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SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

SCHEDULE 13D

(RULE 13d-101)

**INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULE 13d-1(a)
AND AMENDMENTS THERETO FILED PURSUANT TO RULE 13d-2(a)**

(AMENDMENT NO.)

Rigel Pharmaceuticals, Inc.

(Name of Issuer)

Common Stock, par value $0.001 per share
(Title of Class of Securities)

766559 10 8
(CUSIP Number)

MPM Capital
601 Gateway Boulevard, Suite 350
South San Francisco, CA 94080
(650) 553-3300
(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

COPY TO:
Jordan A. Silber
c/o Cooley Godward LLP
One Maritime Plaza, 20th Floor
San Francisco, CA 94111
(415) 693-2000

April 29, 2003
(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box ☐

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 240.13d-7 for other parties to whom copies are to be sent.

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) MPM Bio Ventures III, L.P.		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*		(a) ☐ (b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* 00		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
	8	SHARED VOTING POWER 60,311,533	
	9	SOLE DISPOSITIVE POWER 0	
	10	SHARED DISPOSITIVE POWER 60,311,533	
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		60,311,533
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES*		☐
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11		47.5%
14	TYPE OF REPORTING PERSON*		PN

* SEE INSTRUCTIONS BEFORE FILLING OUT!

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) MPM Bio Ventures III-QP, L.P.		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* 00		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
	8	SHARED VOTING POWER 60,311,533	
	9	SOLE DISPOSITIVE POWER 0	
	10	SHARED DISPOSITIVE POWER 60,311,533	
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		60,311,533
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES*		☐
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14	TYPE OF REPORTING PERSON*		PN

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) MPM Bio Ventures III Parallel Fund, L.P.		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* 00		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
	8	SHARED VOTING POWER 60,311,533	
	9	SOLE DISPOSITIVE POWER 0	
	10	SHARED DISPOSITIVE POWER 60,311,533	
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		60,311,533
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES*		☐
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11		47.5%
14	TYPE OF REPORTING PERSON*		PN

* SEE INSTRUCTIONS BEFORE FILLING OUT!

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) MPM Bio Ventures III GmbH & Co. Beteiligungs KG		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* 00		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
6	CITIZENSHIP OR PLACE OF ORGANIZATION Germany		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
	8	SHARED VOTING POWER 60,311,533	
	9	SOLE DISPOSITIVE POWER 0	
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12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES*		☐
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11		47.5%
14	TYPE OF REPORTING PERSON*		[PN]

* SEE INSTRUCTIONS BEFORE FILLING OUT!

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) MPM Asset Management Investors 2003 BVIII, LLC		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* 00		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
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	10	SHARED DISPOSITIVE POWER 60,311,533	
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12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES*		☐
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14	TYPE OF REPORTING PERSON*		CO

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) MPM BioEquities Master Fund, L.P.		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*		(a) ☐ (b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* 00		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
	8	SHARED VOTING POWER 60,311,533	
	9	SOLE DISPOSITIVE POWER 0	
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12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES*		☐
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11		47.5%
14	TYPE OF REPORTING PERSON*		PN

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) MPM Bio Ventures III GP, L.P.		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) MPM Bio Ventures III LLC		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*		(a) ☐ (b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
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NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
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14	TYPE OF REPORTING PERSON*		CO

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) MPM BioEquities GP, L.P.		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*		(a) ☐ (b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
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NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
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	10	SHARED DISPOSITIVE POWER 60,311,533	
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2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐ (b) ☒
3	SEC USE ONLY	
4	SOURCE OF FUNDS* AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
	8	SHARED VOTING POWER 60,311,533	
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14	TYPE OF REPORTING PERSON*	CO

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Luke Evnin		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
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	10	SHARED DISPOSITIVE POWER 60,311,533	
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14	TYPE OF REPORTING PERSON*		IN

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Ansbert Gadicke		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
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NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
	8	SHARED VOTING POWER 60,311,533	
	9	SOLE DISPOSITIVE POWER 0	
	10	SHARED DISPOSITIVE POWER 60,311,533	
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		60,311,533
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14	TYPE OF REPORTING PERSON*		IN

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Nicholas Galakatos		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
	8	SHARED VOTING POWER 60,311,533	
	9	SOLE DISPOSITIVE POWER 0	
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11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		60,311,533
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES*		☐
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14	TYPE OF REPORTING PERSON*		IN

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Dennis Henner		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
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NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
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	9	SOLE DISPOSITIVE POWER 0	
	10	SHARED DISPOSITIVE POWER 60,311,533	
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14	TYPE OF REPORTING PERSON*		IN

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Robert Liptak		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
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NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
	8	SHARED VOTING POWER 60,311,533	
	9	SOLE DISPOSITIVE POWER 0	
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11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		60,311,533
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14	TYPE OF REPORTING PERSON*		IN

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Nicholas Simon, III		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*		(a) ☐ (b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
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NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
	8	SHARED VOTING POWER 60,311,533	
	9	SOLE DISPOSITIVE POWER 0	
	10	SHARED DISPOSITIVE POWER 60,311,533	
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		60,311,533
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES*		☐
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11		47.5%
14	TYPE OF REPORTING PERSON*		IN

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Michael Steinmetz		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
6	CITIZENSHIP OR PLACE OF ORGANIZATION Germany		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
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	9	SOLE DISPOSITIVE POWER 0	
	10	SHARED DISPOSITIVE POWER 60,311,533	
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		60,311,533
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES*		☐
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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Kurt von Emster		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
	8	SHARED VOTING POWER 60,311,533	
	9	SOLE DISPOSITIVE POWER 0	
	10	SHARED DISPOSITIVE POWER 60,311,533	
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		60,311,533
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES*		☐
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11		47.5%
14	TYPE OF REPORTING PERSON*		IN

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1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Kurt Wheeler		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*	(a) ☐	(b) ☒
3	SEC USE ONLY		
4	SOURCE OF FUNDS* AF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) ☐		
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NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0	
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11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON		60,311,533
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES*		☐
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ITEM 1. **SECURITY AND ISSUER**.

This statement relates to shares of common stock, par value $0.001 per share (the "Common Stock"), of Rigel Pharmaceuticals, Inc. (the "Issuer") and Common Stock issuable upon the exercise of warrants. The Issuer's principal executive offices are located at 1180 Veterans Blvd., South San Francisco, CA 94080.

ITEM 2. **IDENTITY AND BACKGROUND**.

(a) This statement is being filed by MPM BioVentures III, L.P. ("BV III"), MPM BioVentures III-QP, L.P. ("BV III QP"), MPM BioVentures III Parallel Fund, L.P. ("BV III PF"), MPM BioVentures III GmbH & Co. Beteiligungs KG ("BV III KG"), MPM BioVentures III GP, L.P. ("BV III GP"), MPM BioVentures III LLC ("BV III LLC," and together with BV III, BV III QP, BV III PF, BV III KG, and BV III GP, the "MPM BioVentures Entities"), MPM Asset Management Investors 2003 BVIII, LLC ("BV AM LLC"), MPM BioEquities Master Fund, L.P. ("BE MF"), MPM BioEquities GP, L.P. ("BE LP"), MPM BioEquities GP, LLC ("BE LLC," and together with BE MF and BE LP, the "MPM BioEquities Entities"), Luke Evnin ("LE"), Ansbert Gadicke ("AG"), Nicholas Galakatos ("NG"), Dennis Henner ("DH"), Robert Liptak ("RL"), Nick Simon, III ("NS"), Michael Steinmetz ("MS"), Kurt von Emster ("KvE") and Kurt Wheeler ("KW"). The foregoing entities and individuals are collectively referred to as the "Reporting Persons."

BV III GP is the general partner of BV III, BV III QP, BV III PF and BV III KG. BV III LLC is the general partner of BV III GP. BE LP is the general partner of BE MF. BE LLC is the general partner of BE LP. The managing members of BV III LLC are LE, AG, NG, DH, NS, MS and KW. The managing members of BE LLC are LE, AG, RL and KvE. The managing members of BV AM LLC are LE, AG, NG, DH, NS, MS and KW.

(b) The address of the principal business office of BE MF, BE LP, BE LLC, LE, DH, NS, KvE and KW is 601 Gateway Boulevard, Suite 350, South San Francisco, CA 94080. The principal office of BV III, BV III QP, BV III PF, BV III KG, BV AM LLC, BV III GP, BV III LLC, AG, NG, RL and MS is 111 Huntington Avenue, 31st Floor, Boston, MA 02199.

(c) The principal business of the MPM BioVentures Entities is to act as a venture capital investor in the life sciences sector. The principal business of the MPM BioEquities Entities is to act as an investor in the public markets in the life sciences sector. The principal business of each of the individuals is as a venture capitalist, with the exception of KvE whose principal business is that of portfolio manager.

(d) During the five years prior to the date hereof, none of the Reporting Persons has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) During the five years prior to the date hereof, none of the Reporting Persons has been a party to a civil proceeding ending in a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) BV III, BV III QP, BV III PF, BE MF, BV III GP and BE LP are Delaware limited partnerships. BV AM LLC, BV III LLC and BE LLC are Delaware limited liability companies. BV III KG is a German partnership. Each of LE, AG, NG, DH, RL, NS, KvE and KW is a United States citizen. MS is a German citizen.

ITEM 3. **SOURCE AND AMOUNT OF FUNDS OR OTHER CONSIDERATION.**

Pursuant to the Common Stock and Warrant Purchase Agreement (the "Purchase Agreement," a copy of which is attached hereto as Exhibit B) among the Issuer, BV III, BV III QP, BV III PF, BV III KG, BV AM LLC, BE MF and various other investors (collectively, the "Investors"), dated as of April 29, 2003, the Issuer will sell approximately 71,874,999 shares of its Common Stock at a price of $0.64 per share and warrants to purchase approximately 14,374,997 shares of its Common Stock at an exercise price of $0.64 per share to the Investors for an aggregate purchase price of $46,000,000 (the "Financing"). The Financing is subject to stockholder approval and certain other closing conditions.

Pursuant to the Purchase Agreement, BV III agreed to purchase 2,186,328 shares of Common Stock at a price of $0.64 per share for a total consideration of $1,399,249.92, BV III QP agreed to purchase 32,516,524 shares of Common Stock at a price of $0.64 per share for a total consideration of $20,810,575.36, BV III PF agreed to purchase 982,031 shares of Common Stock at a price of $0.64 per share for a total consideration of $628,499.84, BV III KG agreed to purchase 2,748,047 shares of Common Stock at a price of $0.64 per share for a total consideration of $1,758,750.08, BV AM LLC agreed to purchase 629,570 shares of Common Stock at a price of $0.64 per share for a total consideration of $402,924.80, and BE MF agreed to purchase 1,562,500 shares of Common Stock at a price of $0.64 per share for a total consideration of $1,000,000.00. Under the terms of the Purchase Agreement, BV III also will receive a warrant to purchase 437,265 shares of Common Stock at an exercise price of $0.64 per share, BV III QP also will receive a warrant to purchase 6,503,304 shares of Common Stock at an exercise price of $0.64 per share, BV III PF also will receive a warrant to purchase 196,406 shares of Common Stock at an exercise price of $0.64 per share, BV III KG also will receive a warrant to purchase 549,609 shares of Common Stock at an exercise price of $0.64 per share, BV AM LLC also will receive a warrant to purchase 125,914 shares of Common Stock at an exercise price of $0.64 per share, and BE MF also will receive a warrant to purchase 312,500 shares of Common Stock at an exercise price of $0.64 per share (collectively, the "Warrants"). The funds used by BV III, BV III QP, BV III PF, BV III KG, BV AM LLC and BE MF in the Financing were obtained from their investment funds.

References to and descriptions of the Purchase Agreement as set forth in this Item 3 are qualified in their entirety by reference to the Purchase Agreement and the Form of Warrant issued under the Purchase Agreement included as Exhibits B and C, respectively, to this Schedule 13D, which are incorporated in their entirety in this Item 3.

ITEM 4. **PURPOSE OF TRANSACTION.**

BV III, BV III QP, BV III PF, BV III KG, BV AM LLC and BE MF have agreed to acquire the Common Stock and Warrants for investment purposes and, through representation of the Issuer's board of directors, to influence the management policies and control of the Issuer with the aim of increasing the value of the Issuer and the investment. Depending on market conditions, their continuing evaluation of the business and prospects of the Issuer and other factors, BV III, BV III QP, BV III PF, BV III KG, BV AM LLC and BE MF may dispose of or acquire additional shares of Common Stock of Issuer.

In connection with the closing of the Financing, the Issuer and certain of the Investors will enter into the Second Investor Rights Agreement (the "Rights Agreement," a copy of which is attached hereto as Exhibit D). Pursuant to the Rights Agreement, the Issuer has agreed to use its commercially reasonable best efforts to cause a registration statement covering the Common Stock issued pursuant to the Purchase Agreement and the Common Stock issuable upon the exercise of the Warrants to be filed with the SEC as soon as practicable, but in no event later than ten business days after the closing of the Financing. The Issuer further agreed to use its commercially reasonable best efforts to cause the registration statement to be declared effective no later than five business days after receipt of notice of "no review" by the SEC or 90 days from the initial filing of such registration statement in the event of SEC review. Upon the closing of the Financing, certain of the Issuer's existing stockholders will enter into that certain Consent, Waiver and Agreement in order to waive certain registration rights granted to such stockholders under a previous agreement between such existing stockholders and the Issuer.

Pursuant to the Purchase Agreement, the Issuer has agreed that its board of directors will have nine (9) members. The Issuer has agreed to use its commercially reasonable best efforts to cause, at the closing, two persons designated by BV III or its affiliates to be appointed as members of the board of directors of the Issuer. The Issuer has agreed to use its commercially reasonable best efforts to cause, at the closing of the Financing, one of such designees to be a member of the Issuer's compensation committee and one of such designees to be a member of the Issuer's nominating committee.

Pursuant to the Purchase Agreement, the Issuer has agreed to seek stockholder approval to amend its charter, on or before the closing of the Financing, to (a) effect a reverse stock split of the Issuer's Common Stock whereby the Issuer will issue one new share of Common Stock in exchange for not less than five shares nor more than fifteen shares of its outstanding Common Stock (such number as mutually agreed upon by the board of directors of the Issuer and a majority in interest of the Investors under the Purchase Agreement) and (b) effect any other changes that are necessary to complete the transactions contemplated by the Purchase Agreement, including, but not limited to, potentially increasing the number of authorized shares of the Issuer's Common Stock.

Pursuant to a Voting Agreement dated as of April 29, 2003 (the "Voting Agreement," a copy of which is attached hereto as Exhibit E), by and among certain stockholders of the Issuer and certain of the investors to the Purchase Agreement, BV III was delivered an irrevocable proxy by the stockholders who signed the Voting Agreement with respect to the shares held of record by such stockholders as of the date of the Voting Agreement as well as shares acquired by such stockholders prior to the termination of effectiveness of the Voting Agreement.

In order to effect the closing of the Financing, the Issuer must, among other things, obtain required stockholder approval, amend its charter, enter into the Rights Agreement, deliver a fully executed Consent, Waiver and Agreement and file a listing application with the Nasdaq National Market for the Common Stock and Warrants issued in the Financing.

Except as set forth above, the Reporting Persons have no present plans or intentions which would result in or relate to any of the transactions described in subparagraphs (a) through (j) of Item 4 of Schedule 13D.

References to and descriptions of the Purchase Agreement as set forth in this Item 4 are qualified in their entirety by reference to the Purchase Agreement and the Form of Warrant issued under the Purchase Agreement included as Exhibits B and C, respectively, to this Schedule 13D, which are incorporated in their entirety in this Item 4. References to and descriptions of the Rights Agreement as set forth in this Item 4 are qualified in their entirety by reference to the Rights Agreement included as Exhibit D to this Schedule 13D, which is incorporated in its entirety in this Item 4. References to and descriptions of the Voting Agreement as set forth in this Item 4 are qualified in their entirety by reference to the Voting Agreement included as Exhibit E to this Schedule 13D, which is incorporated in its entirety in this Item 4.

ITEM 5. **INTEREST IN SECURITIES OF THE ISSUER**

(a) Pursuant to the Purchase Agreement, BV III has the right to acquire 2,186,328 shares of Common Stock of the Issuer. In addition, pursuant to the Purchase Agreement, BV III has the right to acquire a warrant to purchase 437,265 shares of Common Stock of the Issuer.

Pursuant to the Purchase Agreement, BV III QP has the right to acquire 32,516,524 shares of Common Stock of the Issuer. In addition, pursuant to the Purchase Agreement, BV III QP has the right to acquire a warrant to purchase 6,503,304 shares of Common Stock of the Issuer.

Pursuant to the Purchase Agreement, BV III PF has the right to acquire 982,031 shares of Common Stock of the Issuer. In addition, pursuant to the Purchase Agreement, BV III PF has the right to acquire a warrant to purchase 196,406 shares of Common Stock of the Issuer.

Pursuant to the Purchase Agreement, BV III KG has the right to acquire 2,748,047 shares of Common Stock of the Issuer. In addition, pursuant to the Purchase Agreement, BV III KG has the right to acquire a warrant to purchase 549,609 shares of Common Stock of the Issuer.

Pursuant to the Purchase Agreement, BV AM LLC has the right to acquire 629,570 shares of Common Stock of the Issuer. In addition, pursuant to the Purchase Agreement, BV AM LLC has the right to acquire a warrant to purchase 125,914 shares of Common Stock of the Issuer.

Pursuant to the Purchase Agreement, BE MF has the right to acquire 1,562,500 shares of Common Stock of the Issuer. In addition, pursuant to the Purchase Agreement, BE MF has the right to acquire a warrant to purchase 312,500 shares of Common Stock of the Issuer.

Under SEC rules, and by virtue of their relationship as affiliated limited partnerships

and having a shared general partner (BV III GP), BV III, BV III QP, BV III PF and BV III KG may be deemed to share voting power and the power to direct the disposition of shares of Common Stock which each partnership has the right to acquire. BV III GP, as the general partner of BV III, BV III QP, BV III PF and BV III KG, may also be deemed to own beneficially those shares. BV III LLC, as general partner of BV III GP, may also be deemed to own beneficially those shares. LE, AG, NG, DH, NS, MS and KW, as managing members of BV III LLC, may also be deemed to own beneficially those shares. As an affiliated entity, BV AM LLC may also be deemed to own beneficially those shares.

BE LP, as the general partner of BE MF, may be deemed to own beneficially the shares which BE MF has the right to acquire. BE LLC, as the general partner of BE LP, may also be deemed to own beneficially those shares. LE, AG, RL and KvE, as managing members of BE LLC, may also be deemed to own beneficially those shares.

Pursuant to the Voting Agreement, BV III received proxies from the following stockholders for the stock held of record or beneficially owned by such stockholders: Alta BioPharma Partners II, L.P. for 1,109,196 shares, Alta Embarcadero BioPharma Partners II, LLC for 40,804 shares, Alta California Partners, L.P. for 4,578,327 shares, Alta Embarcadero Partners, LLC for 104,596 shares, Frazier Healthcare II, L.P. for 4,332,575 shares, Frazier & Company, Inc. for 15,144 shares, James M. Gower for 988,100 shares and Donald G. Payan for 892,791 shares. As a result, BV III could be deemed to be the beneficial owner of the aggregate of 12,061,533 shares covered by the proxies. Under SEC rules and due to their relationship as affiliated parties, each of the remaining Reporting Persons may also be deemed to beneficially own such shares.

Therefore, the Reporting Persons may be deemed to beneficially own, in the aggregate, 60,811,533 shares of the Issuer's Common Stock. Collectively, the aggregate number of shares of Common Stock beneficially owned by the Reporting Persons represents 47.5% of the Issuer's outstanding Common Stock.

These percentages are calculated based on 126,876,004 shares of the Issuer's Common Stock outstanding, which is the sum of: (i) 46,376,004 shares of Common Stock outstanding as reported by the Issuer in the Purchase Agreement; (ii) 40,625,000 shares of Common Stock issuable to certain of the Reporting Persons pursuant to the Purchase Agreement; (iii) 8,125,000 shares of Common Stock issuable to certain of the Reporting Persons upon exercise of the Warrants issuable pursuant to the Purchase Agreement; (iv) 31,250,000 shares of Common Stock issuable to the other parties to the Purchase Agreement; and (v) 500,000 shares issuable to James Gower and Donald Payan pursuant to options exercisable within 60 days of the date of this Schedule 13D (as reported in the Issuer's Annual Report on Form 10-K for the fiscal year ended December 31, 2002).

(b) Number of shares as to which each person named in paragraph (a) above has:

(i) sole power to vote or to direct the vote: 0 shares for each Reporting Person

(ii) shared power to vote or to direct the vote: 60,811,533 shares for each Reporting Person

(iii) sole power to dispose or to direct the disposition of: 0 shares for each

Reporting Person

(iv) shared power to dispose or to direct the disposition of: 60,811,533 shares for each Reporting Person

(c) Except as set forth above, none of the Reporting Persons has effected any transaction in the Common Stock in the last 60 days.

(d) No other person is known to have the right to receive or the power to direct the receipt of dividends from, or any proceeds from the sale of, the Common Stock or Warrants beneficially owned by any of the Reporting Persons.

(e) Not applicable.

ITEM 6. **CONTRACTS, ARRANGEMENTS, UNDERSTANDINGS OR RELATIONSHIPS WITH RESPECT TO THE SECURITIES OF THE ISSUER**

The information provided or incorporated by reference in Item 3 and Item 4 is hereby incorporated by reference.

ITEM 7. **MATERIALS TO BE FILED AS EXHIBITS**.

A. Agreement of Joint Filing of Schedule 13D.

B. Common Stock and Warrant Purchase Agreement dated as of April 29, 2003, by and among the Issuer and the Investors.

C. Form of Warrant issued under the Common Stock and Warrant Purchase Agreement dated as of April 29, 2003.

D. Form of Second Investor Rights Agreement, by and among the Issuer and the Investors (to be executed at the closing of the Financing).

E. Voting Agreement dated as of April 29, 2003, by and among certain stockholders of the Issuer and BV III.

SIGNATURES

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: May 8, 2003

MPM BIOVENTURES III, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Series A Member

MPM BIOVENTURES III-QP, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title Series A Member

MPM BIOVENTURES III GMBH & CO. BETEILIGUNGS KG

By: MPM BioVentures III GP, L.P., in its capacity as the Managing Limited Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Series A Member

MPM BIOVENTURES III PARALLEL FUND, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Series A Member

MPM ASSET MANAGEMENT INVESTORS 2003 BVIII LLC

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Manager

MPM BIOVENTURES III GP, L.P.

By: MPM BioVentures III LLC,
its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Manager

MPM BIOVENTURES III LLC

By: /s/ Luke Evnin

Title: Manager

MPM BIOEQUITIES MASTER FUND, L.P.

By: MPM BioEquities GP, L.P.,
its General Partner

By: MPM BioEquities GP LLC,
its General Partner

By: /s/ Luke Evnin

Title: General Partner

MPM BIOEQUITIES GP, L.P.

By: MPM BioEquities GP, LLC
its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Manager

By: /s/ Luke Evnin

Name: Luke Evnin

By: /s/ Nicholas Galakatos

Name: Nicholas Galakatos

By: /s/ Robert Liptak

Name: Robert Liptak

By: /s/ Michael Steinmetz

Name: Michael Steinmetz

By: /s/ Kurt Wheeler

Name: Kurt Wheeler

MPM BIOEQUITIES GP, LLC

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Manager

By: /s/ Ansbert Gadicke

Name: Ansbert Gadicke

By: /s/ Dennis Henner

Name: Dennis Henner

By: /s/ Nick Simon, III

Name: Nick Simon, III

By: /s/ Kurt von Emster

Name: Kurt von Emster

EXHIBIT INDEX

Exhibit A: Agreement of Joint Filing of Schedule 13D

Exhibit B: Common Stock and Warrant Purchase Agreement

Exhibit C: Form of Warrant

Exhibit D: Second Investor Rights Agreement

Exhibit E: Voting Agreement

EXHIBIT A

Agreement of Joint Filing

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, the undersigned hereby agree that only one statement containing the information required by Schedule 13D need be filed with respect to the ownership by each of the undersigned of shares of stock of Rigel Pharmaceuticals, Inc.

Dated: May 8, 2003

<TABLE>

<S>
MPM BIOVENTURES III, L.P.

By: MPM BioVentures III GP, L.P., its General Partner
By: MPM BioVentures III LLC, its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Series A Member

MPM BIOVENTURES III GMBH & CO. BETEILIGUNGS KG

By: MPM BioVentures III GP, L.P., in its capacity as the Managing Limited Partner
By: MPM BioVentures III LLC, its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Series A Member

MPM ASSET MANAGEMENT INVESTORS 2003 BVIII LLC

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Series A Member

<C>
MPM BIOVENTURES III-QP, L.P.

By: MPM BioVentures III GP, L.P., its General Partner
By: MPM BioVentures III LLC, its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title Series A Member

MPM BIOVENTURES III PARALLEL FUND, L.P.

By: MPM BioVentures III GP, L.P., its General Partner
By: MPM BioVentures III LLC, its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Series A Member

MPM BIOVENTURES III GP, L.P.

By: MPM BioVentures III LLC, its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title Series A Member
</TABLE>

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<S>
MPM BIOVENTURES III LLC

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Manager

MPM BIOEQUITIES GP, L.P.

By: MPM BioEquities GP, LLC its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Manager

<C>
MPM BIOEQUITIES MASTER FUND, L.P.

By: MPM BioEquities GP, L.P., its General Partner
By: MPM BioEquities GP LLC, its General Partner

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Series A Member

MPM BIOEQUITIES GP, LLC

By: /s/ Luke Evnin

Name: Luke Evnin
Title: Manager
</TABLE>

By: /s/ Luke Evnin

Name: Luke Evnin

By: /s/ Nicholas Galakatos

Name: Nicholas Galakatos

By: /s/ Robert Liptak

Name: Robert Liptak

By: /s/ Michael Steinmetz

Name: Michael Steinmetz

By: /s/ Kurt Wheeler

Name: Kurt Wheeler
</TABLE>

By: /s/ Ansbert Gadicke

Name: Ansbert Gadicke

By: /s/ Dennis Henner

Name: Dennis Henner

By: /s/ Nick Simon, III

Name: Nick Simon, III

By: /s/ Kurt von Emster

Name: Kurt von Emster

EXHIBIT B

RIGEL PHARMACEUTICALS, INC.

COMMON STOCK AND WARRANT PURCHASE AGREEMENT

APRIL 29, 2003

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RIGEL PHARMACEUTICALS, INC.

COMMON STOCK AND WARRANT PURCHASE AGREEMENT

This Common Stock and Warrant Purchase Agreement (the "AGREEMENT") is made as of April 29, 2003 by and among RIGEL PHARMACEUTICALS, INC., a Delaware corporation (the "COMPANY"), and each of the parties set forth on SCHEDULE A attached hereto (each, an "INVESTOR" and, collectively, the "INVESTORS").

RECITALS

A. The Company desires to sell, and the Investors desire to purchase, the Shares and the Warrants (each as defined below) pursuant to the terms set forth in this Agreement.

B. In order to induce the Investors to enter into this Agreement, certain stockholders of the Company are executing voting agreements in favor of the Investors.

AGREEMENT

1. Authorization of Shares and Warrants. Subject to the terms and conditions of this Agreement, the Company, as of the Closing Date (as defined in Section 3.1), will have authorized (a) the sale and issuance of 71,874,999 shares (the "SHARES") of the Company's common stock, par value $0.001 per share (the "COMMON STOCK"), and the Warrants (as defined in Section 2.1(b)) (the "OFFERING") and (b) the reservation of the shares of Common Stock into which the Warrants are exercisable (the "WARRANT SHARES").

2. Agreement to Sell and Purchase Shares and Warrants.

2.1 Subject to the terms and conditions of this Agreement, each Investor agrees, severally and not jointly, to purchase at the Closing (as defined in Section 3.1), and the Company agrees to sell and issue to each Investor, severally and not jointly, at the Closing:

(a) that number of Shares determined by dividing (i) the dollar amount set forth opposite such Investor's name on SCHEDULE A hereto (the "AGGREGATE PURCHASE PRICE") by (ii) the per share purchase price of $0.64 (the "PURCHASE PRICE"), rounded down to the nearest whole number of Shares; and

(b) a warrant, in the form attached hereto as EXHIBIT A, exercisable for that number of Warrant Shares equal to twenty percent (20%) of the Shares purchased by such Investor pursuant to Section 2.1(a) above, at a price per share exercise price equal to the Purchase Price, as set forth opposite such Investor's name on SCHEDULE A hereto (each, a "WARRANT" and, collectively, the "WARRANTS").

2.2 The number of Shares to be purchased by the Investors at the Closing pursuant to Section 2.1(a), the Purchase Price applicable to such Shares and the per

share exercise price and number of underlying shares of Common Stock attributable to the Warrants shall be proportionately adjusted for any subdivision or combination of Common Stock (by stock split, reverse stock split, dividend, reorganization, recapitalization or otherwise, including, but not limited to, the Reverse Stock Split (as defined in Section 4.4)).

3. Closing; Delivery of Shares and Warrants.

3.1 The closing of the purchase and sale of the Shares and the Warrants pursuant to this Agreement (the "CLOSING") shall take place at 10:00 a.m. at the offices of Cooley Godward LLP, 3175 Hanover Street, Palo Alto, California on the second (2nd) business day (the "CLOSING DATE") after satisfaction in full of the closing conditions set forth in Sections 4 and 5 herein that by their terms are not to occur at the Closing, or waiver of any such closing conditions pursuant to the terms therein, or at such other time and place as may be agreed to by the Company and the Investors representing a majority of the total Aggregate Purchase Prices paid by all Investors (a "MAJORITY IN INTEREST OF THE INVESTORS"). At the Closing, each Investor shall deliver, in immediately available funds, the Aggregate Purchase Price by wire transfer to an account designated by the Company. As soon as reasonably practicable, but in no event later than five (5) business days after the Closing, the Company shall deliver to each Investor, against payment therefor, one or more stock certificates representing the number of Shares set forth on

SCHEDULE A hereto and one or more Warrants to purchase the number of Warrant Shares set forth on SCHEDULE A hereto, each such certificate and Warrant to be dated as of the Closing Date and to be registered in the name of the Investor or, if so indicated on the Stock Certificate and Warrant Questionnaire attached hereto as EXHIBIT B, in the name of a nominee designated by such Investor.

3.2 All certificates representing the Shares and the Warrant Shares shall bear the following legends:

(a) "THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). SUCH SHARES MAY NOT BE SOLD OR TRANSFERRED IN THE ABSENCE OF REGISTRATION OR AN EXEMPTION THEREFROM. RIGEL PHARMACEUTICALS, INC. MAY REQUIRE AN OPINION OF COUNSEL REASONABLY ACCEPTABLE TO IT THAT A PROPOSED TRANSFER OR SALE IS IN COMPLIANCE WITH THE ACT."

(b) "THE SALE, TRANSFER OR VOTING OF THE SHARES REPRESENTED BY THIS CERTIFICATE IS RESTRICTED BY THE TERMS OF A SECOND INVESTOR RIGHTS AGREEMENT BY AND AMONG RIGEL PHARMACEUTICALS, INC. AND THE INVESTORS NAMED THEREIN. COPIES OF THE AGREEMENT MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDERS OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF RIGEL PHARMACEUTICALS, INC. AT THE PRINCIPAL EXECUTIVE OFFICES OF RIGEL PHARMACEUTICALS, INC."

(c) The certificates representing the Shares and Warrant Shares will be subject to a stop transfer order with the Company's transfer agent that restricts the transfer of such shares except in compliance with this Agreement.

(d) The Company acknowledges and agrees that an opinion of counsel shall not be required upon the transfer by an Investor of any securities to an "AFFILIATE" (as defined in Rule 12b-2 of the rules and regulations promulgated under the Securities Exchange Act of 1934, as amended (the "EXCHANGE ACT")) of such Investor, including, but not limited to, a member, retired member, partner, retired partner or affiliated venture capital fund of such Investor.

4. Conditions to Company's Obligations. The Company's obligation to issue Shares and Warrants to each Investor at the Closing shall be subject to the fulfillment on or prior to the Closing of the following conditions, any one or more of which may be waived in whole or in part by the written consent of the Company:

4.1 Payment. The Company shall have received the Aggregate Purchase Price.

4.2 Representations and Warranties True and Correct. The representations and warranties made by such Investor in Section 7 hereof shall be true and correct in all material respects as of the date hereof and the Closing Date with the same force and effect as if they had been made as of the Closing Date.

4.3 No Injunction or Regulatory Restraints; Illegality. No temporary restraining order, preliminary or permanent injunction or other order issued by any court of competent jurisdiction or governmental entity or other legal or regulatory restraint or prohibition preventing the consummation of the transactions contemplated hereby shall be in effect; nor shall there be any action taken by any court of competent jurisdiction or governmental entity, or any law or order enacted, entered, enforced or deemed applicable to the transactions contemplated hereby by any court of competent jurisdiction or governmental entity, that would prohibit their consummation.

4.4 Filing of Certificate. The Company shall have filed with the Secretary of State of the State of Delaware the Amended and Restated Certificate of Incorporation, in substantially the form attached hereto as EXHIBIT C (the "CERTIFICATE"), to (a) effect a reverse stock split of the outstanding Common Stock within the range of 1-for-5 to 1-for-15 as mutually agreed upon by the board of directors of the Company (the "BOARD OF DIRECTORS") and a Majority in Interest of the Investors (the "REVERSE STOCK SPLIT") and (b) to effect any other changes to the Company's certificate of incorporation as are necessary to complete the transactions contemplated hereby, including, but not limited to, potentially increasing the number of authorized shares of Common Stock of the Company.

4.5 Required Stockholder Approval. The Company shall have obtained the Required Stockholder Approval (as defined in Section 6.4).

5. Conditions to Investors' Obligations. Each Investor's obligation to purchase Shares and Warrants at the Closing shall be subject to the fulfillment on or prior to the Closing of the following conditions, any one or more of which may be waived in whole or in part, subject to Section 10.2, by the written consent of a Majority in Interest of the Investors:

5.1 Representations and Warranties True and Correct. The representations and warranties made by the Company in Section 6 hereof shall be true and correct as of the date hereof and the Closing Date with the same force and effect as if they had been made as of the Closing Date, except as otherwise contemplated by this Agreement and except (a) in each case, or in the aggregate, as does not constitute a Material Adverse Effect on the Company (as defined in Section 5.11) and (b) for those representations and warranties that address matters only as of a particular date, which shall be true and correct (subject to the qualification set forth in the preceding clause (a)) as of such date.

5.2 Compliance with Laws. The purchase of the Shares and Warrants by each Investor hereunder shall be legally permitted by all laws and regulations to which the Company is subject (including all applicable federal, state and foreign securities laws).

5.3 No Injunction or Regulatory Constraints; Illegality. No temporary restraining order, preliminary or permanent injunction or other order issued by any court of competent jurisdiction or governmental entity or other legal or regulatory restraint or prohibition preventing the consummation of the transactions contemplated hereby shall be in effect; nor shall there be any action taken by any court of competent jurisdiction or governmental entity, or any law or order enacted, entered, enforced or deemed applicable to the transactions contemplated hereby by any court of competent jurisdiction or governmental entity, that would prohibit their consummation.

5.4 Filing of Certificate. The Company shall have filed with the Secretary of State of the State of Delaware the Certificate to (a) effect the Reverse Stock Split and (b) effect any other changes to the Company's certificate of incorporation as are necessary to complete the transactions contemplated hereby, including, but not limited to, potentially increasing the number of authorized shares of Common Stock of the Company.

5.5 Opinion of Company's Counsel. The Investors shall have received a legal opinion of Cooley Godward LLP, counsel for the Company, in substantially the form attached hereto as EXHIBIT D.

5.6 Required Stockholder Approval. The Company shall have obtained the Required Stockholder Approval.

5.7 Board of Directors Designees. The Board of Directors (which shall have nine (9) members as of the Closing) shall have appointed, effective as of the Closing, Nick Simon and Dennis Henner (the "MPM Representatives") as designees of MPM BioVentures III, L.P. or its affiliates ("MPM CAPITAL") to serve on the Board of Directors as Class II and Class III directors (as defined in the Company's Certificate). In addition, the Board of Directors shall have appointed, effective as of the Closing, one (1) MPM

Representative as a member of the compensation committee of the Board of Directors and one (1) MPM Representative as a member of the nominating committee of the Board of Directors, and all such appointments shall be in full force and effect.

5.8 Committee Appointment. Kazumi Shiosaki, Ph.D., representing MPM Capital, shall have been appointed to the Company's drug development committee (or similar committee as appropriate) to serve until a senior executive officer in the area of drug development, which individual shall have extensive small molecule experience and expertise, has been appointed by the Board of Directors.

5.9 Investor Rights Agreement. The parties hereto shall have entered into that certain Second Investor Rights Agreement in substantially the form attached hereto as EXHIBIT E (the "INVESTOR RIGHTS AGREEMENT," and together with this Agreement, the "AGREEMENTS").

5.10 Waiver of Registration Rights. The Prior Rights Holders (as defined in the Investor Rights Agreement) shall have waived any applicable registration rights held by them in connection with the filing of any registration statement on behalf of the Investors pursuant to Sections 2.1 and 2.4 of the Investor Rights Agreement.

5.11 No Material Adverse Effect. There shall have been no Material Adverse Effect on the Company between the date of the execution of this Agreement and the Closing Date. For the purposes of this Agreement, a "MATERIAL ADVERSE EFFECT" on the Company shall mean an event, change or occurrence that individually, or together with any other event, change or occurrence, has had a material adverse impact on the Company's financial position, business, properties, assets, liabilities (absolute, accrued or contingent), prospects or results of operations; provided, however, that none of the direct effects of any of the following (individually or in combination) shall be deemed to constitute, or shall be taken into account in determining whether there has been, a Material Adverse Effect on the Company: (a) changes in generally accepted accounting practices, (b) historically experienced seasonal fluctuations in the Company's performance, (c) changes in worldwide general business or economic conditions

affecting the industries in which the Company participates, (d) changes in conditions generally affecting the biotechnology industry, (e) the announcement or pendency of any of the transactions contemplated by this Agreement, (f) the taking of any action required by this Agreement and (g) expenditures by the Company in the ordinary course of business consistent with past practices and reasonable expenditures by the Company in connection with the transactions contemplated by this Agreement.

5.12 Executive Search. The Company shall have initiated a search for and shall have diligently pursued the hiring of a senior executive officer in the area of drug development, which individual shall have extensive small molecule development experience and expertise and be acceptable to the Board of Directors.

5.13 Covenants. Each covenant and agreement contained in this Agreement to be performed by the Company on or prior to the Closing shall have been performed or complied with in all material respects.

5.14 Nasdaq Listing. The Company shall (a) have filed a listing application with the Nasdaq National Market ("NASDAQ") for the Shares and the Warrant Shares, (b) continue to have its shares of Common Stock listed for trading on Nasdaq and (c) have not been notified by Nasdaq of any action or potential action by Nasdaq or of any violation of any Nasdaq rule that could result in the delisting of the Company's Common Stock from Nasdaq, except as otherwise described in Section 6.13 of the Company's Disclosure Schedule.

5.15 Closing Proceeds. The Company shall have raised at least $40,000,000 from the Investors pursuant to this Agreement; provided, however, that, notwithstanding Section 10.2, this condition may be waived solely by MPM Capital.

5.16 Officers' Certificates. The Company shall have delivered to the Investors a certificate, dated as of the Closing Date and executed by the chief executive officer of the Company, and a certificate, dated as of the Closing Date and executed by the secretary of the Company, in the forms attached hereto as EXHIBITS F and G, respectively.

6. Representations and Warranties of the Company. Except as otherwise described in the Company's Disclosure Schedule, and except as expressly contemplated herein or thereby, the Company hereby represents and warrants to each Investor as follows:

6.1 Organization. The Company is duly incorporated and validly existing in good standing under the laws of the State of Delaware. The Company has full power and authority to own, operate and occupy its properties and to conduct its business as presently conducted and is registered or qualified to do business and is in good standing in each jurisdiction in which it owns or leases property or transacts business and where the failure to be so qualified would have a Material Adverse Effect on the Company, and, to the Company's knowledge (as defined below), no proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing, or seeking to revoke, limit or curtail, such power and authority or qualification. For purposes of this Agreement, the term "KNOWLEDGE" (including any derivation thereof such as "KNOW" or "KNOWING" and regardless of whether such word starts with an initial capital) in reference to the Company shall mean the actual knowledge of the Company's executive officers.

6.2 Subsidiaries. The Company does not own or control any equity security or other interest of any other corporation, partnership or other business entity. Since its inception, the Company has not consolidated or merged with, acquired all or substantially all of the assets of, or acquired the stock of or any interest in any corporation, partnership or other business entity.

6.3 Due Authorization. The Company has all requisite corporate power and authority to execute, deliver and perform its obligations under the Agreements and Warrants, and the Agreements and Warrants have been duly authorized and validly executed and delivered by the Company and, except for obtaining Stockholder Approval, no other corporate action on the part of the Company or its stockholders is necessary to authorize the execution and delivery by the Company of the Agreements or the Warrants or the consummation by it of the Offering. The Agreements and Warrants, assuming due and valid authorization, execution and delivery hereof and thereof by the Investors, constitute legal, valid and binding agreements of the

Company, enforceable against the Company in accordance with their terms, except as rights to indemnity and contribution may be limited by state or federal securities laws or the public policy underlying such laws, except as

enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' and contracting parties' rights generally, and except as enforceability may be subject to general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law).

6.4 Vote Required. The only votes of the holders of any class or series of the Company's capital stock necessary to approve the Offering and the other transactions contemplated by this Agreement (the "STOCKHOLDER APPROVAL") are (a) the affirmative vote of the majority of shares of Common Stock present in person or represented by proxy at the Stockholders' Meeting (as defined in Section 8.1) and entitled to vote to approve the Offering (the "REQUIRED NASDAQ APPROVAL"), (b) the affirmative vote of at least sixty-six and two-thirds percent (66 2/3%) of the outstanding shares of Common Stock entitled to vote to approve the Certificate and resulting Reverse Stock Split and, if necessary to complete the transactions contemplated hereby, an increase in the number of authorized shares of Common Stock (the "REVERSE SPLIT STOCKHOLDER APPROVAL" and, together with the Required Nasdaq Approval, the "REQUIRED STOCKHOLDER APPROVAL"), (c) the affirmative vote of the majority of the shares of Common Stock present in person or represented by proxy at the Stockholders' Meeting and entitled to vote to approve the amendments to the Company's 2000 Equity Incentive Plan, 2000 Non-Employee Directors' Stock Option Plan and 2000 Employee Stock Purchase Plan to, among other things, increase the number of shares reserved for issuance under each such plan, as set forth on SCHEDULE B attached hereto (the "PLAN AMENDMENTS") and (d) the affirmative vote of the majority of the outstanding shares of Common Stock entitled to vote to approve the repricing, in the discretion of the Board of Directors and the reasonable discretion of a Majority in Interest of the Investors, of all options to purchase Common Stock issued pursuant to the Company's 2000 Equity Incentive Plan, 2001 Non-Officer Equity Incentive Plan and 2000 Non-Employee Directors' Stock Option Plan outstanding as of the Closing (the "REPRICING").

6.5 Non-Contravention. The execution and delivery of the Agreements, the issuance and sale of the Shares and the Warrants, the issuance of the Warrant Shares and the consummation of the transactions contemplated thereby will not (a) conflict with or constitute a violation of or default (with the passage of time or otherwise) or give rise to any right of termination, material amendment, cancellation or acceleration or loss of any material rights under (i) any material contracts to which the Company is a party and that are filed as exhibits to the Company's annual report on Form 10-K for the year ended December 31, 2002 and any Current Reports on Form 8-K or Quarterly Reports on Form 10-Q filed subsequent thereto with the Securities and Exchange Commission (the "SEC") by the Company (the "SEC DOCUMENTS") (such contracts, the "MATERIAL CONTRACTS"), (ii) the certificate of incorporation or the bylaws of the Company or any similar organizational document of the Company or (iii) any law, administrative regulation ordinance, writ, injunction, decree or order of any court or governmental agency, arbitration panel or authority binding upon the Company or its property, where such conflict, violation or default would result in a Material Adverse Effect on the Company or (b) result in the creation or imposition (or the obligation to create or impose) of any material lien, encumbrance, claim, security interest, pledge, charge or restriction of any kind

upon any of the properties or assets of the Company or an acceleration of indebtedness pursuant to any obligation, agreement or condition contained in any Material Contract. No consent, approval, authorization or other order of, or registration, qualification or filing with, any regulatory body, administrative agency or other governmental body in the United States is required for the execution and delivery of the Agreements and the Warrants and the valid issuance and sale of the Shares and the Warrants to be sold pursuant to this Agreement, other than such as have been made or obtained or will be made or obtained pursuant to the Nasdaq Marketplace Rules (the "NASDAQ RULES") prior to the Closing and except for any securities filings required to be made under state securities laws.

6.6 Capitalization. As of the date of this Agreement, the authorized capital stock of the Company consists of 100,000,000 shares of Common Stock and 10,000,000 shares of preferred stock, par value $0.001 per share. As of the date of this Agreement, (a) 46,376,004 shares of Common Stock are issued and outstanding, (b) 45,731 shares of Common Stock are issued and held in the treasury of the Company, (c) no shares of preferred stock are designated as Preferred Stock, (d) 10,327,905 shares of Common Stock are reserved for issuance upon exercise of options to purchase the Common Stock under the Company's stock option plans and employee stock purchase plan and (e) 1,149,615 shares of Common Stock have been reserved for issuance upon the exercise of warrants to purchase Common Stock. The Shares and the Warrants to be sold pursuant to this Agreement and the Warrant Shares have been duly authorized, and when issued and paid for in accordance with the terms of this Agreement and the Warrants, will be duly and validly issued, fully paid and nonassessable. The outstanding shares of capital stock of the Company have been duly and validly issued and are fully paid and nonassessable, have been issued in compliance with all federal, state and foreign securities laws and were not issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. Except as set forth in or contemplated by the Agreements and the Warrants, there are no

outstanding rights (including, without limitation, preemptive rights), warrants or options to acquire, or instruments convertible into or exchangeable for, any unissued shares of capital stock or other equity interest in the Company, or any contract, commitment, agreement, understanding or arrangement of any kind to which the Company is a party and relating to the issuance or sale of any capital stock of the Company, any such convertible or exchangeable securities or any such rights, warrants or options. Without limiting the foregoing, no preemptive right, co-sale right, right of first refusal or other similar right exists with respect to the issuance and sale of the Shares and the Warrants or the issuance of the Warrant Shares. Other than Voting Agreements substantially in the form attached hereto as EXHIBIT H, there are no stockholder agreements, voting agreements or other similar agreements with respect to the Common Stock to which the Company is a party.

6.7 Legal Proceedings. There is no material action, suit or governmental proceeding pending or, to the knowledge of the Company, threatened against or involving the Company or any of its properties or other assets or which questions the validity of this Agreement or any action taken or to be taken by the Company pursuant to the Agreements or in connection with the transactions contemplated hereby. There is no fact or circumstance known to the Company that would reasonably be expected to give rise to any material action, suit, proceeding, inquiry or investigation against, relating to or affecting the Company or any of its properties or other assets. The Company is not subject to any judgment, order or decree that

materially restricts its business practices or its ability to acquire any property or conduct its business in any area.

6.8 No Violations. The Company is not in violation of its certificate of incorporation or its bylaws or, to the knowledge of the Company, in material violation of any law, administrative regulation, ordinance or order of any court or governmental agency, arbitration panel or authority applicable to the Company, and is not in default (and there exists no condition which, with the passage of time or otherwise, would constitute a default) in the performance of any Material Contract. No notice, charge, claim, action or assertion has been received by the Company alleging such a violation or default.

6.9 Governmental Permits, Etc. The Company has all necessary franchises, licenses, certificates and other authorizations from any foreign, federal, state or local government or governmental agency, department or body that are currently necessary for the operation of the business of the Company as currently conducted, except where the failure to currently possess such items would not have a Material Adverse Effect on the Company. The Company has not received any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such certificate, authorization or permit.

6.10 Intellectual Property. The Company owns or possesses and holds valid and sufficient rights to use all patents, patent rights or licenses, inventions, collaborative research agreements, trade secrets, know-how, trademarks, service marks, trade names and copyrights that are necessary to conduct its business as currently conducted and as proposed to be conducted in all material respects. The expiration of any patents, patent rights, trade secrets, trademarks, service marks, trade names or copyrights, or termination or expiration of any exclusive licenses thereto, would not, individually or in the aggregate, result in a Material Adverse Effect on the Company. The Company has not received any notice of, and has no knowledge of, any infringement of or conflict with rights of the Company by others with respect to any patent, patent rights, inventions, trade secrets, know-how, trademarks, service marks, trade names or copyrights; and the Company has not received any notice of, and has no knowledge of, any infringement of or conflict with rights of others with respect to any patent, patent rights, inventions, trade secrets, know-how, trademarks, service marks, trade names or copyrights of or exclusively licensed to the Company. There is no claim being made against the Company regarding patents, patent rights or licenses, inventions, collaborative research, trade secrets, know-how, trademarks, service marks, trade names or copyrights. The Company does not, in the conduct of its business, infringe or conflict with any right or patent of any third party, or any discovery, invention, product or process that is the subject of a patent application filed by any third party, known to the Company. The Company has taken reasonable steps to protect the material intellectual property of the Company. The execution, delivery and performance by the Company of this Agreement, and the consummation of the transactions contemplated hereby, will not result in the loss or impairment of, or give rise to any right of any third party to terminate or materially alter, any of the Company's material rights to own any of its intellectual property or its material rights under any agreements relating to such intellectual property, nor require the consent of any governmental authority or third party in respect of any such intellectual property.

6.11 Financial Statements. The financial statements of the Company and

the related notes contained in the Company's SEC Documents have been prepared from and are in accordance with the books and records of the Company and present fairly, in accordance with United States generally accepted accounting principles ("GAAP"), the financial position of the Company as of the dates indicated, and the results of its operations and cash flows for the periods therein specified. Such financial statements (including the related notes) have been prepared in accordance with GAAP applied on a consistent basis throughout the periods therein specified and have complied, as of their respective dates, in all material respects with the applicable accounting requirements and rules and regulations of the SEC. The Company has not created any entities or entered into any transactions or created any liabilities or obligations of any nature, whether or not accrued, contingent or otherwise, for the purpose of avoiding disclosure required by GAAP.

6.12 Absence of Changes. Since December 31, 2002, there has not been (a) any Material Adverse Effect on the Company, (b) any material obligation, direct or contingent, incurred by the Company, except obligations incurred in the ordinary course of business, (c) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company, (d) any loss or damage (whether or not insured) to the physical property of the Company which has had a Material Adverse Effect on the Company, (e) any change in any method of tax or GAAP or accounting practice that would or would reasonably be expected to result in any material change in the financial statements, (f) any payment, loan or advance of any amount to, or sale, transfer or lease of any material properties or assets (real, personal or mixed, tangible or intangible) to, or any agreement or arrangement with, any executive officer or directors or employees of the Company, except such amounts or such agreements made in the ordinary course of business, (g) any amendment to the Company's certificate of incorporation, bylaws or similar organizational documents, (h) any issuance, sale, transfer, pledge, disposal of or encumbrance of any shares of any class or series of the Company's capital stock, or securities convertible into or exchangeable for, or options, warrants, calls, commitments or rights of any kind to acquire, any shares of any class or series of its capital stock, other than shares of Common Stock reserved for issuance on the date of this Agreement pursuant to the Company's stock option plans and employee stock purchase plan, the exercise of any options or warrants to purchase Common Stock outstanding on the date of this Agreement or existing agreements that require the Company to issue shares of Common Stock, (i) any redemption, purchase or other acquisition directly or indirectly of any shares of any class or series of the Company's capital stock, or any instrument or security which consists of or includes a right to acquire such shares (other than repurchases of restricted stock at the original purchase price pursuant to agreements outstanding on the date of this Agreement or entered into after the date of this Agreement in compliance with the provisions hereof), (j) except in the ordinary course of business and consistent with past practice or pursuant to the terms of its Material Contracts as in effect on the date hereof, any termination, modification or amendment to any of its Material Contracts or any waiver, release or assignment of any material rights under any Material Contract or material claims, (k) any revaluation in any material respect any of its assets, including any writing down of the value of inventory or writing-off of notes or accounts receivable, other than in the ordinary course of business consistent with past practice or as required by GAAP, (l) any settlement or compromise of any pending or threatened suit, action or claim that relates to the transactions contemplated hereby or is material to the Company, (m) any adoption of a plan of complete or

partial liquidation, dissolution, merger, consolidation, restructuring, recapitalization or other reorganization of the Company or (n) any agreement, whether in writing or otherwise, to take any action described in this Section 6.12.

6.13 Nasdaq Compliance. The Company's Common Stock is registered pursuant to Section 12(g) of the Exchange Act and is listed on Nasdaq, and the Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from Nasdaq. The Company has not been notified by Nasdaq of any action or potential action by Nasdaq or of any violation of any Nasdaq Rules that could result in the delisting of the Company's Common Stock from Nasdaq.

6.14 Reporting Status. The Company has filed in a timely manner all documents that the Company was required to file under the Exchange Act and the Nasdaq Rules during the twelve (12) months preceding the date of this Agreement. The Company has delivered to the Investors a copy of all SEC Documents filed within the ten (10) days preceding the date hereof. The SEC Documents complied in all material respects with the requirements of the Securities Act of 1933, as amended (the "SECURITIES ACT"), and the Exchange Act and the rules and regulations of the SEC promulgated thereunder as of their respective filing dates, and none of the SEC Documents, including any financial statements or schedules included or incorporated by reference therein, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements

therein, in light of the circumstances under which they were made, not misleading. The Chief Executive Officer and the Chief Financial Officer of the Company have signed, and the Company has furnished to the SEC, all certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 (the "CERTIFICATIONS"). Such Certifications contain no qualifications or exceptions to the matters certified therein and have not been modified or withdrawn, and neither the Company nor any of it officers has received notice from any governmental entity questioning or challenging the accuracy, completeness, content, form or manner of filing or submission of such Certifications.

6.15 Listing. The Company shall comply with all requirements of the National Association of Securities Dealers, Inc. with respect to the issuance of the Shares and the Warrants and the listing of the underlying Common Stock on Nasdaq.

6.16 No Manipulation of Stock. The Company has not taken and will not take any action outside the ordinary course of business designed to or that might reasonably be expected to cause or result in unlawful manipulation of the price of the Common Stock to facilitate the sale or resale of the Shares and the Warrants.

6.17 Accountants. Ernst & Young LLP, which expressed its opinion with respect to the financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2002, are independent accountants as required by the Securities Act and the rules and regulations promulgated thereunder.

6.18 Contracts.

(a) Except for the Material Contracts, the Company does not have any agreements, contracts and commitments not made in the ordinary course of business that are material to the Company.

(b) The Company does not have any employment agreements, or any other similar agreements that contain any severance or termination pay liabilities or obligations, that are not filed as exhibits to the SEC Documents.

(c) No purchase contract or commitment of the Company continues for a period of more than twelve (12) months or is in excess of the normal, ordinary and usual requirements of business.

(d) The Company is not in default under or in material violation of, nor to the Company's knowledge, is there any valid basis for any claim of default, under or material violation of, any Material Contract.

(e) The Company does not have any debt obligations for borrowed money, including any guarantee of or agreement to acquire any such debt obligation of others, or any power of attorney outstanding or any obligation or liability (whether absolute, accrued, contingent or otherwise) as guarantor, surety, co-signer, endorser, co-maker, indemnitor or otherwise with respect to the obligation of any corporation, partnership, joint venture, association, organization or other entity.

(f) All agreements, contracts and commitments required to be filed by the Company under the Exchange Act or the Securities Act have been filed in a timely manner with the SEC.

(g) The Company is not materially restricted by agreement from carrying on its business anywhere in the world.

6.19 Taxes. The Company has duly and timely filed all necessary federal, state and foreign income and franchise tax returns and has paid or accrued all taxes shown as due thereon, and the Company has no knowledge of a tax deficiency which has been or might be asserted or threatened against it which would have a Material Adverse Effect on the Company.

6.20 Transfer Taxes. On the Closing Date, all stock transfer or other taxes (other than income taxes) which are required to be paid in connection with the sale and transfer of the Shares and the Warrants to be sold to the Investors hereunder will be, or will have been, fully paid or provided for by the Company and all laws imposing such taxes will be or will have been fully complied with.

6.21 Investment Company. The Company is not an "investment company" or an "affiliated person" of, or "promoter" or "principal underwriter" for, an investment company, within the meaning of the Investment Company Act of 1940, as amended.

6.22 Insurance. The Company maintains and will continue to maintain insurance of the types and in the amounts that the Company reasonably believes is adequate for its business, including, but not limited to, insurance against

theft, damage, destruction, acts of vandalism and all other risks customarily insured against by similarly situated companies, all of which insurance is in full force and effect.

6.23 DGCL 203. Prior to the date of this Agreement, the Board of Directors, at a meeting duly called and held, has (a) determined that the Agreement and the Offering are fair to, advisable and in the best interests of the Company and the stockholders of the Company, (b) approved the Offering and (c) resolved to recommend that the stockholders of the Company approve the Offering. The action taken by the Board of Directors constitutes approval of the Offering under the provisions of Section 203 of the Delaware General Corporation Law ("DGCL") such that Section 203 of the DGCL does not apply to this Agreement or the Offering, and such approval has not been amended, rescinded or modified. No other state takeover, antitakeover, moratorium, fair price, interested stockholder, business combination or similar statute or rule is applicable to the Offering. If any state takeover statute other than Section 203 of the DGCL becomes or is deemed to become applicable to this Agreement or the Offering, the Company shall take all reasonable action necessary to render such statute inapplicable to all of the foregoing.

6.24 Brokers or Finders. No agent, broker, investment banker, financial advisor or other firm or entity is or will be entitled to any broker's or finder's fee or any other commission or similar fee payable by the Company in connection with the Offering, except for amounts paid or payable to Houlihan Lokey Howard & Zukin (the "FINANCIAL ADVISOR"). The Company has no liabilities or obligations (absolute, accrued, contingent or otherwise) to the Financial Advisor except as set forth in the engagement letter between the Company and the Financial Advisor, which letter has been provided to the Investors.

6.25 Offering Materials. The Company has not distributed and will not distribute prior to the Closing Date any offering material in connection with the offering and sale of the Shares and the Warrants. The Company has not issued, offered or sold any shares of Common Stock (including for this purpose any securities of the same or a similar class as the Shares or the Warrant Shares or any securities convertible into or exchangeable or exercisable for the Shares or the Warrant Shares) within the six (6) month period preceding the date hereof or taken any other action, or failed to take any action, that, in any such case, would (i) eliminate the availability of the exemption from registration under Regulation D under the Securities Act in connection with the offer and sale of the Shares and the Warrants as contemplated hereby or (ii) cause the offering of the Shares and the Warrants pursuant to this Agreement to be integrated with prior offerings by the Company for purposes of the Securities Act. The Company shall not directly or indirectly take, and shall not permit any of its directors, or officers indirectly to take, any action (including any offering or sale to any person or entity of the Shares, the Warrants or any Common Stock) that will make unavailable the exemption from registration under the Securities Act being relied upon by the Company for the offer and sale to the Investors of the Shares and the Warrants as contemplated by this Agreement, including the filing of a registration statement under the Securities Act. No form of general solicitation or advertising within the meaning of Rule 502(c) under the Securities Act has been used or authorized by the Company or

any of its officers or directors in connection with the offer or sale of the Shares or the Warrants as contemplated by this Agreement or any other agreement to which the Company is a party.

6.26 Registration Rights. There are no registration or other similar rights to have any securities registered under any registration statement to be filed on behalf of the Investors pursuant to Sections 2.1 and 2.4 of the Investor Rights Agreement and no other registration rights exist with respect to the issuance or registration of the Shares and the Warrant Shares by the Company under the Securities Act that have not been satisfied or waived.

6.27 Books and Records. The books of account, minute books, stock record books and other records of the Company are complete and correct in all material respects and have been maintained in accordance with sound business practices and the requirements of Section 13(b)(2) of the Exchange Act, including an adequate system of internal controls. The minute books of the Company contain accurate and complete records of all meetings held of, and corporate action taken by, the stockholders, the Board of Directors and committees of the Board of Directors, and no meeting of any of such stockholders, the Board of Directors or such committees has been held for which minutes have not been prepared and are not contained in such minute books.

6.28 Employee Benefit Plans; Employee Matters. The consummation of the transactions contemplated by this Agreement will not, alone or in conjunction with any other possible event (including termination of employment) (i) entitle any current or former employee or other service provider of the Company to severance benefits or any other payment, compensation or benefit (including forgiveness of indebtedness), except as expressly provided by this Agreement or (ii) accelerate the time of payment or vesting, or increase the amount of compensation or benefit due any such employee or service provider, alone or in

conjunction with any other possible event (including termination of employment). The Company is in compliance in all material respects with all currently applicable laws and regulations respecting employment, discrimination in employment, terms and conditions of employment, wages, hours and occupational safety and health and employment practices, and is not engaged in any unfair labor practice. To the Company's knowledge, no employees of the Company are in violation of any term of any material employment contract, patent disclosure agreement, noncompetition agreement or any restrictive covenant to a former employer relating to the right of any such employee to be employed by the Company because of the nature of the business conducted or presently proposed to be conducted by the Company or to the use of trade secrets or proprietary information of others. No key employee of the Company has given written notice to the Company and, to the Company's knowledge, no key employee intends to terminate his or her employment with the Company.

6.29 Environmental Laws. The Company is not in violation of any applicable statute, law or regulation relating to the environment or occupational health and safety, and no material expenditures are or will be required in order to comply with any such existing statute, law or regulation, which could reasonably be expected to result in a Material Adverse Effect on the Company.

6.30 Regulatory Compliance. As to each of the product candidates of the Company, including, without limitation, product candidates or compounds currently under

research and/or development by the Company, subject to the jurisdiction of the United States Food and Drug Administration ("FDA") under the Federal Food, Drug and Cosmetic Act and the regulations thereunder ("FDCA") (each such product, a "LIFE SCIENCE PRODUCT"), such Life Science Product is being researched, developed, manufactured, tested and studied in compliance in all material respects with all applicable requirements under the FDCA and similar laws and regulations applicable to such Life Science Product, including those relating to investigational use, premarket approval, good manufacturing practices, labeling, advertising, record keeping, filing of reports and security. The Company has not received any notice or other communication from the FDA or any other federal, state or foreign governmental entity (i) contesting the premarket approval of, the uses of or the labeling and promotion of any Life Science Product or (ii) otherwise alleging any violation by the Company of any law, regulation or other legal provision applicable to a Life Science Product. Neither the Company, nor any officer, employee or agent of the Company has made an untrue statement of a material fact or fraudulent statement to the FDA or other federal, state or foreign governmental entity performing similar functions or failed to disclose a material fact required to be disclosed to the FDA or such other federal, state or foreign governmental entity.

6.31 Title to Property and Assets. The Company owns its property and tangible assets free and clear of all mortgages, liens, loans and encumbrances, except such encumbrances and liens that arise in the ordinary course of business and do not materially impair the Company's ownership or use of such property or tangible assets. With respect to the property and tangible assets it leases, the Company is in compliance with such leases and, to the knowledge, holds a valid leasehold interest free of any liens, claims or encumbrances.

6.32 Insider Interests; Related Party Transactions. Except for inventors who have assigned their patent rights to the Company and which assignments have been filed with the United States Patent and Trademark Office, to the Company's knowledge no executive officer or director of the Company has any material interest in any material property, real or personal, tangible or intangible, including any invention, patent, trademark or trade name, used in or pertaining to the business of the Company.

6.33 Real Property Holding Corporation. The Company is not a real property holding corporation within the meaning of Section 897(c)(2) of the Internal Revenue Code of 1986, as amended, and any regulations promulgated thereunder.

7. Representations, Warranties and Covenants of the Investors.

Each Investor, severally and not jointly, hereby represents and warrants to the Company as follows:

7.1 Investment Experience and Interest. Such Investor represents and warrants to, and covenants with, the Company that: (a) the Investor is an "accredited investor" as defined in Regulation D under the Securities Act and the Investor is knowledgeable, sophisticated and experienced in making, and is qualified to make decisions with respect to, investments in shares presenting an investment decision like that involved in the purchase of the Shares and the Warrants, including investments in securities issued by the Company and investments in comparable companies, and has requested, received, reviewed and considered all

information it deemed relevant in making an informed decision to purchase the Shares and the Warrants, (b) the Investor is acquiring the number of Shares set forth on SCHEDULE A hereto and the Warrants to purchase the number of shares of Common Stock set forth on SCHEDULE A hereto in the ordinary course of its business and for its own account and with no present intention of distributing any of such Shares or Warrants or any arrangement or understanding with any other persons regarding the distribution of such Shares or Warrants, (c) the Investor will not, directly or indirectly, offer, sell, pledge, transfer or otherwise dispose of (or solicit any offers to buy, purchase or otherwise acquire or take a pledge of) any of the Shares or the Warrants except in compliance with the Securities Act, applicable state securities laws and the respective rules and regulations promulgated thereunder and (d) the Investor has, in connection with its decision to purchase the number of Shares set forth on SCHEDULE A hereto and the Warrants to purchase the number of shares of Common Stock set forth on SCHEDULE A hereto, relied only upon the SEC Documents and the information incorporated by reference therein and the representations and warranties of the Company contained herein.

7.2 Registration or Exemption Requirements. Such Investor acknowledges and understands that the Shares and the Warrants may not be resold or otherwise transferred except in a transaction registered under the Securities Act, or unless an exemption from such registration is available. Such Investor understands that the Warrants and the certificates evidencing the Shares will be imprinted with a legend that prohibits the transfer of such securities unless (a) they are registered or such registration is not required and (b) if the transfer is pursuant to an exemption from registration under the Securities Act and, if the Company shall so request in writing, an opinion of counsel reasonably satisfactory to the Company is obtained to the effect that the transaction is so exempt; provided, however, that notwithstanding the foregoing, Section 3.2(d) hereof shall also apply to such transfers.

7.3 Foreign Jurisdictions. Such Investor acknowledges, represents and agrees that no action has been or will be taken in any jurisdiction outside the United States by the Company, or any agents acting on behalf of the Company, that would permit an offering of the Shares or the Warrants, or possession or distribution of offering materials in connection with the issue of the Shares and the Warrants, in any jurisdiction outside the United States where action for that purpose is required. Each Investor outside the United States will comply with all applicable laws and regulations in each foreign jurisdiction in which it purchases, offers, sells or delivers the Shares or the Warrants or has in its possession or distributes any offering material, in all cases at its own expense.

7.4 Due Authorization. Such Investor has all requisite corporate power and authority to execute, deliver and perform its obligations under the Agreements and Warrants, and the Agreements and Warrants have been duly authorized and validly executed and delivered by the Investor and no other corporate action on the part of the Investor is necessary to authorize the execution and delivery by the Investor of the Agreements or the Warrants. The Agreements and Warrants constitute legal, valid and binding agreements of the Investor, enforceable against the Investor in accordance with their terms, except as rights to indemnity and contribution may be limited by state or federal securities laws or the public policy underlying such laws, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' and contracting parties' rights

generally, and except as enforceability may be subject to general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law).

7.5 No Legal, Tax or Investment Advice. Such Investor understands that nothing in the Agreements or any other materials presented to the Investor in connection with the purchase and sale of the Shares and Warrants constitutes legal, tax or investment advice. The Investor has consulted such legal, tax and investment advisors as it, in its sole discretion, has deemed necessary or appropriate in connection with its purchase of the Shares and the Warrants. The Investor has not, and will not, rely on the fairness opinion, if any, that the Financial Advisor may deliver to the Board of Directors with respect to the Offering.

8. Covenants.

8.1 Stockholders' Meeting. The Company shall, in accordance with the laws of the State of Delaware, its certificate of incorporation and its bylaws, as each may be amended, use its commercially reasonable best efforts to convene

a meeting of holders of the Common Stock (the "STOCKHOLDERS' MEETING") within thirty (30) days (or such other time period that is mutually agreed to by the Company and a Majority in Interest of Investors) after the date of the Proxy Statement (as defined in Section 8.2), to consider and vote upon giving Stockholder Approval. The Board of Directors shall recommend such approval by the stockholders (the "COMPANY Recommendation") and shall not (i) withdraw, modify or qualify (or propose to withdraw, modify or qualify) in any manner adverse to Investors such recommendation in favor of the Required Stockholder Approval or (ii) take any action or make any statement in connection with the Stockholders' Meeting inconsistent with such recommendation in favor of the Required Stockholder Approval (collectively, a "CHANGE IN THE COMPANY RECOMMENDATION"); provided, however, that the Board of Directors may make a Change in the Company Recommendation pursuant to Section 8.7 hereof and to effect any action permitted by Section 9 hereof. Notwithstanding any Change in the Company Recommendation, the Company shall nonetheless cause the Stockholders' Meeting to be convened and a vote to be taken, and nothing contained herein shall be deemed to relieve the Company of such obligation unless this Agreement is terminated pursuant to Section 9.

8.2 Filing of Proxy Statement; Amendment of Form 10-K. Not later than May 9, 2003, the Company shall prepare and file with the SEC a proxy statement meeting the requirements of Section 14 of the Exchange Act and the related rules and regulations thereunder promulgated by the SEC (the "PROXY STATEMENT") to solicit Stockholder Approval. The Company shall use its commercially reasonable best efforts to cause the Proxy Statement to be cleared by the SEC as promptly as reasonably practicable after such filing, and shall promptly mail the Proxy Statement to the stockholders of the Company. The Company shall keep the Investors apprised of the status of matters relating to the Proxy Statement and the Stockholders' Meeting, including promptly furnishing the Investors and their counsel with copies of notices or other communications related to the Proxy Statement, the Stockholders' Meeting or the transactions contemplated hereby received by the Company from the SEC or Nasdaq. The Company shall use its commercially reasonable best efforts to prepare and file with the SEC prior to the filing of the Proxy Statement an amendment of its Annual Report on Form 10-K for the year ended December 31, 2002 in order to file certain agreements as identified in Section 6.14 of the Company's Disclosure Schedule.

8.3 Election of Directors. The Company will use its commercially reasonable best efforts to cause, at the Closing, (i) the MPM Representatives to be appointed as members of the Board of Directors, (ii) one (1) of the MPM Representatives to be designated as a member of the compensation committee of the Board of Directors and (iii) one (1) of the MPM Representatives to be designated as a member of the nominating committee of the Board of Directors.

8.4 Nasdaq Listing. The Company shall file a listing application with Nasdaq for the Shares and the Warrant Shares.

8.5 Delivery of Warrant Shares. The Company covenants to each Investor that, upon exercise of the Warrant(s) held by such Investor, it shall use its commercially reasonable efforts to cause the Warrant Shares to be issued and promptly delivered to such Investor in accordance with the Certificate; provided, however, that such issuance and delivery shall occur no later than ten (10) business days after the Company's receipt of the Investor's surrender of the Warrant(s) that such Investor desires to exercise.

8.6 Rights Offering and Option Plan Matters.

(a) The Company and the Investors acknowledge and agree that, promptly after the Closing, the Company intends to offer to its stockholders (excluding the Investors) non-transferable rights to purchase 15,625,000 shares of Common Stock at the Purchase Price, and each Investor hereby agrees to waive any right to participate in such rights offering.

(b) The Company and the Investors acknowledge and agree that the Company shall solicit the approval of its stockholders of, and, if such stockholder approval is obtained, shall effect (i) at the Closing, the Plan Amendments and (ii) after the Closing, the Repricing.

8.7 No Solicitation.

(a) The Company and each of its officers, directors and agents shall not take, cause or permit (and the Company shall use its commercially reasonable efforts to ensure that none of its representatives takes, causes or permits) any person to take, directly or indirectly, any of the following actions with any third party: (i) solicit, knowingly encourage, initiate or participate in any negotiations, inquiries or discussions with respect to any offer or proposal to acquire the business, assets or capital shares of the Company (excluding non-exclusive licenses entered into in the ordinary course of business), whether by merger, consolidation, other business combination, purchase of capital stock, purchase of assets, license, lease, tender or exchange offer or otherwise (each of the foregoing, an "ALTERNATIVE PROPOSAL"), (ii) disclose, in connection with an Alternative Proposal, any nonpublic information concerning Company's business or properties or afford to any third

party access to its properties, books or records, except in the ordinary course of business and as required by law or pursuant to a governmental request for information, (iii) enter into or execute any agreement providing for an Alternative Proposal or (iv) make or authorize any public statement, recommendation or solicitation in support of any Alternative Proposal or any offer or proposal relating to an

Alternative Proposal, other than with respect to the Offering; provided, however, that, in each case, (A) if and to the extent that (1) the Stockholders' Meeting has not yet occurred, (2) the Board of Directors believes in good faith, after consultation with the Company's legal counsel (and, in order for the Company to withhold, withdraw, modify or change in a manner adverse to the Investors or effect a Change in the Company Recommendation, the Company's Financial Advisor), that such Alternative Proposal is, or could reasonably be expected to lead to, a Superior Proposal (as defined hereafter) and (3) the Board of Directors believes in good faith, considering the advice of the Company's counsel, that the failure to participate in such negotiations or discussions, disclose such nonpublic information or provide such access to its properties, books or records would be inconsistent with the fiduciary duties of the Board of Directors under applicable law, then the Company may participate in discussions or negotiations regarding such Alternative Proposal, provide non-public information with respect to the Company (but only to the extent that such information was previously provided to the Investors prior to the execution of this Agreement or is provided to the Investors concurrently therewith) or afford access to the properties, books or records of the Company, as applicable, for no more than five (5) business days from the date of receipt of such Alternative Proposal and (B) if and to the extent that (1) the Stockholders' Meeting has not yet occurred, (2) the Board of Directors believes in good faith, after consultation with the Company's legal counsel (and, in order for the Company to withhold, withdraw, modify or change in a manner adverse to the Investors or effect a Change in the Company Recommendation, the Company's Financial Advisor), that such Alternative Proposal is a Superior Proposal and (3) the Board of Directors believes in good faith, considering the advice of the Company's counsel, that the failure to participate in such negotiations or discussions, disclose such nonpublic information, provide such access to its properties, books or records, enter into any agreement providing for such Superior Proposal or make or authorize any public statement, recommendation or solicitation in support of such Superior Proposal or any offer or proposal relating to such Superior Proposal would be inconsistent with the fiduciary duties of the Board of Directors under applicable law, then the Company may participate in discussions or negotiations regarding such Superior Proposal, provide non-public information with respect to the Company (but only to the extent that such information was previously provided to the Investors prior to the execution of this Agreement or is provided to the Investors concurrently therewith), afford access to the properties, books or records of the Company, enter into any agreement relating to such Superior Proposal (subject to full compliance with Section 8.8 hereof) or make or authorize any public statement, recommendation or solicitation in support of such Superior Proposal or any offer or proposal relating to an Superior Proposal, as applicable (subject to full compliance with Section 8.8 hereof).

(b) In the event that the Company is contacted by any third party expressing an interest in discussing an Alternative Proposal, the Company will promptly, but in no event later than twenty-four (24) hours following the Company's knowledge of such contact, notify the Investors in writing of such contact and the identity of the third party so contacting the Company and shall promptly, but in no event later than twenty-four (24) hours, advise the Investors of any material modification or proposed modification thereto.

(c) Nothing contained in this Agreement shall prohibit the Company or the Board of Directors from taking and disclosing to the Company's stockholders a

position with respect to an unsolicited bona fide tender or exchange offer by a third party pursuant to Rule 14e-2(a) of the Exchange Act or from making any disclosure required by applicable law.

(d) For purposes of this Agreement, a "SUPERIOR PROPOSAL" means any unsolicited written bona fide offer or proposal from any party other than the parties hereto and any of their affiliates to acquire all or thirty percent (30%) or more of the business, assets or capital shares of the Company (excluding non-exclusive licenses entered into in the ordinary course of business), whether by merger, consolidation, other business combination, purchase of capital stock, purchase of assets, license, lease, tender or exchange offer or otherwise, (i) on terms (including conditions to consummation of the contemplated transaction) which the Board of Directors in its reasonable good faith judgment (after consultation with and based on the written advice of its Financial Advisor) believes to be more favorable to its stockholders from a

financial point of view than the Offering and the transactions contemplated by this Agreement and (ii) that is not attributable to a material breach by the Company of Section 8.7(a) hereof.

(e) Notwithstanding Section 8.7 hereof, the Company may negotiate with respect to the transaction identified in Section 8.7 of the Company's Disclosure Schedule on the conditions identified therein; provided, however, that any such material terms as disclosed in Section 8.7 of the Company's Disclosure Schedule shall not change. The negotiation or consummation of such transaction (i) shall not affect the obligations of the Company pursuant to the Agreements, including, but not limited to, the obligation of the Company to complete the transactions contemplated hereby, and (ii) shall not be construed as a Superior Proposal.

8.8 Third Party Offer. During the period from the date of this Agreement until the Closing or the effective date of termination of this Agreement pursuant to the termination provisions of Sections 9.1(a), 9.1(b), 9.1(c), 9.1(d), 9.1(f) or 9.1(g), if the Board of Directors determines in good faith to accept a Superior Proposal, prior to accepting such Superior Proposal, the Company shall first (a) disclose to the Investors the terms and conditions of such Superior Proposal and (b) offer the Investors the opportunity to enter into a transaction with the Company on terms no less favorable to the Company and its stockholders from a financial point of view (including conditions to consummation of the contemplated transactions) than those contained in the Superior Proposal (the "OFFER"). A Majority in Interest of the Investors shall be entitled to notify the Company within five (5) business days of the terms of a transaction with the Company in response to the Offer (a "COUNTER PROPOSAL"). If the terms of the Counter Proposal are determined by the Board of Directors (after consultation with its legal and financial advisors) in good faith to be no less favorable to the Company and its stockholders from a financial point of view (including conditions to consummation of the contemplated transaction) than those contained in the Superior Proposal, then the Company shall accept the Counter Proposal. If the Company does not receive a Counter Proposal from a Majority in Interest of the Investors within such five (5) business day period, the Company may accept the Superior Proposal, provided there are no subsequent material changes to the terms of such Superior Proposal. If the terms of such Superior Proposal are materially changed, such Superior Proposal shall be deemed a new proposal and shall be subject to each of the terms of this Section 8.8. This Section

8.8 shall apply to any Superior Proposal made by any person or entity at any time prior to the termination of the Investors' rights under this Section 8.8.

8.9 Operation of Business. Except as contemplated by this Agreement, the Company shall carry on its business in the ordinary course in substantially the same manner as heretofore conducted and, to the extent consistent with such business, use its commercially reasonable efforts consistent with past practice and policies to preserve intact its present business organizations, keep available the services of its present officers, consultants and employees and preserve its relationships with customers, suppliers and others having business dealings with it. The Company shall promptly notify the Investors of any event or occurrence or emergency, which is not in the ordinary course of business of the Company. The Company shall not amend or modify the charter of any committee of the Board of Directors without the consent of a Majority in Interest of the Investors, which consent shall not be unreasonably withheld.

8.10 Reasonable Efforts; Notification; Representations. Subject to the other terms and conditions of this Agreement, each of the parties to this Agreement shall use its commercially reasonable efforts to take promptly, or cause to be taken, all actions, and to do promptly, or cause to be done, all things necessary, proper or advisable under applicable laws and regulations to consummate and make effective the Offering contemplated by this Agreement. Each party to this Agreement shall give prompt notice to each other party to this Agreement upon becoming aware that any representation or warranty made by such party in this Agreement has become untrue or inaccurate or that such party has failed to comply with or satisfy in any material respect any covenant, condition or agreement to be complied with or satisfied by such party under this Agreement, in each case such that the conditions set forth in Section 4 or Section 5, as the case may be, would not be satisfied. No party to this Agreement shall take any action that would cause any representation or warranty made by such party in this Agreement to be untrue if made at the Closing.

8.11 Indemnification Agreements; Charter Documents. Promptly following the date hereof and prior to the time that the MPM Representatives become members of the Board of Directors, the Company shall execute indemnification agreements with each director appointed or elected to the Board of Directors pursuant to Section 8.3.

8.12 HSR Compliance. The Company and each of the Investors shall at all times use commercially reasonable efforts to comply with the provisions of the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended.

8.13 Executive Recruiting Firm. The Company shall retain an executive recruiting firm, reasonably acceptable to a Majority in Interest of the Investors, to conduct a search for and diligently pursue the hire of a senior executive officer in the area of drug development (which individual shall have extensive small molecule development experience and expertise and be acceptable to the Board of Directors) until such time as such senior executive officer in the area of drug development is appointed by the Board of Directors.

9. Termination.

9.1 Termination Events. Without prejudice to other remedies that may be available to the parties by law or this Agreement, this Agreement may be terminated and the transactions contemplated hereby may be abandoned at any time prior to the Closing:

(a) mutually, by the written consent of the Company and a Majority in Interest of the Investors;

(b) by either the Company or a Majority in Interest of the Investors by giving written notice to the other party or parties if the Closing shall not have occurred prior to August 31, 2003, unless extended by written agreement of such parties; provided, however, that the party seeking termination pursuant to this subsection (b) is not in default or material breach hereunder and provided, further, that the right to terminate this Agreement under this subsection (b) shall not be available to any party whose failure to fulfill any obligation under this Agreement has been the cause of, or resulted in, the failure of the Closing to occur on or before such date;

(c) by either the Company or a Majority in Interest of the Investors by giving written notice to the other party or parties if any governmental entity shall have issued an injunction or other ruling prohibiting the consummation of any of the transactions contemplated by this Agreement and such injunction or other ruling shall not be subject to appeal or shall have become final and unappealable;

(d) by either the Company or a Majority in Interest of the Investors in the event that the Required Stockholder Approval is not obtained at the Stockholders' Meeting;

(e) by either the Company or a Majority in Interest of the Investors, if (i) the Company shall have entered into an agreement to consummate a Superior Proposal, (ii) the Board of Directors shall have recommended to the stockholders of the Company a Superior Proposal or (iii) the Board of Directors shall have withdrawn, modified or qualified in any manner adverse to the Investors or made any public statement inconsistent with the Company Recommendation; provided, however, that, in order for the termination of this Agreement by the Company pursuant to this clause (e) to be deemed effective, the Company shall have complied with all provisions of Sections 8.7 and 8.8;

(f) by a Majority in Interest of the Investors, if (i) the Company shall have materially breached any covenant or obligation in this Agreement and such breach is not cured within ten (10) business days of the date of the delivery to the Company by an Investor of a written notice of such breach or (ii) any of the Company's representations and warranties contained in this Agreement shall have become inaccurate as of a date subsequent to the date of this Agreement (as if made on such subsequent date), such that the condition set forth in Section 5.1 would not be satisfied as of such date and such breach is not cured within thirty (30) days of the date of the delivery to the Company by an Investor of a written notice of such breach; or

(g) by a Majority in Interest of the Investors, if there shall have occurred an event or events which, individually or in the aggregate, constitute a Material Adverse Effect on the Company and such Material Adverse Effect on the Company continues for at least thirty (30) days after the date of delivery to the Company by an Investor of a written notice of such Material Adverse Effect on the Company.

9.2 Effect of Termination. In the event of any termination of this Agreement pursuant to Section 9.1, all rights and obligations of the parties hereunder shall terminate without any liability on the part of any party or its Affiliates in respect thereof; provided, however, that such termination shall not relieve the Company or any Investor of any liability for any willful breach of this Agreement. If this Agreement is terminated pursuant to Section 9.1(d) or Section 9.1(f)(i), the Company shall promptly reimburse the Investors for their reasonable and documented legal, financial, due diligence and advisory out-of-pocket fees and expenses incurred directly in connection with this Agreement and the transactions contemplated hereby (subject to the limit on legal expenses set forth in Section 10.4). If this Agreement is terminated pursuant to Section 9.1(e), the Company shall (a) promptly reimburse the Investors for their reasonable and documented legal, financial, due diligence and advisory out-of-pocket fees and expenses incurred directly in connection

with this Agreement and the transactions contemplated hereby (subject to the limit on legal expenses set forth in Section 10.4) and (b) upon the consummation of a transaction resulting from the Superior Proposal, shall pay to the Investors an aggregate amount of $1.5 million. Each Investor's pro rata share of such $1.5 million payment shall be determined in relation to the proportion that such Investor's Aggregate Purchase Price bears to the total Aggregate Purchase Price committed by all Investors.

10. Miscellaneous.

10.1 Notices. All notices, requests, consents and other communications hereunder shall be in writing; shall be mailed (a) if within the domestic United States, by first-class registered or certified airmail, by nationally recognized overnight express courier, postage prepaid, or by facsimile or (b) if delivered to or from outside the United States, by International Federal Express or facsimile; shall be deemed given: (i) if delivered by first-class registered or certified mail domestic, three business days after so mailed, (ii) if delivered by nationally recognized overnight carrier, one business day after so mailed, (iii) if delivered by International Federal Express, two business days after so mailed or (iv) if delivered by facsimile, upon electric confirmation of receipt; and shall be delivered as addressed as follows:

(a) if to the Company, to:

Rigel Pharmaceuticals, Inc.
1180 Veterans Boulevard
South San Francisco, CA 94080
Attn: James M. Gower
Chairman and Chief Executive Officer
Phone: (650) 624-1100
Telecopy: (650) 624-1133

(b) with a copy mailed to:

Cooley Godward LLP
Five Palo Alto Square
3000 El Camino Real
Palo Alto, CA 94306
Attn: Suzanne Sawochka Hooper
Phone: (650) 843-5000
Telecopy: (650) 849-7400

(c) if to the Investors, at the addresses on the SCHEDULE A hereto, or at such other address or addresses as may have been furnished to the Company in writing.

10.2 Amendment and Waiver. Any provision of this Agreement may be amended, waived or modified only upon the written consent of the Company and a Majority in Interest of the Investors; provided, however, that no amendment, waiver or modification of this Section 10.2, the form of Warrant attached hereto as EXHIBIT A or any of the conditions to the Investors' obligations set forth in Section 5, and no amendment, waiver or modification of any provision of this Agreement which is detrimental to any Investor in a manner materially different from any other Investor, shall be made without the consent of each affected Investor. Subject to the foregoing, any amendment or waiver effected in accordance with this Section 10.2 shall be binding upon each Investor and the Company.

10.3 Survival of Representations, Warranties and Agreements. Notwithstanding any investigation made by any party to this Agreement, all covenants, agreements, representations and warranties made by the Company and the Investors herein shall survive the execution of this Agreement until the third (3rd) anniversary of the Closing.

10.4 Expenses. The Company shall pay all costs and expenses that it incurs with respect to the negotiation, execution, delivery and performance of the Agreement and the transactions contemplated thereby. The Company shall, at the Closing, reimburse the reasonable and documented fees and expenses of counsel for MPM Capital incurred directly in connection with this Agreement and the transactions contemplated hereby, up to a maximum of $100,000.00 (the "MPM FEES"); provided, however, that if the SEC informs the Company that the Proxy Statement will be subject to a full review by, and comments from, the SEC, then the Company and MPM Capital shall negotiate in good faith to reach mutual agreement regarding a necessary increase in the maximum amount of the MPM Fees, if any.

10.5 Attorneys' Fees. In the event that any suit or action is instituted under or in relation to this Agreement, including without limitation to enforce any provision in this Agreement, the prevailing party in such dispute shall be entitled to recover from the losing party all fees, costs and expenses of enforcing any right of such prevailing party under or with respect to this

Agreement, including without limitation, such reasonable fees and expenses of attorneys and accountants, which shall include, without limitation, all fees, costs and expenses of appeals.

10.6 Public Announcements. Except as may be required by law or regulation, the Company shall not use the name of, or make reference to, any Investor or any of its affiliates in any press release or in any public manner (including any reports or filings made by the Company under the Exchange Act) without such Investor's prior written consent, which consent shall not be unreasonably withheld. The initial press release with respect to the execution of this Agreement shall be approved by the Company and MPM Capital on behalf of the Investors. Thereafter, so long as this Agreement is in effect, the Company and the Investors shall consult with each other before issuing any press release or otherwise making any public statements with respect to this Agreement or the transactions contemplated hereby without the prior consent of the other party, which consent shall not be unreasonably withheld; provided, however, that the Company, on the one hand, and the Investors, on the other hand, may, without the prior consent of the other party, issue a press release or make such public statement as may, upon the advice of counsel, be required by law if it has used all reasonable efforts to consult with the other party.

10.7 Headings. The headings of the various sections of this Agreement have been inserted for convenience of reference only and shall not be deemed to be part of this Agreement.

10.8 Pronouns. All pronouns contained herein, and any variations thereof, shall be deemed to refer to the masculine, feminine or neutral, singular or plural, as to the identity of the parties hereto may require.

10.9 Severability. In case any provision contained in this Agreement should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

10.10 Governing Law. This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of California, without giving effect to the principles of conflicts of law. The parties agree that any action brought by either party under or in relation to this Agreement, including without limitation to interpret or enforce any provision of this Agreement, shall be brought in, and each party agrees to and does hereby submit to the jurisdiction and venue of, any state or federal court located in the County of San Francisco, California.

10.11 Entire Agreement. This Agreement, including the Exhibits hereto, constitutes the full and entire understanding and agreement between the parties with regard to the subjects hereof, and no party shall be liable or bound to any other in any manner by any oral or written representations, warranties, covenants and agreements except as specifically set forth herein. Each party expressly represents and warrants that it is not relying on any oral or written representations, warranties, covenants or agreements outside of this Agreement.

10.12 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall constitute an original, but all of which, when taken together, shall constitute but one (1) instrument, and shall become effective when one (1) or more counterparts have been signed by each party hereto and delivered to the other parties.

10.13 Confidential Disclosure Agreement. Notwithstanding any provision of this Agreement to the contrary, any confidential disclosure agreement previously executed by the Company and the Investors in connection with the transactions contemplated by this Agreement shall remain in full force and effect in accordance with its terms following the execution of this Agreement and the consummation of the transactions contemplated hereby.

10.14 Tax Disclosure. Notwithstanding any provision of this Agreement to the contrary, any party to this Agreement (and any employee, representative, shareholder or other agent of any party to this Agreement) may disclose to any and all persons, without limitation of any kind, the tax treatment and tax structure of the transactions contemplated by this Agreement and all materials of any kind (including opinions or other tax analyses) that are provided to it relating to such tax treatment and tax structure; provided however, that such disclosure may not be made to the extent reasonably necessary to comply with any applicable federal or state securities laws; and provided further, that for this purpose, (a) the "TAX TREATMENT" of a transaction means the purported or claimed federal income tax treatment of the transaction and (b) the "TAX STRUCTURE" of a transaction means any fact that may be relevant to understanding the purported or claimed federal income tax treatment of the transaction.

IN WITNESS WHEREOF, the parties hereto have executed this COMMON STOCK AND WARRANT PURCHASE AGREEMENT as of the date set forth in the first paragraph hereof.

<TABLE>
<CAPTION>

COMPANY:	INVESTORS:
<S>	<C>
RIGEL PHARMACEUTICALS, INC.	MPM BIOVENTURES III, L.P.
By: _____	By: MPM BioVentures III GP, L.P., its General Partner
Name: _____	By: MPM BioVentures III LLC, its General Partner
Title: _____	By: _____
	Name: _____
	Title: Series A Member
	MPM BIOVENTURES III-QP, L.P.
	By: MPM BioVentures III GP, L.P., its General Partner
	By: MPM BioVentures III LLC, its General Partner
	By: _____
	Name: _____
	Title: Series A Member

</TABLE>

<TABLE>

<S>	<C>
	MPM BIOVENTURES III GMBH & CO. PARALLEL-BETEILIGUNGS KG
	By: MPM BioVentures III GP, L.P., in its capacity as the Managing Limited Partner
	By: MPM BioVentures III LLC, its General Partner
	By: _____
	Name: _____
	Title: Series A Member
	MPM BIOVENTURES III PARALLEL FUND, L.P.
	By: MPM BioVentures III GP, L.P., its General Partner
	By: MPM BioVentures III LLC,

its General Partner

By: _____

Name: _____

Title: Series A Member

</TABLE>

SIGNATURE PAGE TO
COMMON STOCK AND WARRANT PURCHASE AGREEMENT

<TABLE>

<S> <C>

MPM ASSET MANAGEMENT
INVESTORS 2003 BVIII LLC

By: _____

Name: _____

Title: Manager

MPM BIOEQUITIES MASTER FUND, L.P.

By: MPM BioEquities GP, L.P.,
its General Partner

By: MPM BioEquities GP LLC,
its General Partner

By: _____

Name: _____

Title: General Partner

</TABLE>

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<TABLE>

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ALTA BIOPHARMA PARTNERS II, L.P.

By: Alta BioPharma Management Partners
II, LLC

By: _____

Managing Director

ALTA EMBARCADERO BIOPHARMA
PARTNERS II, LLC

By: _____

V.P. of Finance & Admin.

</TABLE>

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<TABLE>

<S> <C>

FRAZIER HEALTHCARE IV, L.P.

By: FHM IV, LP, its General Partner
By: FHM IV, LLC, its General Partner

By:

Nathan Every, Authorized Representative

FRAZIER AFFILIATES IV, L.P.

By: FHM IV, LP, its General Partner
By: FHM IV, LLC, its General Partner

By:

Nathan Every, Authorized Representative

</TABLE>

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<TABLE>

<S> <C>

HBM BIOVENTURES (CAYMAN) LTD.

By:

Name: John Arnold
Title: Chairman and Managing Director

</TABLE>

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COMMON STOCK AND WARRANT PURCHASE AGREEMENT

SCHEDULE A

SCHEDULE OF INVESTORS

<TABLE>
<CAPTION>

INVESTOR	AGGREGATE PURCHASE PRICE	SHARES PURCHASED	WARRANT SHARES
<S>	<C>	<C>	<C>
MPM BIOVENTURES III, L.P. 111 Huntington Avenue 31st Floor Boston, MA 02199 (617) 425-9200 (T) (617) 425-9201 (F)	$ 1,399,249.92	2,186,328	437,265
MPM BIOVENTURES III-QP, L.P. 111 Huntington Avenue 31st Floor Boston, MA 02199 (617) 425-9200 (T) (617) 425-9201 (F)	$20,810,575.36	32,516,524	6,503,304
MPM BIOVENTURES III GMBH & CO. PARALLEL-BETEILIGUNGS KG 111 Huntington Avenue 31st Floor	$ 1,758,750.08	2,748,047	549,609

Boston, MA 02199 (617) 425-9200 (T) (617) 425-9201 (F)			
MPM BIOVENTURES III PARALLEL FUND, L.P. 111 Huntington Avenue 31st Floor Boston, MA 02199 (617) 425-9200 (T) (617) 425-9201 (F)	$ 628,499.84	982,031	196,406
MPM ASSET MANAGEMENT INVESTORS 2003 BVIII LLC 111 Huntington Avenue 31st Floor Boston, MA 02199 (617) 425-9200 (T) (617) 425-9201 (F)	$ 402,924.80	629,570	125,914
MPM BIOEQUITIES MASTER FUND, L.P. 111 Huntington Avenue 31st Floor	$ 1,000,000.00	1,562,500	312,500

<TABLE>

<S>	<C>	<C>	<C>
Boston, MA 02199 (617) 425-9200 (T) (617) 425-9201 (F)			
ALTA BIOPHARMA PARTNERS II, L.P. One Embarcadero Center Suite 4050 San Francisco, CA 94111 (415) 362-4022 (T) (415) 362-6178 (F)	$ 7,233,884.80	11,302,945	2,260,589
ALTA EMBARCADERO BIOPHARMA PARTNERS II, LLC One Embarcadero Center Suite 4050 San Francisco, CA 94111 (415) 362-4022 (T) (415) 362-6178 (F)	$ 266,115.20	415,805	83,161
FRAZIER HEALTHCARE IV, L.P. 601 Union Street, Suite 3300 Seattle, WA 98101 (206) 621-7200 (T) (206) 621-1848 (F)	$ 7,462,120.35	11,659,563	2,331,912
FRAZIER AFFILIATES IV, L.P. 601 Union Street, Suite 3300 Seattle, WA 98101 (206) 621-7200 (T) (206) 621-1848 (F)	$ 37,879.65	59,186	11,837
HBM BIOVENTURES (CAYMAN) LTD. Unit 10 Eucalyptus Building Crewe Road P.O. Box 30852 SMB Grand Cayman, Cayman Islands (345) 946-8002 (T) (345) 946-8003 (F)	$ 5,000,000.00	7,812,500	1,562,500
TOTALS	$46,000,000.00	71,874,999	14,374,997

SCHEDULE B

PROPOSED INCENTIVE PLAN AMENDMENTS (1)

<TABLE>
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	2000 EQUITY INCENTIVE PLAN	2000 NON-EMPLOYEE DIRECTOR PLAN	2000 EMPLOYEE STOCK PURCHASE PLAN
<S>	<C>	<C>	<C>

Proposed Amendments	Increase of 14,400,000 reserved shares and addition of "evergreen" feature. (2)	Increase of 600,000 reserved shares and 200% increase in option grants.	Increase of 600,000 reserved shares.

- ---

(1) All numbers reflected are pre-Reverse Stock Split.
(2) The Company shall not determine the size of the evergreen increase without the consent of a Majority in Interest of the Investors, which consent shall not be unreasonably withheld.

EXHIBIT A

FORM OF WARRANT

EXHIBIT B

RIGEL PHARMACEUTICALS, INC.

STOCK CERTIFICATE AND WARRANT QUESTIONNAIRE

Pursuant to Section 3.1 of the Agreement, please provide us with the following information:

1.	The exact name in which your Shares and Warrants are to be registered (i.e., the name that will appear on your stock certificate(s)). You may use a nominee name if appropriate:	_____
2.	The relationship between the Investor and the registered holder listed in response to item 1 above:	_____
3.	The mailing address of the registered holder listed in response to item 1 above:	_____
4.	The Social Security Number or Tax Identification Number of the registered holder listed in the response to item 1 above:	_____

EXHIBIT C

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

EXHIBIT D

FORM OF LEGAL OPINION OF COMPANY'S COUNSEL

EXHIBIT E

FORM OF SECOND INVESTOR RIGHTS AGREEMENT

EXHIBIT F

OFFICER'S CERTIFICATE

EXHIBIT G

SECRETARY'S CERTIFICATE

EXHIBIT H

VOTING AGREEMENT

EXHIBIT C

THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). SUCH SECURITIES MAY NOT BE SOLD OR TRANSFERRED IN THE ABSENCE OF REGISTRATION OR AN EXEMPTION THEREFROM. RIGEL PHARMACEUTICALS, INC. MAY REQUIRE AN OPINION OF COUNSEL REASONABLY ACCEPTABLE TO IT THAT A PROPOSED TRANSFER OR SALE IS IN COMPLIANCE WITH THE ACT.

THE SALE, TRANSFER OR VOTING OF THE SECURITIES REPRESENTED HEREBY IS RESTRICTED BY THE TERMS OF A SECOND INVESTOR RIGHTS AGREEMENT BY AND AMONG RIGEL PHARMACEUTICALS, INC. AND THE INVESTORS NAMED THEREIN. COPIES OF THE AGREEMENT MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDERS OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF RIGEL PHARMACEUTICALS, INC. AT THE PRINCIPAL EXECUTIVE OFFICES OF RIGEL PHARMACEUTICALS, INC.

RIGEL PHARMACEUTICALS, INC.

COMMON STOCK PURCHASE WARRANT

Warrant No. CS-[__] [_____] Shares
[_____ ___,] 2003

1. ISSUANCE. For value received, this Warrant is issued to [HOLDER], by RIGEL PHARMACEUTICALS, INC., a Delaware corporation (hereinafter with its successors called the "Company"), pursuant to the terms and conditions of that certain Common Stock and Warrant Purchase Agreement, dated as of April 29, 2003, by and among the Company and the investors listed on Schedule A thereto (the "Purchase Agreement").

2. PURCHASE PRICE; NUMBER OF SHARES. The registered holder of this Warrant (the "Holder"), commencing on the date hereof, is entitled upon surrender of this Warrant, with the subscription form annexed hereto duly executed, at the principal office of the Company, to purchase from the Company [_____ (_____)] [To be 20% of the Holder's shares under the Purchase Agreement] fully paid and nonassessable shares (the "Shares") of common stock, $.001 par value per share, of the Company (the "Common Stock"), at a price per share of $0.64 (the "Warrant Price"). Until such time as this Warrant is exercised in full or expires, the Warrant Price and the securities issuable upon exercise of this Warrant are subject to adjustment as hereinafter provided. The person or persons under whose name or names any certificate representing Shares shall be deemed to have become the holder of record of the Shares represented thereby as at the close of business on the date this Warrant is exercised with respect to such Shares, whether or not the transfer books of the Company shall be closed.

3. PAYMENT OF PURCHASE PRICE. The Purchase Price (as defined below) may be paid: (i) by certified or bank check or by wire transfer of immediately available funds to an account designated by the Company; (ii) by the surrender by the Holder to the Company of any promissory notes or other obligations issued by the Company, with all such notes and obligations

so surrendered being credited against the Purchase Price in an amount equal to the principal amount thereof plus accrued interest to the date of surrender; (iii) exercise of the "net issue election" right provided for in Section 4; or (iv) by any combination of the foregoing. The "Purchase Price" shall mean the amount equal to the then applicable Warrant Price multiplied by the number of Shares then being purchased.

4. NET ISSUE ELECTION. The Holder may elect to receive, without the payment by the Holder of any additional consideration, shares of Common Stock equal to the value of this Warrant or any portion hereof by the surrender of this Warrant or such portion to the Company, with the net issue election notice annexed hereto duly executed, at the principal office of the Company. Thereupon, the Company shall issue to the Holder such number of fully paid and nonassessable shares of Common Stock as is computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

where: X = the number of shares of Common Stock to be issued to the Holder pursuant to this Section 4.

Y = the number of shares of Common Stock covered by this Warrant in respect of which the net issue election is made pursuant to this Section 4.

A = the Fair Market Value (defined below) of one share of Common Stock, as determined at the time the net issue election is made pursuant

to this Section 4.

B = the Warrant Price in effect under this Warrant at the time the net issue election is made pursuant to this Section 4.

"Fair Market Value" of a share of Common Stock as of a particular date (the "Determination Date") shall mean the average of the closing or last reported sale prices of the Common Stock as reported on the Nasdaq National Market over the 30-day period ending five business days prior to the Determination Date; provided, however, that if (i) the Common Stock is neither traded on the Nasdaq National Market nor on a national securities exchange, then Fair Market Value shall be the average of the closing or last reported sale prices of the Common Stock over the 30-day period ending five business days prior to the Determination Date reflected in the over-the-counter market, as reported by the National Quotation Bureau, Inc. or any organization performing a similar function, or if closing prices are not then routinely reported for the over-the-counter market, the average of the last bid and asked prices of the Common Stock over the 30-day period ending five business days prior to the Determination Date and (ii) if there is no public market for the Common Stock, then Fair Market Value shall be determined in good faith by the Company's Board of Directors.

5. PARTIAL EXERCISE. This Warrant may be exercised in part, and the Holder shall be entitled to receive a new warrant, which shall be dated as of the date of this Warrant, covering the number of Shares in respect of which this Warrant shall not have been exercised.

6. FRACTIONAL SHARES. In no event shall any fractional share of Common Stock be issued upon any exercise of this Warrant. If, upon exercise of this Warrant as an entirety, the Holder would, except as provided in this Section 6, be entitled to receive a fractional share of Common Stock, then the Company shall pay in lieu thereof, the Fair Market Value of such fractional share in cash.

7. EXPIRATION DATE; EARLY TERMINATION. This Warrant or any Successor Warrant (as defined in Section 10 below) shall expire on the close of business on [_____ __,] 2008 [to be the fifth anniversary of the date of issuance] (the "Expiration Date"), and shall be void thereafter.

8. RESERVED SHARES; VALID ISSUANCE. The Company covenants that it will at all times from and after the date hereof reserve and keep available such number of its authorized shares of Common Stock, free from all preemptive or similar rights therein, as will be sufficient to permit the exercise of this Warrant in full into shares of Common Stock upon such exercise. If at any time prior to the Expiration Date the number of authorized but unissued shares of Common Stock shall not be sufficient to permit exercise of this Warrant, the Company shall take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes. The Company further covenants that such shares as may be issued pursuant to such exercise will, upon issuance, be duly and validly issued, fully paid and nonassessable and free from all taxes, liens and charges with respect to the issuance thereof.

9. STOCK SPLITS AND DIVIDENDS. If after the date hereof the Company shall subdivide the Common Stock, by split-up or otherwise, combine the Common Stock or issue additional shares of Common Stock in payment of a stock dividend on the Common Stock, then the number of Shares issuable upon the exercise of this Warrant shall forthwith be proportionately increased in the case of a subdivision or stock dividend, or proportionately decreased in the case of a combination, and the Warrant Price shall forthwith be proportionately decreased in the case of a subdivision or stock dividend, or proportionately increased in the case of a combination.

10. MERGERS AND RECLASSIFICATIONS.

(a) If after the date hereof the Company shall enter into any Reorganization (as hereinafter defined), then, as a condition of such Reorganization, lawful provisions shall be made, and duly executed documents evidencing the same from the Company or its successor shall be delivered to the Holder (a "Successor Warrant"), so that the Holder shall thereafter have the right to purchase, at a total price not to exceed that payable upon the exercise of this Warrant in full, the kind and amount of shares of stock and other securities and property receivable upon such Reorganization by a holder of the number of shares of Common Stock that might have been purchased by the Holder immediately prior to such Reorganization, and in any such case appropriate provisions shall be made with respect to the rights and interest of the Holder to the end that the provisions hereof (including without limitation, provisions for the adjustment of the Warrant Price and the number of shares issuable hereunder and the provisions relating to the net issue election) shall thereafter be applicable in relation to any shares of stock or other securities and property thereafter deliverable upon exercise hereof.

(b) For the purposes of this Section 10, the term "Reorganization" shall include without limitation any reclassification, capital reorganization or change of the Common Stock (other than as a result of a subdivision, combination or stock dividend provided for in Section 9 hereof), any consolidation of the Company with, or merger of the Company into, another corporation or other business organization (other than a merger in which the Company is the surviving corporation and which does not result in any reclassification or change of the outstanding Common Stock), or any sale or conveyance to another corporation or other business organization of all or substantially all of the assets of the Company

11. CERTIFICATE OF ADJUSTMENT. Whenever the Warrant Price is adjusted, as herein provided, the Company shall promptly deliver to the Holder a certificate of the Company's Chief Financial Officer setting forth the Warrant Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

12. NOTICES OF RECORD DATE, ETC. In the event of:

(a) any taking by the Company of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend or other distribution, or any right to subscribe for, purchase, sell or otherwise acquire or dispose of any shares of stock of any class or any other securities or property, or to receive any other right;

(b) any reclassification of the capital stock of the Company, capital reorganization of the Company, consolidation or merger involving the Company or sale or conveyance of all or substantially all of its assets; or

(c) any voluntary or involuntary dissolution, liquidation or winding-up of the Company;

then in each such event the Company will provide or cause to be provided to the Holder a written notice thereof. Such notice shall be provided at least 15 calendar days prior to the date specified in such notice on which any such action is to be taken.

13. REPRESENTATIONS, WARRANTIES AND COVENANTS. This Warrant is issued and delivered by the Company and accepted by each Holder on the basis of the following representations, warranties and covenants made by the Company:

(a) The Company has all necessary authority to issue, execute and deliver this Warrant and to perform its obligations hereunder. This Warrant has been duly authorized, issued, executed and delivered by the Company and is the valid and binding obligation of the Company, enforceable in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, reorganization or other similar laws of general application affecting the enforcement of the Holder's rights or by general equity principals or public policy concerns.

(b) The Shares have been duly authorized and reserved for issuance by the Company and, when issued in accordance with the terms hereof, will be validly issued, fully paid and nonassessable.

14. AMENDMENT AND WAIVER. The terms of this Warrant may be amended, modified or waived only with the written consent of the party against which enforcement of the same is sought.

15. REPRESENTATIONS AND COVENANTS OF THE HOLDER. This Warrant has been entered into by the Company in reliance upon the following representations and covenants of the Holder, which by its execution hereof the Holder hereby confirms:

(a) The Holder is an "accredited investor" as defined in Regulation D under the Securities Act of 1933, as amended (the "Securities Act"), and the Holder is knowledgeable, sophisticated and experienced in making, and is qualified to make decisions with respect to, investments in shares presenting an investment decision like that involved in the purchase of the Shares and the Warrant, including investments in securities issued by the Company and investments in comparable companies, and has requested, received, reviewed and considered all information it deemed relevant in making an informed decision to purchase the Warrant;

(b) The Holder is acquiring the Warrant in the ordinary course of its business and for its own account for investment only and with no present intention of distributing the Warrant or any of the Shares or any arrangement or understanding with any other persons regarding the distribution of the Warrant or the Shares; and

(c) The Holder will not, directly or indirectly, offer, sell, pledge, transfer or otherwise dispose of (or solicit any offers to buy, purchase

or otherwise acquire or take a pledge of) the Warrant or any of the Shares except in compliance with the Securities Act, applicable state securities laws and the respective rules and regulations promulgated thereunder.

16. NOTICES, TRANSFERS, ETC.

(a) Any notice or written communication required or permitted to be given to the Holder may be given by certified mail or delivered to the Holder at the address most recently provided by the Holder to the Company.

(b) Subject to compliance with applicable federal and state securities laws and any other contractual restrictions between the Company and the Holder contained in the Purchase Agreement or that certain Second Investor Rights Agreement, dated as of the date hereof, by and among the Company and the investors named therein, this Warrant may be transferred by the Holder with respect to any or all of the Shares purchasable hereunder. Upon surrender of this Warrant to the Company, together with the assignment notice annexed hereto duly executed, for transfer of this Warrant as an entirety by the Holder, the Company shall issue a new warrant of the same denomination to the assignee. Upon surrender of this Warrant to the Company, together with the assignment hereof properly endorsed, by the Holder for transfer with respect to a portion of the Shares, the Company shall issue a new warrant to the assignee, in such denomination as shall be requested by the Holder hereof, and shall issue to such Holder a new warrant covering the number of Shares in respect of which this Warrant shall not have been transferred.

(c) The Company acknowledges and agrees that an opinion of counsel shall not be required upon the transfer by the Holder of any securities to an "Affiliate" (as defined in Rule 12b-2 of the rules and regulations promulgated under the Securities and Exchange Act of 1934, as amended) of such Holder.

(d) In case this Warrant shall be mutilated, lost, stolen or destroyed, the Company shall issue a new warrant of like tenor and denomination and deliver the same (i) in exchange and substitution for and upon surrender and cancellation of any mutilated Warrant or (ii) in lieu of any Warrant lost, stolen or destroyed, upon receipt of an affidavit of the Holder or other evidence reasonably satisfactory to the Company of the loss, theft or destruction of such Warrant and an indemnification of loss by the Holder in favor of the Company.

17. TRANSFER TO COMPLY WITH THE SECURITIES ACT. This Warrant may not be exercised and neither this Warrant nor any of the Shares, nor any interest in either, may be offered, sold, assigned, pledged, hypothecated, encumbered or in any other manner transferred or disposed of, in whole or in part, except in compliance with applicable United States federal and state securities laws and the terms and conditions hereof. Each Warrant shall bear a legend in substantially the same form as the legend set forth on the first page of this Warrant. Each certificate for Shares issued upon exercise of this Warrant, unless at the time of exercise such Shares are acquired pursuant to a registration statement that has been declared effective under the Securities Act and applicable blue sky laws, shall bear legends substantially in the following form:

> "THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). SUCH SHARES MAY NOT BE SOLD OR TRANSFERRED IN THE ABSENCE OF REGISTRATION OR AN EXEMPTION THEREFROM. RIGEL PHARMACEUTICALS, INC. MAY REQUIRE AN OPINION OF COUNSEL REASONABLY ACCEPTABLE TO IT THAT A PROPOSED TRANSFER OR SALE IS IN COMPLIANCE WITH THE ACT."
>
> "THE SALE, TRANSFER OR VOTING OF THE SHARES REPRESENTED BY THIS CERTIFICATE IS RESTRICTED BY THE TERMS OF A SECOND INVESTOR RIGHTS AGREEMENT BY AND AMONG RIGEL PHARMACEUTICALS, INC. AND THE INVESTORS NAMED THEREIN. COPIES OF THE AGREEMENT MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDERS OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF RIGEL PHARMACEUTICALS, INC. AT THE PRINCIPAL EXECUTIVE OFFICES OF RIGEL PHARMACEUTICALS, INC."

Any certificate for any Shares issued at any time in exchange or substitution for any certificate for any Shares bearing such legends (except a new certificate for any Shares issued after the acquisition of such Shares pursuant to a registration statement that has been declared effective under the Securities Act) shall also bear such legends unless, in the opinion of counsel for the Company, the Shares represented thereby need no longer be subject to the restriction contained herein. The provisions of this Section 17 shall be binding upon all subsequent holders of certificates for Shares bearing the above legends and all subsequent holders of this Warrant, if any.

18. RIGHTS OF THE HOLDER. The Holder shall not, by virtue hereof, be entitled to any rights of a stockholder of the Company, either at law or equity, and the rights of the Holder are limited to those expressed in this Warrant. Nothing contained in this Warrant shall be construed as conferring upon the Holder hereof the right to vote, to consent or to receive notice as a stockholder of the Company on any matters or with respect to any rights whatsoever as a stockholder of the Company. No dividends or interest shall be payable or accrued in respect of this Warrant or the interest represented hereby or the Shares purchasable hereunder until, and only to the extent that, this Warrant shall have been exercised in accordance with its terms.

19. NO IMPAIRMENT. The Company will not, by amendment of its Amended and Restated Certificate of Incorporation or through any reclassification, capital reorganization, consolidation, merger, sale or conveyance of assets, dissolution, liquidation, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance of performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the Holder.

20. GOVERNING LAW. The provisions and terms of this Warrant shall be governed by and construed in accordance with the internal laws of the State of California.

21. SUCCESSORS AND ASSIGNS. This Warrant shall be binding upon the Company's successors and assigns and shall inure to the benefit of the Holder's successors, legal representatives and permitted assigns.

22. BUSINESS DAYS. If the last or appointed day for the taking of any action required or the expiration of any rights granted herein shall be a Saturday or Sunday or a legal holiday in California, then such action may be taken or right may be exercised on the next succeeding day that is not a Saturday or Sunday or such a legal holiday.

23. SEVERABILITY. If one or more provisions of this Warrant are held to be unenforceable under applicable law, such provision shall be excluded from this Warrant, and the balance of the Warrant shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its terms.

IN WITNESS WHEREOF, the Company has duly caused this Warrant to be signed by its duly authorized officer and to be dated as of the date first written above.

COMPANY:

RIGEL PHARMACEUTICALS, INC.

By: _____

Name _____

Title: _____

NOTICE OF EXERCISE

(1) The undersigned hereby:

[ ] elects to purchase _____ shares of Common Stock of the Company pursuant to the terms of the attached Warrant, and tenders herewith payment of the purchase price of such shares in full, together with all applicable transfer taxes, if any.

[ ] elects to exercise its net issuance rights pursuant to Section 4 of the attached Warrant with respect to _____ shares of Common Stock, and shall tender payment of all applicable transfer taxes, if any.

(2) Please issue a certificate or certificates representing said shares of Common Stock in the name of the undersigned or in such other name as is specified below:

(Name)

(Address)

(3) The undersigned represents that the aforesaid shares are being acquired for the account of the undersigned for investment and not with a view to, or for resale in connection with, the distribution thereof and that the undersigned has no present intention of distributing or reselling such shares, all except as in compliance with applicable securities laws.

- ---------- ----------

(Date) (Signature)

(Print name)

ASSIGNMENT

For value received _____ hereby sells, assigns and transfers unto _____

_____

[Please print or type the name and address of Assignee]

_____

the within Warrant, and does hereby irrevocably constitute and appoint _____ its attorney to transfer the within Warrant on the books of the within named Company with full power of substitution on the premises.

DATED:_____ _____

IN THE PRESENCE OF:

_____

EXHIBIT D

RIGEL PHARMACEUTICALS, INC.

SECOND INVESTOR RIGHTS AGREEMENT

[_____] [__], 2003

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RIGEL PHARMACEUTICALS, INC.
SECOND INVESTOR RIGHTS AGREEMENT

THIS SECOND INVESTOR RIGHTS AGREEMENT (the "AGREEMENT") is entered into as of [_____], 2003 by and among RIGEL PHARMACEUTICALS, INC., a Delaware corporation (the "COMPANY"), and the investors listed on EXHIBIT A hereto, referred to hereinafter as the "Investors" and each individually as an "Investor."

RECITALS

WHEREAS, the Investors are purchasing shares of the Company's common stock, par value $.001 per share (the "COMMON STOCK"), and warrants to purchase shares of Common Stock pursuant to that certain Common Stock and Warrant Purchase Agreement (the "PURCHASE AGREEMENT") dated as of April 29, 2003 (the "FINANCING");

WHEREAS, the obligations in the Purchase Agreement are conditioned upon the execution and delivery of this Agreement; and

WHEREAS, in connection with the consummation of the Financing, the parties desire to enter into this Agreement in order to grant registration and other rights to the Investors as set forth below.

NOW, THEREFORE, in consideration of the foregoing recitals and the mutual promises, representations, warranties and covenants hereinafter set forth and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

SECTION 1. GENERAL.

1.1 DEFINITIONS. Capitalized terms used but not otherwise defined herein shall have the meanings given them in the Purchase Agreement. As used in this Agreement the following terms shall have the following respective meanings:

(a) "COMMON WARRANTS" means those certain warrants to purchase Common Stock issued pursuant to the Purchase Agreement and held by the Investors listed on EXHIBIT A hereto and their permitted assigns.

(b) "EXCHANGE ACT" means the Securities Exchange Act of 1934, as amended.

(c) "FORM S-3" means such form under the Securities Act as in effect on the date hereof or any successor or similar registration form under the Securities Act subsequently adopted by the SEC that permits inclusion or incorporation of substantial information by reference to other documents filed by the Company with the SEC.

(d) "HOLDER" means any person owning of record or having the right to acquire Registrable Securities, or any assignee of record thereof in accordance with Section 2.10 hereof, which have not been sold to the public.

(e) "INITIATING HOLDERS" means the Holders of at least thirty percent (30%) of the Registrable Securities then outstanding.

(f) "PRIOR INVESTOR RIGHTS AGREEMENT" means that certain Amended and Restated Investor Rights Agreement, dated as of [April ___], 2003, by and among the Company and the investors named therein.

(g) "PRIOR REGISTRABLE SECURITIES" means the "Registrable Securities" (as defined in the Prior Investor Rights Agreement) then outstanding under the Prior Investor Rights Agreement, such Prior Rights Holders and their associated amounts of Prior Registrable Securities are as set forth hereto on EXHIBIT B.

(h) "PRIOR RIGHTS HOLDERS" means the "Holders" of "Registrable Securities" (each
as defined in the Prior Investor Rights Agreement) then outstanding under the Prior Investor Rights Agreement.

(i) "REGISTER," "REGISTERED" and "REGISTRATION" refer to a registration effected by preparing and filing a registration statement in compliance with the Securities Act and the declaration or ordering of effectiveness of such registration statement or document.

(j) "REGISTRABLE SECURITIES" means: (i) the Shares; (ii) the Warrant Shares; and (iii) any shares of Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the Shares and Warrant Shares. Notwithstanding the foregoing, Registrable Securities shall not include any shares of Common Stock: (A) sold by a person to the public either pursuant to a registration statement or Rule 144; (B) sold in a private transaction in which the transferor's rights under Section 2 of this Agreement are not assigned; or (C) held by a Holder (together with its affiliates) during such periods in which all of such shares may be sold by the Holder pursuant to Rule 144 within 90 days.

(k) "REGISTRATION EXPENSES" means all expenses incurred by the Company in complying with Sections 2.1, 2.3 and 2.4 hereof, including, without limitation, all registration and filing fees, printing expenses, fees and disbursements of counsel for the Company, reasonable fees and disbursements not to exceed $25,000 of a single special counsel for the Holders, blue sky fees and expenses and the expense of any special audits incident to, or required by, any such registration (but excluding the compensation of regular employees of the Company that shall be paid in any event by the Company).

(l) "SEC" or "COMMISSION" means the Securities and Exchange Commission.

(m) "SECURITIES ACT" means the Securities Act of 1933, as amended.

(n) "SELLING EXPENSES" means all underwriting discounts and selling commissions applicable to a sale of Registrable Securities.

(o) "SHARES" means the shares of Common Stock issued pursuant to the Purchase Agreement and held by the Investors listed on EXHIBIT A hereto and their permitted assigns.

(p) "SPECIAL REGISTRATION STATEMENT" means: (i) a registration statement relating to any employee benefit plan; (ii) a registration statement relating to any corporate reorganization or transaction under Rule 145 of the Securities Act, including any registration statements related to the issuance or resale of securities issued in such a transaction; or (iii) a registration statement in which the only securities being registered are shares of stock issuable upon conversion of debt securities.

(q) "WARRANT SHARES" means the shares of Common Stock issuable or issued upon exercise of the Common Warrants.

SECTION 2. REGISTRATION; ADDITIONAL REGISTRATION RIGHTS; ETC.

2.1 REGISTRATION OF THE SECURITIES. The Company shall:

(a) prepare and file with the SEC, as soon as practicable, but in no event later than 10 business days after the Closing Date (as defined in the Purchase Agreement), a registration statement on Form S-3 (the "REGISTRATION STATEMENT") for an offering to be made on a delayed or continuous basis pursuant to Rule 415 under the Securities Act registering the resale from time to time by the Investors of the Registrable Securities;

(b) use its commercially reasonable best efforts to cause the Registration Statement to become effective as soon as practicable and no later than five business days after the receipt of a notice of "no review" from the SEC or, in the event of SEC review, no later than 90 days after the Registration Statement is initially filed by the Company with the SEC;

(c) subject to Section 2.2, use its commercially reasonable best efforts to prepare and file with the SEC such amendments and supplements to the Registration Statement and the related prospectus used in connection therewith (the "PROSPECTUS") as may be necessary to keep the Registration Statement current and effective for a period not exceeding the earlier of: (i) the second anniversary of the initial effectiveness of the Registration Statement; (ii) the date on which all Holders may sell all Registrable Securities then held by such Holders without restriction under Rule 144 of the Securities Act; or (iii) such time as all Registrable Securities have been sold (together, the "REGISTRATION PERIOD");

(d) furnish to the Holders with respect to the Registrable Securities registered under the Registration Statement such number of copies of the Registration Statement and Prospectuses (including any preliminary prospectuses) in conformity with the requirements of the Securities Act and such other documents as the Holders may reasonably request, in order to facilitate the sale or other disposition of all or any of the Registrable Securities by the Holders;

(e) use its commercially reasonable best efforts to register and qualify the Registrable Securities covered by the Registration Statement under such other securities or Blue Sky laws of such jurisdictions in the United States as shall be reasonably requested by the Holders; provided, however, that the Company shall not be required in connection therewith or

as a condition thereto to qualify to do business or consent to service of process in any jurisdiction in which it is not now so qualified or has not so consented;

(f) advise the Holders promptly after it shall receive notice or obtain knowledge of the issuance of any stop order by the SEC delaying or suspending the effectiveness of the Registration Statement or of the initiation of any proceeding for that purpose; and it will promptly use its commercially reasonable best efforts to prevent the issuance of any stop order or to obtain its withdrawal at the earliest possible moment if such stop order should be issued;

(g) notify each Holder of securities registered by such Registration Statement at any time when a Prospectus relating thereto is required to be delivered under the Securities Act of the happening of any event as a result of which the Prospectus included in such Registration Statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing; and

(h) bear all Registration Expenses in connection with the procedures in paragraphs (a) through (g) of this Section 2.1 and the registration of the Registrable Securities pursuant to the Registration Statement.

2.2 SUSPENSION PERIODS.

(a) Except in the event that paragraph (b) below applies, the Company shall: (i) if necessary to keep the Registration Statement current and effective, promptly prepare and file from time to time with the SEC post-effective amendments to the Registration Statement or supplements to the related Prospectus or supplements or amendments to any document incorporated therein by reference or file any other required document so that the Registration Statement will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and so that, as thereafter delivered to purchasers of the Registrable Securities being sold thereunder, such Prospectus will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; (ii) provide the Holders with copies of any documents filed pursuant to Section 2.2(a)(i); and (iii) inform the Holders that the Company has complied with its obligations in Section 2.2(a)(i) (or that, if the Company has filed a post-effective amendment to the Registration Statement that has not yet been declared effective, the Company will notify the Holders to that effect, will use its commercially reasonable best efforts to secure the effectiveness of such post-effective amendment as promptly as possible and will promptly notify the Holders pursuant to Section 2.2(a)(i) hereof when the amendment has become effective).

(b) Subject to Section 2.2(c) below, in the event: (i) of any request by the SEC or any other federal or state governmental authority during the period of effectiveness of the Registration Statement for amendments or supplements to the Registration Statement or related Prospectus or for additional information so that the Registration Statement will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading or otherwise fail to comply with the

applicable rules and regulations of the federal securities laws; (ii) of the issuance by the SEC or any other federal or state governmental authority of any stop order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose; (iii) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction or the initiation of any proceeding for such purpose, provided that, considering the advice of counsel, the Company reasonably believes that it must qualify in such jurisdiction; (iv) of any event or circumstance that, considering the advice of counsel, the Company reasonably believes necessitates the making of any changes in the Registration Statement or related Prospectus, or any document incorporated or deemed to be incorporated therein by reference, so that, in the case of the Registration Statement, it will not contain any untrue statement of a material fact or any omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and that in the case of a related Prospectus, it will not contain any untrue statement of a material fact or any omission to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; or (v) that the Company reasonably believes, considering the advice of counsel, that the Company may, in the absence of a suspension described hereunder, be required under state or federal securities laws to disclose any corporate development, the disclosure of which could reasonably be expected to have a material adverse effect upon the Company, its stockholders, a potentially material transaction or event involving the Company, or any negotiations, discussions or proposals directly relating thereto; then the Company shall deliver a certificate in writing to each Holder (the "SUSPENSION Notice") to the effect of the foregoing and, upon receipt of such Suspension Notice, the Holder will refrain from selling any Registrable Securities pursuant to the Registration Statement (a "SUSPENSION") until the Holder's receipt of copies of a supplemented or amended Prospectus prepared and filed by the Company or until the Holder is advised in writing by the Company that the current Prospectus may be used and the Holder has received copies of any additional or supplemental filings that are incorporated or deemed incorporated by reference in any such Prospectus. In the event of any Suspension, the Company will use its commercially reasonable best efforts to cause the use of the Prospectus so suspended to be resumed as soon as reasonably practicable after delivery of a Suspension Notice to the Holders. In the event that the Company shall exercise its right to suspend the effectiveness of the Registration Statement hereunder, the Registration Period during which the Registration Statement is to remain effective shall be extended by a period of time equal to the duration of any Suspensions.

(c) Notwithstanding the foregoing paragraphs of this Section 2.2, the Holders shall not be prohibited from selling Registrable Securities under the Registration Statement as a result of Suspensions on more than two occasions of not more than 45 days each in any 12-month period; provided, however, that in no event shall any Suspension pursuant to Section 2.2(b)(iv) exceed ten business days.

(d) Provided that a Suspension is not then in effect, each Holder may sell Registrable Securities under the Registration Statement, provided that it arranges for delivery of a current Prospectus to the transferee of such Registrable Securities. Upon receipt of a request therefor, the Company will provide an adequate number of current Prospectuses to the Holder and supply copies to any other parties requiring such Prospectuses.

2.3 PIGGYBACK REGISTRATIONS.

(a) The Company shall notify all Holders of Registrable Securities then outstanding in writing at least ten days prior to the filing of any registration statement under the Securities Act for purposes of a public offering of securities of the Company (including, but not limited to, registration statements relating to secondary offerings of securities of the Company, but excluding Special Registration Statements) and shall afford each such Holder an opportunity to include in such registration statement all or part of such Registrable Securities held by such Holder. Each Holder desiring to include in any such registration statement all or any part of the Registrable Securities held by it shall, within ten days after the above-described notice from the Company, so notify the Company in writing. Such notice shall state the intended method of disposition of the Registrable Securities by such Holder. If a Holder decides not to include all of its Registrable Securities in any registration statement thereafter filed by the Company, such Holder shall nevertheless continue to have the right to include any Registrable Securities in any subsequent registration statement or registration statements as may be filed by the Company with respect to offerings of its securities, all upon the terms and conditions set forth herein.

(b) If the registration statement under which the Company gives notice under this Section 2.3 is for an underwritten public offering, the Company shall so advise the Holders of Registrable Securities then outstanding. In such event, the right of any such Holder to be included in a registration pursuant to this Section 2.3 shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their Registrable Securities through such underwriting shall enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by the Company. Notwithstanding any other provision of this Agreement, if the underwriter determines in good faith that marketing factors require a limitation of the number of shares to be underwritten, the number of shares that may be included in the underwriting shall be allocated: first, to the Company; second, to the Holders and the Prior Rights Holders on a pro rata basis based on the aggregate of the Registrable Securities then held by the Holders under this Agreement and the Prior Registrable Securities then held by the Prior Rights Holders under the Prior Investor Rights Agreement; and third, to any stockholders of the Company (other than a Holder or Prior Rights Holder) on a pro rata basis; provided, however, that: (i) no such reduction shall reduce the aggregate amount of securities of the selling Holders, together with the securities of the Prior Rights Holders, included in the registration below thirty percent (30%) of the total amount of securities included in such registration; and (ii) no such reduction shall reduce the amount of Registrable Securities of the selling Holders included in the registration unless all Prior Rights Holders exercising piggyback registration rights in such registration are subject to such reduction in their Prior Registrable Securities. Except as provided above, in no event will shares of any other selling stockholder of the Company be included in such registration that would reduce the number of shares that may be included by the Holders and the Prior Rights Holders without the written consent of the holders of not less than a majority of the aggregate of the Registrable Securities and the Prior Registrable Securities proposed to be sold in the offering. If any participating Holder disapproves of the terms of any such underwriting, such participating Holder may elect to withdraw therefrom by written notice to the Company and the underwriter, delivered prior to the effective date of the registration statement. Any Registrable Securities excluded or withdrawn from such underwriting shall be excluded and withdrawn from the

registration. For any Holder that is a partnership, corporation, venture capital fund or limited liability company, the partners, retired partners, members, retired members and stockholders of such Holder, or the estates and family members of any such partners, retired partners, members, retired members and any trusts for the benefit of any of the foregoing person shall be deemed to be a single "Holder," and any pro rata reduction with respect to such "Holder" shall be based upon the aggregate amount of shares carrying registration rights owned by all entities and individuals included in such "Holder," as defined in this sentence.

(c) The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.3 prior to the effectiveness of such registration whether or not any Holder has elected to include securities in such registration.

2.4 DEMAND REGISTRATION.

(a) In the event that: (i) the Registration Statement is not declared effective by the SEC as set forth in Section 2.1(b); (ii) the Holders still hold Registrable Securities at the end of the Registration Period; or (iii) subject to Section 2.2, the Registration Statement does not remain effective during the Registration Period, and the Initiating Holders intend to distribute Registrable Securities, then the Initiating Holders may deliver a written request to the Company that the Company file a registration statement under the Securities Act covering the registration of at least $3 million of the Registrable Securities then outstanding in an underwritten offering. The Company shall, within 20 business days of the receipt of such request, give written notice of such request to all Holders, and subject to the limitations of this Section 2.4, effect, as expeditiously as reasonably possible, the registration under the Securities Act of all Registrable Securities that all Holders request to be registered on the form of registration statement then available to the Company.

(b) If the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to this Section 2.4, and the Company shall include such information in the written notice referred to in Section 2.4(a). In such event, the right of any Holder to include its Registrable Securities in such registration under this Section 2.4 shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting (unless otherwise mutually agreed by a majority in interest of the Initiating Holders and such Holder) to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall enter into an

underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by a majority in interest of the Initiating Holders (which underwriter or underwriters shall be reasonably acceptable to the Company). Notwithstanding any other provision of this Section 2.4, if the underwriter advises the Company that marketing factors require a limitation on the number of securities underwritten (including Registrable Securities), then the Company shall so advise all Holders of Registrable Securities that would otherwise be underwritten pursuant hereto, and the number of shares that may be included in the underwriting shall be allocated to the Holders of such Registrable Securities pro rata based on the number of Registrable Securities held by all such Holders (including the Initiating Holders). In no event shall any Registrable Securities be excluded from such underwriting unless all other securities

are first excluded. Any Registrable Securities excluded or withdrawn from such underwriting shall be withdrawn from the registration.

(c) The Company shall not be required to effect a registration pursuant to this Section 2.4:

(i) after the Company has effected three registrations pursuant to this Section 2.4, and such registrations have been declared or ordered effective;

(ii) during the period starting with the date of filing of, and ending on the date one hundred eighty (180) days following the effective date of, a registration statement pertaining to a public offering as described in Section 2.3, other than pursuant to a Special Registration Statement; provided that the Company makes reasonable good faith efforts to cause such registration statement to become effective;

(iii) if within 30 days of receipt of a written request from the Initiating Holders pursuant to Section 2.4(a), the Company gives notice to the Holders of the Company's intention to file a registration statement for a public offering as described in Section 2.3, other than pursuant to a Special Registration Statement, within 90 days; provided that if the Company does not file such registration statement within such 90-day period, the Company shall then effect the registration requested by the Initiating Holders pursuant to Section 2.4;

(iv) if the Company shall file a registration statement pursuant to this Section 2.3 and then furnish to the Initiating Holders requesting such registration statement pursuant to this Section 2.4 a certificate signed by the Chairman of the Board of the Company stating that in the good faith judgment of the Board of Directors of the Company, it would be seriously detrimental to the Company and its stockholders for such registration statement to become effective at such time, in which event the Company shall have the right to defer seeking acceleration of effectiveness of such filing for a period of not more than 30 days after receipt of a notice of "no review" or completion of the review process from the SEC; provided that such right to delay effectiveness of a requested registration shall be exercised by the Company not more than once in any 12-month period; and provided further that the Company shall not register any securities for the account of itself or any other stockholder during such period (other than pursuant to a Special Registration Statement); and

(v) in any particular jurisdiction in which the Company would be required to qualify to do business or to execute a general consent to service of process in effecting such registration, qualification or compliance.

2.5 CERTAIN OBLIGATIONS OF THE COMPANY FOR PIGGYBACK AND DEMAND REGISTRATIONS.

(a) Whenever required to effect the registration of any Registrable Securities pursuant to Section 2.3 or Section 2.4, the Company shall, as expeditiously as reasonably possible:

(i) prepare and file with the SEC a registration statement with respect to such Registrable Securities, and use its commercially reasonable best efforts to cause such registration statement to become effective as soon as practicable;

(ii) subject to Section 2.5(b), use its commercially reasonable best efforts to prepare and file with the SEC such amendments and supplements to a registration statement and prospectus used in connection therewith as may be necessary to keep such registration statement effective for a period not exceeding, with respect to each Holder's Registrable Securities included in such registration, the earlier of: (i) the second anniversary of the initial effectiveness of such registration statement; (ii) the date on which the Holder may sell all Registrable Securities then held by the Holder without restriction

under Rule 144 of the Securities Act; or (iii) such time as all Registrable Securities held by such Holder have been sold;

(iii) furnish to the Holders with respect to the Registrable Securities registered under a registration statement such number of copies of such registration statement, and related prospectuses, including preliminary prospectuses, in conformity with the requirements of the Securities Act, and such other documents as such Holders may reasonably request in order to facilitate the public sale or other disposition of the Registrable Securities by the Holders;

(iv) use its commercially reasonable best efforts to register and qualify the securities covered by such registration statement under such other securities or Blue Sky laws of such jurisdictions in the United States as shall be reasonably requested by the Holders; provided, however, that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business or consent to service of process in any jurisdiction in which it is not now so qualified or has not so consented;

(v) advise the Holders promptly after it shall receive notice or obtain knowledge of the issuance of any stop order by the SEC delaying or suspending the effectiveness of a registration statement or of the initiation of any proceeding for that purpose; and it will promptly use its commercially reasonable best efforts to prevent the issuance of any stop order or to obtain its withdrawal at the earliest possible moment if such stop order should be issued;

(vi) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter(s) of such offering; each Holder participating in such underwriting shall also enter into and perform its obligations under such an agreement;

(vii) notify each Holder of securities registered by such registration statement at any time when a prospectus relating thereto is required to be delivered under the Securities Act of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing;

(viii) cause all such Registrable Securities registered under such registration statement to be listed on each securities exchange on which similar securities issued by the Company are then listed;

(ix) provide a transfer agent and registrar for all Registrable Securities registered under the registration statement and a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration; and

(x) use its commercially reasonable efforts to furnish, at the request of any Holder requesting registration of Registrable Securities under the registration statement, on the date that such Registrable Securities are delivered to the underwriters for sale in connection with a registration under the registration statement, if such securities are being sold through underwriters, or, if such securities are not being sold through underwriters, on the date that the registration statement with respect to such securities becomes effective, (A) an opinion, dated such date, of the counsel for the Company, in form and substance as is customarily requested by the underwriters in an underwritten public offering, addressed to the underwriters, if any, and to the Holders requesting registration of Registrable Securities and (B) a letter dated such date, from the independent certified public accountants of the Company and any company acquired by the Company, in form and substance as is customarily given by independent certified public accountants to underwriters in an underwritten public offering, addressed to the underwriters, if any, and to the Holders requesting registration of Registrable Securities.

(b) Subject to Section 2.5(c) below, in the event: (i) of any request by the SEC or any other federal or state governmental authority during the period of effectiveness of a registration statement filed pursuant to Section 2.3 or Section 2.4 for amendments or supplements to such registration statement or related prospectus or for additional information so that the Registration Statement will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading or otherwise fail to comply with the applicable rules and regulations of the federal securities laws; (ii) of the issuance by the SEC or any other federal or state governmental authority of any stop order suspending the effectiveness of such registration statement or the initiation of any proceedings for that purpose; (iii) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction or the initiation of any proceeding for such purpose, provided

that, considering the advice of counsel, the Company reasonably believes that it must qualify in such jurisdiction; (iv) of any event or circumstance that, considering the advice of counsel, the Company reasonably believes necessitates the making of any changes in such registration statement or related prospectus, or any document incorporated or deemed to be incorporated therein by reference, so that, in the case of such registration statement, it will not contain any untrue statement of a material fact or any omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and that in the case of a related prospectus, it will not contain any untrue statement of a material fact or any omission to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; or (v) that the Company reasonably believes, considering the advice of counsel, that the Company may, in the absence of a suspension described hereunder, be required under state or federal securities laws to disclose any corporate development, the disclosure of

which could reasonably be expected to have a material adverse effect upon the Company, its stockholders, a potentially material transaction or event involving the Company, or any negotiations, discussions or proposals directly relating thereto; then the Company shall deliver a Suspension Notice to each Holder to the effect of the foregoing and, upon receipt of such Suspension Notice, the Holder will refrain from selling any Registrable Securities pursuant to such registration statement until the Holder's receipt of copies of a supplemented or amended prospectus prepared and filed by the Company or until the Holder is advised in writing by the Company that the current prospectus may be used and the Holder has received copies of any additional or supplemental filings that are incorporated or deemed incorporated by reference in any such prospectus. In the event of any Suspension, the Company will use its commercially reasonable best efforts to cause the use of the prospectus so suspended to be resumed as soon as reasonably practicable after delivery of a Suspension Notice to the Holders. In the event that the Company shall exercise its right to suspend the effectiveness of such registration statement hereunder, the period during which such registration statement is to remain effective pursuant to Section 2.5(a)(ii) shall be extended by a period of time equal to the duration of any Suspensions.

(c) Notwithstanding the foregoing paragraphs of this Section 2.5, the Holders shall not be prohibited from selling Registrable Securities under a registration statement filed pursuant to Section 2.4 as a result of Suspensions on more than two occasions of not more than 45 days each in any 12-month period (it being understood that (i) any delay in effectiveness of a registration statement pursuant to Section 2.4(c)(iv) shall be counted as an occasion of Suspension for purposes of this Section 2.5(c) and (ii) any days of delayed effectiveness of a registration statement pursuant to Section 2.4(c)(iv) shall be counted as part of the 45-day total allowed for Suspension under this Section 2.5(c)); provided, however, that in no event shall any Suspension pursuant to Section 2.5(b)(iv) of a registration statement filed under Section 2.4 exceed ten business days.

(d) Except as specifically provided herein, all Registration Expenses incurred in connection with any registration under Section 2.3 or Section 2.4 shall be borne by the Company. All Selling Expenses incurred in connection with any registrations under Section 2.3 or Section 2.4 shall be borne by the holders of the securities so registered pro rata on the basis of the number of shares so registered. The Company shall not, however, be required to pay the Registration Expenses of any registration proceeding begun pursuant to Section 2.4, the request of which has been subsequently withdrawn by the Initiating Holders unless: (i) the withdrawal is based upon material adverse information concerning the Company of which the Initiating Holders were not aware at the time of such request; or (ii) the Holders of a majority of the Registrable Securities then outstanding agree to forfeit their right to one requested registration pursuant to Section 2.4 (in which event such right shall be deemed forfeited by all Holders). If the Holders are required to pay the Registration Expenses, such expenses shall be borne by the holders of securities (including Registrable Securities) requesting such registration in proportion to the number of shares for which registration was requested.

2.6 RESTRICTIONS ON TRANSFER.

(a) Each Investor agrees that it will not sell, offer to sell, solicit offers to buy, dispose of, loan, pledge or grant any right with respect to (collectively, a "DISPOSITION") all or any portion of the Registrable Securities unless and until:

(i) there is then in effect a registration statement under the Securities Act covering such proposed Disposition and such Disposition is made in accordance with such registration statement; or

(ii) (A) if rights under this Agreement are assigned to the transferee, the transferee has agreed in writing to be bound by the terms of this Agreement, (B) such Holder shall have notified the Company of the proposed Disposition and shall have furnished the Company with a detailed statement of the circumstances surrounding the proposed Disposition and (C) if reasonably requested by the Company, such Holder shall have furnished the Company with an opinion of counsel, reasonably satisfactory to the Company, that such Disposition will not require registration of such shares under the Securities Act.

(b) Notwithstanding the provisions of Section 2.6(a) above, no such restriction shall apply to a transfer by a Holder that is: (i) a partnership transferring to its partners or former partners in accordance with partnership interests; (ii) a corporation transferring to a wholly-owned subsidiary or a parent corporation that owns all of the capital stock of the Holder; (iii) a limited liability company transferring to its members or former members in accordance with their interest in the limited liability company; (iv) an affiliated venture fund transferring to another affiliated venture fund; or (v) an individual transferring to the Holder's family member or trust for the benefit of an individual Holder; provided that in each case the transferee will agree in writing to be subject to the terms of this Agreement to the same extent as if the transferee were an original Holder hereunder.

(c) Each certificate representing the Shares or Warrant Shares shall be stamped or otherwise imprinted with legends substantially similar to the following (in addition to any legend required under applicable state securities laws):

"THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). SUCH SHARES MAY NOT BE SOLD OR TRANSFERRED IN THE ABSENCE OF REGISTRATION OR AN EXEMPTION THEREFROM. RIGEL PHARMACEUTICALS, INC. MAY REQUIRE AN OPINION OF COUNSEL REASONABLY ACCEPTABLE TO IT THAT A PROPOSED TRANSFER OR SALE IS IN COMPLIANCE WITH THE ACT."

"THE SALE, TRANSFER OR VOTING OF THE SHARES REPRESENTED BY THIS CERTIFICATE IS RESTRICTED BY THE TERMS OF A SECOND INVESTOR RIGHTS AGREEMENT BY AND AMONG RIGEL PHARMACEUTICALS, INC. AND THE INVESTORS NAMED THEREIN. COPIES OF THE AGREEMENT MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDERS OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF RIGEL PHARMACEUTICALS, INC. AT

THE PRINCIPAL EXECUTIVE OFFICES OF RIGEL PHARMACEUTICALS, INC."

(d) The Company shall be obligated to reissue promptly unlegended certificates at the request of any Holder thereof if the Holder shall have (i) sold Registrable Securities pursuant to an effective registration statement or (ii) obtained an opinion of counsel (which counsel may be counsel to the Company) reasonably acceptable to the Company to the effect that the securities proposed to be disposed of may lawfully be so disposed of without registration, qualification and legend.

(e) Any legend endorsed on an instrument pursuant to applicable state securities laws and the stop-transfer instructions with respect to such securities shall be removed upon receipt by the Company of an order of the appropriate blue sky authority authorizing such removal.

2.7 TERMINATION OF REGISTRATION RIGHTS. All registration rights granted under this Section 2 shall terminate and be of no further force and effect upon the earlier of: (i) the date on which the Holders may sell all Registrable Securities then held by the Holders without restriction under Rule 144 of the Securities Act; or (ii) such time as all Registrable Securities purchased by the Investors in the Financing have been sold.

2.8 DELAY OF REGISTRATION; FURNISHING INFORMATION.

(a) No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any such registration as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

(b) It shall be a condition precedent to the obligations of the Company to register a Holder's Registrable Securities pursuant to Section 2.1, Section 2.3 or Section 2.4 that such Holder shall furnish to the Company such information regarding themselves, the Registrable Securities held by them and the intended method of disposition of such securities as shall be reasonably required to effect the registration of such Holder's Registrable Securities. Upon receipt of such information, the Company shall promptly update any registration statement (whether or not such registration statement has been

declared effective) used or to be used to register Registrable Securities.

2.9 INDEMNIFICATION. In the event any Registrable Securities are included in a registration statement under Section 2.1, Section 2.3 or Section 2.4:

(a) To the extent permitted by law, the Company shall indemnify and hold harmless each Holder, the partners, members, officers and directors of each Holder, any underwriter (as defined in the Securities Act) for such Holder and each person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any losses, claims, damages, or liabilities (joint or several) to which they may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of, or are based upon, any of the following statements, omissions or violations (collectively a "VIOLATION") by the Company: (i) any untrue statement or alleged untrue statement of a material fact contained

in such registration statement or incorporated by reference therein, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) the omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the Company of the Securities Act, the Exchange Act, any state securities law or any rule or regulation promulgated under the Securities Act, the Exchange Act or any state securities law in connection with the offering covered by such registration statement; and the Company shall reimburse each such Holder, partner, member, officer, director, underwriter or controlling person for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action as such expenses are incurred; provided however, that the indemnity agreement contained in this Section 2.9(a) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable in any such case for any such loss, claim, damage, liability or action to the extent that it arises out of, or is based upon, a Violation that occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by or on behalf of such Holder, partner, member, officer, director, underwriter or controlling person of such Holder.

(b) To the extent permitted by law, each Holder shall, if Registrable Securities held by such Holder are included in such registration statement, indemnify and hold harmless the Company, each of its directors, its officers and each person, if any, who controls the Company within the meaning of the Securities Act, any underwriter and any other Holder selling securities under such registration statement or any of such other Holder's partners, directors or officers or any person who controls such Holder, against any losses, claims, damages or liabilities (joint or several) to which the Company or any such director, officer, controlling person, underwriter or other such Holder, or partner, director, officer or controlling person of such other Holder may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages or liabilities (or actions in respect thereto) arise out of, or are based upon, any of the following statements: (i) any untrue statement or alleged untrue statement of a material fact contained in such registration statement or incorporated by reference therein, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) the omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the Company of the Securities Act (collectively, a "HOLDER VIOLATION"), in each case to the extent (and only to the extent) that such Holder Violation occurs in reliance upon and in conformity with written information furnished by such Holder under an instrument duly executed by such Holder and stated to be specifically for use in connection with such registration; and each such Holder shall reimburse any legal or other expenses reasonably incurred by the Company or any such director, officer, controlling person, underwriter or other Holder, or partner, officer, director or controlling person of such other Holder in connection with investigating or defending any such loss, claim, damage, liability or action if it is judicially determined that there was such a Holder Violation; provided, however, that the indemnity agreement contained in this Section 2.9(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; provided further, that in no event

shall any indemnity under this Section 2.9 exceed the net proceeds from the

offering received by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.9 of notice of the commencement of any action (including any governmental action), such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.9, deliver to the indemnifying party a written notice of the commencement thereof, and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party shall have the right to retain its own counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action, if materially prejudicial to its ability to defend such action, shall relieve such indemnifying party of liability to the indemnified party under this Section 2.9 to the extent of such prejudice, but the omission so to deliver written notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.9.

(d) If the indemnification provided for in this Section 2.9 is held by a court of competent jurisdiction to be unavailable to an indemnified party with respect to any losses, claims, damages or liabilities referred to herein, the indemnifying party, in lieu of indemnifying such indemnified party hereunder, shall to the extent permitted by applicable law contribute to the amount paid or payable by such indemnified party as a result of such loss, claim, damage or liability in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and of the indemnified party on the other in connection with the Violation(s) or Holder Violation(s) that resulted in such loss, claim, damage or liability, as well as any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by a court of law by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission; provided, that in no event shall any contribution by a Holder hereunder, when combined with amounts paid pursuant to Section 2.9(b), exceed the net proceeds from the offering received by such Holder.

(e) The obligations of the Company and the Holders under this Section 2.9 shall survive completion of any offering of Registrable Securities pursuant to a registration statement under Section 2 and the termination of this Agreement. No indemnifying party, in the defense of any such claim or litigation, shall, except with the consent of each indemnified party, consent to the entry of any judgment or enter into any settlement that does not include as an unconditional term thereof the giving by the claimant or plaintiff to such indemnified party of a release from all liability in respect to such claim or litigation.

2.10 ASSIGNMENT OF REGISTRATION RIGHTS. The rights to cause the Company to register Registrable Securities pursuant to this Section 2 may be assigned by a Holder to a transferee or assignee of Registrable Securities that: (a) is a subsidiary, parent, general partner, limited partner, retired partner, member or retired member, stockholder or affiliated venture fund of a Holder; (b) is a Holder's family member or trust for the benefit of an individual Holder; (c) acquires at least 100,000 shares of Registrable Securities (as adjusted for stock splits and combinations); or (d) is an entity affiliated by common control (or other related entity) with such Holder; provided, however, that: (i) the transferor shall, within ten days after such transfer, furnish to the Company written notice of the name and address of such transferee or assignee and the securities with respect to which such registration rights are being assigned; and (ii) such transferee shall agree to be subject to all restrictions set forth in this Agreement.

2.11 AMENDMENT OF REGISTRATION RIGHTS. Any provision of this Section 2 may be amended and the observance thereof may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the Company and the Holders of at least a majority of the Registrable Securities then outstanding. Any amendment or waiver effected in accordance with this Section 2.11 shall be binding upon each Holder and the Company. By acceptance of any benefits under this Section 2, the Holders of Registrable Securities hereby agree to be bound by the provisions hereunder.

SECTION 3. CERTAIN COVENANTS OF THE PARTIES.

3.1 RESERVATION OF COMMON STOCK. The Company will at all times reserve and keep available, solely for issuance and delivery upon the exercise of the

Common Warrants, the Warrant Shares issuable from time to time upon such exercise.

3.2 RULE 144 REPORTING. With a view to making available to each Holder the benefits of Rule 144 under the Securities Act (or its successor rule) and any other rule or regulation of the SEC that may at any time permit the Holder to sell Registrable Securities to the public without registration or pursuant to Form S-3, the Company covenants and agrees to: (a) make and keep public information available, as those terms are understood and defined in Rule 144, until such time as all Registrable Securities purchased by the Investors in the Financing have been sold; (b) file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act; and (c) furnish to the Holder upon request, as long as the Holder owns any Registrable Securities, (i) a written statement by the Company that it has complied with the reporting requirements of Rule 144 of the Securities Act and the Exchange Act or that it qualifies as a registrant whose securities may be registered on Form S-3, (ii) a copy of the Company's most recent Annual Report on Form 10-K or Quarterly Report on Form 10-Q and (iii) such other information as may be reasonably requested in order to avail the Holder of any rule or regulation of the SEC that permits the selling of any such Registrable Securities without registration or pursuant to such form.

3.3 OBSERVATION RIGHTS. For so long as MPM BioVentures III, L.P. or its affiliates ("MPM CAPITAL") shall own Registrable Securities representing not less than 10% of the total shares of Common Stock then outstanding, the Company shall allow Ms. Ashley Ledbetter (or such other representative that may be designated by MPM Capital in accordance with this Section 3.3) to serve as a representative designated by MPM Capital (the "REPRESENTATIVE") to

attend all regularly scheduled meetings of the Company's Board of Directors in a nonvoting capacity, and in connection therewith, the Company shall give such Representative copies of all notices, minutes, consents and other materials, financial or otherwise, which the Company provides to its Board of Directors; provided, however, that: (a) MPM Capital shall not change or substitute its Representative without providing the Company with 20 days' prior notice of such change or substitution; (b) the Representative shall agree to hold in confidence and trust and to act in a fiduciary manner with respect to all information so provided; and (c) the Company reserves the right to exclude such Representative from access to any material or meeting or portion thereof if the Company believes that such exclusion is reasonably necessary: (i) to preserve the attorney-client privilege; (ii) to protect highly confidential information; or (iii) to prevent the disclosure of trade secrets to a competitor.

3.4 BOARD OF DIRECTORS MATTERS. For so long as MPM Capital shall own Registrable Securities representing not less than 10% of the total shares of Common Stock then outstanding:

(a) the Company's Board of Directors shall consist of nine members, and the Company's Board of Directors shall be divided into three classes, with each class having a three-year term;

(b) the Company shall: (i) use its commercially reasonable best efforts to cause Mr. Dennis Henner, as designated by MPM Capital (the "CLASS II DESIGNEE"), to be nominated and elected to Class II of the Company's Board of Directors at each meeting or pursuant to each consent of the Company's stockholders for the election of Class II directors; (ii) use its commercially reasonable best efforts to cause Mr. Nick Simon, as designated by MPM Capital (the "CLASS III DESIGNEE" and collectively with the Class II Designee, the "MPM DESIGNEES"), to be nominated and elected to Class III of the Company's Board of Directors at each meeting or pursuant to each consent of the Company's stockholders for the election of Class III directors; and (iii) if any MPM Designee elected to the Company's Board of Directors ceases to be a member of the Company's Board of Directors during such person's term as a director due to such person's resignation, death or removal, the Company shall use its commercially reasonable best efforts, subject to applicable laws and regulations, to cause such vacancy to be filled by a replacement designated by MPM Capital, and such designee shall be an MPM Designee for purposes of this Agreement;

(c) as long as an MPM Designee remains on the Company's Board of Directors pursuant to Section 3.4(b), then: (i) the Company shall use its commercially reasonable best efforts to appoint one of the MPM Designees to the Nominating Committee of the Company's Board of Directors; and (ii) the Company shall not materially amend or modify the Charter of the Nominating Committee of the Company's Board of Directors as in effect as of the date of this Agreement; provided, however, that the Company shall not be required to make any appointment to a committee of the Company's Board of Directors if such appointment could reasonably be expected to conflict with federal securities laws or any other rules or regulations then in effect of Nasdaq or any exchange on which the Company's securities are listed for trading; and provided further that the Company shall be able to amend or modify the Charter of the Nominating Committee of the Company's Board of Directors as is necessary to not conflict

with any applicable federal securities laws, state laws or any other rules or regulations then in effect of Nasdaq or any exchange on which the Company's securities are listed for trading;

(d) as long as an MPM Designee remains on the Company's Board of Directors pursuant to Section 3.4(b), then the Company shall use its commercially reasonable best efforts to appoint one of the MPM Designees to the Compensation Committee of the Company's Board of Directors; provided, however, that the Company shall not be required to make any appointment to a committee of the Company's Board of Directors if such appointment could reasonably be expected to conflict with federal securities laws or any other rules or regulations then in effect of Nasdaq or any exchange on which the Company's securities are listed for trading; and

(e) the Company shall use its commercially reasonable efforts to maintain the Company's amended and restated certificate of incorporation and bylaws, as amended, to permit the Company to indemnify its directors and officers to the fullest extent permitted by law (including to seek to amend such certificate and bylaws to the extent the law permits greater indemnification than then permitted by such certificate and bylaws).

3.5 LIMITATION ON SUBSEQUENT REGISTRATION RIGHTS. For so long as any Registrable Securities remain outstanding, after the date of this Agreement, the Company shall not, without the prior written consent of the holders of at least a majority of the aggregate of (a) the Registrable Securities then outstanding under this Agreement and (b) the Prior Registrable Securities then outstanding under the Prior Investor Rights Agreement, enter into any agreement, other than in connection with a Special Registration Statement, with any holder or prospective holder of any securities of the Company that would grant such holder registration rights on a parity with, or senior to, those granted to the Holders hereunder.

3.6 PARTICIPATION RIGHTS.

(a) The parties hereby agree that each Investor, so long as such Investor and its respective affiliates beneficially own at least 10% of all of the outstanding shares of Common Stock, shall have the right (the "PARTICIPATION RIGHT"), but not the obligation, to purchase its Pro Rata Share (as defined below) of all (or any part) of any New Securities (as defined below). "PRO RATA SHARE" equals a fraction, (i) the numerator of which shall be the number of shares of Common Stock then owned by such Investor (or receivable by such Investor upon conversion or exercise of all then outstanding convertible or exercisable securities held by such Investor) and (ii) the denominator of which shall be the total number of shares of Common Stock then outstanding.

(b) For purposes of this Agreement, "NEW SECURITIES" shall mean any shares of, or securities convertible into or exchangeable or exercisable for any shares of, the Company's capital stock; provided, however, that the term "New Securities" does not include:

(i) any securities, including shares of Common Stock, to be issued pursuant to a "public offering" (as such term is determined by the rules, regulations and guidelines of the National Association of Securities Dealers) of such securities, or issued pursuant to a registration statement on a Form S-4 or S-8 or substantially equivalent successor form, or, upon the approval of a majority of the entire Board of Directors of the Company (i.e., a majority of the total number of directors then in office), any shares issued pursuant to registration statement and offered publicly (the parties hereto agree that merely because an offering is to be

undertaken as a "take-down" from a shelf registration statement, that factor will not be the sole determinative factor as to whether such offering is a "public offering");

(ii) shares of Common Stock (or options therefor) issued or issuable to employees, officers, directors, consultants or other service providers of the Company pursuant to stock options or other stock incentive agreements or plans approved by a majority of the Company's Board of Directors and not for capital-raising transactions;

(iii) any securities issued upon the conversion or exercise of an convertible or exercisable securities outstanding as of the date hereof;

(iv) any shares of Common Stock (or any other security) issued in connection with any stock split, stock dividend, combination, recapitalization or similar corporate action for which no consideration is paid or payable;

(v) any shares of Common Stock (or any other security) issued

in connection with (A) any corporate collaboration agreement, (B) any licensing agreement, (C) any payment or settlement of any obligation under a material contract and (D) as compensation for any services rendered to the Company;

(vi) any securities issued pursuant to an acquisition of the Company approved by its Board of Directors by means of (A) merger or other form of corporate reorganization in which outstanding shares of the Company are exchanged for securities or other consideration issued, or caused to be issued, by the acquiring corporation or its subsidiary and pursuant to which the holders of the outstanding voting securities of the Company immediately prior to such merger or other form of corporate reorganization fail to hold equity securities representing a majority of the voting power of the Company or surviving entity immediately following such merger or other form of corporate reorganization or (B) a sale of all or substantially all the assets of the Company approved by the Company's Board of Directors;

(vii) any shares of Common Stock or Warrants issued pursuant to the Financing;

(viii) any securities issued in connection with bona fide equipment financings or bona fide lease agreements; or

(ix) any securities issued in transactions approved by the Board of Directors (i.e., a majority of the total number of directors then in office) as being excluded from the provisions of this Section 3.6.

(c) If the Company proposes to undertake any issuance of New Securities, it shall, prior to any such issuance, give written notice to the Investors of its bona fide intention to issue New Securities (the "COMPANY NOTICE"), describing the type of New Securities proposed to be issued, the total number or quantity of New Securities proposed to be issued, and the price and the general terms upon which the Company proposes to issue such New Securities. Each Investor may elect to purchase or acquire its Pro Rata Share of such New Securities (an "ELECTING PARTY") by delivering written notice (the "PARTICIPATION NOTICE") of its election to so purchase or acquire such New Securities at the price and upon the general terms specified in the

Company Notice and stating the quantity of New Securities to be purchased (not to exceed its Pro Rata Share). The Participation Notice shall be delivered to the Company within five (5) business days after the date of delivery of the Company Notice, and the obligations of the Electing Party thereunder to purchase the elected number or percentage of New Securities, and the obligations of the Company to sell such New Securities to the Electing Party, shall be contingent upon the consummation of the sale or other transaction pursuant to which the New Securities are proposed to be issued. The number or amount of New Securities specified in the Participation Notice shall be subject to automatic and proportionate reduction in the event that the total number or quantity of New Securities sold by the Company is reduced below the number or quantity specified in the Company Notice. If any Investor fails to give the Participation Notice to the Company within such five business-day period, or specifies in the Participation Notice that such Investor will only purchase part, but not all, of such Investor's Pro Rata Share (a "NONPURCHASING INVESTOR"), then such Nonpurchasing Investor shall forfeit the right hereunder to purchase that part of its Pro Rata Share of such New Securities that it did not so agree to purchase, and the Company shall promptly give each Investor (if any) who has timely agreed to purchase its full Pro Rata Share of such offering of New Securities (a "PURCHASING INVESTOR") written notice of the failure of any Nonpurchasing Investor to purchase such Nonpurchasing Investor's full Pro Rata Share of such offering of New Securities (the "OVERALLOTMENT NOTICE"). Such Overallotment Notice shall be given to each Purchasing Investor within three business days of the expiration of the five business-day period. Each Purchasing Investor shall have a right of overallotment such that such Purchasing Investor may agree to purchase a portion of the Nonpurchasing Investor's unpurchased Pro Rata Share of such offering on a pro rata basis according to the relative Pro Rata Shares of the Purchasing Investor at any time within three business days after receiving the Overallotment Notice.

(d) If the Investors fail to exercise in full the Participation Right within such five plus three plus three business-day period, then the Company shall have 180 calendar days thereafter to sell the New Securities with respect to which the Investors' Participation Rights hereunder were not exercised, at a price not less than, and upon general terms not more favorable than those specified in the Company Notice. If the Company has not issued and sold the New Securities within such 180 calendar-day period, then the Company shall not thereafter issue or sell any New Securities without again first offering such New Securities to the Investors pursuant to this Section 3.6.

(e) From and after the date of this Agreement, the Company shall not enter into any agreement with any holder or prospective holder of any securities that would allow such holder or prospective holder a participation right, right of first refusal, right of first offer or other similar right which is on terms materially more favorable to such holder or prospective holder than, or in

preference to, the Participation Right granted to the Investors hereunder.

3.7 NASDAQ LISTING. The Company shall use its commercially reasonable best efforts to maintain the listing of the Registrable Securities on Nasdaq.

SECTION 4. MISCELLANEOUS.

4.1 GOVERNING LAW. This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of California, without giving effect to the

principles of conflicts of law. The parties agree that any action brought by either party under or in relation to this Agreement, including without limitation to interpret or enforce any provision of this Agreement, shall be brought in, and each party agrees to and does hereby submit to the jurisdiction and venue of, any state or federal court located in the County of San Francisco, California.

4.2 NO INCONSISTENT AGREEMENTS. The Company has not entered, as of the date hereof, into any agreement with respect to any of its securities that is inconsistent with, diminishes or otherwise limits, the rights granted to the Holders of Registrable Securities in this Agreement or otherwise conflicts with the provisions hereof.

4.3 SUCCESSORS AND ASSIGNS. Except as otherwise expressly provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the parties hereto and their respective successors, assigns, heirs, executors and administrators and shall inure to the benefit of, and be enforceable by, each person who shall be a Holder of Registrable Securities from time to time; provided, however, that prior to the receipt by the Company of adequate written notice of the transfer of any Registrable Securities specifying the full name and address of the transferee, the Company may deem and treat the person listed as the holder of such shares in its records as the absolute owner and holder of such shares for all purposes, including the payment of dividends or any redemption price.

4.4 ENTIRE AGREEMENT. This Agreement, including the Exhibits hereto, constitutes the full and entire understanding and agreement between the parties with regard to the subject hereof and no party shall be liable or bound to any other in any manner by any oral or written representations, warranties, covenants and agreements except as specifically set forth herein. Each party expressly represents and warrants that it is not relying on any oral or written representations, warranties, covenants or agreements outside of this Agreement; provided, however, that the parties hereto acknowledge that the Investors have relied on those certain Consents, Waivers and Agreements, dated as of April 29, 2003, executed by holders of a majority of the "Registrable Securities" outstanding under (and as defined in) that certain Amended and Restated Investor Rights Agreement, dated as of February 3, 2000, by and among the Company and the investors named therein.

4.5 SPECIFIC ENFORCEMENT. It is agreed and understood that monetary damages would not adequately compensate an injured party for the breach of Section 3.4 of this Agreement by any other party, that Section 3.4 of this Agreement shall be specifically enforceable, and that any breach or threatened breach of Section 3.4 of this Agreement shall be the proper subject of a temporary or permanent injunction or restraining order. Further, each party hereto waives any claim or defense that there is an adequate remedy at law for such breach or threatened breach Section 3.4 of this Agreement.

4.6 SEVERABILITY. In case any provision contained in this Agreement should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

4.7 AMENDMENT AND WAIVER.

(a) Except as otherwise expressly provided, this Agreement may be amended or modified only upon the written consent of the Company and the Holders of at least a majority of the Registrable Securities then outstanding.

(b) Except as otherwise expressly provided, the obligations of the Company and the rights of the Holders under this Agreement may be waived only with the written consent of the Holders of at least a majority of the Registrable Securities then outstanding.

(c) For the purposes of determining the number of Holders entitled to vote or exercise any rights hereunder, the Company shall be entitled to rely solely on the list of record holders of its stock as maintained by or on behalf of the Company.

4.8 NOTICES. All notices, requests, consents and other communications hereunder shall be in writing; shall be mailed (a) if within the domestic United States, by first-class registered or certified airmail, by nationally recognized overnight express courier, postage prepaid, or by facsimile or (b) if delivered from outside the United States, by International Federal Express or facsimile; shall be deemed given: (i) if delivered by first-class registered or certified mail domestic, three business days after so mailed; (ii) if delivered by nationally recognized overnight carrier, one business day after so mailed; (iii) if delivered by International Federal Express, two business days after so mailed; or (iv) if delivered by facsimile, upon electric confirmation of receipt; and shall be delivered as addressed as follows:

(a) if to the Company, to:

Rigel Pharmaceuticals, Inc.
1180 Veterans Boulevard
South San Francisco, CA 94080
Attn: James M. Gower
Chairman and Chief Executive Officer
Phone: (650) 624-1100
Telecopy: (650) 624-1133

with a copy to:

Cooley Godward LLP
Five Palo Alto Square
3000 El Camino Real
Palo Alto, CA 94306
Attn: Suzanne Sawochka Hooper
Phone: (650) 843-5000
Telecopy: (650) 849-7400

(b) if to the Investors, at the addresses as set forth on EXHIBIT A hereto, or at such other address or addresses as may have been furnished to the Company in writing.

4.9 ATTORNEYS' FEES. In the event that any suit or action is instituted under or in relation to this Agreement, including without limitation to enforce any provision in this Agreement, the prevailing party in such dispute shall be entitled to recover from the losing party

all fees, costs and expenses of enforcing any right of such prevailing party under or with respect to this Agreement, including without limitation, such reasonable fees and expenses of attorneys and accountants, which shall include, without limitation, all fees, costs and expenses of appeals.

4.10 HEADINGS. The headings of the various sections of this Agreement have been inserted for convenience of reference only and shall not be deemed to be part of this Agreement.

4.11 COUNTERPARTS. This Agreement may be executed in two or more counterparts, each of which shall constitute an original, but all of which, when taken together, shall constitute but one instrument, and shall become effective when one or more counterparts have been signed by each party hereto and delivered to the other parties.

4.12 AGGREGATION OF STOCK. All shares of Registrable Securities held or acquired by affiliated entities or persons or persons or entities under common management or control shall be aggregated together for the purpose of determining the availability of any rights under this Agreement.

4.13 PRONOUNS. All pronouns contained herein, and any variations thereof, shall be deemed to refer to the masculine, feminine or neutral, singular or plural, as to the identity of the parties hereto may require.

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IN WITNESS WHEREOF, the parties hereto have executed this SECOND INVESTOR RIGHTS AGREEMENT as of the date set forth in the first paragraph hereof.

<TABLE>
<CAPTION>
COMPANY:

<S>
RIGEL PHARMACEUTICALS, INC.

By: _____

Name: _____

Title: _____

INVESTORS:

<C>
MPM BIOVENTURES III, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: _____

Name: _____

Title: Series A Member

MPM BIOVENTURES III-QP, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: _____

Name: _____

Title: Series A Member

</TABLE>

SECOND INVESTOR RIGHTS AGREEMENT
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MPM BIOVENTURES III GMBH & CO.
PARALLEL-BETEILIGUNGS KG

By: MPM BioVentures III GP, L.P., in its
capacity as the Managing Limited
Partner

By: MPM BioVentures III LLC,
its General Partner

By: _____

Name: _____

Title: Series A Member

MPM BIOVENTURES III PARALLEL
FUND, L.P.

By: MPM BioVentures III GP, L.P.,
its General Partner

By: MPM BioVentures III LLC,
its General Partner

By: _____

Name: _____

Title: Series A Member

</TABLE>

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MPM ASSET MANAGEMENT
INVESTORS 2003 BVIII LLC

By:

Name:

Title: Manager

MPM BIOEQUITIES MASTER FUND, L.P.

By: MPM BioEquities GP, L.P.,
its General Partner

By: MPM BioEquities GP LLC,
its General Partner

By:

Name:

Title: General Partner

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SECOND INVESTOR RIGHTS AGREEMENT
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ALTA BIOPHARMA PARTNERS II, L.P.

By: Alta BioPharma Management Partners
II, LLC

By:

Managing Director

ALTA EMBARCADERO BIOPHARMA
PARTNERS II, LLC

By:

V.P. of Finance & Admin.

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SECOND INVESTOR RIGHTS AGREEMENT
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FRAZIER HEALTHCARE IV, L.P.

By: FHM IV, LP, its General Partner
By: FHM IV, LLC, its General Partner

By:

, Member

FRAZIER AFFILIATES IV, L.P.

By: FHM IV, LP, its General Partner
By: FHM IV, LLC, its General Partner

By: _____
, Member

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SECOND INVESTOR RIGHTS AGREEMENT
SIGNATURE PAGE

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<S> <C>
HBM BIOVENTURES (CAYMAN) LTD.

By: _____
Name: John Arnold

Title: Chairman and Managing Director

</TABLE>

SECOND INVESTOR RIGHTS AGREEMENT
SIGNATURE PAGE

EXHIBIT A

INVESTORS

<TABLE>
<CAPTION>

INVESTOR	AGGREGATE PURCHASE PRICE	SHARES PURCHASED	WARRANT SHARES	TOTAL REGISTRABLE SECURITIES
<S>	<C>	<C>	<C>	<C>
MPM BioVentures III, L.P. [Address]	$ 1,399,249.92	2,186,328	437,265	2,623,593
MPM BioVentures III-QP, L.P. [Address]	$20,810,575.36	32,516,524	6,503,304	39,019,828
MPM BioVentures III GmbH & Co. Parallel-Beteiligungs KG [Address]	$ 1,758,750.08	2,748,047	549,609	3,297,656
MPM BioVentures III Parallel Fund, L.P. [Address]	$ 628,499.84	982,031	196,406	1,178,437
MPM Asset Management Investors 2003 BVIII LLC [Address]	$ 402,924.80	629,570	125,914	755,484
MPM BioEquities Master Fund, L.P. [Address]	$ 1,000,000.00	1,562,500	312,500	1,875,000
Alta BioPharma Partners II, L.P. [Address]	$ 7,233,884.80	11,302,945	2,260,589	13,563,534
Alta Embarcadero BioPharma Partners II, LLC [Address]	$ 266,115.20	415,805	83,161	498,966
Frazier Healthcare IV, L.P. [Address]	$ 7,462,120.35	11,659,563	2,331,912	13,991,475
Frazier Affiliates IV, L.P. [Address]	$ 37,879.65	59,186	11,837	71,023

HBM BioVentures (Cayman) Ltd. Unit 10 Eucalyptus Building Crewe Road P.O. Box 30852 SMB Grand Cayman, Cayman Islands Attn: John Arnold (345) 946-8002 (T) (345) 946-8003 (F)	$ 5,000,000.00	7,812,500	1,562,500	9,375,000
TOTAL	$46,000,000.00	71,874,999	14,374,997	86,249,996

EXHIBIT B

PRIOR RIGHTS HOLDERS

AS OF APRIL [__], 2003

INVESTOR NAME AND ADDRESS	REGISTRABLE SECURITIES
Alta California Partners, L, P. One Embarcadero Center, Suite 4050 San Francisco, CA 94111	4,579,314
Alta Embarcadero Partners, LLC One Embarcadero Center, Suite 4050 San Francisco, CA 94111	104,618
CB Capital Investors, L.P. c/o Chase Capital Partners Partners 380 Madison Avenue, 12th Floor New York, NY 10017	833,333
Fortune Maker Corporation 11/F King Fook Building 30-32 Des Voeux Road Central HONG KONG	550,000
Frazier & Company, Inc. 601 Union Street, Suite 2110 Seattle, WA 98101	15,234
Frazier Healthcare II, L.P. 601 Union Street, Suite 2110 Seattle, WA 98101	4,332,575
Johnson & Johnson Development Corporation One Johnson & Johnson Plaza New Brunswick, NJ 08933	1,666,666
Lombard Odier Darier Hentsch & Cie 11, rue de la Corraterie 1204 Geneva Switzerland	4,169,538
Novartis Pharma AG Head Financial Investments CH-4002 Basil, Switzerland	2,000,000
Pfizer, Inc. 235 East 42nd Street New York, NY 10017	1,000,000
Thomas Volpe [Address]	33,333

Total:	19,284,611

</TABLE>

SECOND INVESTOR RIGHTS AGREEMENT
SIGNATURE PAGE

EXHIBIT E

VOTING AGREEMENT

THIS VOTING AGREEMENT ("AGREEMENT") is entered into as of April 29, 2003, by and among _____ ("STOCKHOLDER") and certain of the investors set forth on SCHEDULE A (the "INVESTORS") to that certain Common Stock and Warrant Purchase Agreement of even date herewith (the "PURCHASE AGREEMENT").

RECITALS

A. Stockholder is a holder of record and the "beneficial owner" (within the meaning of Rule 13d-3 under the Securities Exchange Act of 1934, as amended (the "EXCHANGE ACT")) of certain shares of common stock of Rigel Pharmaceuticals, Inc., a Delaware corporation (the "COMPANY").

B. The Company is entering into the Purchase Agreement with the Investors that provides (subject to the conditions set forth therein) for the sale by the Company and the purchase by the Investors of (i) an aggregate of 71,874,999 shares (the "SHARES") of the Company's common stock, par value $0.001 per share (the "COMPANY COMMON STOCK"), and (ii) Warrants (as defined in the Purchase Agreement).

C. In order to induce the Investors to enter into the Purchase Agreement, Stockholder is entering into this Agreement.

AGREEMENT

The parties to this Agreement, intending to be legally bound, agree as follows:

SECTION 1. CERTAIN DEFINITIONS

For purposes of this Agreement:

(a) The term "CLOSING DATE" shall have the meaning assigned to it in the Purchase Agreement.

(b) The term "OFFERING" shall have the meaning assigned to it in the Purchase Agreement.

(c) Stockholder shall be deemed to "OWN" or to have acquired "Ownership" of a security if Stockholder (i) is the record owner of such security or (ii) is the "beneficial owner" (within the meaning of Rule 13d-3 under the Exchange Act) of such security.

(d) "PERSON" shall mean any (i) individual, (ii) corporation, limited liability company, partnership or other entity or (iii) governmental authority.

(e) "SUBJECT SECURITIES" shall mean (i) all securities of the Company (including all shares of Company Common Stock and all options, warrants and other rights to acquire shares of Company Common Stock) Owned by Stockholder as of the date of this Agreement and (ii) all additional securities of the Company (including all

additional shares of Company Common Stock and all additional options, warrants and other rights to acquire shares of Company Common Stock) of which Stockholder acquires Ownership during the period from the date of this Agreement through the Voting Covenant Expiration Date.

(f) A Person shall be deemed to have a effected a "TRANSFER" of a security if such Person directly or indirectly (i) sells, pledges, encumbers, grants an option with respect to, transfers or disposes of such security or any interest in such security to any Person, (ii) enters into an agreement or commitment contemplating the possible sale of, pledge of, encumbrance of, grant of an option with respect to, transfer of or disposition of such security or any interest therein to any Person or (iii) reduces such Person's beneficial ownership of, interest in or risk relating to such security.

(g) "VOTING COVENANT EXPIRATION DATE" shall mean the earlier of (i) the date upon which the Purchase Agreement is validly terminated pursuant to Section 9 thereof or (ii) the Closing Date.

SECTION 2. TRANSFER OF SUBJECT SECURITIES AND VOTING RIGHTS

2.1 RESTRICTION ON TRANSFER OF SUBJECT SECURITIES. Subject to Section 2.3, during the period from the date of this Agreement through the Voting Covenant Expiration Date, Stockholder shall not, directly or indirectly, cause

or permit any Transfer of any of the Subject Securities to be effected.

2.2 RESTRICTION ON TRANSFER OF VOTING RIGHTS. During the period from the date of this Agreement through the Voting Covenant Expiration Date, Stockholder shall ensure that (a) none of the Subject Securities is deposited into a voting trust and (b) no proxy is granted, and no voting agreement or similar agreement is entered into, with respect to any of the Subject Securities.

2.3 PERMITTED TRANSFERS. Section 2.1 shall not prohibit a transfer of Company Common Stock by Stockholder (a) to any member of his immediate family, or to a trust for the benefit of Stockholder or any member of his immediate family, (b) upon the death of Stockholder or (c) if Stockholder is a partnership or limited liability company, to one or more partners or members of Stockholder or to an affiliated corporation under common control with Stockholder; provided, however, that a transfer referred to in this sentence shall be permitted only if, as a precondition to such transfer, the transferee agrees in a writing, reasonably satisfactory in form and substance to the Investors, to be bound by the terms of this Agreement.

SECTION 3. VOTING OF SHARES

3.1 VOTING COVENANT. Stockholder, solely in Stockholder's capacity as a stockholder of the Company, hereby agrees that, prior to the Voting Covenant Expiration Date, at any meeting of the stockholders of the Company, however called, and in any written action by consent of stockholders of the Company, Stockholder shall cause all of the Subject Securities to be voted:

(a) in favor of the issuance of the Shares and the Warrants in the Offering, in favor of each of the other actions contemplated by the Purchase Agreement and in favor of any action in furtherance of any of the foregoing; and

(b) against any action or agreement that would result in a breach of any representation, warranty, covenant or obligation of the Investors and/or the Company in the Purchase Agreement or which could be expected to delay, prevent or adversely affect the consummation of the transactions contemplated by the Purchase Agreement (including, but not limited to, any matter submitted to stockholders that would cause a failure of a closing condition in the Purchase Agreement).

Prior to the Voting Covenant Expiration Date, Stockholder shall not enter into any agreement or understanding with any Person to vote or give instructions in any manner inconsistent with clause "(a)" or "(b)" of the preceding sentence.

3.2 PROXY; FURTHER ASSURANCES.

(a) Contemporaneously with the execution of this Agreement: (i) Stockholder shall deliver to the Investors a proxy in the form attached to this Agreement as EXHIBIT A, which shall be irrevocable to the fullest extent permitted by law (at all times prior to the Voting Covenant Expiration Date) with respect to the shares referred to therein (the "PROXY") and (ii) Stockholder shall cause to be delivered to the Investors an additional proxy (in the form attached hereto as EXHIBIT A) executed on behalf of the record owner of any outstanding shares of Company Common Stock that are owned beneficially (within the meaning of Rule 13d-3 under the Exchange Act), but not of record, by Stockholder.

(b) Stockholder shall, at his or its own expense, perform such further acts and execute such further proxies and other documents and instruments as may reasonably be required to vest in the Investors the power to carry out and give effect to the provisions of this Agreement.

SECTION 4. NO SOLICITATION

Stockholder agrees that, during the period from the date of this Agreement through the Voting Covenant Expiration Date, Stockholder shall not take, cause or permit (and shall use its commercially reasonable efforts to ensure that none of its officers, directors, agents or representatives takes, causes or permits) any person to take, directly or indirectly, any of the following actions with any third party: (a) solicit, knowingly encourage, initiate or participate in any negotiations, inquiries or discussions with respect to any offer or proposal to acquire the business, assets or capital shares of the Company (excluding non-exclusive licenses entered into in the ordinary course of business), whether by merger, consolidation, other business combination, purchase of capital stock, purchase of assets, license, lease, tender or exchange offer or otherwise (each of the foregoing, an "ALTERNATIVE PROPOSAL"), (b) disclose, in connection with an Alternative Proposal, any nonpublic information concerning the Company's business or properties or afford to any third party access to its properties, books or records, except in the ordinary course of business and as required by law or pursuant to a governmental request for information, (c) enter into or execute any agreement providing for

an Alternative Proposal or (d) make or authorize any public statement, recommendation or solicitation in support of any Alternative Proposal or any offer or proposal relating to an Alternative Proposal, other than with respect to the Offering.

SECTION 5. REPRESENTATIONS AND WARRANTIES OF STOCKHOLDER

Stockholder hereby represents and warrants to the Investors as follows:

5.1 AUTHORIZATION, ETC. Stockholder has the absolute and unrestricted right, power, authority and capacity to execute and deliver this Agreement and the Proxy and to perform his or its obligations hereunder and thereunder. This Agreement and the Proxy have been duly executed and delivered by Stockholder and constitute legal, valid and binding obligations of Stockholder, enforceable against Stockholder in accordance with their terms, subject to (a) laws of general application relating to bankruptcy, insolvency and the relief of debtors and (b) rules of law governing specific performance, injunctive relief and other equitable remedies. If Stockholder is a general or limited partnership, then Stockholder is a partnership duly organized, validly existing and in good standing under the laws of the jurisdiction in which it was organized. If Stockholder is a limited liability company, then Stockholder is a limited liability company duly organized, validly existing and in good standing under the laws of the jurisdiction in which it was organized.

5.2 NO CONFLICTS OR CONSENTS.

(a) The execution and delivery of this Agreement and the Proxy by Stockholder do not, and the performance of this Agreement and the Proxy by Stockholder will not (i) conflict with or violate any law, rule, regulation, order, decree or judgment applicable to Stockholder or by which he or it or any of his or its properties is or may be bound or affected, (ii) if Stockholder is not a natural person, violate or conflict with the certificate of incorporation, bylaws or other equivalent organizational documents of Stockholder or (iii) result in or constitute (with or without notice or lapse of time) any breach of or default under, or give to any other Person (with or without notice or lapse of time) any right of termination, amendment, acceleration or cancellation of, or result (with or without notice or lapse of time) in the creation of any encumbrance or restriction on any of the Subject Securities pursuant to, any note, bond, mortgage, indenture, contract, agreement, lease, license, permit, franchise or other instrument or obligation to which Stockholder is a party or by which Stockholder or any of his or its affiliates or properties is or may be bound or affected. There is no beneficiary or holder of a voting trust certificate or other interest of any trust of which Stockholder is a trustee whose consent is required for the execution and delivery of this Agreement or the consummation by Stockholder of the transactions contemplated by this Agreement.

(b) The execution and delivery of this Agreement and the Proxy by Stockholder do not, and the performance of this Agreement and the Proxy by Stockholder will not, require any consent, approval, authorization or permit of any Person. Stockholder does not have any understanding in effect with respect to the voting or transfer of any Subject Securities. Stockholder is not required to make any filing with or notify any governmental or regulatory authority in connection with this Agreement or the transactions contemplated thereby pursuant to the requirements of the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, and the rules and regulations promulgated thereunder. If Stockholder is a natural person and is married, and Stockholder's Subject Securities constitute community property or otherwise need spousal or other approval for this Agreement to be legal, valid and binding on Stockholder, this Agreement has been duly authorized, executed and delivered by, and constitutes a valid and binding agreement of, Stockholder's spouse, enforceable against such spouse in accordance with its terms.

5.3 TITLE TO SECURITIES. As of the date of this Agreement, (a) Stockholder holds of record (free and clear of any encumbrances or restrictions) the number of outstanding shares of Company Common Stock set forth under the heading "Shares Held of Record" on the signature page hereof, (b) Stockholder holds (free and clear of any encumbrances or restrictions) the options, warrants and other rights to acquire shares of Company Common Stock set forth under the heading "Options and Other Rights" on the signature page hereof, (c) Stockholder Owns the additional securities of the Company set forth under the heading "Additional Securities Beneficially Owned" on the signature page hereof and (d) Stockholder does not directly or indirectly Own any shares of capital stock or other securities of the Company, or any option, warrant or other right to acquire (by purchase, conversion or otherwise) any shares of capital stock or other securities of the Company, other than the shares and options, warrants and other rights set forth on the signature page hereof.

5.4 LITIGATION. There is no private or governmental action, suit, proceeding, claim, arbitration or investigation pending or, to the knowledge of Stockholder or any of Stockholder's affiliates, threatened before any agency, administration, court or tribunal, foreign or domestic, against Stockholder or any of Stockholder's affiliates or any of their respective properties or any of their respective officers or directors, in the case of a corporate entity (in their capacities as such), or any of their respective partners (in the case of a partnership), that, individually or in the aggregate, could reasonably be expected to materially delay or impair Stockholder's ability to consummate the transactions contemplated by this Agreement. There is no judgment, decree or order against Stockholder or any of Stockholder's affiliates, or, to the knowledge of Stockholder or any of Stockholder's affiliates, any of their respective directors or officers (in their capacities as such), in the case of a corporate entity, or any of their respective partners (in the case of a partnership), that, individually or in the aggregate, could reasonably be expected to prevent, enjoin, alter or delay any of the transactions contemplated by this Agreement, or that, individually or in the aggregate, could reasonably be expected to have an adverse effect on Stockholder's ability to consummate the transactions contemplated by this Agreement.

5.5 ACCURACY OF REPRESENTATIONS. The representations and warranties contained in this Agreement are accurate in all respects as of the date of this Agreement and will be accurate in all respects at all times until the termination of this Agreement.

SECTION 6. ADDITIONAL COVENANTS OF STOCKHOLDER

6.1 FURTHER ASSURANCES. From time to time and without additional consideration, Stockholder shall (at Stockholder's sole expense) execute and deliver, or cause to be executed and delivered, such additional transfers, assignments, endorsements, proxies, consents and other instruments, and shall (at Stockholder's sole expense) take such further actions, as the Investors may request for the purpose of carrying out and furthering the intent of this Agreement.

SECTION 7. MISCELLANEOUS

7.1 SURVIVAL OF REPRESENTATIONS, WARRANTIES AND AGREEMENTS. All representations, warranties, covenants and agreements made by Stockholder in this Agreement shall survive (a) the Closing Date, (b) any termination of the Purchase Agreement and/or this Agreement and (c) the Voting Covenant Expiration Date.

7.2 EXPENSES. All costs and expenses incurred in connection with the transactions contemplated by this Agreement shall be paid by the party incurring such costs and expenses.

7.3 NOTICES. All notices, requests, consents and other communications hereunder shall be in writing; shall be mailed (a) if within the domestic United States, by first-class registered or certified airmail, by nationally recognized overnight express courier, postage prepaid, or by facsimile or (b) if delivered to or from outside the United States, by International Federal Express or facsimile; shall be deemed given: (i) if delivered by first-class registered or certified mail domestic, three business days after so mailed, (ii) if delivered by nationally recognized overnight carrier, one business day after so mailed, (iii) if delivered by International Federal Express, two business days after so mailed or (iv) if delivered by facsimile, upon electric confirmation of receipt; and shall be delivered as addressed as follows:

if to Stockholder:

at the address set forth on the signature page hereof; and

if to the Investors:

[address]

7.4 SEVERABILITY. In case any provision contained in this Agreement should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible to the fullest extent permitted by applicable law in an acceptable manner.

7.5 ENTIRE AGREEMENT. This Agreement, the Proxy and any other documents delivered by the parties in connection herewith constitute the entire agreement between the parties with respect to the subject matter hereof and thereof and supersede all prior agreements and understandings between the parties with respect thereto. No addition to or modification of any provision of this Agreement shall be binding upon either party unless made in writing and signed

by both parties.

7.6 ASSIGNMENT; BINDING EFFECT. Except as provided herein, neither this Agreement nor any of the interests or obligations hereunder may be assigned or delegated by Stockholder, and any attempted or purported assignment or delegation of any of such interests or obligations shall be void. Subject to the preceding sentence, this Agreement shall be binding upon Stockholder and his heirs, estate, executors and personal representatives and his or its successors and assigns, and shall inure to the benefit of the Investors and their successors and assigns. Without limiting any of the restrictions set forth in Section 2 or Section 6.1 or elsewhere in this Agreement, this Agreement shall be binding upon any Person to whom any Subject Securities are transferred. Nothing in this Agreement is intended to confer on any Person (other than the Investors and their successors and assigns) any rights or remedies of any nature. Notwithstanding the foregoing, any assignment, delegation or attempted transfer of any rights, interests or obligations under this Agreement by Stockholder without the prior written consent of the Investors shall be void.

7.7 INDEMNIFICATION. Stockholder shall hold harmless and indemnify the Investors from and against, and shall compensate and reimburse the Investors for, any loss, damage, claim, liability, fee (including attorneys' fees), demand, cost or expense (regardless of whether or not such loss, damage, claim, liability, fee, demand, cost or expense relates to a third-party claim) that is directly or indirectly suffered or incurred by the Investors, or to which the Investors otherwise become subject, and that arises directly or indirectly from, or relates directly or indirectly to, (a) any inaccuracy in or breach of any representation or warranty contained in this Agreement or (b) any failure on the part of Stockholder to observe, perform or abide by, or any other breach of, any restriction, covenant, obligation or other provision contained in this Agreement or in the Proxy.

7.8 SPECIFIC PERFORMANCE. The parties agree that irreparable damage would occur in the event that any of the provisions of this Agreement or the Proxy were not performed in accordance with its specific terms or were otherwise breached. Stockholder agrees that, in the event of any breach or threatened breach by Stockholder of any covenant or obligation contained in this Agreement or in the Proxy, the Investors shall be entitled (in addition to any other remedy that may be available to them, including monetary damages) to seek and obtain (a) a decree or order of specific performance to enforce the observance and performance of such covenant or obligation, and (b) an injunction restraining such breach or threatened breach. Stockholder further agrees that neither the Investors nor any other Person shall be required to obtain, furnish or post any bond or similar instrument in connection with or as a condition to obtaining any remedy referred to in this Section 7.8, and Stockholder irrevocably waives any right he or it may have to require the obtaining, furnishing or posting of any such bond or similar instrument.

7.9 NON-EXCLUSIVITY. The rights and remedies of the Investors under this Agreement are not exclusive of or limited by any other rights or remedies which it may have, whether at law, in equity, by contract or otherwise, all of which shall be cumulative (and not alternative). Without limiting the generality of the foregoing, the rights and remedies of the Investors under this Agreement, and the obligations and liabilities of Stockholder under this Agreement, are in addition to their respective rights, remedies, obligations and liabilities under common law requirements and under all applicable statutes, rules and regulations.

7.10 GOVERNING LAW; VENUE.

(a) This Agreement and the Proxy shall be construed in accordance with, and governed in all respects by, the laws of the State of Delaware (without giving effect to principles of conflicts of laws).

(b) Any legal action or other legal proceeding relating to this Agreement or the Proxy or the enforcement of any provision of this Agreement or the Proxy may be brought or otherwise commenced in any state or federal court located in the State of Delaware. Stockholder:

(i) expressly and irrevocably consents and submits to the jurisdiction of each state and federal court located in the State of Delaware in connection with any such legal proceeding;

(ii) agrees that service of any process, summons, notice or document by U.S. mail addressed to him or it at the address set forth on the signature page

hereof shall constitute effective service of such process, summons, notice or document for purposes of any such legal proceeding;

(iii) agrees that each state and federal court located in the State of Delaware shall be deemed to be a convenient forum; and

(iv) agrees not to assert (by way of motion, as a defense or otherwise), in any such legal proceeding commenced in any state or federal court located in the State of Delaware, any claim that Stockholder is not subject personally to the jurisdiction of such court, that such legal proceeding has been brought in an inconvenient forum, that the venue of such proceeding is improper or that this Agreement or the subject matter of this Agreement may not be enforced in or by such court.

Nothing contained in this Section 7.10 shall be deemed to limit or otherwise affect the right of the Investors to commence any legal proceeding or otherwise proceed against Stockholder in any other forum or jurisdiction.

(c) STOCKHOLDER IRREVOCABLY WAIVES THE RIGHT TO A JURY TRIAL IN CONNECTION WITH ANY LEGAL PROCEEDING RELATING TO THIS AGREEMENT OR THE PROXY OR THE ENFORCEMENT OF ANY PROVISION OF THIS AGREEMENT OR THE PROXY.

7.11 COUNTERPARTS. This Agreement may be executed in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute one and the same instrument.

7.12 HEADINGS. The captions contained in this Agreement are for convenience of reference only, shall not be deemed to be a part of this Agreement and shall not be referred to in connection with the construction or interpretation of this Agreement.

7.13 PRONOUNS. All pronouns contained herein, and any variations thereof, shall be deemed to refer to the masculine, feminine or neutral, singular or plural, as to the identity of the parties hereto may require.

7.14 ATTORNEYS' FEES. In the event that any suit or action is instituted under or in relation to this Agreement, including without limitation to enforce any provision in this Agreement, the prevailing party in such dispute shall be entitled to recover from the losing party all fees, costs and expenses of enforcing any right of such prevailing party under or with respect to this Agreement, including without limitation, such reasonable fees and expenses of attorneys and accountants, which shall include, without limitation, all fees, costs and expenses of appeals.

7.15 NO WAIVER. No failure on the part of the Investors to exercise any power, right, privilege or remedy under this Agreement, and no delay on the part of the Investors in exercising any power, right, privilege or remedy under this Agreement, shall operate as a waiver of such power, right, privilege or remedy; and no single or partial exercise of any such power, right, privilege or remedy shall preclude any other or further exercise thereof or of any other power, right, privilege or remedy. The Investors shall not be deemed to have waived any claim available to the Investors arising out of this Agreement, or any power, right, privilege or remedy of the Investors under this Agreement, unless the waiver of such claim, power, right, privilege or

remedy is expressly set forth in a written instrument duly executed and delivered on behalf of the Investors, and any such waiver shall not be applicable or have any effect except in the specific instance in which it is given.

IN WITNESS WHEREOF, the Investors and Stockholder have caused this Agreement to be executed as of the date first written above.

[INVESTORS]

By: ----------

Name: ----------

Title: ----------

STOCKHOLDER

Name:

Address:

Facsimile:

<TABLE>
<CAPTION>

SHARES HELD OF RECORD	OPTIONS AND OTHER RIGHTS	ADDITIONAL SECURITIES BENEFICIALLY OWNED
<S>	<C>	<C>

</TABLE>

EXHIBIT A
FORM OF IRREVOCABLE PROXY

The undersigned stockholder (the "STOCKHOLDER") of RIGEL PHARMACEUTICALS, INC., a Delaware corporation (the "COMPANY"), hereby irrevocably (to the fullest extent permitted by law) appoints and constitutes [_____], [_____] and [_____], and each of them, the exclusive attorneys and proxies of the Stockholder with full power of substitution and resubstitution, to the full extent of the Stockholder's rights with respect to (i) the outstanding shares of capital stock of the Company owned of record by the Stockholder as of the date of this proxy, which shares are specified on the final page of this proxy and (ii) any and all other shares of capital stock of the Company which the Stockholder may acquire on or after the date hereof. (The shares of the capital stock of the Company referred to in clauses "(i)" and "(ii)" of the immediately preceding sentence are collectively referred to as the "SHARES.") Upon the execution hereof, all prior proxies given by the Stockholder with respect to any of the Shares are hereby revoked, and the Stockholder agrees that no subsequent proxies will be given with respect to any of the Shares.

This proxy is irrevocable (to the fullest extent permitted by law), is coupled with an interest and is granted in connection with the Voting Agreement, dated as of the date hereof, between the Investors and the Stockholder (the "VOTING AGREEMENT"), and is granted in consideration of the Investors entering into the Common Stock and Warrant Purchase Agreement, dated as of the date hereof, among the Company and the Investors (the "PURCHASE AGREEMENT"). This proxy will terminate on the Voting Covenant Expiration Date (as defined in the Voting Agreement).

The attorneys and proxies named above be, and each of them are, authorized and empowered by the undersigned, and may exercise this proxy, to vote the Shares, and to exercise all voting, consent and similar rights of the undersigned with respect to the Shares until the Voting Covenant Expiration Date at any meeting of the stockholders of the Company, however called, and in connection with any written action by consent of stockholders of the Company:

(i) in favor of issuance of the Shares and the Warrants (as defined in the Purchase Agreement) in the Offering, in favor of each of the other actions contemplated by the Purchase Agreement and in favor of any action in furtherance of any of the foregoing; and

(ii) against any action or agreement that would result in a breach of any representation, warranty, covenant or obligation of the Investors and/or the Company in the Purchase Agreement or which could be expected to delay, prevent or adversely affect the consummation of the transactions contemplated by the Purchase Agreement (including, but not limited to, any matter submitted to stockholders that would cause a failure of a closing condition in the Purchase Agreement).

The Stockholder may vote the Shares on all other matters not referred to in this proxy, and the attorneys and proxies named above may not exercise this proxy with respect to such other matters.

This proxy shall be binding upon the heirs, estate, executors, personal

representatives, successors and assigns of the Stockholder (including any transferee of any of the Shares).

In case any provision contained in this Agreement should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

Dated: [_____], 2003

Signature

Print Name