

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 8-K

CURRENT REPORT

**Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): June 29, 2011

ACELRX PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

DELAWARE
(State of incorporation)

001-35068
(Commission File No.)

41-2193603
(IRS Employer Identification No.)

575 Chesapeake Drive
Redwood City, CA 94063
(Address of principal executive offices and zip code)

Registrant's telephone number, including area code: (650) 216-3500

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 1.01 ENTRY INTO A MATERIAL DEFINITIVE AGREEMENT.

On June 29, 2011, AcclRx Pharmaceuticals, Inc. (the "Company") entered into a Loan and Security Agreement (the "Loan Agreement") with Hercules Technology II, L.P. and Hercules Technology Growth Capital, Inc. (together, the "Lenders") under which the Company may borrow up to \$20.0 million in two tranches of \$10.0 million each, represented by secured convertible term promissory notes (collectively, the "Notes").

The Company borrowed the first tranche of \$10.0 million upon closing of the transaction on June 29, 2011. The Company used a portion of the proceeds from the first tranche to repay the remaining obligations under that certain Loan and Security Agreement between the Company and Pinnacle Ventures, L.L.C., as agent and the lenders party thereto, dated September 16, 2008 (the "Pinnacle Agreement"), and expects to use the remainder of the capital to fund development activities related to ARX-01, its product candidate for treatment of post-operative pain, and for other general corporate purposes. The second tranche of up to \$10.0 million can be drawn, at the Company's option, anytime prior to December 16, 2011. The interest rate for each tranche will be calculated at a rate equal to the greater of either (i) 8.50% plus the positive difference between the prime rate as reported from time to time in The Wall Street Journal and 5.25%, and (ii) 8.50%. Payments under the Loan Agreement are interest only until June 30, 2012 (which would be extended until October 1, 2012 if the Company has initiated enrollment for its planned abdominal and comparator ARX-01 Phase 3 clinical trials on or before December 31, 2011 (the "Extension Trigger Event")) followed by equal monthly payments of principal and interest through the scheduled maturity date on December 1, 2014 (which would be extended until March 1, 2015 if the Extension Trigger Event has occurred) (the "Loan Maturity Date"). In addition, a final payment equal to \$200,000 will be due on the Loan Maturity Date, or such earlier date specified in the Loan Agreement. The Company's obligations under the Loan Agreement are secured by a security interest in substantially all of its assets, other than its intellectual property.

If the Company prepays the loan prior to maturity, it will pay the Lenders a prepayment charge, based on a percentage of the then outstanding principal balance, equal to 3% if the prepayment occurs prior to June 29, 2012, 2% if the prepayment occurs after June 29, 2012, but prior to June 29, 2013, or 1% if the prepayment occurs after June 29, 2013.

Subject to certain conditions and limitations set forth in the Loan Agreement, the Company has the right to convert up to \$3.0 million of scheduled principal installments under the Notes into freely tradeable shares of the Company's common stock ("Common Stock"). The number of shares of Common Stock that would be issued upon conversion of the Notes would be equal to the number determined by dividing (x) the product of (A) the principal amount to be paid in shares of Common Stock and (B) 103%, by (y) \$5.70 (subject to certain proportional adjustments as provided for in the Loan Agreement). In addition, pursuant to the Loan Agreement, the Lenders were granted the right, in their discretion, to participate in certain future private offerings of securities by the Company occurring on or prior to June 29, 2013 by investing up to an aggregate of \$2,000,000 on the same terms, conditions and pricing afforded to others participating in such subsequent offerings.

The Loan Agreement includes customary affirmative and restrictive covenants, but does not include any financial maintenance covenants, and also includes standard events of default, including payment defaults, breaches of covenants following any applicable cure period, a material impairment in the perfection or priority of Lenders' security interest or in the value of the collateral, and events relating to bankruptcy or insolvency. Upon the occurrence of an event of default, a default interest rate of an additional 5% may be applied to the outstanding loan balances, and the Lenders may declare all outstanding obligations immediately due and payable and take such other actions as set forth in the Loan Agreement.

In connection with the Loan Agreement, the Company issued a warrant to each Lender which together are exercisable for an aggregate of 274,508 shares of Common Stock and each carry an exercise price of \$3.06 (the "Warrants"). Each Warrant may be exercised on a cashless basis. The Warrants are exercisable for a term beginning on the date of issuance and ending on the earlier to occur of seven years from the date of issuance or the consummation of certain acquisitions of the Company as set forth in the Warrants. The number of shares for which the Warrants are exercisable and the associated exercise price are subject to certain proportional adjustments as set forth in the Warrants.

In connection with the Company's repayment of its remaining obligations under the Pinnacle Agreement, the Pinnacle Agreement was terminated on June 29, 2011.

The descriptions of the Loan Agreement and the Warrants contained herein do not purport to be complete and are qualified in their entirety by reference to the complete text of the Loan Agreement and the Warrants, including the exhibits thereto, copies of which are attached hereto as Exhibits 10.1, 4.4 and 4.5, respectively, and are incorporated herein by reference.

On June 30, 2011, the Company issued a press release regarding the above transactions, which is attached hereto as Exhibit 99.1 and incorporated herein by reference.

ITEM 1.02 TERMINATION OF A MATERIAL DEFINITIVE AGREEMENT.

The information set forth above and referenced under Item 1.01 that relates to the Company's repayment of obligations under and termination of the Pinnacle Agreement on June 29, 2011 is hereby incorporated by reference into this Item 1.02.

ITEM 2.03 CREATION OF A DIRECT FINANCIAL OBLIGATION OR AN OBLIGATION UNDER AN OFF-BALANCE SHEET ARRANGEMENT OF A REGISTRANT.

The information set forth above and referenced under Item 1.01 that relates to the Loan Agreement and the Notes is hereby incorporated by reference into this Item 2.03.

ITEM 3.02 UNREGISTERED SALES OF EQUITY SECURITIES.

The information set forth above and referenced under Item 1.01 that relates to the issuance of the Warrants and the Notes is hereby incorporated by reference into this Item 3.02.

Neither the Company nor the Lenders engaged any investment advisors with respect to the issuance of the Warrants or the Notes, and no finders' fees were paid to any party in connection therewith. The issuance of the Warrants and the Notes was made in reliance on the exemption from registration contained in Section 4(2) of the Securities Act of 1933, as amended (the "Act"), and Regulation D, Rule 506 thereunder. Each Lender represented that it is an "accredited investor" as defined in Regulation D of the Act and that the securities acquired by the Lenders were being acquired for investment purposes and not with a view to the sale or distribution of any part thereof.

ITEM 9.01 FINANCIAL STATEMENTS AND EXHIBITS.**(d) Exhibits.**

Exhibit Number	Description
4.4	Warrant to Purchase Stock issued to Hercules Technology II, L.P., dated as of June 29, 2011
4.5	Warrant to Purchase Stock issued to Hercules Technology Growth Capital, Inc., dated as of June 29, 2011
10.1	Loan and Security Agreement among AcclRx Pharmaceuticals, Inc., Hercules Technology II, L.P. and Hercules Technology Growth Capital, Inc., dated as of June 29, 2011
99.1	Press Release titled "AcclRx Secures \$20 Million Loan Financing Agreement, Expected to Extend Its Operating Cash Runway Into 2013," dated as of June 30, 2011

Forward-Looking Statements

Statements in this report that are not strictly historical in nature constitute "forward-looking statements." Such statements include, but are not limited to, the initiation of planned ARX-01 Phase 3 clinical trials, the Company's ability to access the second tranche funds under the Loan Agreement and the Company's ability to convert certain principal under the Notes into shares of Common Stock. These forward-looking statements are based on the Company's current expectations and inherently involve significant risks and uncertainties. The Company's actual results and the timing of events could differ materially from those anticipated in such forward looking statements as a result of these risks and uncertainties, which include, without limitation, risks related to: the success, cost and timing of the Company's product development activities and clinical trials; the uncertain clinical development process, including the risk that planned clinical trials may not begin on time, have an effective design, enroll a sufficient number of patients, or be initiated or completed on schedule, if at all; the Company's ability to obtain adequate clinical supplies of the ARX-01 drug and device components; the Company's ability to attract funding partners or collaborators with development, regulatory and commercialization expertise; the accuracy of the Company's estimates regarding expenses, capital requirements and needs for financing; with respect to accessing the second tranche funds under the Loan Agreement, extending the interest only period thereunder and the Company's ability to convert certain principal under the Notes into shares of Common Stock, the Company's ability to satisfy the conditions required to effect such transactions; and other risks detailed in under "Risk Factors" and elsewhere in the Company's Securities and Exchange Commission filings and reports, including its Annual Report on Form 10-K for the year ended December 31, 2010 and its Quarterly Report on Form 10-Q for the quarter ended March 31, 2011. The Company undertakes no duty or obligation to update any forward-looking statements contained in this report as a result of new information, future events or changes in its expectations.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: June 30, 2011

ACELRX PHARMACEUTICALS, INC.

By: /s/ James H. Welch
James H. Welch
Chief Financial Officer

INDEX TO EXHIBITS

Exhibit Number	Description
4.4	Warrant to Purchase Stock issued to Hercules Technology II, L.P., dated as of June 29, 2011
4.5	Warrant to Purchase Stock issued to Hercules Technology Growth Capital, Inc., dated as of June 29, 2011
10.1	Loan and Security Agreement among AcelRx Pharmaceuticals, Inc., Hercules Technology II, L.P. and Hercules Technology Growth Capital, Inc., dated as of June 29, 2011
99.1	Press Release titled "AcelRx Secures \$20 Million Loan Financing Agreement, Expected to Extend Its Operating Cash Runway Into 2013," dated as of June 30, 2011

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY STATE SECURITIES LAWS. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, OR HYPOTHECATED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL (WHICH MAY BE COMPANY COUNSEL) REASONABLY SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY APPLICABLE STATE SECURITIES LAWS.

WARRANT AGREEMENT

To Purchase Shares of the Common Stock of

ACELRX PHARMACEUTICALS, INC.

Dated as of June 29, 2011 (the "Effective Date")

WHEREAS, AcelRx Pharmaceuticals, Inc., a Delaware corporation (the "Company"), has entered into a Loan and Security Agreement of even date herewith (the "Loan Agreement") with Hercules Technology II, L.P., a Delaware limited partnership (the "Warrantholder");

WHEREAS, the Company desires to grant to Warrantholder, in consideration for, among other things, the financial accommodations provided for in the Loan Agreement, the right to purchase shares of its Common Stock (as defined below) pursuant to this Warrant Agreement (the "Warrant");

NOW, THEREFORE, in consideration of the Warrantholder executing and delivering the Loan Agreement and providing the financial accommodations contemplated therein, and in consideration of the mutual covenants and agreements contained herein, the Company and Warrantholder agree as follows:

SECTION 1. GRANT OF THE RIGHT TO PURCHASE COMMON STOCK.

For value received, the Company hereby grants to the Warrantholder, and the Warrantholder is entitled, upon the terms and subject to the conditions hereinafter set forth, to subscribe for and purchase, from the Company, One Hundred Thirty-Seven Thousand, Two Hundred Fifty-Four (137,254) fully paid and non-assessable shares of the Common Stock at the Exercise Price (as defined below). The Exercise Price of such shares is subject to adjustment as provided in Section 8. As used herein, the following terms shall have the following meanings:

"1934 Act" means the Securities Exchange Act of 1934, as amended.

"Acknowledgment of Exercise" has the meaning given to it in Section 3(a).

"Act" means the Securities Act of 1933, as amended, and as the same may be in effect from time to time.

"Charter" means the Company's Certificate of Incorporation or other constitutional document, as the same may be amended from time to time.

"Claims" has the meaning given to it in Section 12(p).

"Common Stock" means the Company's common stock, \$0.001 par value per share.

"Company" has the meaning given to it in the preamble to this Warrant.

“Company SEC Reports” means, collectively (a) the Company’s most recent Annual Report on Form 10-K (the “Annual Report”), (b) the Company’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2011 and (c) any other statement, report (including without limitation, Current Reports on Form 8-K) or registration statement filed by the Company with the SEC during the period commencing subsequent to the period covered by such Annual Report (including, in each case, all exhibits thereto and documents incorporated by reference therein).

“Effective Date” has the meaning given to it in the preamble to this Warrant.

“Exercise Price” means \$3.06.

“Lender” has the meaning given to it in the Loan Agreement.

“Loan Agreement” has the meaning given to it in the preamble to this Warrant.

“Merger Event” means (a) a merger or consolidation involving the Company in which (i) the Company is not the surviving entity, or (ii) the outstanding shares of the Company’s capital stock are otherwise converted into or exchanged for shares of capital of another entity; or (b) the sale of all or substantially all of the assets of the Company.

“Net Issuance” has the meaning given to it in Section 3(a).

“Notice of Exercise” has the meaning given to it in Section 3(a).

“Public Acquisition” means any Merger Event which is effected such that (i) the holders of Common Stock shall be entitled to receive (A) cash and/or (B) shares of stock that are of a publicly traded company listed on a national market or exchange which may be resold without restrictions (other than restrictions to which Warrantholder may separately agree in writing) after the consummation of such Merger Event, and (ii) the Company’s stockholders own less than 50% of the voting securities of the surviving entity.

“Purchase Price” means, with respect to any exercise of this Warrant, an amount equal to the Exercise Price as of the relevant time multiplied by the number of shares of Common Stock requested to be exercised under this Warrant pursuant to such exercise.

“Rules” has the meaning given to it in Section 12(q).

“Transfer Notice” has the meaning given to it in Section 11.

“Warrant” has the meaning given to it in the preamble to this Warrant.

“Warrant Term” has the meaning given to it in Section 2.

“Warrantholder” has the meaning given to it in the preamble to this Warrant.

SECTION 2. TERM OF THE AGREEMENT.

Except as otherwise provided for herein, the term of this Warrant (the “Warrant Term”) and the right to purchase Common Stock as granted herein shall commence on the Effective Date and shall be exercisable for a period ending upon the earlier to occur of (A) seven (7) years from the Effective Date or (B) the consummation of a Public Acquisition.

SECTION 3. EXERCISE OF THE PURCHASE RIGHTS.

(a) Exercise. The purchase rights set forth in this Warrant are exercisable by the Warrantholder, in whole or in part, at any time, or from time to time, during the Warrant Term, by tendering to the Company at its principal office a notice of exercise in the form attached hereto as Exhibit A (the “Notice of Exercise”), duly completed and executed. Promptly upon receipt of the Notice of Exercise and the payment of the Purchase Price in accordance with the terms set

forth below, and in no event later than five (5) business days thereafter, the Company shall issue to the Warrantholder a certificate for the number of shares of Common Stock purchased and shall execute the acknowledgment of exercise in the form attached hereto as Exhibit B (the "Acknowledgment of Exercise") indicating the number of shares which remain subject to future purchases, if any.

The Purchase Price may be paid at the Warrantholder's election either (i) by cash or check, or (ii) by surrender of all or a portion of the Warrant for shares of Common Stock to be exercised under this Warrant and, if applicable, an amended Warrant representing the remaining number of shares purchasable hereunder, as determined below ("Net Issuance"). If the Warrantholder elects the Net Issuance method, the Company will issue Common Stock in accordance with the following formula:

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

Where: X= the number of shares of Common Stock to be issued to the Warrantholder.

Y = the number of shares of Common Stock requested to be exercised under this Warrant.

A = the fair market value of one (1) share of Common Stock at the time of issuance of such shares of Common Stock.

B = the Exercise Price.

For purposes of the above calculation, the fair market value of one (1) share of Common Stock shall mean:

(i) if the Common Stock is traded on the New York Stock Exchange, the American Stock Exchange, any exchange operated by the NASDAQ Stock Market, LLC or any other securities exchange, the fair market value of one (1) share of Common Stock shall be deemed to be the volume-weighted average of the closing prices over the twenty (20) consecutive trading days ending two (2) trading days before the day the fair market value of one (1) share of Common Stock is being determined; or

(ii) if at any time the Common Stock is not listed on any securities exchange, the fair market value of one (1) share of Common Stock shall be the highest price per share which the Company could obtain from a willing buyer (not a current employee or director) for shares of Common Stock sold by the Company (based upon the valuation by the Board of all shares of Common Stock), from authorized but unissued shares, as determined in good faith by its Board of Directors, unless this Warrant is being exercised in connection with a Merger Event, in which case the fair market value of one (1) share of Common Stock shall be deemed to be the per share value received by the holders of the Common Stock on a Common Stock equivalent basis pursuant to such Merger Event.

Upon partial exercise by either cash or Net Issuance, the Company shall promptly issue an agreement substantially in the form of the Warrant representing the remaining number of shares purchasable hereunder. All other terms and conditions of such agreement shall be identical to those contained herein, including, but not limited to the Effective Date hereof.

(b) Exercise Prior to Expiration. To the extent that the Warrantholder has not

exercised its purchase rights under this Warrant to all Common Stock subject hereto, and if the fair market value of one share of the Common Stock is greater than the Exercise Price then in effect, this Warrant shall be deemed automatically exercised pursuant to Section 3(a) (even if not surrendered) immediately before the expiration of the Warrant Term. For purposes of such automatic exercise, the fair market value of one share of the Common Stock upon such expiration shall be determined pursuant to Section 3(a). To the extent this Warrant or any portion thereof is deemed automatically exercised pursuant to this Section 3(b), the Company agrees to promptly notify the Warrantholder of the number of shares of Common Stock, if any, the Warrantholder is to receive by reason of such automatic exercise.

(c) Legend. Each certificate for the shares of Common Stock purchased upon exercise of this Warrant shall bear the restrictive legend set forth on the first page of this Warrant. Such legend shall be removed and the Company shall, or shall instruct its transfer agent to, issue a certificate without such legend or any other legend to the holder of such shares (i) if such shares are sold or transferred pursuant to an effective registration statement under the Act covering the resale of such shares by the holder thereof, (ii) if such shares are sold or transferred pursuant to Rule 144 under the Act, (iii) if, upon advice of counsel to the Company, such shares are eligible for resale without any restrictions under Rule 144 under the Act, or (iv) upon the request of such holder if such request is accompanied (at such holder's expense) by a written opinion of counsel reasonably satisfactory to the Company that registration is not required under the Act or any applicable state securities laws for the resale of the shares of Common Stock purchased upon exercise of this Warrant. The removal of such restrictive legend from any certificates representing the shares of Common Stock purchased upon exercise of this Warrant is predicated upon the Company's reliance that the holder of such shares would sell, transfer, assign, pledge, hypothecate or otherwise dispose of such shares pursuant to either the registration requirements of the Act, including any applicable prospectus delivery requirements, or an exemption therefrom, and that if such shares are sold pursuant to a registration statement, they will be sold in compliance with the plan of distribution set forth therein.

SECTION 4. RESERVATION OF SHARES.

During the Warrant Term, the Company will at all times have authorized and reserved a sufficient number of shares of its Common Stock to provide for the exercise of the rights to purchase Common Stock as provided for herein.

SECTION 5. NO FRACTIONAL SHARES OR SCRIP.

No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant, but in lieu of such fractional shares the Company shall make a cash payment therefor upon the basis of the Exercise Price then in effect.

SECTION 6. NO RIGHTS AS SHAREHOLDER/STOCKHOLDER.

This Warrant does not entitle the Warrantholder to any voting rights or other rights as a stockholder of the Company prior to the exercise of this Warrant.

SECTION 7. WARRANTHOLDER REGISTRY.

The Company shall maintain a registry showing the name and address of the registered holder of this Warrant. Warrantholder's initial address, for purposes of such registry, is set forth in Section 12(g). Warrantholder may change such address by giving written notice of such changed address to the Company.

SECTION 8. ADJUSTMENT RIGHTS.

The Exercise Price and the number of shares of Common Stock purchasable hereunder are subject to adjustment, as follows:

(a) Merger Event. If at any time there shall be a Merger Event that is not a Public Acquisition, then, as a part of such Merger Event, lawful provision shall be made so that the Warrantholder shall thereafter be entitled to receive, upon exercise of this Warrant, the kind, amount and value of shares of Common Stock or other securities or property of the successor, surviving or purchasing corporation resulting from, or participating in, such Merger Event that would have been issuable if Warrantholder had exercised this Warrant immediately prior to such Merger Event. In any such case, appropriate adjustment (as determined in good faith by the Company's Board of Directors) shall be made in the application of the provisions of this Warrant with respect to the rights and interests of the Warrantholder after such Merger Event to the end that the provisions of this Warrant (including adjustments of the Exercise Price) shall be applicable in their entirety, and to the greatest extent possible. Without limiting the foregoing, in connection with any Merger Event other than a Public Acquisition, upon the closing thereof, the successor, surviving or purchasing entity shall assume the obligations of this Warrant. The provisions of this Section 8(a) shall similarly apply to successive Merger Events. In connection with a Merger Event and upon Warrantholder's written election to the Company, the Company shall cause this Warrant to be exchanged for the consideration that Warrantholder would have received if Warrantholder chose to exercise its right to have shares issued pursuant to the Net Issuance provisions of this Warrant prior to the Merger Event without actually exercising such right, acquiring such shares and exchanging such shares for such consideration.

(b) Reclassification of Shares. Except as set forth in Section 8(a), if the Company at any time shall, by combination, reclassification, exchange or subdivision of securities or otherwise, change any of the securities as to which purchase rights under this Warrant exist into the same or a different number of securities of any other class or classes, this Warrant shall thereafter represent the right to acquire such number and kind of securities as would have been issuable as the result of such change with respect to the securities which were subject to the purchase rights under this Warrant immediately prior to such combination, reclassification, exchange, subdivision or other change.

(c) Subdivision or Combination of Shares. If the Company at any time shall combine or subdivide its Common Stock, (i) in the case of a subdivision, the Exercise Price shall be proportionately decreased, and the number of shares of Common Stock issuable upon exercise of this Warrant shall be proportionately increased, or (ii) in the case of a combination, the Exercise Price shall be proportionately increased, and the number of shares of Common Stock issuable upon the exercise of this Warrant shall be proportionately decreased.

(d) Stock Dividends. If the Company at any time while this Warrant is outstanding and unexpired shall:

(i) pay a dividend with respect to the Common Stock payable in Common Stock, then the Exercise Price shall be adjusted, from and after the date of determination of stockholders entitled to receive such dividend or distribution, to that price determined by multiplying the Exercise Price in effect immediately prior to such date of determination by a fraction (A) the numerator of which shall be the total number of shares of Common Stock outstanding immediately prior to such dividend or distribution, and (B) the denominator of which shall be the total number of shares of Common Stock outstanding immediately after such dividend or distribution; or

(ii) make any other distribution with respect to the Common Stock, except any distribution specifically provided for in any other clause of this Section 8, then, in each such case, provision shall be made by the Company such that the Warrantholder shall receive upon exercise of this Warrant a proportionate share of any such distribution as though it were the holder of the Common Stock as of the record date fixed for the determination of the stockholders of the Company entitled to receive such distribution.

(e) Antidilution Rights. To the extent that any antidilution rights applicable to the Common Stock purchasable hereunder may be set forth in the Charter, the Company shall promptly provide the Warrantholder with a copy of any restatement, amendment, modification or waiver of the Charter that impairs or reduces such antidilution rights; provided, that no such amendment, modification or waiver shall impair or reduce the antidilution rights, if any, set forth in the Charter with respect to the Common Stock unless such amendment, modification or waiver affects the rights of Warrantholder with respect to the Common Stock issuable hereunder generally in the same manner as it affects all other holders of Common Stock. The Company shall, within ten (10) business days of the end of each fiscal quarter following the Effective Date, provide Warrantholder with written notice of any issuance of its stock or other equity security during such fiscal quarter that triggered an antidilution adjustment under the antidilution rights applicable to the Common Stock purchasable hereunder, if any, as may be set forth in the Charter, which notice shall include (a) the price at which such stock or security was sold, (b) the number of shares issued, and (c) such other information as reasonably necessary for Warrantholder to verify that such antidilution adjustment occurred and the amount of any such adjustment. For the avoidance of doubt, there shall be no duplicate antidilution adjustment pursuant to this subsection (e), the forgoing subsection (d) and the Charter.

(f) Notice of Adjustments. If: (i) the Company shall declare any dividend or distribution upon its Common Stock, whether in stock, cash, property or other securities (assuming Lender consents to a dividend involving cash, property or other securities under the Loan Agreement, if the consent of Lender is then required by the terms of the Loan Agreement); (ii) the Company shall offer for subscription prorata to the holders of Common Stock any additional shares of stock of any class or other rights; (iii) there shall be any Merger Event; (iv) the Company shall sell, lease, license or otherwise transfer all or substantially all of its assets; or (v) there shall be any voluntary dissolution, liquidation or winding up of the Company; then, in connection with each such event, the Company shall send to the Warrantholder: (A) at least ten (10) days' prior written notice of the date on which the books of the Company shall close or a record shall be taken for such dividend, distribution, subscription rights (specifying the date on which the holders of Common Stock shall be entitled thereto) or for determining rights to vote in respect of such Merger Event, sale, lease, license or other transfer of all or substantially all assets, dissolution, liquidation or winding up; and (B) in the case of any such Merger Event, dissolution, liquidation or winding up, at least ten (10) days' prior written notice of the date when the same shall take place (and specifying the date on which the holders of Common Stock shall be entitled to exchange their Common Stock for securities or other property deliverable upon such Merger Event, dissolution, liquidation or winding up).

Each such written notice shall set forth, in reasonable detail, (i) the event requiring the notice, and (ii) if any adjustment is required to be made, (A) the amount of such adjustment, (B) the method by which such adjustment was calculated, (C) the adjusted Exercise Price (if the Exercise Price has been adjusted), and (D) the number of shares subject to purchase hereunder after giving effect to such adjustment, and shall be given by first class mail, postage prepaid, or by reputable overnight courier with all charges prepaid, addressed to the Warrantholder at the address for Warrantholder set forth in the registry referred to in Section 7.

(g) Timely Notice. Failure to timely provide such notice required by subsection (f) above shall entitle Warrantholder to retain the benefit of the applicable notice period notwithstanding anything to the contrary contained in any insufficient notice received by Warrantholder ; provided, that, notwithstanding anything herein to the contrary, the failure to timely provide such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice.

SECTION 9. REPRESENTATIONS, WARRANTIES AND COVENANTS OF THE COMPANY.

(a) Reservation of Common Stock. The Common Stock issuable upon exercise of the Warrantholder's rights has been duly and validly reserved and, when issued in accordance with the provisions of this Warrant, will be validly issued, fully paid and non-assessable, and will be free of any taxes, liens, charges or encumbrances of any nature whatsoever; provided, that the Common Stock issuable pursuant to this Warrant may be subject to restrictions on transfer under state and/or federal securities laws. The Company has made available to the Warrantholder true, correct and complete copies of its Charter and current bylaws. The issuance of certificates for shares of Common Stock upon exercise of this Warrant shall be made without charge to the Warrantholder for any issuance tax in respect thereof, or other cost incurred by the Company in connection with such exercise and the related issuance of shares of Common Stock; provided, that the Company shall not be required to pay any tax which may be payable in respect of any transfer and the issuance and delivery of any certificate in a name other than that of the Warrantholder.

(b) Due Authority. The execution and delivery by the Company of this Warrant and the performance of all obligations of the Company hereunder, including the issuance to Warrantholder of the right to acquire the shares of Common Stock, have been duly authorized by all necessary corporate action on the part of the Company. This Warrant: (1) does not violate the Company's Charter or current bylaws; (2) does not contravene any law or governmental rule, regulation or order applicable to it; and (3) does not and will not contravene any provision of, or constitute a default under, any indenture, mortgage, contract or other instrument to which it is a party or by which it is bound. This Warrant constitutes a legal, valid and binding agreement of the Company, enforceable in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or other laws affecting the enforcement of creditors' rights in general, and except that the enforceability of this Warrant is subject to general principles of equity.

(c) Consents and Approvals. No consent or approval of, giving of notice to, registration with, or taking of any other action in respect of any state, federal or other governmental authority or agency is required on the part of the Company with respect to the execution, delivery and performance by the Company of its obligations under this Warrant, except for the filing of notices pursuant to Regulation D under the Act and any filing required by applicable state securities law, which filings will be effective by the time required thereby.

(d) Issued Securities. All issued and outstanding shares of Common Stock have been duly authorized and validly issued and are fully paid and nonassessable. All outstanding shares of Common Stock and any other Company securities were issued in compliance with all applicable federal and state securities laws in all material respects. In addition, as of the date immediately preceding the Effective Date:

(i) The authorized capital of the Company consists of (A) 100,000,000 shares of Common Stock, of which 19,419,665 shares are issued and outstanding, and (B) 10,000,000 shares of Preferred Stock, of which no shares are issued and outstanding.

(ii) The Company has reserved an aggregate of 2,125,000 shares of Common Stock for issuance under its 2011 Equity Incentive Plan and 2011 Employee Stock Purchase Plan, not including any automatic increases to the shares reserved for issuance under such plans as described in the Company SEC Reports. Stock options or other equity awards to purchase or acquire an aggregate of 2,795,382 shares of Common Stock are outstanding. In addition, there are warrants for the purchase of 231,678 shares of Common Stock outstanding. Except as set forth in the Company SEC Reports, there are no other options, warrants, conversion privileges or other rights presently outstanding to purchase or otherwise acquire any authorized but unissued shares of the Company's capital stock or other securities of the Company. The Company has no outstanding loans to any employee, officer or director of the Company, and the Company agrees not to enter into any such loan or otherwise guarantee the payment of any loan made to an employee, officer or director by a third party.

(iii) No stockholder of the Company has preemptive rights to purchase new issuances of the Company's capital stock pursuant to the Charter or the Company's bylaws.

(e) Exempt Transaction. Subject to the accuracy of the Warrantholder's representations in Section 10, the issuance of the Common Stock upon exercise of this Warrant will each constitute a transaction exempt from (i) the registration requirements of Section 5 of the Act, in reliance upon Section 4(2) thereof, and (ii) the qualification requirements of the applicable state securities laws.

(f) Compliance with Rule 144. If the Warrantholder proposes to sell Common Stock issuable upon the exercise of this Warrant in compliance with Rule 144 promulgated by the SEC, then, upon Warrantholder's written request to the Company, the Company shall furnish to the Warrantholder, within five days after receipt of such request, a written statement confirming the Company's compliance with the filing requirements of the SEC as set forth in such Rule, as such Rule may be amended from time to time, and shall, subject to such sale being in compliance with all of the conditions of Rule 144, issue appropriate instructions to its transfer agent to remove the restrictive legend from any certificates evidencing the Common Stock issuable upon the exercise of this Warrant.

(g) Information Rights. During the Warrant Term, Warrantholder shall be entitled to the information rights contained in Sections 7.1(b) and 7.1(c) of the Loan Agreement, and Sections 7.1(b) and 7.1(c) of the Loan Agreement are hereby incorporated into this Warrant by this reference as though fully set forth herein, provided, however, that the Company shall not, once all Indebtedness (as defined in the Loan Agreement) owed by the Company to Lender has been repaid, be required to deliver any information required by Section 7.1 of the Loan Agreement so long as the Company is subject to SEC reporting obligations under Section 13(a) or Section 15(d) of the 1934 Act. Notwithstanding anything to the contrary in this Section 9(g) or elsewhere herein, to the extent that this Warrant is transferred to a third party that is not then a party to the Loan Agreement as Lender or is not an affiliate of Lender, then this Section 9(g) shall automatically terminate and shall have no further force or effect.

(h) Listing of Shares. The Common Stock is listed for trading on the NASDAQ Global Market as of the Effective Date.

SECTION 10. REPRESENTATIONS AND COVENANTS OF THE WARRANTHOLDER.

This Warrant has been entered into by the Company in reliance upon the following representations and covenants of the Warrantholder:

(a) Investment Purpose. The right to acquire Common Stock or the Common Stock issuable upon exercise of the Warrantholder's rights contained herein has been, and such shares will be, acquired for investment and not with a view to the sale or distribution of any part thereof, and the Warrantholder has no present intention of selling or engaging in any public distribution of the same except pursuant to a registration under the Act or an exemption from the registration requirements of the Act. Warrantholder is not a registered broker-dealer under Section 15 of the 1934 Act or an entity engaged in a business that would require it to be so registered as a broker-dealer.

(b) Private Issue. The Warrantholder understands (i) that the Common Stock issuable upon exercise of this Warrant is not registered under the Act or qualified under applicable state securities laws on the ground that the issuance contemplated by this Warrant will be exempt from the registration and qualifications requirements thereof, and (ii) that the Company's reliance on such exemption is predicated on the representations set forth in this Section 10.

(c) Financial Risk. The Warrantholder has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment, and has the ability to bear the economic risks of its investment.

(d) Risk of No Registration. Without in any way limiting the Company's obligations under this Warrant, the Warrantholder understands that if the Common Stock is not registered with the SEC pursuant to Section 12 of the 1934 Act or the Company is not required to file reports pursuant to Section 13(a) or Section 15(d) of the 1934 Act, or if a registration statement is not effective under the Act covering the resale of the shares of Common Stock issuable upon exercise of the Warrant when it desires to sell (i) the rights to purchase Common Stock pursuant to this Warrant or (ii) the Common Stock issuable upon exercise of the right to purchase, as applicable, it may be required to hold such securities for an indefinite period. The Warrantholder also understands that any sale of (A) its rights hereunder to purchase Common Stock or (B) Common Stock issued or issuable hereunder which might be made by it in reliance upon Rule 144 under the Act may be made only in accordance with the terms and conditions of that Rule.

(e) Accredited Investor. Warrantholder is, and on each date on which it exercises any portion of this Warrant, it will be, an "accredited investor" within the meaning of the Securities and Exchange Rule 501 of Regulation D, as presently in effect.

(f) No Short Sales. Warrantholder has not engaged, and will not engage, in "short sales" of the Common Stock of the Company. The term "short sale" shall mean any sale of a security which the seller does not own or any sale which is consummated by the delivery of a security borrowed by, or for the account of, the seller.

SECTION 11. TRANSFERS.

Subject to compliance with applicable federal and state securities laws, this Warrant and all rights hereunder are transferable, in whole or in part, without charge to the holder hereof (except for transfer taxes) upon surrender of this Warrant properly endorsed. Each taker and holder of this Warrant, by taking or holding the same, consents and agrees that this Warrant, when endorsed in blank, shall be deemed negotiable, and that the holder hereof, when this Warrant shall have been so endorsed and its transfer recorded on the Company's books, shall be treated by the Company and all other persons dealing with this Warrant as the absolute owner hereof for any purpose and as the person entitled to exercise the rights represented by this Warrant. The transfer of this Warrant shall be recorded on the books of the Company upon receipt by the Company of a notice of transfer in the form attached hereto as Exhibit C (the "Transfer Notice"), at its principal offices and the payment to the Company of all transfer taxes

and other governmental charges imposed on such transfer. Until the Company receives such Transfer Notice, the Company may treat the registered owner hereof as the owner for all purposes.

SECTION 12. MISCELLANEOUS.

(a) Effective Date. The provisions of this Warrant shall be construed and shall be given effect in all respects as if it had been executed and delivered by the Company on the date hereof. This Warrant shall be binding upon any successors or assigns of the Company and the Warrantholder.

(b) Remedies. In the event of any default hereunder, the non-defaulting party may proceed to protect and enforce its rights either by suit in equity and/or by action at law, including but not limited to an action for damages as a result of any such default, and/or an action for specific performance for any default where Warrantholder will not have an adequate remedy at law and where damages will not be readily ascertainable. The Company expressly agrees that it shall not oppose an application by the Warrantholder or any other person entitled to the benefit of this Warrant requiring specific performance of any or all provisions hereof or enjoining the Company from continuing to commit any such breach of this Warrant.

(c) No Impairment of Rights. The Company will not, by amendment of its Charter or through any other means, avoid or seek to avoid the observance or 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 actions as may be reasonably necessary or appropriate in order to protect the rights of the Warrantholder against impairment. Notwithstanding the foregoing, nothing in this Section 12(c) shall negate or otherwise restrict or impair the Company's right to effect any changes to the rights, preferences, privileges or restrictions associated with the Common Stock so long as such changes do not adversely affect the rights, preferences, privileges or restrictions associated with the shares of Common Stock issuable upon exercise of this Warrant in a manner different from the effect that such changes have generally on the rights, preferences, privileges or restrictions associated with all other shares of Common Stock.

(d) Additional Documents. The Company, upon execution of this Warrant, shall provide the Warrantholder with certified resolutions with respect to the representations and warranties set forth in the first sentence of Section 9(b).

(e) Attorney's Fees. In any litigation, arbitration or court proceeding between the Company and the Warrantholder relating hereto, the prevailing party shall be entitled to reasonable attorneys' fees and expenses and all reasonable costs of proceedings incurred in enforcing this Warrant. For the purposes of this Section 12(e), attorneys' fees shall include without limitation reasonable fees incurred in connection with the following: (i) contempt proceedings; (ii) discovery; (iii) any motion, proceeding or other activity of any kind in connection with an insolvency proceeding; (iv) garnishment, levy, and debtor and third party examinations; and (v) post-judgment motions and proceedings of any kind, including without limitation any activity taken to collect or enforce any judgment.

(f) Severability. In the event any one or more of the provisions of this Warrant shall for any reason be held invalid, illegal or unenforceable, the remaining provisions of this Warrant shall be unimpaired, and the invalid, illegal or unenforceable provision shall be replaced by a mutually acceptable valid, legal and enforceable provision, which comes closest to the intention of the parties underlying the invalid, illegal or unenforceable provision.

(g) Notices. Except as otherwise provided herein, any notice, demand, request, consent, approval, declaration, service of process or other communication that is required, contemplated, or permitted under this Warrant or with respect to the subject matter hereof shall be

in writing, and shall be deemed to have been validly served, given, delivered, and received upon the earlier of: (i) the day of transmission by facsimile or hand delivery if transmission or delivery occurs on a business day at or before 5:00 pm in the time zone of the recipient, or, if transmission or delivery occurs on a non-business day or after such time, the first business day thereafter, or the first business day after deposit with an overnight express service or overnight mail delivery service; or (ii) the third calendar day after deposit in the United States mails, with proper first class postage prepaid (provided, that any Advance Request shall not be deemed received until Lender's actual receipt thereof), and shall be addressed to the party to be notified as follows:

If to Warrantholder:

HERCULES TECHNOLOGY II, L.P.
Legal Department
Attention: Chief Legal Officer and Manuel Henriquez
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
Facsimile: 650-473-9194
Telephone: 650-289-3060

If to the Company:

ACELRX PHARMACEUTICALS, INC.
Attention: Chief Financial Officer
575 Chesapeake Drive
Redwood City, CA 94063
Facsimile: 650-216-6500
Telephone: 650-216-3511

With a copy to (which shall not constitute notice hereunder):

Mark. B Weeks
Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304-1130
Facsimile: (650) 849-7400
Telephone: (650) 843-5011

or to such other address as each party may designate for itself by like notice.

(h) Entire Agreement; Amendments. This Warrant constitutes the entire agreement and understanding of the parties hereto in respect of the subject matter hereof, and supersede and replace in their entirety any prior proposals, term sheets, letters, negotiations or other documents or agreements, whether written or oral, with respect to the subject matter hereof (including Lender's proposal letter dated February 10, 2011). None of the terms of this Warrant may be amended except by an instrument executed by each of the parties hereto.

(i) Headings. The various headings in this Warrant are inserted for convenience only and shall not affect the meaning or interpretation of this Warrant or any provisions hereof.

(j) Advice of Counsel. Each of the parties represents to each other party hereto that it has discussed (or had an opportunity to discuss) with its counsel this Warrant and, specifically, the provisions of Sections 12(n), 12(o), 12(p), 12(q) and 12(r).

(k) No Strict Construction. The parties hereto have participated jointly in the negotiation and drafting of this Warrant. In the event an ambiguity or question of intent or interpretation arises, this Warrant shall be construed as if drafted jointly by the parties hereto and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Warrant.

(l) No Waiver. Except for the requirement that this Warrant be exercised (or be deemed exercised), if at all, during the Warrant Term, no omission or delay by either party hereto at any time to enforce any right or remedy reserved to it, or to require performance of any of the terms, covenants or provisions hereof by the other party hereto at any time designated, shall be a waiver of any such right or remedy to which such party is entitled, nor shall it in any way affect the right of such party to enforce such provisions thereafter.

(m) Survival. All agreements, representations and warranties contained in this Warrant or in any document delivered pursuant hereto shall be for the benefit of Warrantholder and the Company, as the case may be, and shall survive the execution and delivery of this Warrant and the expiration or other termination of this Warrant.

(n) Governing Law. This Warrant has been negotiated and delivered to Warrantholder in the State of California, and shall have been accepted by Warrantholder in the State of California. Delivery of Common Stock to Warrantholder by the Company under this Warrant is due in the State of California. This Warrant shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

(o) Consent to Jurisdiction and Venue. All judicial proceedings arising in or under or related to this Warrant may be brought in any state or federal court of competent jurisdiction located in the State of California. By execution and delivery of this Warrant, each party hereto generally and unconditionally: (a) consents to personal jurisdiction in Santa Clara County, State of California; (b) waives any objection as to jurisdiction or venue in Santa Clara County, State of California; (c) agrees not to assert any defense based on lack of jurisdiction or venue in the aforesaid courts; and (d) irrevocably agrees to be bound by any judgment rendered thereby in connection with this Warrant. Service of process on any party hereto in any action arising out of or relating to this Warrant shall be effective if given in accordance with the requirements for notice set forth in Section 12(g), and shall be deemed effective and received as set forth in Section 12(g). Nothing herein shall affect the right to serve process in any other manner permitted by law or shall limit the right of either party to bring proceedings in the courts of any other jurisdiction.

(p) Mutual Waiver of Jury Trial. Because disputes arising in connection with complex financial transactions are most quickly and economically resolved by an experienced and expert person and the parties wish applicable state and federal laws to apply (rather than arbitration rules), the parties desire that their disputes arising out of this Warrant be resolved by a judge applying such applicable laws. EACH OF THE COMPANY AND WARRANTHOLDER SPECIFICALLY WAIVES ANY RIGHT IT MAY HAVE TO TRIAL BY JURY OF ANY CAUSE OF ACTION, CLAIM, CROSS-CLAIM, COUNTERCLAIM, THIRD PARTY CLAIM OR ANY OTHER CLAIM (COLLECTIVELY, "CLAIMS") ASSERTED BY THE COMPANY AGAINST WARRANTHOLDER OR ITS ASSIGNEE OR BY WARRANTHOLDER OR ITS ASSIGNEE AGAINST THE COMPANY RELATING TO THIS WARRANT. This waiver extends to all such Claims arising out of this Warrant, including Claims that involve persons other than the Company and Warrantholder, and any Claims for damages, breach of contract, specific performance, or any equitable or legal relief of any kind, arising out of this Warrant.

(q) Arbitration. If the Mutual Waiver of Jury Trial set forth in Section 12(p) is ineffective or unenforceable, the parties agree that all Claims shall be submitted to binding arbitration in accordance with the commercial arbitration rules of JAMS (the “Rules”), such arbitration to occur before one arbitrator, which arbitrator shall be a retired California state judge or a retired Federal court judge. Such proceeding shall be conducted in the City and County of San Francisco, California, with California rules of evidence and discovery applicable to such arbitration. The decision of the arbitrator shall be binding on the parties, and shall be final and nonappealable to the maximum extent permitted by law. Any judgment rendered by the arbitrator may be entered in a court of competent jurisdiction and enforced by the prevailing party as a final judgment of such court.

(r) Prearbitration Relief. In the event Claims are to be resolved by arbitration, either party may seek from a court of competent jurisdiction identified in Section 12(o), any prejudgment order, writ or other relief and have such prejudgment order, writ or other relief enforced to the fullest extent permitted by law notwithstanding that all Claims are otherwise subject to resolution by binding arbitration.

(s) Counterparts. This Warrant and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so delivered shall be deemed an original, but all of which counterparts shall constitute but one and the same instrument.

(t) Specific Performance. The parties hereto hereby declare that it is impossible to measure in money the damages which will accrue to a party hereto by reason of the other party’s failure to perform any of the obligations under this Warrant and agree that the terms of this Warrant shall be specifically enforceable by either party hereto. If a party hereto institutes any action or proceeding to specifically enforce the provisions hereof, any person against whom such action or proceeding is brought hereby waives the claim or defense therein that such party has an adequate remedy at law, and such person shall not offer in any such action or proceeding the claim or defense that such remedy at law exists.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have caused this Warrant to be executed by its officers thereunto duly authorized as of the Effective Date.

COMPANY:

ACELRX PHARMACEUTICALS, INC.

By: /s/ Jim Welch

Name: Jim Welch

Title: Chief Financial Officer

WARRANTHOLDER:

HERCULES TECHNOLOGY II, L.P.

By: Hercules Technology SBIC
Management, LLC, its General Partner

By: Hercules Technology Growth Capital, Inc.,
its Manager

By: /s/ K. Nicholas Martitsch

Name: K. Nicholas Martitsch

Title: Associate General Counsel

[Signature Page to Warrant – HT II LP]

EXHIBIT A

NOTICE OF EXERCISE

To: ACELRX PHARMACEUTICALS, INC. (the "Company")

- (1) The undersigned Warrantholder hereby elects to purchase [_____] shares of the Common Stock of the Company, pursuant to the terms of that certain Warrant Agreement, dated as of June 29, 2011, between the Company and the Warrantholder (the "Warrant"), and [CASH PAYMENT: tenders herewith payment of the Purchase Price in full, together with all applicable transfer taxes, if any.] [NET ISSUANCE: elects pursuant to Section 3(a) of the Warrant to effect a Net Issuance.]
- (2) Please issue a certificate or certificates representing said shares of Common Stock in the name of the Warrantholder or in such other name as is specified below:

(Name)

(Address)

WARRANTHOLDER:

HERCULES TECHNOLOGY GROWTH
CAPITAL, INC.

By: _____

Name: _____

Title: _____

EXHIBIT B

ACKNOWLEDGMENT OF EXERCISE

The undersigned, as representative of AcelRx Pharmaceuticals, Inc. (the "Company"), hereby acknowledges receipt of the "Notice of Exercise" from Hercules Technology Growth Capital, Inc. (the "Warrantholder"), to purchase [_____] shares of the Common Stock of the Company, pursuant to the terms of that certain Warrant Agreement, dated as of June 29, 2011, between the Company and the Warrantholder (the "Warrant"), and further acknowledges that [_____] shares remain subject to purchase under the terms of the Warrant.

COMPANY:

ACELRX PHARMACEUTICALS, INC.

By: _____

Title: _____

Date: _____

EXHIBIT C

TRANSFER NOTICE

FOR VALUE RECEIVED, that certain Warrant Agreement, dated as of June 29, 2011, between AcelRx Pharmaceuticals, Inc., as the Company, and Hercules Technology Growth Capital, Inc., as the Warrantholder (the "Warrant"), and all rights evidenced thereby are hereby transferred and assigned to

(Please Print)

whose address is _____

Dated: _____

Holder's Signature: _____

Holder's Address: _____

Signature Guaranteed: _____

NOTE: The signature to this Transfer Notice must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatever. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY STATE SECURITIES LAWS. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, OR HYPOTHECATED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL (WHICH MAY BE COMPANY COUNSEL) REASONABLY SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY APPLICABLE STATE SECURITIES LAWS.

WARRANT AGREEMENT

To Purchase Shares of the Common Stock of

ACELRX PHARMACEUTICALS, INC.

Dated as of June 29, 2011 (the "Effective Date")

WHEREAS, AcelRx Pharmaceuticals, Inc., a Delaware corporation (the "Company"), has entered into a Loan and Security Agreement of even date herewith (the "Loan Agreement") with Hercules Technology Growth Capital, Inc., a Maryland corporation (the "Warrantholder");

WHEREAS, the Company desires to grant to Warrantholder, in consideration for, among other things, the financial accommodations provided for in the Loan Agreement, the right to purchase shares of its Common Stock (as defined below) pursuant to this Warrant Agreement (the "Warrant");

NOW, THEREFORE, in consideration of the Warrantholder executing and delivering the Loan Agreement and providing the financial accommodations contemplated therein, and in consideration of the mutual covenants and agreements contained herein, the Company and Warrantholder agree as follows:

SECTION 1. GRANT OF THE RIGHT TO PURCHASE COMMON STOCK.

For value received, the Company hereby grants to the Warrantholder, and the Warrantholder is entitled, upon the terms and subject to the conditions hereinafter set forth, to subscribe for and purchase, from the Company, One Hundred Thirty-Seven Thousand, Two Hundred Fifty-Four (137,254) fully paid and non-assessable shares of the Common Stock at the Exercise Price (as defined below). The Exercise Price of such shares is subject to adjustment as provided in Section 8. As used herein, the following terms shall have the following meanings:

"1934 Act" means the Securities Exchange Act of 1934, as amended.

"Acknowledgment of Exercise" has the meaning given to it in Section 3(a).

"Act" means the Securities Act of 1933, as amended, and as the same may be in effect from time to time.

"Charter" means the Company's Certificate of Incorporation or other constitutional document, as the same may be amended from time to time.

"Claims" has the meaning given to it in Section 12(p).

"Common Stock" means the Company's common stock, \$0.001 par value per share.

"Company" has the meaning given to it in the preamble to this Warrant.

“Company SEC Reports” means, collectively (a) the Company’s most recent Annual Report on Form 10-K (the “Annual Report”), (b) the Company’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2011 and (c) any other statement, report (including without limitation, Current Reports on Form 8-K) or registration statement filed by the Company with the SEC during the period commencing subsequent to the period covered by such Annual Report (including, in each case, all exhibits thereto and documents incorporated by reference therein).

“Effective Date” has the meaning given to it in the preamble to this Warrant.

“Exercise Price” means \$3.06.

“Lender” has the meaning given to it in the Loan Agreement.

“Loan Agreement” has the meaning given to it in the preamble to this Warrant.

“Merger Event” means (a) a merger or consolidation involving the Company in which (i) the Company is not the surviving entity, or (ii) the outstanding shares of the Company’s capital stock are otherwise converted into or exchanged for shares of capital of another entity; or (b) the sale of all or substantially all of the assets of the Company.

“Net Issuance” has the meaning given to it in Section 3(a).

“Notice of Exercise” has the meaning given to it in Section 3(a).

“Public Acquisition” means any Merger Event which is effected such that (i) the holders of Common Stock shall be entitled to receive (A) cash and/or (B) shares of stock that are of a publicly traded company listed on a national market or exchange which may be resold without restrictions (other than restrictions to which Warrantheader may separately agree in writing) after the consummation of such Merger Event, and (ii) the Company’s stockholders own less than 50% of the voting securities of the surviving entity.

“Purchase Price” means, with respect to any exercise of this Warrant, an amount equal to the Exercise Price as of the relevant time multiplied by the number of shares of Common Stock requested to be exercised under this Warrant pursuant to such exercise.

“Rules” has the meaning given to it in Section 12(q).

“Transfer Notice” has the meaning given to it in Section 11.

“Warrant” has the meaning given to it in the preamble to this Warrant.

“Warrant Term” has the meaning given to it in Section 2.

“Warrantheader” has the meaning given to it in the preamble to this Warrant.

SECTION 2. TERM OF THE AGREEMENT.

Except as otherwise provided for herein, the term of this Warrant (the “Warrant Term”) and the right to purchase Common Stock as granted herein shall commence on the Effective Date and shall be exercisable for a period ending upon the earlier to occur of (A) seven (7) years from the Effective Date or (B) the consummation of a Public Acquisition.

SECTION 3. EXERCISE OF THE PURCHASE RIGHTS.

(a) Exercise. The purchase rights set forth in this Warrant are exercisable by the Warrantheader, in whole or in part, at any time, or from time to time, during the Warrant Term, by tendering to the Company at its principal office a notice of exercise in the form attached hereto as Exhibit A (the “Notice of Exercise”), duly completed and executed. Promptly upon receipt of the Notice of Exercise and the payment of the Purchase Price in accordance with the terms set

forth below, and in no event later than five (5) business days thereafter, the Company shall issue to the Warrantholder a certificate for the number of shares of Common Stock purchased and shall execute the acknowledgment of exercise in the form attached hereto as Exhibit B (the "Acknowledgment of Exercise") indicating the number of shares which remain subject to future purchases, if any.

The Purchase Price may be paid at the Warrantholder's election either (i) by cash or check, or (ii) by surrender of all or a portion of the Warrant for shares of Common Stock to be exercised under this Warrant and, if applicable, an amended Warrant representing the remaining number of shares purchasable hereunder, as determined below ("Net Issuance"). If the Warrantholder elects the Net Issuance method, the Company will issue Common Stock in accordance with the following formula:

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

Where:

X = the number of shares of Common Stock to be issued to the Warrantholder.

Y = the number of shares of Common Stock requested to be exercised under this Warrant.

A = the fair market value of one (1) share of Common Stock at the time of issuance of such shares of Common Stock.

B = the Exercise Price.

For purposes of the above calculation, the fair market value of one (1) share of Common Stock shall mean:

(i) if the Common Stock is traded on the New York Stock Exchange, the American Stock Exchange, any exchange operated by the NASDAQ Stock Market, LLC or any other securities exchange, the fair market value of one (1) share of Common Stock shall be deemed to be the volume-weighted average of the closing prices over the twenty (20) consecutive trading days ending two (2) trading days before the day the fair market value of one (1) share of Common Stock is being determined; or

(ii) if at any time the Common Stock is not listed on any securities exchange, the fair market value of one (1) share of Common Stock shall be the highest price per share which the Company could obtain from a willing buyer (not a current employee or director) for shares of Common Stock sold by the Company (based upon the valuation by the Board of all shares of Common Stock), from authorized but unissued shares, as determined in good faith by its Board of Directors, unless this Warrant is being exercised in connection with a Merger Event, in which case the fair market value of one (1) share of Common Stock shall be deemed to be the per share value received by the holders of the Common Stock on a Common Stock equivalent basis pursuant to such Merger Event.

Upon partial exercise by either cash or Net Issuance, the Company shall promptly issue an agreement substantially in the form of the Warrant representing the remaining number of shares purchasable hereunder. All other terms and conditions of such agreement shall be identical to those contained herein, including, but not limited to the Effective Date hereof.

(b) Exercise Prior to Expiration. To the extent that the Warrantholder has not

exercised its purchase rights under this Warrant to all Common Stock subject hereto, and if the fair market value of one share of the Common Stock is greater than the Exercise Price then in effect, this Warrant shall be deemed automatically exercised pursuant to Section 3(a) (even if not surrendered) immediately before the expiration of the Warrant Term. For purposes of such automatic exercise, the fair market value of one share of the Common Stock upon such expiration shall be determined pursuant to Section 3(a). To the extent this Warrant or any portion thereof is deemed automatically exercised pursuant to this Section 3(b), the Company agrees to promptly notify the Warrantholder of the number of shares of Common Stock, if any, the Warrantholder is to receive by reason of such automatic exercise.

(c) Legend. Each certificate for the shares of Common Stock purchased upon exercise of this Warrant shall bear the restrictive legend set forth on the first page of this Warrant. Such legend shall be removed and the Company shall, or shall instruct its transfer agent to, issue a certificate without such legend or any other legend to the holder of such shares (i) if such shares are sold or transferred pursuant to an effective registration statement under the Act covering the resale of such shares by the holder thereof, (ii) if such shares are sold or transferred pursuant to Rule 144 under the Act, (iii) if, upon advice of counsel to the Company, such shares are eligible for resale without any restrictions under Rule 144 under the Act, or (iv) upon the request of such holder if such request is accompanied (at such holder's expense) by a written opinion of counsel reasonably satisfactory to the Company that registration is not required under the Act or any applicable state securities laws for the resale of the shares of Common Stock purchased upon exercise of this Warrant. The removal of such restrictive legend from any certificates representing the shares of Common Stock purchased upon exercise of this Warrant is predicated upon the Company's reliance that the holder of such shares would sell, transfer, assign, pledge, hypothecate or otherwise dispose of such shares pursuant to either the registration requirements of the Act, including any applicable prospectus delivery requirements, or an exemption therefrom, and that if such shares are sold pursuant to a registration statement, they will be sold in compliance with the plan of distribution set forth therein.

SECTION 4. RESERVATION OF SHARES.

During the Warrant Term, the Company will at all times have authorized and reserved a sufficient number of shares of its Common Stock to provide for the exercise of the rights to purchase Common Stock as provided for herein.

SECTION 5. NO FRACTIONAL SHARES OR SCRIP.

No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant, but in lieu of such fractional shares the Company shall make a cash payment therefor upon the basis of the Exercise Price then in effect.

SECTION 6. NO RIGHTS AS SHAREHOLDER/STOCKHOLDER.

This Warrant does not entitle the Warrantholder to any voting rights or other rights as a stockholder of the Company prior to the exercise of this Warrant.

SECTION 7. WARRANTHOLDER REGISTRY.

The Company shall maintain a registry showing the name and address of the registered holder of this Warrant. Warrantholder's initial address, for purposes of such registry, is set forth in Section 12(g). Warrantholder may change such address by giving written notice of such changed address to the Company.

SECTION 8. ADJUSTMENT RIGHTS.

The Exercise Price and the number of shares of Common Stock purchasable hereunder are subject to adjustment, as follows:

(a) Merger Event. If at any time there shall be a Merger Event that is not a Public Acquisition, then, as a part of such Merger Event, lawful provision shall be made so that the Warrantholder shall thereafter be entitled to receive, upon exercise of this Warrant, the kind, amount and value of shares of Common Stock or other securities or property of the successor, surviving or purchasing corporation resulting from, or participating in, such Merger Event that would have been issuable if Warrantholder had exercised this Warrant immediately prior to such Merger Event. In any such case, appropriate adjustment (as determined in good faith by the Company's Board of Directors) shall be made in the application of the provisions of this Warrant with respect to the rights and interests of the Warrantholder after such Merger Event to the end that the provisions of this Warrant (including adjustments of the Exercise Price) shall be applicable in their entirety, and to the greatest extent possible. Without limiting the foregoing, in connection with any Merger Event other than a Public Acquisition, upon the closing thereof, the successor, surviving or purchasing entity shall assume the obligations of this Warrant. The provisions of this Section 8(a) shall similarly apply to successive Merger Events. In connection with a Merger Event and upon Warrantholder's written election to the Company, the Company shall cause this Warrant to be exchanged for the consideration that Warrantholder would have received if Warrantholder chose to exercise its right to have shares issued pursuant to the Net Issuance provisions of this Warrant prior to the Merger Event without actually exercising such right, acquiring such shares and exchanging such shares for such consideration.

(b) Reclassification of Shares. Except as set forth in Section 8(a), if the Company at any time shall, by combination, reclassification, exchange or subdivision of securities or otherwise, change any of the securities as to which purchase rights under this Warrant exist into the same or a different number of securities of any other class or classes, this Warrant shall thereafter represent the right to acquire such number and kind of securities as would have been issuable as the result of such change with respect to the securities which were subject to the purchase rights under this Warrant immediately prior to such combination, reclassification, exchange, subdivision or other change.

(c) Subdivision or Combination of Shares. If the Company at any time shall combine or subdivide its Common Stock, (i) in the case of a subdivision, the Exercise Price shall be proportionately decreased, and the number of shares of Common Stock issuable upon exercise of this Warrant shall be proportionately increased, or (ii) in the case of a combination, the Exercise Price shall be proportionately increased, and the number of shares of Common Stock issuable upon the exercise of this Warrant shall be proportionately decreased.

(d) Stock Dividends. If the Company at any time while this Warrant is outstanding and unexpired shall:

(i) pay a dividend with respect to the Common Stock payable in Common Stock, then the Exercise Price shall be adjusted, from and after the date of determination of stockholders entitled to receive such dividend or distribution, to that price determined by multiplying the Exercise Price in effect immediately prior to such date of determination by a fraction (A) the numerator of which shall be the total number of shares of Common Stock outstanding immediately prior to such dividend or distribution, and (B) the denominator of which shall be the total number of shares of Common Stock outstanding immediately after such dividend or distribution; or

(ii) make any other distribution with respect to the Common Stock, except any distribution specifically provided for in any other clause of this Section 8, then, in each such case, provision shall be made by the Company such that the Warrantholder shall receive upon exercise of this Warrant a proportionate share of any such distribution as though it were the holder of the Common Stock as of the record date fixed for the determination of the stockholders of the Company entitled to receive such distribution.

(e) Antidilution Rights. To the extent that any antidilution rights applicable to the Common Stock purchasable hereunder may be set forth in the Charter, the Company shall promptly provide the Warrantholder with a copy of any restatement, amendment, modification or waiver of the Charter that impairs or reduces such antidilution rights; provided, that no such amendment, modification or waiver shall impair or reduce the antidilution rights, if any, set forth in the Charter with respect to the Common Stock unless such amendment, modification or waiver affects the rights of Warrantholder with respect to the Common Stock issuable hereunder generally in the same manner as it affects all other holders of Common Stock. The Company shall, within ten (10) business days of the end of each fiscal quarter following the Effective Date, provide Warrantholder with written notice of any issuance of its stock or other equity security during such fiscal quarter that triggered an antidilution adjustment under the antidilution rights applicable to the Common Stock purchasable hereunder, if any, as may be set forth in the Charter, which notice shall include (a) the price at which such stock or security was sold, (b) the number of shares issued, and (c) such other information as reasonably necessary for Warrantholder to verify that such antidilution adjustment occurred and the amount of any such adjustment. For the avoidance of doubt, there shall be no duplicate antidilution adjustment pursuant to this subsection (e), the forgoing subsection (d) and the Charter.

(f) Notice of Adjustments. If: (i) the Company shall declare any dividend or distribution upon its Common Stock, whether in stock, cash, property or other securities (assuming Lender consents to a dividend involving cash, property or other securities under the Loan Agreement, if the consent of Lender is then required by the terms of the Loan Agreement); (ii) the Company shall offer for subscription prorata to the holders of Common Stock any additional shares of stock of any class or other rights; (iii) there shall be any Merger Event; (iv) the Company shall sell, lease, license or otherwise transfer all or substantially all of its assets; or (v) there shall be any voluntary dissolution, liquidation or winding up of the Company; then, in connection with each such event, the Company shall send to the Warrantholder: (A) at least ten (10) days' prior written notice of the date on which the books of the Company shall close or a record shall be taken for such dividend, distribution, subscription rights (specifying the date on which the holders of Common Stock shall be entitled thereto) or for determining rights to vote in respect of such Merger Event, sale, lease, license or other transfer of all or substantially all assets, dissolution, liquidation or winding up; and (B) in the case of any such Merger Event, dissolution, liquidation or winding up, at least ten (10) days' prior written notice of the date when the same shall take place (and specifying the date on which the holders of Common Stock shall be entitled to exchange their Common Stock for securities or other property deliverable upon such Merger Event, dissolution, liquidation or winding up).

Each such written notice shall set forth, in reasonable detail, (i) the event requiring the notice, and (ii) if any adjustment is required to be made, (A) the amount of such adjustment, (B) the method by which such adjustment was calculated, (C) the adjusted Exercise Price (if the Exercise Price has been adjusted), and (D) the number of shares subject to purchase hereunder after giving effect to such adjustment, and shall be given by first class mail, postage prepaid, or by reputable overnight courier with all charges prepaid, addressed to the Warrantholder at the address for Warrantholder set forth in the registry referred to in Section 7.

(g) Timely Notice. Failure to timely provide such notice required by subsection (f) above shall entitle Warrantholder to retain the benefit of the applicable notice period notwithstanding anything to the contrary contained in any insufficient notice received by Warrantholder ; provided, that, notwithstanding anything herein to the contrary, the failure to timely provide such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice.

SECTION 9. REPRESENTATIONS, WARRANTIES AND COVENANTS OF THE COMPANY.

(a) Reservation of Common Stock. The Common Stock issuable upon exercise of the Warrantholder's rights has been duly and validly reserved and, when issued in accordance with the provisions of this Warrant, will be validly issued, fully paid and non-assessable, and will be free of any taxes, liens, charges or encumbrances of any nature whatsoever; provided, that the Common Stock issuable pursuant to this Warrant may be subject to restrictions on transfer under state and/or federal securities laws. The Company has made available to the Warrantholder true, correct and complete copies of its Charter and current bylaws. The issuance of certificates for shares of Common Stock upon exercise of this Warrant shall be made without charge to the Warrantholder for any issuance tax in respect thereof, or other cost incurred by the Company in connection with such exercise and the related issuance of shares of Common Stock; provided, that the Company shall not be required to pay any tax which may be payable in respect of any transfer and the issuance and delivery of any certificate in a name other than that of the Warrantholder.

(b) Due Authority. The execution and delivery by the Company of this Warrant and the performance of all obligations of the Company hereunder, including the issuance to Warrantholder of the right to acquire the shares of Common Stock, have been duly authorized by all necessary corporate action on the part of the Company. This Warrant: (1) does not violate the Company's Charter or current bylaws; (2) does not contravene any law or governmental rule, regulation or order applicable to it; and (3) does not and will not contravene any provision of, or constitute a default under, any indenture, mortgage, contract or other instrument to which it is a party or by which it is bound. This Warrant constitutes a legal, valid and binding agreement of the Company, enforceable in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or other laws affecting the enforcement of creditors' rights in general, and except that the enforceability of this Warrant is subject to general principles of equity.

(c) Consents and Approvals. No consent or approval of, giving of notice to, registration with, or taking of any other action in respect of any state, federal or other governmental authority or agency is required on the part of the Company with respect to the execution, delivery and performance by the Company of its obligations under this Warrant, except for the filing of notices pursuant to Regulation D under the Act and any filing required by applicable state securities law, which filings will be effective by the time required thereby.

(d) Issued Securities. All issued and outstanding shares of Common Stock have been duly authorized and validly issued and are fully paid and nonassessable. All outstanding shares of Common Stock and any other Company securities were issued in compliance with all applicable federal and state securities laws in all material respects. In addition, as of the date immediately preceding the Effective Date:

(i) The authorized capital of the Company consists of (A) 100,000,000 shares of Common Stock, of which 19,419,665 shares are issued and outstanding, and (B) 10,000,000 shares of Preferred Stock, of which no shares are issued and outstanding.

(ii) The Company has reserved an aggregate of 2,125,000 shares of Common Stock for issuance under its 2011 Equity Incentive Plan and 2011 Employee Stock Purchase Plan, not including any automatic increases to the shares reserved for issuance under such plans as described in the Company SEC Reports. Stock options or other equity awards to purchase or acquire an aggregate of 2,795,382 shares of Common Stock are outstanding. In addition, there are warrants for the purchase of 231,678 shares of Common Stock outstanding. Except as set forth in the Company SEC Reports, there are no other options, warrants, conversion privileges or other rights presently outstanding to purchase or otherwise acquire any authorized but unissued shares of the Company's capital stock or other securities of the Company. The Company has no outstanding loans to any employee, officer or director of the Company, and the Company agrees not to enter into any such loan or otherwise guarantee the payment of any loan made to an employee, officer or director by a third party.

(iii) No stockholder of the Company has preemptive rights to purchase new issuances of the Company's capital stock pursuant to the Charter or the Company's bylaws.

(e) Exempt Transaction. Subject to the accuracy of the Warrantholder's representations in Section 10, the issuance of the Common Stock upon exercise of this Warrant will each constitute a transaction exempt from (i) the registration requirements of Section 5 of the Act, in reliance upon Section 4(2) thereof, and (ii) the qualification requirements of the applicable state securities laws.

(f) Compliance with Rule 144. If the Warrantholder proposes to sell Common Stock issuable upon the exercise of this Warrant in compliance with Rule 144 promulgated by the SEC, then, upon Warrantholder's written request to the Company, the Company shall furnish to the Warrantholder, within five days after receipt of such request, a written statement confirming the Company's compliance with the filing requirements of the SEC as set forth in such Rule, as such Rule may be amended from time to time, and shall, subject to such sale being in compliance with all of the conditions of Rule 144, issue appropriate instructions to its transfer agent to remove the restrictive legend from any certificates evidencing the Common Stock issuable upon the exercise of this Warrant.

(g) Information Rights. During the Warrant Term, Warrantholder shall be entitled to the information rights contained in Sections 7.1(b) and 7.1(c) of the Loan Agreement, and Sections 7.1(b) and 7.1(c) of the Loan Agreement are hereby incorporated into this Warrant by this reference as though fully set forth herein, provided, however, that the Company shall not, once all Indebtedness (as defined in the Loan Agreement) owed by the Company to Lender has been repaid, be required to deliver any information required by Section 7.1 of the Loan Agreement so long as the Company is subject to SEC reporting obligations under Section 13(a) or Section 15(d) of the 1934 Act. Notwithstanding anything to the contrary in this Section 9(g) or elsewhere herein, to the extent that this Warrant is transferred to a third party that is not then a party to the Loan Agreement as Lender or is not an affiliate of Lender, then this Section 9(g) shall automatically terminate and shall have no further force or effect.

(h) Listing of Shares. The Common Stock is listed for trading on the NASDAQ Global Market as of the Effective Date.

SECTION 10. REPRESENTATIONS AND COVENANTS OF THE WARRANTHOLDER.

This Warrant has been entered into by the Company in reliance upon the following representations and covenants of the Warrantholder:

(a) Investment Purpose. The right to acquire Common Stock or the Common Stock issuable upon exercise of the Warrantholder's rights contained herein has been, and such shares will be, acquired for investment and not with a view to the sale or distribution of any part thereof, and the Warrantholder has no present intention of selling or engaging in any public distribution of the same except pursuant to a registration under the Act or an exemption from the registration requirements of the Act. Warrantholder is not a registered broker-dealer under Section 15 of the 1934 Act or an entity engaged in a business that would require it to be so registered as a broker-dealer.

(b) Private Issue. The Warrantholder understands (i) that the Common Stock issuable upon exercise of this Warrant is not registered under the Act or qualified under applicable state securities laws on the ground that the issuance contemplated by this Warrant will be exempt from the registration and qualifications requirements thereof, and (ii) that the Company's reliance on such exemption is predicated on the representations set forth in this Section 10.

(c) Financial Risk. The Warrantholder has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment, and has the ability to bear the economic risks of its investment.

(d) Risk of No Registration. Without in any way limiting the Company's obligations under this Warrant, the Warrantholder understands that if the Common Stock is not registered with the SEC pursuant to Section 12 of the 1934 Act or the Company is not required to file reports pursuant to Section 13(a) or Section 15(d) of the 1934 Act, or if a registration statement is not effective under the Act covering the resale of the shares of Common Stock issuable upon exercise of the Warrant when it desires to sell (i) the rights to purchase Common Stock pursuant to this Warrant or (ii) the Common Stock issuable upon exercise of the right to purchase, as applicable, it may be required to hold such securities for an indefinite period. The Warrantholder also understands that any sale of (A) its rights hereunder to purchase Common Stock or (B) Common Stock issued or issuable hereunder which might be made by it in reliance upon Rule 144 under the Act may be made only in accordance with the terms and conditions of that Rule.

(e) Accredited Investor. Warrantholder is, and on each date on which it exercises any portion of this Warrant, it will be, an "accredited investor" within the meaning of the Securities and Exchange Rule 501 of Regulation D, as presently in effect.

(f) No Short Sales. Warrantholder has not engaged, and will not engage, in "short sales" of the Common Stock of the Company. The term "short sale" shall mean any sale of a security which the seller does not own or any sale which is consummated by the delivery of a security borrowed by, or for the account of, the seller.

SECTION 11. TRANSFERS.

Subject to compliance with applicable federal and state securities laws, this Warrant and all rights hereunder are transferable, in whole or in part, without charge to the holder hereof (except for transfer taxes) upon surrender of this Warrant properly endorsed. Each taker and holder of this Warrant, by taking or holding the same, consents and agrees that this Warrant, when endorsed in blank, shall be deemed negotiable, and that the holder hereof, when this Warrant shall have been so endorsed and its transfer recorded on the Company's books, shall be treated by the Company and all other persons dealing with this Warrant as the absolute owner hereof for any purpose and as the person entitled to exercise the rights represented by this Warrant. The transfer of this Warrant shall be recorded on the books of the Company upon receipt by the Company of a notice of transfer in the form attached hereto as Exhibit C (the "Transfer Notice"), at its principal offices and the payment to the Company of all transfer taxes

and other governmental charges imposed on such transfer. Until the Company receives such Transfer Notice, the Company may treat the registered owner hereof as the owner for all purposes.

SECTION 12. MISCELLANEOUS.

(a) Effective Date. The provisions of this Warrant shall be construed and shall be given effect in all respects as if it had been executed and delivered by the Company on the date hereof. This Warrant shall be binding upon any successors or assigns of the Company and the Warrantholder.

(b) Remedies. In the event of any default hereunder, the non-defaulting party may proceed to protect and enforce its rights either by suit in equity and/or by action at law, including but not limited to an action for damages as a result of any such default, and/or an action for specific performance for any default where Warrantholder will not have an adequate remedy at law and where damages will not be readily ascertainable. The Company expressly agrees that it shall not oppose an application by the Warrantholder or any other person entitled to the benefit of this Warrant requiring specific performance of any or all provisions hereof or enjoining the Company from continuing to commit any such breach of this Warrant.

(c) No Impairment of Rights. The Company will not, by amendment of its Charter or through any other means, avoid or seek to avoid the observance or 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 actions as may be reasonably necessary or appropriate in order to protect the rights of the Warrantholder against impairment. Notwithstanding the foregoing, nothing in this Section 12(c) shall negate or otherwise restrict or impair the Company's right to effect any changes to the rights, preferences, privileges or restrictions associated with the Common Stock so long as such changes do not adversely affect the rights, preferences, privileges or restrictions associated with the shares of Common Stock issuable upon exercise of this Warrant in a manner different from the effect that such changes have generally on the rights, preferences, privileges or restrictions associated with all other shares of Common Stock.

(d) Additional Documents. The Company, upon execution of this Warrant, shall provide the Warrantholder with certified resolutions with respect to the representations and warranties set forth in the first sentence of Section 9(b).

(e) Attorney's Fees. In any litigation, arbitration or court proceeding between the Company and the Warrantholder relating hereto, the prevailing party shall be entitled to reasonable attorneys' fees and expenses and all reasonable costs of proceedings incurred in enforcing this Warrant. For the purposes of this Section 12(e), attorneys' fees shall include without limitation reasonable fees incurred in connection with the following: (i) contempt proceedings; (ii) discovery; (iii) any motion, proceeding or other activity of any kind in connection with an insolvency proceeding; (iv) garnishment, levy, and debtor and third party examinations; and (v) post-judgment motions and proceedings of any kind, including without limitation any activity taken to collect or enforce any judgment.

(f) Severability. In the event any one or more of the provisions of this Warrant shall for any reason be held invalid, illegal or unenforceable, the remaining provisions of this Warrant shall be unimpaired, and the invalid, illegal or unenforceable provision shall be replaced by a mutually acceptable valid, legal and enforceable provision, which comes closest to the intention of the parties underlying the invalid, illegal or unenforceable provision.

(g) Notices. Except as otherwise provided herein, any notice, demand, request, consent, approval, declaration, service of process or other communication that is required, contemplated, or permitted under this Warrant or with respect to the subject matter hereof shall be

in writing, and shall be deemed to have been validly served, given, delivered, and received upon the earlier of: (i) the day of transmission by facsimile or hand delivery if transmission or delivery occurs on a business day at or before 5:00 pm in the time zone of the recipient, or, if transmission or delivery occurs on a non-business day or after such time, the first business day thereafter, or the first business day after deposit with an overnight express service or overnight mail delivery service; or (ii) the third calendar day after deposit in the United States mails, with proper first class postage prepaid (provided, that any Advance Request shall not be deemed received until Lender's actual receipt thereof), and shall be addressed to the party to be notified as follows:

If to Warrantholder:

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.
Legal Department
Attention: Chief Legal Officer and Manuel Henriquez
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
Facsimile: 650-473-9194
Telephone: 650-289-3060

If to the Company:

ACELRX PHARMACEUTICALS, INC.
Attention: Chief Financial Officer
575 Chesapeake Drive
Redwood City, CA 94063
Facsimile: 650-216-6500
Telephone: 650-216-3511

With a copy to (which shall not constitute notice hereunder):

Mark. B Weeks
Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304-1130
Facsimile: (650) 849-7400
Telephone: (650) 843-5011

or to such other address as each party may designate for itself by like notice.

(h) Entire Agreement; Amendments. This Warrant constitutes the entire agreement and understanding of the parties hereto in respect of the subject matter hereof, and supersede and replace in their entirety any prior proposals, term sheets, letters, negotiations or other documents or agreements, whether written or oral, with respect to the subject matter hereof (including Lender's proposal letter dated February 10, 2011). None of the terms of this Warrant may be amended except by an instrument executed by each of the parties hereto.

(i) Headings. The various headings in this Warrant are inserted for convenience only and shall not affect the meaning or interpretation of this Warrant or any provisions hereof.

(j) Advice of Counsel. Each of the parties represents to each other party hereto that it has discussed (or had an opportunity to discuss) with its counsel this Warrant and, specifically, the provisions of Sections 12(n), 12(o), 12(p), 12(q) and 12(r).

(k) No Strict Construction. The parties hereto have participated jointly in the negotiation and drafting of this Warrant. In the event an ambiguity or question of intent or interpretation arises, this Warrant shall be construed as if drafted jointly by the parties hereto and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Warrant.

(l) No Waiver. Except for the requirement that this Warrant be exercised (or be deemed exercised), if at all, during the Warrant Term, no omission or delay by either party hereto at any time to enforce any right or remedy reserved to it, or to require performance of any of the terms, covenants or provisions hereof by the other party hereto at any time designated, shall be a waiver of any such right or remedy to which such party is entitled, nor shall it in any way affect the right of such party to enforce such provisions thereafter.

(m) Survival. All agreements, representations and warranties contained in this Warrant or in any document delivered pursuant hereto shall be for the benefit of Warrantholder and the Company, as the case may be, and shall survive the execution and delivery of this Warrant and the expiration or other termination of this Warrant.

(n) Governing Law. This Warrant has been negotiated and delivered to Warrantholder in the State of California, and shall have been accepted by Warrantholder in the State of California. Delivery of Common Stock to Warrantholder by the Company under this Warrant is due in the State of California. This Warrant shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

(o) Consent to Jurisdiction and Venue. All judicial proceedings arising in or under or related to this Warrant may be brought in any state or federal court of competent jurisdiction located in the State of California. By execution and delivery of this Warrant, each party hereto generally and unconditionally: (a) consents to personal jurisdiction in Santa Clara County, State of California; (b) waives any objection as to jurisdiction or venue in Santa Clara County, State of California; (c) agrees not to assert any defense based on lack of jurisdiction or venue in the aforesaid courts; and (d) irrevocably agrees to be bound by any judgment rendered thereby in connection with this Warrant. Service of process on any party hereto in any action arising out of or relating to this Warrant shall be effective if given in accordance with the requirements for notice set forth in Section 12(g), and shall be deemed effective and received as set forth in Section 12(g). Nothing herein shall affect the right to serve process in any other manner permitted by law or shall limit the right of either party to bring proceedings in the courts of any other jurisdiction.

(p) Mutual Waiver of Jury Trial. Because disputes arising in connection with complex financial transactions are most quickly and economically resolved by an experienced and expert person and the parties wish applicable state and federal laws to apply (rather than arbitration rules), the parties desire that their disputes arising out of this Warrant be resolved by a judge applying such applicable laws. EACH OF THE COMPANY AND WARRANTHOLDER SPECIFICALLY WAIVES ANY RIGHT IT MAY HAVE TO TRIAL BY JURY OF ANY CAUSE OF ACTION, CLAIM, CROSS-CLAIM, COUNTERCLAIM, THIRD PARTY CLAIM OR ANY OTHER CLAIM (COLLECTIVELY, "CLAIMS") ASSERTED BY THE COMPANY AGAINST WARRANTHOLDER OR ITS ASSIGNEE OR BY WARRANTHOLDER OR ITS ASSIGNEE AGAINST THE COMPANY RELATING TO THIS WARRANT. This waiver extends to all such Claims arising out of this Warrant, including Claims that involve persons other than the Company and Warrantholder, and any Claims for damages, breach of contract, specific performance, or any equitable or legal relief of any kind, arising out of this Warrant.

(q) Arbitration. If the Mutual Waiver of Jury Trial set forth in Section 12(p) is ineffective or unenforceable, the parties agree that all Claims shall be submitted to binding arbitration in accordance with the commercial arbitration rules of JAMS (the “Rules”), such arbitration to occur before one arbitrator, which arbitrator shall be a retired California state judge or a retired Federal court judge. Such proceeding shall be conducted in the City and County of San Francisco, California, with California rules of evidence and discovery applicable to such arbitration. The decision of the arbitrator shall be binding on the parties, and shall be final and nonappealable to the maximum extent permitted by law. Any judgment rendered by the arbitrator may be entered in a court of competent jurisdiction and enforced by the prevailing party as a final judgment of such court.

(r) Prearbitration Relief. In the event Claims are to be resolved by arbitration, either party may seek from a court of competent jurisdiction identified in Section 12(o), any prejudgment order, writ or other relief and have such prejudgment order, writ or other relief enforced to the fullest extent permitted by law notwithstanding that all Claims are otherwise subject to resolution by binding arbitration.

(s) Counterparts. This Warrant and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so delivered shall be deemed an original, but all of which counterparts shall constitute but one and the same instrument.

(t) Specific Performance. The parties hereto hereby declare that it is impossible to measure in money the damages which will accrue to a party hereto by reason of the other party’s failure to perform any of the obligations under this Warrant and agree that the terms of this Warrant shall be specifically enforceable by either party hereto. If a party hereto institutes any action or proceeding to specifically enforce the provisions hereof, any person against whom such action or proceeding is brought hereby waives the claim or defense therein that such party has an adequate remedy at law, and such person shall not offer in any such action or proceeding the claim or defense that such remedy at law exists.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have caused this Warrant to be executed by its officers thereunto duly authorized as of the Effective Date.

COMPANY:

ACELRX PHARMACEUTICALS, INC.

By: /s/ Jim Welch

Name: Jim Welch

Title: Chief Financial Officer

WARRANTHOLDER:

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.

By: /s/ K. Nicholas Martitsch

Name: K. Nicholas Martitsch

Title: Associate General Counsel

[Signature Page to Warrant – HTGC]

EXHIBIT A
NOTICE OF EXERCISE

To: ACELRX PHARMACEUTICALS, INC. (the "Company")

- (1) The undersigned Warrantholder hereby elects to purchase [_____] shares of the Common Stock of the Company, pursuant to the terms of that certain Warrant Agreement, dated as of June 29, 2011, between the Company and the Warrantholder (the "Warrant"), and [CASH PAYMENT: tenders herewith payment of the Purchase Price in full, together with all applicable transfer taxes, if any.] [NET ISSUANCE: elects pursuant to Section 3(a) of the Warrant to effect a Net Issuance.]
- (2) Please issue a certificate or certificates representing said shares of Common Stock in the name of the Warrantholder or in such other name as is specified below:

(Name)

(Address)

WARRANTHOLDER:

HERCULES TECHNOLOGY GROWTH
CAPITAL, INC.

By: _____

Name: _____

Title: _____

EXHIBIT B

ACKNOWLEDGMENT OF EXERCISE

The undersigned, as representative of AcelRx Pharmaceuticals, Inc. (the "Company"), hereby acknowledges receipt of the "Notice of Exercise" from Hercules Technology Growth Capital, Inc. (the "Warrantholder"), to purchase [_____] shares of the Common Stock of the Company, pursuant to the terms of that certain Warrant Agreement, dated as of June 29, 2011, between the Company and the Warrantholder (the "Warrant"), and further acknowledges that [_____] shares remain subject to purchase under the terms of the Warrant.

COMPANY:

ACELRX PHARMACEUTICALS, INC.

By: _____

Title: _____

Date: _____

EXHIBIT C

TRANSFER NOTICE

FOR VALUE RECEIVED, that certain Warrant Agreement, dated as of June 29, 2011, between AcelRx Pharmaceuticals, Inc., as the Company, and Hercules Technology Growth Capital, Inc., as the Warrantholder (the "Warrant"), and all rights evidenced thereby are hereby transferred and assigned to

(Please Print)

whose address is _____

Dated: _____

Holder's Signature: _____

Holder's Address: _____

Signature Guaranteed: _____

NOTE: The signature to this Transfer Notice must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatever. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT is made and dated as of June 29, 2011 and is entered into by and between AcelRx Pharmaceuticals, Inc., a Delaware corporation, and each of its subsidiaries, (hereinafter collectively referred to as the "Borrower"), HERCULES TECHNOLOGY II, L.P., a Delaware limited partnership, and HERCULES TECHNOLOGY GROWTH CAPITAL, INC., a Maryland corporation (collectively, "Lender").

RECITALS

A. Borrower has requested Lender to make available to Borrower a loan in an aggregate principal amount of up to Twenty Million Dollars (\$20,000,000) (the "Term Loan"); and

B. Lender is willing to make the Term Loan on the terms and conditions set forth in this Agreement.

AGREEMENT

NOW, THEREFORE, Borrower and Lender agree as follows:

SECTION 1. DEFINITIONS AND RULES OF CONSTRUCTION

1.1 Unless otherwise defined herein, the following capitalized terms shall have the following meanings:

"Account Control Agreement(s)" means any agreement entered into by and among the Lender, Borrower and a third party Bank or other institution (including a Securities Intermediary) in which Borrower maintains a Deposit Account or an account holding Investment Property and which grants Lender a perfected first priority security interest in the subject account or accounts.

"ACH Authorization" means the ACH Debit Authorization Agreement in substantially the form of Exhibit I.

"Advance(s)" means a Term Loan Advance.

"Advance Date" means the funding date of any Advance.

"Advance Request" means a request for an Advance submitted by Borrower to Lender in substantially the form of Exhibit A.

"Agreement" means this Loan and Security Agreement, as amended from time to time.

"Assignee" has the meaning given to it in Section 11.13.

“Borrower Products” means all products, software, service offerings, technical data or technology currently being designed, manufactured or sold by Borrower or which Borrower intends to sell, license, or distribute in the future including any products or service offerings under development, collectively, together with all products, software, service offerings, technical data or technology that have been sold, licensed or distributed by Borrower since its incorporation.

“Cap” shall have the meaning assigned to such term in Section 2.2(e)(iii).

“Cash” means all cash and liquid funds.

“Change in Control” means any reorganization, recapitalization, consolidation or merger (or similar transaction or series of related transactions) of Borrower or any Subsidiary, sale or exchange of outstanding shares (or similar transaction or series of related transactions) of Borrower or any Subsidiary in which the holders of Borrower or Subsidiary’s outstanding shares immediately before consummation of such transaction or series of related transactions do not, immediately after consummation of such transaction or series of related transactions, retain shares representing more than fifty percent (50%) of the voting power of the surviving entity of such transaction or series of related transactions (or the parent of such surviving entity if such surviving entity is wholly owned by such parent), in each case without regard to whether Borrower or Subsidiary is the surviving entity.

“Claims” has the meaning given to it in Section 11.10.

“Closing Date” means the date of this Agreement.

“Collateral” means the property described in Section 3.

“Collateral Agent” means Hercules Technology II, L.P., a Delaware limited partnership.

“Commitment Fee” means \$40,000, which fee is due to Lender on or prior to the Closing Date, and shall be deemed fully earned on such date regardless of the early termination of this Agreement.

“Common Stock” means the Common Stock, \$0.001 par value per share, of the Company.

“Confidential Information” has the meaning given to it in Section 11.12.

“Contingent Obligation” means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any indebtedness, lease, dividend, letter of credit or other obligation of another, including any such obligation directly or indirectly guaranteed, endorsed, co-made or discounted or sold with recourse by that Person, or in respect of which that Person is otherwise directly or indirectly liable; (ii) any obligations with respect to undrawn letters of credit, corporate credit cards or merchant services issued for the account of that Person; and (iii) all obligations arising under any interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other

agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; provided, however, that the term "Contingent Obligation" shall not include endorsements for collection or deposit in the ordinary course of business. The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determined amount of the primary obligation in respect of which such Contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by such Person in good faith; provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement.

"Copyright License" means any written agreement granting any right to use any Copyright or Copyright registration, now owned or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

"Copyrights" means all copyrights, whether registered or unregistered, held pursuant to the laws of the United States, any State thereof, or of any other country.

"Delivery Date" has the meaning given to it in Section 2.2(e)(i).

"Deposit Accounts" means any "deposit accounts," as such term is defined in the UCC, and includes any checking account, savings account, or certificate of deposit.

"ERISA" is the Employee Retirement Income Security Act of 1974, and its regulations.

"Event of Default" has the meaning given to it in Section 9.

"Extension Trigger Event" means that Borrower has initiated enrollment for the "Abdominal" and the "Comparator" phase 3 trials on or before December 31, 2011.

"Facility Charge" means three-quarters of one percent (0.75%) of the Maximum Term Loan Amount.

"Financial Statements" has the meaning given to it in Section 7.1.

"Fixed Conversion Price" has the meaning given to it in Section 2.2(e)(i).

"GAAP" means generally accepted accounting principles in the United States of America, as in effect from time to time.

"Indebtedness" means indebtedness of any kind, including (a) all indebtedness for borrowed money or the deferred purchase price of property or services (excluding trade credit entered into in the ordinary course of business due within sixty (60) days), including reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations, and (d) all Contingent Obligations.

“Insolvency Proceeding” is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

“Intellectual Property” means all of Borrower’s Copyrights; Trademarks; Patents; Licenses; trade secrets and inventions; mask works; Borrower’s applications therefor and reissues, extensions, or renewals thereof; and Borrower’s goodwill associated with any of the foregoing, together with Borrower’s rights to sue for past, present and future infringement of Intellectual Property and the goodwill associated therewith.

“Investment” means any beneficial ownership (including stock, partnership or limited liability company interests) of or in any Person, or any loan, advance or capital contribution to any Person.

“Joinder Agreements” means for each Subsidiary, a completed and executed Joinder Agreement in substantially the form attached hereto as Exhibit G.

“Lender” has the meaning given to it in the preamble to this Agreement.

“Lender Expenses” are all audit fees and expenses, costs, and expenses (including reasonable attorneys’ fees and expenses) for preparing, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred with respect to Borrower.

“License” means any Copyright License, Patent License, Trademark License or other license of rights or interests.

“Lien” means any mortgage, deed of trust, pledge, hypothecation, assignment for security, security interest, encumbrance, levy, lien or charge of any kind, whether voluntarily incurred or arising by operation of law or otherwise, against any property, any conditional sale or other title retention agreement, and any lease in the nature of a security interest.

“Loan” means the Advances made under this Agreement.

“Loan Documents” means this Agreement, the Notes, the ACH Authorization, the Account Control Agreements, the Joinder Agreements, all UCC Financing Statements, the Warrant, and any other documents executed in connection with the Secured Obligations or the transactions contemplated hereby, as the same may from time to time be amended, modified, supplemented or restated.

“Material Adverse Effect” means a material adverse effect upon: (i) the business, operations, properties, assets, or condition (financial or otherwise) of Borrower; or (ii) the ability of Borrower to perform the Secured Obligations in accordance with the terms of the Loan Documents, or the ability of Lender to enforce any of its rights or remedies with respect to the Secured Obligations; or (iii) the Collateral or Lender’s Liens on the Collateral or the priority of such Liens.

“Maximum Term Loan Amount” means Twenty Million and No/100 Dollars (\$20,000,000).

“Maximum Rate” shall have the meaning assigned to such term in Section 2.3.

“Note” means Secured Convertible Term Promissory Notes in substantially the form of Exhibit B-1 and Exhibit B-2.

“Optional Prepayment” has the meaning given to it in Section 2.2(e)(i).

“Optional Prepayment Date” has the meaning given to it in Section 2.2(e)(i).

“Patent License” means any written agreement granting any right with respect to any invention on which a Patent is in existence or a Patent application is pending, in which agreement Borrower now holds or hereafter acquires any interest.

“Patents” means all letters patent of, or rights corresponding thereto, in the United States or in any other country, all registrations and recordings thereof, and all applications for letters patent of, or rights corresponding thereto, in the United States or any other country.

“Permitted Indebtedness” means: (i) Indebtedness of Borrower in favor of Lender arising under this Agreement or any other Loan Document; (ii) Indebtedness existing on the Closing Date which is disclosed in Schedule 1A; (iii) Indebtedness of up to \$200,000 outstanding at any time secured by a lien described in clause (vii) of the defined term “Permitted Liens,” provided such Indebtedness does not exceed the lesser of the cost or fair market value of the Equipment financed with such Indebtedness; (iv) Indebtedness to trade creditors incurred in the ordinary course of business, including Indebtedness incurred in the ordinary course of business with corporate credit cards; (v) Indebtedness that also constitutes a Permitted Investment; (vi) Subordinated Indebtedness; (vii) reimbursement obligations in connection with letters of credit that are secured by cash or cash equivalents and issued on behalf of the Borrower or a Subsidiary thereof in an amount not to exceed \$200,000 at any time outstanding, (viii) other Indebtedness in an amount not to exceed \$500,000 at any time outstanding, and (ix) extensions, refinancings and renewals of any items of Permitted Indebtedness, provided that the principal amount is not increased or the terms modified to impose materially more burdensome terms upon Borrower or its Subsidiary, as the case may be.

“Permitted Investment” means: (i) Investments existing on the Closing Date which are disclosed in Schedule 1B; (ii) (a) marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within one year from the date of acquisition thereof, (b) commercial paper maturing no more than one year from the date of creation thereof and currently having a rating of at least A-2 or P-2 from either Standard & Poor’s Corporation or Moody’s Investors Service, (c) certificates of deposit issued by any bank with assets of at least \$500,000,000 maturing no more than one year from the date of investment therein, and (d) money market accounts; (iii) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; (iv) repurchases of stock from former employees, directors, or consultants of Borrower under the terms of applicable repurchase agreements at the original issuance price of such securities in an aggregate amount not to exceed \$250,000 in any fiscal year,

provided that no Event of Default has occurred, is continuing or would exist after giving effect to the repurchases; (v) Investments accepted in connection with Permitted Transfers; (vi) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of Borrower's business; (vii) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not affiliates, in the ordinary course of business, provided that this subparagraph (vii) shall not apply to Investments of Borrower in any Subsidiary; (viii) Investments consisting of loans not involving the net transfer on a substantially contemporaneous basis of cash proceeds to employees, officers or directors relating to the purchase of capital stock of Borrower pursuant to employee stock purchase plans or other similar agreements approved by Borrower's Board of Directors; (ix) Investments consisting of travel advances, employee relocation loans and other employee loans and advances in the ordinary course of business and not in excess of \$500,000 in the aggregate; (x) Investments in newly-formed Subsidiaries organized in the United States, provided that such Subsidiaries enter into a Joinder Agreement promptly after their formation by Borrower and execute such other documents as shall be reasonably requested by Lender; (xi) Investments in subsidiaries organized outside of the United States approved in advance in writing by Lender; (xii) joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of the nonexclusive licensing of technology, the development of technology or the providing of technical support, provided that any cash Investments by Borrower do not exceed \$100,000 in the aggregate in any fiscal year; (xiii) Investments constituting mergers or acquisitions permitted by Section 7.10; and (xiv) additional Investments that do not exceed \$500,000 in the aggregate.

"Permitted Liens" means any and all of the following: (i) Liens in favor of Lender; (ii) Liens existing on the Closing Date which are disclosed in Schedule 1C; (iii) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings; provided, that Borrower maintains adequate reserves therefor in accordance with GAAP to the extent required thereby; (iv) Liens securing claims or demands of materialmen, artisans, mechanics, carriers, warehousemen, landlords and other like Persons arising in the ordinary course of Borrower's business and imposed without action of such parties; provided, that the payment thereof is not overdue; (v) Liens arising from judgments, decrees or attachments in circumstances which do not constitute an Event of Default hereunder; (vi) the following deposits, to the extent made in the ordinary course of business: deposits under worker's compensation, unemployment insurance, social security and other similar laws, or to secure the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure indemnity, performance or other similar bonds for the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure statutory obligations (other than liens arising under ERISA or environmental liens) or surety or appeal bonds, or to secure indemnity, performance or other similar bonds; (vii) Liens on Equipment or software or other intellectual property constituting purchase money liens and liens in connection with capital leases securing Indebtedness permitted in clause (iii) of "Permitted Indebtedness"; (viii) Liens incurred in connection with Subordinated Indebtedness; (ix) leasehold interests in leases or subleases and licenses granted in the ordinary course of business and not interfering in any material respect with the business of the licensor; (x) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of custom duties that are promptly paid on or before the date they become due; (xi) Liens on insurance proceeds securing the payment of

financed insurance premiums that are promptly paid on or before the date they become due (provided that such Liens extend only to such insurance proceeds and not to any other property or assets); (xii) statutory and common law rights of set-off and other similar rights as to deposits of cash and securities in favor of banks, other depository institutions and brokerage firms; (xiii) easements, zoning restrictions, rights-of-way and similar encumbrances on real property imposed by law or arising in the ordinary course of business so long as they do not materially impair the value or marketability of the related property; (xiv) Liens on cash or cash equivalents securing obligations permitted under clause (vii) of the definition of Permitted Indebtedness; and (xv) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by Liens of the type described in clauses (i) through (xi) above; provided, that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness being extended, renewed or refinanced (as may have been reduced by any payment thereon) does not increase.

“Permitted Transfers” means (i) sales of Inventory in the normal course of business, (ii) non-exclusive licenses and similar arrangements for the use of Intellectual Property in the ordinary course of business and licenses that could not result in a legal transfer of title of the licensed property but that may be exclusive in respects other than territory and that may be exclusive as to territory only as to discrete geographical areas outside of the United States in the ordinary course of business, or (iii) dispositions of worn-out, obsolete or surplus Equipment at fair market value in the ordinary course of business, (iv) dispositions expressly permitted under Section 7.7, 7.8 or 7.10 hereof, (v) dispositions arising from the abandonment of fixtures and other similar tenant improvements in connection with office relocations, and (vi) other Transfers of assets having a fair market value of not more than \$250,000 in the aggregate in any fiscal year.

“Person” means any individual, sole proprietorship, partnership, joint venture, trust, unincorporated organization, association, corporation, limited liability company, institution, other entity or government.

“Preferred Stock” means at any given time any equity security issued by Borrower that has any rights, preferences or privileges senior to Borrower’s Common Stock.

“Prepayment Charge” shall have the meaning assigned to such term in Section 2.5.

“Principal Installment Due Date” has the meaning given to it in Section 2.2(e)(i).

“Principal Installment Payment” has the meaning given to it in Section 2.2(e)(i).

“Receivables” means (i) all of Borrower’s Accounts, Instruments, Documents, Chattel Paper, Supporting Obligations, letters of credit, proceeds of any letter of credit, and Letter of Credit Rights, and (ii) all customer lists, software, and business records related thereto.

“Repayment Election Notice” has the meaning given to it in Section 2.2(e)(i).

“Rule 144” means Rule 144 under the Securities Act.

“SBA” shall have the meaning assigned to such term in Section 7.15.

“SBIC” shall have the meaning assigned to such term in Section 7.15.

“SBIC Act” shall have the meaning assigned to such term in Section 7.15.

“SEC” has the meaning given to it in Section 2.2(e)(iv).

“Secured Obligations” means Borrower’s obligations under this Agreement and any Loan Document, including any obligation to pay any amount now owing or later arising. Notwithstanding the foregoing, the Secured Obligations shall not include any of Borrower’s obligations, liabilities or duties under the Warrant.

“Securities Act” means the Securities Act of 1933, as amended.

“Stock Payment Conditions” shall have the meaning assigned to such term in Section 2.2(e)(ii).

“Stock Payment Option” has the meaning given to it in Section 2.2(e)(i).

“Subordinated Indebtedness” means Indebtedness subordinated to the Secured Obligations in amounts and on terms and conditions satisfactory to Lender in its sole discretion.

“Subsequent Financing” means the closing of the sale by Borrower of its equity securities in a private placement to institutional investors primarily for capital raising purposes resulting in net cash proceeds to Borrower of at least \$20 million, which closing occurs after the Closing Date but prior to the date that is two (2) years from the Closing Date (such period, the “Participation Period”). For the avoidance of doubt, the issuance or sale of any equity securities in or in connection with any of the following transactions shall not constitute a “Subsequent Financing” hereunder: (i) any strategic transaction, including without limitation, joint venture, licensing, collaboration, manufacturing, development, marketing or distribution arrangements; (ii) any acquisition or license of any business, products, technologies or other assets; (iii) any merger, consolidation, acquisition or similar business combination; (iv) any equipment loan or leasing arrangement or real property leasing arrangement, or any debt financing from a bank or similar financial or lending institution; (v) any equity line financing or similar arrangement, including without limitation, any such arrangement in which Borrower has the right to put, or has agreed to sell, its equity securities to an investor from time to time; or (vi) any transaction in which the offer or sale by Borrower of Borrower’s equity securities or rights to acquire Borrower’s equity securities is registered under the Securities Act.

“Subsidiary” means an entity, whether corporate, partnership, limited liability company, joint venture or otherwise, in which Borrower owns or controls 50% or more of the outstanding voting securities, including each entity listed on Schedule I hereto.

“Term Loan Advance” means any Term Loan funds advanced under this Agreement.

“Term Loan Interest Rate” means for any day a per annum rate of interest equal to the greater of either (i) 8.50% plus the positive difference between the prime rate as reported in The Wall Street Journal and 5.25%, and (ii) 8.50%.

“Term Loan Maturity Date” means December 1, 2014, or, if the Extension Trigger Event has occurred, March 1, 2015.

“Trademark License” means any written agreement granting any right to use any Trademark or Trademark registration, now owned or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

“Trademarks” means all trademarks (registered, common law or otherwise) and any applications in connection therewith, including registrations, recordings and applications in the United States Patent and Trademark Office or in any similar office or agency of the United States, any State thereof or any other country or any political subdivision thereof.

“UCC” means the Uniform Commercial Code as the same is, from time to time, in effect in the State of California; provided, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection or priority of, or remedies with respect to, Lender’s Lien on any Collateral is governed by the Uniform Commercial Code as the same is, from time to time, in effect in a jurisdiction other than the State of California, then the term “UCC” shall mean the Uniform Commercial Code as in effect, from time to time, in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority or remedies and for purposes of definitions related to such provisions.

“Warrant” means the warrant entered into in connection with the Loan.

“1934 Act” has the meaning given to it in Section 2.2(e)(iii).

Unless otherwise specified, all references in this Agreement or any Annex or Schedule hereto to a “Section,” “subsection,” “Exhibit,” “Annex,” or “Schedule” shall refer to the corresponding Section, subsection, Exhibit, Annex, or Schedule in or to this Agreement. Unless otherwise specifically provided herein, any accounting term used in this Agreement or the other Loan Documents shall have the meaning customarily given such term in accordance with GAAP, and all financial computations hereunder shall be computed in accordance with GAAP, consistently applied. Unless otherwise defined herein or in the other Loan Documents, terms that are used herein or in the other Loan Documents and defined in the UCC shall have the meanings given to them in the UCC.

SECTION 2. THE LOAN

2.1 Reserved.

2.2 Term Loan.

(a) Advances. Subject to the terms and conditions of this Agreement, Lender will make, and Borrower agrees to draw, a Term Loan Advance of \$10,000,000 on the Closing Date. Not later than December 15, 2011, Borrower may request one additional Term Loan Advance in an amount up to \$10,000,000. The aggregate outstanding Term Loan Advances may be up to the Maximum Term Loan Amount.

(b) Advance Request. To obtain a Term Loan Advance, Borrower shall complete, sign and deliver an Advance Request (at least five business days before the Advance Date). Lender shall fund the Term Loan Advance in the manner requested by the Advance Request provided that each of the conditions precedent to such Term Loan Advance is satisfied as of the requested Advance Date.

(c) Interest. The principal balance of each Term Loan Advance shall bear interest thereon from such Advance Date at the Term Loan Interest Rate based on a year consisting of 360 days, with interest computed daily based on the actual number of days elapsed. The Term Loan Interest Rate will float and change on the day the Prime Rate changes from time to time.

(d) Payment. Borrower will pay interest on each Term Loan Advance on the first day of each month, beginning the month after the Advance Date. Borrower shall repay the aggregate Term Loan principal balance in thirty (30) equal monthly installments of principal and interest beginning July 1, 2012, or, if the Extension Trigger Event has occurred, October 1, 2012, and continuing on the first business day of each month thereafter. The entire Term Loan principal balance and all accrued but unpaid interest hereunder, shall be due and payable on Term Loan Maturity Date. Borrower shall make all payments under this Agreement without setoff, recoupment or deduction and regardless of any counterclaim or defense. Except to the extent Borrower pays any regularly scheduled installments of principal and/or optional prepayments of principal in Common stock in accordance with, and subject to the limitations set forth in, Section 2.2(e), Lender will initiate debit entries to the Borrower's account as authorized on the ACH Authorization on each payment date of all periodic obligations payable to Lender under each Note or Term Loan Advance.

(e) Payment in Cash or Common Stock of Monthly Amount or Prepayment Principal Amount.

(i) Payment in Cash or Common Stock. Subject to satisfaction of the Stock Payment Conditions and compliance with the other terms and conditions of this Section 2.2(e), Borrower may elect to pay, in whole or in part, any regularly scheduled installment of principal (a "Principal Installment Payment") or any optional prepayment of principal (an "Optional Prepayment") by converting the Notes into shares of Common Stock in lieu of payment in cash (such option, the "Stock Payment Option"). In order to validly exercise a Stock Payment Option, Borrower (A) must deliver written notice thereof, in the form attached hereto as Exhibit J, to Lender (a "Repayment Election Notice") five (5) days prior to (i) the applicable due date of the Principal Installment Payment (the "Principal Installment Due Date") or (ii) the Optional Prepayment (such date, the "Optional Prepayment Date") and (B) shall either (i) (provided that Borrower's transfer agent is participating in the Fast Automated Securities Transfer Program of the Depository Trust Company) credit to Lender by no later than the first trading day

following the applicable Principal Installment Due Date or Optional Prepayment Date (such date, the “Delivery Date”) such aggregate number of shares of Common Stock to be issued to Lender with respect to such Repayment Election Notice, as determined in accordance with this Section 2.2(e) (which shares shall be free of any restrictions on transfer), or (ii) deliver to Collateral Agent, on behalf of Lender, stock certificates, without restrictive legend, evidencing the number of shares of Common Stock with respect to such Repayment Election Notice, as determined in accordance with this Section 2.2(e), by no later than the first trading day following the applicable Delivery Date. All payments in respect of a Principal Installment Payment and Optional Prepayment shall be made in cash, unless (i) Borrower timely delivers a Repayment Election Notice in accordance with the immediately preceding sentence, (ii) Borrower timely delivers the requisite stock certificates or credits the shares of Common Stock to Lender, free of restrictive legends, in accordance with this Section 2.2(e) and (iii) the Stock Payment Conditions are satisfied in respect of such payment. A Repayment Election Notice, once delivered by Borrower, shall be irrevocable unless otherwise agreed, in writing, by Collateral Agent, on behalf of Lender. If Borrower elects to convert the Notes to repay a Principal Installment Payment or make an Optional Prepayment, in whole or in part, in shares of Common Stock, the number of such shares of Common Stock to be issued in respect of such Principal Installment Payment or Optional Prepayment shall be equal to the number determined by dividing (x) the product of (A) the principal amount to be paid in shares of Common Stock and (B) 103%, by (y) the Fixed Conversion Price. For purposes hereof, the “Fixed Conversion Price” shall be \$5.73; provided, however, that upon the occurrence of any stock split, stock dividend, combination of shares or reverse stock split pertaining to the Common Stock, the Fixed Conversion Price shall be proportionately increased or decreased as necessary to reflect the proportionate change in the shares of Common Stock issued and outstanding as a result of such stock split, stock dividend, combination of shares or reverse stock split. Any shares of Common Stock issued pursuant to a Repayment Election Notice shall be deemed to be issued upon conversion of the Notes.

(ii) Stock Payment Conditions. Notwithstanding the foregoing, Borrower’s right to deliver, and Lender’s obligation to accept, shares of Common Stock in lieu of payment in cash of a Principal Installment Payment or Optional Prepayment, as applicable, is conditioned on the satisfaction of each of the following conditions (the “Stock Payment Conditions”) as of such Delivery Date: (A) the closing price of the shares of Common Stock as reported by Bloomberg, L.P. on the NASDAQ market for each of the seven (7) consecutive trading days immediately preceding the Delivery Date shall be greater than or equal to 115% of the Fixed Conversion Price; (B) the Common Stock issued in connection with any such payment does not exceed 15% of the total trading volume of the Common Stock for the twenty-two (22) consecutive trading days immediately prior to and including such Delivery Date; (C) only one Repayment Election Notice may be given in any calendar month; (D) the aggregate principal amount to be paid in shares of Common Stock pursuant to Section 2.2 of this Agreement shall not exceed Three Million Dollars (\$3,000,000); (E) the Common Stock is (and was on

each of the twenty-two (22) consecutive trading days immediately preceding such Delivery Date) quoted or listed on the NASDAQ market; (F) a registration statement is effective and available for the resale of all of the shares of Common Stock to be delivered on such Delivery Date, or such shares of Common Stock are eligible for resale to the public pursuant to Rule 144 without any limitation; (G) after giving effect to the issuance of such shares of Common Stock to Lender, Lender would not (A) beneficially own, together with its affiliates, Common Stock in excess of the limitations specified in subsection (e)(iii) below and (B) have been issued shares of Common Stock pursuant to all Repayment Election Notices in an aggregate amount in excess of the Cap; (H) as of such Delivery Date, there is no outstanding Event of Default and there is no breach or default that, if left uncured, would result in an Event of Default; and (I) Borrower shall have sufficient authorized but unissued shares of Common Stock to provide for the issuance of the shares of Common Stock pursuant to the Repayment Election Notice. If any of the Stock Payment Conditions are not satisfied as of a Delivery Date, Borrower shall not be permitted to pay, and the Lender shall not be obligated to accept, the Principal Installment Payment or Optional Prepayment, as applicable, in shares of Common Stock, and Borrower shall instead pay such principal amount in cash; provided, however, that the Stock Payment Conditions set forth in clauses (A), (B), (C), (E), (F) and (H) above may be waived by a writing executed by both Borrower and Lender. In the event the Company is relying upon an effective registration statement to satisfy clause (F) of the Stock Payment Conditions, each of the Company and Lender shall provide customary indemnification to one another with respect to such registration statement in a form acceptable to the Company and Lender. By no later than the first trading day following the Delivery Date, Borrower shall either (i) (provided that Borrower's transfer agent is participating in the Fast Automated Securities Transfer Program of the Depository Trust Company) credit to Lender the shares of Common Stock to be delivered by Borrower with respect to the portion of the Principal Installment Payment or Optional Prepayment being paid in shares of Common Stock or (ii) deliver to Collateral Agent, on behalf of each Lender, certificates, free of restrictive legends, evidencing the shares of Common Stock to be delivered by Borrower with respect to the portion of the Principal Installment Payment or Optional Prepayment being paid in shares of Common Stock, which shares of Common Stock, in the case of clauses (i) and (ii), shall be allocated among each Lender in the manner specified to Borrower by the Collateral Agent.

(iii) Beneficial Ownership Limitation. Notwithstanding any provision herein to the contrary, Lender, together with its affiliates, shall not be permitted to beneficially own a number of shares of Common Stock (other than shares that may be deemed beneficially owned except for being subject to a limitation analogous to the limitation contained in this Section 2.2(e)(iii)) in excess of 9.99% of the number of shares of Common Stock then issued and outstanding, it being the intent of Borrower and Lender that Lender, together with its affiliates, not be deemed at any time to have the power to vote or dispose of greater than 9.99% of the number of shares of Common Stock issued and outstanding at any time; *provided, however*, that Lender shall have the right, upon 61 days' prior written notice to

Borrower, to waive the 9.99% limitation of this subsection (e)(iii). Notwithstanding anything contained herein to the contrary, Borrower shall not be permitted to issue to Lender, and Lender shall not be required to accept, shares of Common Stock pursuant to a Repayment Election Notice if and to the extent such issuance, when taken together with all other issuances pursuant to prior Repayment Election Notices, would result in (A) the issuance of more than 19.99% of the Common Stock outstanding as of the date of this Agreement or (B) Lender, together with its affiliates, beneficially owning in excess of 19.99% of the outstanding Common Stock (each of clauses (A) and (B) are referred to herein as the "Cap"). As used herein, beneficial ownership shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the "1934 Act"). For any reason at any time, upon written or oral request of Lender, Borrower shall within one business day confirm orally and in writing to Lender the number of shares of Common Stock then issued and outstanding as of any given date.

(iv) With a view to making available to Lender the benefits of Rule 144 (or its successor rule) and any other rule or regulation of the Securities and Exchange Commission (the "SEC") that may at any time permit Lender to sell shares of Common Stock issued pursuant to Section 2.2(e) of this Agreement to the public without registration, Borrower covenants and agrees to: (i) make and keep public information available, as those terms are understood and defined in Rule 144, until six (6) months after such date as all of the shares of Common Stock issued pursuant to Section 2.2(e) of this Agreement may be sold without restriction by Lender pursuant to Rule 144 or any other rule of similar effect; (ii) file with the SEC in a timely manner all reports and other documents required of Borrower under the 1934 Act; and (iii) furnish to Lender upon request, as long as Lender owns any shares of Common Stock issued pursuant to Section 2.2(e) of this Agreement, such information as may be reasonably requested in order to avail Lender of any rule or regulation of the SEC that permits the selling of any such shares of Common Stock without registration.

(v) Borrower covenants and agrees to reserve from its duly authorized capital stock not less than the number of shares of Common Stock that may be issuable upon payment of any Principal Installment Payment or Optional Prepayment pursuant to Section 2.2(e) of this Agreement. Borrower further represents, warrants and covenants that, upon issuance of any shares of Common Stock pursuant to Section 2.2(e) of this Agreement, such shares of Common Stock shall be validly issued, fully paid and non-assessable and free from all preemptive or similar rights, taxes, liens and charges with respect to the issue thereof.

(vi) For so long as Lender holds any shares of Common Stock issued pursuant to Section 2.2(e) of this Agreement, Borrower shall maintain the Common Stock's authorization for listing on NASDAQ and Borrower shall not take any action which would reasonably be executed to result in the delisting or suspension of the Common Stock on NASDAQ.

2.3 Maximum Interest. Notwithstanding any provision in this Agreement, the Notes, or any other Loan Document, it is the parties' intent not to contract for, charge or receive interest at a rate that is greater than the maximum rate permissible by law that a court of competent jurisdiction shall deem applicable hereto (which under the laws of the State of California shall be deemed to be the laws relating to permissible rates of interest on commercial loans) (the "Maximum Rate"). If a court of competent jurisdiction shall finally determine that Borrower has actually paid to Lender an amount of interest in excess of the amount that would have been payable if all of the Secured Obligations had at all times borne interest at the Maximum Rate, then such excess interest actually paid by Borrower shall be deemed retroactively applied as of the date of receipt of such payment as follows: first, to the payment of principal outstanding on the Notes; second, after all principal is repaid, to the payment of Lender's accrued and unpaid interest, costs, expenses, professional fees and any other Secured Obligations; and third, after all Secured Obligations are repaid, the excess (if any) shall be refunded to Borrower.

2.4 Default Interest. In the event any payment is not paid on the scheduled payment date, an amount equal to five percent (5%) of the past due amount shall be payable on demand. In addition, upon the occurrence and during the continuation of an Event of Default hereunder, all Secured Obligations, including principal, interest, compounded interest, and Lender's fees and expenses in accordance with Section 11.11 hereof, shall bear interest at a rate per annum equal to the rate set forth in Section 2.2(c) plus five percent (5%) per annum. In the event any interest is not paid when due hereunder, delinquent interest shall be added to principal and shall bear interest on interest, compounded at the rate set forth in Section 2.2(c) or this Section 2.4, as applicable.

2.5 Prepayment. At its option upon at least 7 business days prior notice to Lender, Borrower may prepay all, but not less than all, of the outstanding Advances by paying the entire principal balance and all accrued and unpaid interest, together with a prepayment charge equal to the following percentage of the Advance amount being prepaid: if such Advance amounts are prepaid in any of the first twelve (12) months following the Closing Date, 3.0%; after twelve (12) months but prior to twenty four (24) months, 2.0%; and thereafter, 1.0% (each, a "Prepayment Charge"). Borrower agrees that the Prepayment Charge is a reasonable calculation of Lender's lost profits in view of the difficulties and impracticality of determining actual damages resulting from an early repayment of the Advances. Borrower shall prepay the outstanding amount of all principal and accrued interest through the prepayment date and the Prepayment Charge upon the occurrence of a Change in Control.

2.6 End of Term Charge. On the earliest to occur of (i) the Term Loan Maturity Date, (ii) the date that Borrower prepays the outstanding Secured Obligations, or (iii) the date that the Secured Obligations become due and payable, Borrower shall pay Lender a charge of \$200,000. Notwithstanding the required payment date of such charge, it shall be deemed earned by Lender as of the Closing Date.

2.7 Lender Investment Representations. The Note is being issued to Lender in reliance upon the following representations and covenants of Lender (which, for the avoidance of doubt, are being made severally, but not jointly, by each Lender):

(a) Investment Purpose. The Note has been, and the Common Stock issuable upon conversion of the Note by Borrower in accordance with Section 2.2(e) of this Agreement will be, acquired by Lender for investment and not with a view to the sale or distribution of any part thereof, and Lender has no present intention of selling or engaging in any public distribution of the same except pursuant to a registration under the Securities Act or an exemption from the registration requirements of the Securities Act. Lender is not a registered broker-dealer under Section 15 of the 1934 Act or an entity engaged in a business that would require it to be so registered as a broker-dealer.

(b) Private Issue. The Lender understands (i) that the Common Stock issuable upon conversion of the Note by Borrower in accordance with Section 2.2(e) of this Agreement is not registered under the Securities Act or qualified under applicable state securities laws on the ground that the issuance contemplated upon conversion of the Note will be exempt from the registration and qualifications requirements thereof, and (ii) that the Company's reliance on such exemption is predicated on the representations set forth in this Section 2.7.

(c) Financial Risk. The Lender has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment in the Note, and has the ability to bear the economic risks of its investment.

(d) Risk of No Registration. Without in any way limiting the Company's obligations under this Agreement, the Lender understands that if the Common Stock is not registered with the SEC pursuant to Section 12 of the 1934 Act or the Company is not required to file reports pursuant to Section 13(a) or Section 15(d) of the 1934 Act, or if a registration statement is not effective under the Securities Act covering the resale of the shares of Common Stock issued to Lender upon conversion of the Note when it desires to sell such shares of Common Stock it may be required to hold such securities for an indefinite period. The Lender also understands that any sale of Common Stock issuable by Borrower to Lender upon conversion of the Note in accordance with Section 2.2(e) of this Agreement which might be made by it in reliance upon Rule 144 under the Securities Act may be made only in accordance with the terms and conditions of Rule 144.

(e) Accredited Investor. The Lender is an "accredited investor" within the meaning of Rule 501 of Regulation D promulgated under the Securities Act.

(f) No Short Sales. The Lender has not engaged, and will not engage, in "short sales" of the Common Stock of the Company. The term "short sale" shall mean any sale of a security which the seller does not own or any sale which is consummated by the delivery of a security borrowed by, or for the account of, the seller.

(g) Legends. The Lender understands and agrees that each Note issued pursuant to this Agreement may bear the following legend.

THIS SECURED CONVERTIBLE TERM PROMISSORY NOTE HAS NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION

FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND, ACCORDINGLY, MAY NOT BE TRANSFERRED UNLESS (I) THIS NOTE HAS BEEN REGISTERED FOR SALE PURSUANT TO THE SECURITIES ACT OF 1933, AS AMENDED, (II) THIS NOTE MAY BE SOLD PURSUANT TO RULE 144, OR (III) THE BORROWER HAS RECEIVED AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO IT THAT SUCH TRANSFER MAY LAWFULLY BE MADE WITHOUT REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED.

Lender acknowledges and agrees that the issuance of a certificate or certificates without restrictive legend for, or deposit with the Depository Trust Company via book-entry of, any shares of Common Stock that may be issued upon conversion of the Notes is predicated upon the Company's reliance that the holder of such shares would sell, transfer, assign, pledge, hypothecate or otherwise dispose of such shares pursuant to either the registration requirements of the Act, including any applicable prospectus delivery requirements, or an exemption therefrom, and that if such shares are sold pursuant to a registration statement, they will be sold in compliance with the plan of distribution set forth therein. Lender acknowledges that the foregoing representations, warranties and covenants will be relied upon by the Company, the Company's transfer agent, and by the Company's counsel in delivering an opinion to such transfer agent, in connection with not including restrictive legends on the certificates representing the shares, in order to facilitate the sale of the shares pursuant Rule 144 or an effective registration statement.

The foregoing representations and covenants of Lender do not imply any period of time that Lender will hold any shares of Common Stock issuable to Lender in accordance with Section 2.2(e) of this Agreement, and any shares of Common Stock issuable to Lender in accordance with Section 2.2(e) of this Agreement shall (i) not contain any restrictions on transfer and (ii) either be subject to an effective resale registration statement or be eligible for resale to the public pursuant to Rule 144 without any limitation.

SECTION 3. SECURITY INTEREST

3.1 As security for the prompt, complete and indefeasible payment when due (whether on the payment dates or otherwise) of all the Secured Obligations, Borrower grants to Lender a security interest in all of Borrower's personal property now owned or hereafter acquired, including the following (collectively, the "Collateral"): (a) Receivables; (b) Equipment; (c) Fixtures; (d) General Intangibles (other than Intellectual Property); (e) Inventory; (f) Investment Property (but excluding thirty-five percent (35%) of the capital stock of any foreign Subsidiary that constitutes a Permitted Investment); (g) Deposit Accounts; (h) Cash; (i) Goods; and other tangible and intangible personal property of Borrower whether now or hereafter owned or existing, leased, consigned by or to, or acquired by, Borrower and wherever located; and, to the extent not otherwise included, all Proceeds of each of the foregoing and all accessions to, substitutions and replacements for, and rents, profits and products of each of the foregoing; provided, however, that the Collateral shall include all Accounts and General Intangibles that consist of rights to payment and proceeds from the sale, licensing or disposition of all or any part, or rights in, the Intellectual Property (the "Rights to Payment"). Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to

Payment, then the Collateral shall automatically, and effective as of the date of this Agreement, include the Intellectual Property to the extent necessary to permit perfection of Lender's security interest in the Rights to Payment. Upon payment in full in cash of the Secured Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) and at such time as this Agreement has been terminated, the Collateral Agent shall, at Borrower's sole cost and expense, release its Liens in the Collateral and all rights therein shall revert to Borrower.

SECTION 4. CONDITIONS PRECEDENT TO LOAN

The obligations of Lender to make the Loan hereunder are subject to the satisfaction by Borrower of the following conditions:

4.1 Initial Advance. On or prior to the Closing Date, Borrower shall have delivered to Lender the following:

(a) executed originals of the Loan Documents, Account Control Agreements, a legal opinion of Borrower's counsel, and all other documents and instruments reasonably required by Lender to effectuate the transactions contemplated hereby or to create and perfect the Liens of Lender with respect to all Collateral, in all cases in form and substance reasonably acceptable to Lender;

(b) certified copy of resolutions of Borrower's board of directors evidencing approval of (i) the Loan and other transactions evidenced by the Loan Documents; and (ii) the Warrant and transactions evidenced thereby;

(c) certified copies of the Certificate of Incorporation and the Bylaws, as amended through the Closing Date, of Borrower;

(d) a certificate of good standing for Borrower from its state of incorporation and similar certificates from all other jurisdictions in which it does business and where the failure to be qualified would have a Material Adverse Effect;

(e) payment of the Facility Charge and reimbursement of Lender's current expenses reimbursable pursuant to this Agreement, which amounts may be deducted from the initial Advance; and

(f) such other documents as Lender may reasonably request.

4.2 All Advances. On each Advance Date:

(a) Lender shall have received (i) an Advance Request and a Note for the relevant Advance as required by Section 2.2(b), each duly executed by Borrower's Chief Executive Officer or Chief Financial Officer, and (ii) any other documents Lender may reasonably request.

(b) The representations and warranties set forth in this Agreement and in Section 5 and in the Warrant shall be true and correct in all material respects on and as of the Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date.

(c) Borrower shall be in compliance with all the terms and provisions set forth herein and in each other Loan Document on its part to be observed or performed, and at the time of and immediately after such Advance no Event of Default shall have occurred and be continuing.

(d) Each Advance Request shall be deemed to constitute a representation and warranty by Borrower on the relevant Advance Date as to the matters specified in paragraphs (b) and (c) of this Section 4.2 and as to the matters set forth in the Advance Request.

4.3 No Default. As of the Closing Date and each Advance Date, (i) no fact or condition exists that would (or would, with the passage of time, the giving of notice, or both) constitute an Event of Default and (ii) no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing.

SECTION 5. REPRESENTATIONS AND WARRANTIES OF BORROWER

Borrower represents and warrants that:

5.1 Corporate Status. Borrower is a corporation duly organized, legally existing and in good standing under the laws of the State of Delaware, and is duly qualified as a foreign corporation in all jurisdictions in which the nature of its business or location of its properties require such qualifications and where the failure to be qualified could reasonably be expected to have a Material Adverse Effect. Borrower's present name, former names (if any), locations, place of formation, tax identification number, organizational identification number and other information are correctly set forth in Exhibit C, as may be updated by Borrower in a written notice (including any Compliance Certificate) provided to Lender after the Closing Date.

5.2 Collateral. Borrower owns the Collateral and the Intellectual Property, free of all Liens, except for Permitted Liens. Borrower has the power and authority to grant to Lender a Lien in the Collateral as security for the Secured Obligations.

5.3 Consents. Borrower's execution, delivery and performance of the Notes, this Agreement and all other Loan Documents, and Borrower's execution of the Warrant, (i) have been duly authorized by all necessary corporate action of Borrower, (ii) will not result in the creation or imposition of any Lien upon the Collateral, other than Permitted Liens and the Liens created by this Agreement and the other Loan Documents, (iii) do not violate any provisions of Borrower's Certificate or Articles of Incorporation (as applicable), bylaws, or any, law, regulation, order, injunction, judgment, decree or writ to which Borrower is subject and (iv) except as described on Schedule 5.3, do not violate any contract or agreement or require the consent or approval of any other Person. The individual or individuals executing the Loan Documents and the Warrant are duly authorized to do so.

5.4 Material Adverse Effect. Since December 31, 2010, no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing. Borrower is not aware of any event likely to occur that is reasonably expected to result in a Material Adverse Effect.

5.5 Actions Before Governmental Authorities. Except as described on Schedule 5.5, there are no actions, suits or proceedings at law or in equity or by or before any governmental authority now pending or, to the knowledge of Borrower, threatened against or affecting Borrower or its property.

5.6 Laws. Borrower is not in violation of any law, rule or regulation, or in default with respect to any judgment, writ, injunction or decree of any governmental authority, where such violation or default is reasonably expected to result in a Material Adverse Effect. Borrower is not in default in any manner under any provision of any agreement or instrument evidencing indebtedness, or any other material agreement to which it is a party or by which it is bound.

5.7 Information Correct and Current. No information, report, Advance Request, financial statement, exhibit or schedule furnished, by or on behalf of Borrower to Lender in connection with any Loan Document or included therein or delivered pursuant thereto contained, contains or will contain any material misstatement of fact or omitted, omits or will omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were, are or will be made, not misleading at the time such statement was made or deemed made. Additionally, any and all financial or business projections provided by Borrower to Lender shall be (i) provided in good faith and based on the most current data and information available to Borrower, and (ii) the most current of such projections approved by Borrower's Board of Directors.

5.8 Tax Matters. Except as described on Schedule 5.8, (a) Borrower has filed all federal, and all material state and local tax returns that it is required to file, (b) Borrower has duly paid or fully reserved for all taxes or installments thereof (including any interest or penalties) as and when due, which have or may become due pursuant to such returns, and (c) Borrower has paid or fully reserved for any tax assessment received by Borrower for the three (3) years preceding the Closing Date, if any (including any taxes being contested in good faith and by appropriate proceedings).

5.9 Intellectual Property Claims. Borrower is the sole owner of, or otherwise has the right to use, the Intellectual Property. Except as described on Schedule 5.9, (i) each of the material Copyrights, Trademarks and Patents is valid and enforceable, (ii) no material part of the Intellectual Property has been judged invalid or unenforceable, in whole or in part, and (iii) no claim has been made to Borrower that any material part of the Intellectual Property violates the rights of any third party. Exhibit D is a true, correct and complete list of each of Borrower's Patents, registered Trademarks, registered Copyrights, and material agreements under which Borrower licenses Intellectual Property from third parties (other than shrink-wrap software licenses), together with application or registration numbers, as applicable, owned by Borrower or any Subsidiary, in each case as of the Closing Date. Borrower is not in material breach of, nor has Borrower failed to perform

any material obligations under, any of the foregoing contracts, licenses or agreements and, to Borrower's knowledge, no third party to any such contract, license or agreement is in material breach thereof or has failed to perform any material obligations thereunder.

5.10 Intellectual Property. Except as described on Schedule 5.10, Borrower has, or in the case of any proposed business, will have, all material rights with respect to Intellectual Property necessary in the operation or conduct of Borrower's business as currently conducted and proposed to be conducted by Borrower. Without limiting the generality of the foregoing, and in the case of Licenses, except for restrictions that are unenforceable under Division 9 of the UCC, Borrower has the right, to the extent required to operate Borrower's business, to freely transfer, license or assign Intellectual Property without condition, restriction or payment of any kind (other than license payments in the ordinary course of business) to any third party, and Borrower owns or has the right to use, pursuant to valid licenses, all software development tools, library functions, compilers and all other third-party software and other items that are used in the design, development, promotion, sale, license, manufacture, import, export, use or distribution of Borrower Products.

5.11 Borrower Products. Except as described on Schedule 5.11, no Intellectual Property owned by Borrower and no Borrower Product has been or is subject to any actual or, to the knowledge of Borrower, threatened litigation, proceeding (including any proceeding in the United States Patent and Trademark Office or any corresponding foreign office or agency) or outstanding decree, order, judgment, settlement agreement or stipulation that restricts in any manner Borrower's use, transfer or licensing thereof or that may affect the validity, use or enforceability thereof. There is no decree, order, judgment, agreement, stipulation, arbitral award or other provision entered into in connection with any litigation or proceeding that obligates Borrower to grant licenses or ownership interest in any future Intellectual Property related to the operation or conduct of the business of Borrower or Borrower Products. Borrower has not received any written notice or claim, or, to the knowledge of Borrower, oral notice or claim, challenging or questioning Borrower's ownership in any Intellectual Property (or written notice of any claim challenging or questioning the ownership in any licensed Intellectual Property of the owner thereof) or suggesting that any third party has any claim of legal or beneficial ownership with respect thereto nor, to Borrower's knowledge, is there a reasonable basis for any such claim. Neither Borrower's use of its Intellectual Property nor the production and sale of Borrower Products infringes the Intellectual Property or other rights of others.

5.12 Financial Accounts. Exhibit E, as may be updated by the Borrower in a written notice provided to Lender after the Closing Date, is a true, correct and complete list of (a) all banks and other financial institutions at which Borrower or any Subsidiary maintains Deposit Accounts and (b) all institutions at which Borrower or any Subsidiary maintains an account holding Investment Property, and such exhibit correctly identifies the name, address and telephone number of each bank or other institution, the name in which the account is held, a description of the purpose of the account, and the complete account number therefor.

5.13 Employee Loans. Borrower has no outstanding loans to any employee, officer or director of the Borrower nor has Borrower guaranteed the payment of any loan made to an employee, officer or director of the Borrower by a third party.

5.14 Capitalization and Subsidiaries. Borrower's capitalization as of the Closing Date is set forth on Schedule 5.14 annexed hereto. Borrower does not own any stock, partnership interest or other securities of any Person, except for Permitted Investments. Attached as Schedule 5.14, as may be updated by Borrower in a written notice provided after the Closing Date, is a true, correct and complete list of each Subsidiary.

SECTION 6. INSURANCE; INDEMNIFICATION

6.1 Coverage. Borrower shall cause to be carried and maintained commercial general liability insurance, on an occurrence form, against risks customarily insured against in Borrower's line of business. Such risks shall include the risks of bodily injury, including death, property damage, personal injury, advertising injury, and contractual liability per the terms of the indemnification agreement found in Section 6.3. Borrower must maintain a minimum of \$2,000,000 of commercial general liability insurance for each occurrence. Borrower has and agrees to maintain a minimum of \$10,000,000 of directors and officers' insurance for each occurrence and \$10,000,000 in the aggregate. So long as there are any Secured Obligations (other than inchoate indemnity obligations) outstanding, Borrower shall also cause to be carried and maintained insurance upon the Collateral, insuring against all risks of physical loss or damage, in an amount not less than the full replacement cost of the Collateral, provided that such insurance may be subject to standard exceptions and deductibles. Borrower shall also carry and maintain a fidelity insurance policy in an amount not less than \$25,000.

6.2 Certificates. Borrower shall deliver to Lender certificates of insurance that evidence Borrower's compliance with its insurance obligations in Section 6.1 and the obligations contained in this Section 6.2. Borrower's insurance certificate shall state Lender is an additional insured for commercial general liability, loss payee for all risk property damage insurance, subject to the insurer's approval, and a loss payee for property insurance. Attached to the certificates of insurance will be additional insured endorsements for liability and lender's loss payable endorsements, or copies of policy forms evidencing such coverages. Any failure of Lender to scrutinize such insurance certificates for compliance is not a waiver of any of Lender's rights, all of which are reserved.

6.3 Indemnity. Borrower agrees to indemnify and hold Lender and its officers, directors, employees, agents, in-house attorneys, representatives and shareholders harmless from and against any and all claims, costs, expenses, damages and liabilities (including such claims, costs, expenses, damages and liabilities based on liability in tort, including strict liability in tort), including reasonable attorneys' fees and disbursements and other costs of investigation or defense (including those incurred upon any appeal), that may be instituted or asserted against or incurred by Lender or any such Person as the result of credit having been extended, suspended or terminated under this Agreement and the other Loan Documents or the administration of such credit, or in connection with or arising out of the transactions contemplated hereunder and thereunder, or any actions or failures to act

in connection therewith, or arising out of the disposition or utilization of the Collateral, excluding in all cases claims resulting solely from the Collateral Agent's or the Lender's gross negligence or willful misconduct. Borrower agrees to pay, and to save Lender harmless from, any and all liabilities with respect to, or resulting from any delay in paying, any and all excise, sales or other similar taxes (excluding taxes imposed on or measured by the net income of Lender) that may be payable or determined to be payable with respect to any of the Collateral or this Agreement.

SECTION 7. COVENANTS OF BORROWER

Borrower agrees as follows:

7.1 Financial Reports. Borrower shall furnish to Lender the financial statements and reports listed hereinafter (the "Financial Statements"):

(a) as soon as practicable (and in any event within 30 days) after the end of each month, unaudited interim and year-to-date financial statements as of the end of such month (prepared on a consolidated and consolidating basis, if applicable), including balance sheet and related statements of income and cash flows accompanied by a report detailing any material contingencies (including the commencement of any material litigation by or against Borrower) or any other occurrence that would reasonably be expected to have a Material Adverse Effect, all certified by Borrower's Chief Executive Officer or Chief Financial Officer to the effect that they have been prepared in accordance with GAAP, except (i) for the absence of footnotes, (ii) that they are subject to normal year end adjustments, (iii) they do not contain certain non-cash items that are customarily included in quarterly and annual financial statements, and (iv) for the first two months of each quarter only the balance sheet and income statement will be required;

(b) as soon as practicable (and in any event within 45 days) after the end of each of the first three fiscal quarters of any fiscal year of Borrower, unaudited interim and year-to-date financial statements as of the end of such fiscal quarter (prepared on a consolidated and consolidating basis, if applicable), including balance sheet and related statements of income and cash flows accompanied by a report detailing any material contingencies (including the commencement of any material litigation by or against Borrower) or any other occurrence that would reasonably be expected to have a Material Adverse Effect, certified by Borrower's Chief Executive Officer or Chief Financial Officer to the effect that they have been prepared in accordance with GAAP, except (i) for the absence of footnotes, and (ii) that they are subject to normal year end adjustments; as well as the most recent capitalization table for Borrower, including the weighted average exercise price of employee stock options;

(c) as soon as practicable (and in any event within 90 days) after the end of each fiscal year, unqualified audited financial statements as of the end of such year (prepared on a consolidated and consolidating basis, if applicable), including balance sheet and related statements of income and cash flows, and setting forth in comparative form the corresponding figures for the preceding fiscal year, certified by a firm of independent certified public accountants selected by Borrower and reasonably acceptable to Lender, accompanied by any management report from such accountants;

(d) as soon as practicable (and in any event within 30 days) after the end of each month, a Compliance Certificate in the form of Exhibit F;

(e) promptly after the sending or filing thereof, as the case may be, copies of any proxy statements, financial statements or reports that Borrower has made available to holders of its Preferred Stock and copies of any regular, periodic and special reports or registration statements that Borrower files with the SEC or any governmental authority that may be substituted therefor, or any national securities exchange;

(f) [reserved]; and

(g) financial and business projections promptly following their approval by Borrower's Board of Directors, as well as other financial information reasonably requested by Lender.

Borrower shall not make any change in its (a) accounting policies or reporting practices, except in accordance with GAAP or with the consent of Lender, or (b) fiscal years or fiscal quarters. The fiscal year of Borrower shall end on December 31.

The executed Compliance Certificate may be sent via facsimile to Lender at (650) 473-9194 or via e-mail to kconte@herculestech.com. All Financial Statements required to be delivered pursuant to clauses (a), (b) and (c) shall be sent via e-mail to financialstatements@herculestech.com with a copy to kconte@herculestech.com provided, that if e-mail is not available or sending such Financial Statements via e-mail is not possible, they shall be sent via facsimile to Lender at: (866) 468-8916, attention Chief Credit Officer. Notwithstanding anything herein to the contrary, documents required to be delivered pursuant to this Section 7.1 may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which Borrower posts such documents, or provides a link thereto, on Borrower's website on the Internet at www.ancelrx.com, and notifies Lender via email or facsimile as provided in the immediately preceding sentence.

7.2 Management Rights. Borrower shall permit any representative that Lender authorizes, including its attorneys and accountants, to inspect the Collateral and examine and make copies and abstracts of the books of account of Borrower at reasonable times and upon reasonable notice during normal business hours. Such inspections or examinations shall be conducted no more often than once every six months unless an Event of Default has occurred and is continuing. In addition, any such representative shall have the right to meet with management and officers of Borrower to discuss such books of account and records. In addition, Lender shall be entitled at reasonable times and intervals to consult with and advise the management and officers of Borrower concerning significant business issues affecting Borrower. Such consultations shall not unreasonably interfere with Borrower's business operations. The parties intend that the rights granted Lender shall constitute "management rights" within the meaning of 29 C.F.R Section 2510.3-101(d)(3)(ii), but that any advice, recommendations or participation by Lender with respect to any business issues shall not be deemed to give Lender, nor be deemed an exercise by Lender of, control over Borrower's management or policies.

7.3 Further Assurances. Borrower shall from time to time execute, deliver and file, alone or with Lender, any financing statements, security agreements, collateral assignments, notices, control agreements, or other documents to perfect or give the highest priority to Lender's Lien on the Collateral. Borrower shall from time to time procure any instruments or documents as may be requested by Lender, and take all further action that may be necessary or desirable, or that Lender may reasonably request, to perfect and protect the Liens granted hereby and thereby. In addition, and for such purposes only, Borrower hereby authorizes Lender to execute and deliver on behalf of Borrower and to file such financing statements, collateral assignments, notices, control agreements, security agreements and other documents without the signature of Borrower either in Lender's name or in the name of Lender as agent and attorney-in-fact for Borrower. Borrower shall protect and defend Borrower's title to the Collateral and Lender's Lien thereon against all Persons claiming any interest adverse to Borrower or Lender other than Permitted Liens.

7.4 Reserved.

7.5 Indebtedness. Borrower shall not create, incur, assume, guarantee or be or remain liable with respect to any Indebtedness, or permit any Subsidiary so to do, other than Permitted Indebtedness, or prepay any Indebtedness or take any actions which impose on Borrower an obligation to prepay any Indebtedness, except for the conversion of Indebtedness into equity securities and the payment of cash in lieu of fractional shares in connection with such conversion.

7.6 Collateral. Borrower shall at all times keep the Collateral, the Intellectual Property and all other property and assets used in Borrower's business or in which Borrower now or hereafter holds any interest free and clear from any legal process or Liens whatsoever (except for Permitted Liens), and shall give Lender prompt written notice of any legal process affecting the Collateral, the Intellectual Property, such other property and assets, or any Liens thereon. Borrower shall cause its Subsidiaries to protect and defend such Subsidiary's title to its assets from and against all Persons claiming any interest adverse to such Subsidiary, and Borrower shall cause its Subsidiaries at all times to keep such Subsidiary's property and assets free and clear from any legal process or Liens whatsoever (except for Permitted Liens), and shall give Lender prompt written notice of any legal process affecting such Subsidiary's assets. Except with respect to (i) specific property encumbered to secure payment of particular Indebtedness incurred to finance the acquisition of such property, and (ii) restrictions by reason of customary provisions restricting assignment, subletting or other transfers contained in leases, licenses and similar agreements entered into in the ordinary course of business (provided that such restrictions are limited to the property or assets secured by such Liens or the property or assets subject to such leases, licenses or similar agreements, as the case may be), Borrower shall not agree with any Person other than Lender not to encumber its property.

7.7 Investments. Borrower shall not directly or indirectly acquire or own, or make any Investment in or to any Person, or permit any of its Subsidiaries so to do, other than Permitted Investments.

7.8 Distributions. Borrower shall not, and shall not allow any Subsidiary to, (a) repurchase or redeem any class of stock or other equity interest other than pursuant to employee, director or consultant stock purchase or repurchase plans or other similar agreements, provided, however, in each case the repurchase or redemption price does not exceed the original consideration paid for such stock or equity interest, or (b) declare or pay any cash dividend or make a cash distribution on any class of stock or other equity interest, except that a Subsidiary may pay dividends or make distributions to Borrower, or (c) lend money to any employees, officers or directors except as expressly permitted by clause (ix) of the definition of Permitted Investments.

7.9 Transfers. Except for Permitted Transfers, Borrower shall not voluntarily or involuntarily transfer, sell, lease, license, lend or in any other manner convey any equitable, beneficial or legal interest in any material portion of their assets.

7.10 Mergers or Acquisitions. Borrower shall not merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with or into any other business organization (other than mergers or consolidations of a Subsidiary into another Subsidiary or into Borrower), or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person.

7.11 Taxes. Borrower and its Subsidiaries shall pay when due all taxes, fees or other charges of any nature whatsoever (together with any related interest or penalties) now or hereafter imposed or assessed against Borrower, Lender (to the extent assessed in connection with the making of the Loan hereunder but excluding taxes on Lender's net income) or the Collateral or upon Borrower's ownership, possession, use, operation or disposition thereof or upon Borrower's rents, receipts or earnings arising therefrom. Borrower shall file on or before the due date therefor all personal property tax returns in respect of the Collateral. Notwithstanding the foregoing, Borrower may contest, in good faith and by appropriate proceedings, taxes for which Borrower maintains adequate reserves therefor in accordance with GAAP.

7.12 Corporate Changes. Neither Borrower nor any Subsidiary shall change its corporate name, legal form or jurisdiction of formation without twenty (20) days' prior written notice to Lender. Neither Borrower nor any Subsidiary shall suffer a Change in Control. Neither Borrower nor any Subsidiary shall relocate its chief executive office or its principal place of business unless: (i) it has provided prior written notice to Lender; and (ii) such relocation shall be within the continental United States. Neither Borrower nor any Subsidiary shall relocate any item of Collateral (other than (w) sales of Inventory in the ordinary course of business, (x) relocations of mobile Equipment, (y) relocations of other Equipment having an aggregate value of up to \$150,000 in any fiscal year, and (z) relocations of Collateral from a location described on Exhibit C to another location described on Exhibit C) unless (i) it has provided prompt written notice to Lender, (ii) such relocation is within the continental United States or to such other jurisdiction as designated in writing by Borrower from time to time, and (iii), if such relocation is to a third party bailee, it has delivered a bailee agreement in form and substance reasonably acceptable to Lender.

7.13 Deposit Accounts. Neither Borrower nor any Subsidiary shall maintain any Deposit Accounts, or accounts holding Investment Property, except with respect to which Lender has an Account Control Agreement.

7.14 Borrower shall notify Lender of each Subsidiary formed subsequent to the Closing Date and, within 30 days of formation, shall cause any such Subsidiary organized under the laws of any State within the United States to execute and deliver to Lender a Joinder Agreement.

7.15 Hercules Technology II, L.P. has received a license from the U.S. Small Business Administration (“SBA”) to extend loans as a small business investment company (“SBIC”) pursuant to the Small Business Investment Act of 1958, as amended, and the associated regulations (collectively, the “SBIC Act”). Portions of the loan to Borrower will be made under the SBA license and the SBIC Act. Addendum 1 to this Agreement outlines various responsibilities of Lender and Borrower associated with an SBA loan, and such Addendum 1 is hereby incorporated in this Agreement.

SECTION 8. RIGHT TO INVEST

8.1 Subject to the terms and conditions hereof, including, without limitation, Section 11.13 hereof, Lender shall have the right, in its discretion, to participate in any Subsequent Financing by investing up to an aggregate of \$2,000,000, in each case on the same terms, conditions and pricing afforded to others participating in any such Subsequent Financings; provided, however, that the obligation of the Borrower to issue and sell to the Lender any equity securities pursuant to this Section 8.1 is subject in all cases to the preparation, execution and delivery by the Borrower and the Lender of a purchase agreement containing the same terms and conditions set forth in the agreement between the Borrower and other investors participating in the applicable Subsequent Financing, if any, and other terms and conditions reasonable acceptable to the Borrower and the Lender, and the receipt of any required regulatory approval. In no event shall Lender have the right to invest more than an aggregate of \$2,000,000 during the Participation Period in all Subsequent Financings pursuant to the rights granted to Lender under this Section 8.

8.2 In lieu of giving notice to Lender of, and an opportunity to participate in, any Subsequent Financing prior to the closing thereof, Borrower may, at its election, satisfy its obligations under Section 8.1 with respect to such Subsequent Financing by giving notice (a “Sale Notice”) to Lender of the closing of such Subsequent Financing, which Sale Notice shall be delivered by Borrower within ten (10) business days of such closing and shall include an offer by Borrower to sell to Lender, on terms and conditions (including with respect to pricing) that are no less favorable to Lender than those provided to investors in such Subsequent Financing, up to the number of the type of equity securities issued in such Subsequent Financing that may be purchased for an amount equal to the difference between (i) \$2,000,000 and (ii) the amount previously invested by Lender pursuant to this

Section 8, if any. Lender shall have ten (10) business days from receipt of a Sale Notice to elect to accept the offer to sell equity securities set forth therein by delivering a written notice of acceptance to Borrower. For the avoidance of doubt, the fact that Lender may have the right pursuant to this Section 8.2 to purchase the type of equity securities offered in a Subsequent Financing subsequent to the closing of such Subsequent Financing shall not be considered a term or condition of any offer made pursuant to this Section 8.2 that is less favorable to Lender than the terms and conditions provided to investors in such Subsequent Financing.

8.3 Notwithstanding anything to contrary in this Section 8, Lender shall not have the right to participate in, and Borrower shall not be required to offer or sell any equity securities to Lender in, any Subsequent Financing if such offer, sale or participation in such Subsequent Financing would, in the good faith determination of the Borrower, (i) require the Borrower to obtain the approval of its stockholders pursuant to applicable securities exchange rules, including those of The NASDAQ Stock Market, LLC, (ii) result in a violation of any applicable law, rule or regulation or (iii) adversely affect such Subsequent Financing (including the marketing thereof) that the Borrower is engaged in at such time.

SECTION 9. EVENTS OF DEFAULT

The occurrence of any one or more of the following events shall be an Event of Default:

9.1 Payments. Borrower fails to pay any amount due under this Agreement, the Notes or any of the other Loan Documents on the due date; or

9.2 Covenants. Borrower breaches or defaults in the performance of any covenant or Secured Obligation under this Agreement, the Notes, or any of the other Loan Documents, and (a) with respect to a default under any covenant under this Agreement (other than under Sections 6, 7.5, 7.6, 7.7, 7.8, 7.9 or 7.15) such default continues for more than ten (10) days after the earlier of the date on which (i) Lender has given notice of such default to Borrower and (ii) Borrower has actual knowledge of such default or (b) with respect to a default under any of Sections 6, 7.5, 7.6, 7.7, 7.8, 7.9 or 7.15, the occurrence of such default; or

9.3 Material Adverse Effect. A circumstance has occurred that would reasonably be expected to have a Material Adverse Effect; or

9.4 Other Loan Documents. The occurrence of any default under any Loan Document or any other agreement between Borrower and Lender and such default continues for more than ten (10) days after the earlier of the date on which (a) Lender has given notice of such default to Borrower, or (b) Borrower has actual knowledge of such default; or

9.5 Representations. Any representation or warranty made by Borrower in any Loan Document or in the Warrant shall have been false or misleading in any material respect; or

9.6 Insolvency. Borrower (A) (i) shall make an assignment for the benefit of creditors; or (ii) shall be unable to pay its debts as they become due, or be unable to pay or perform under the Loan Documents, or shall become insolvent; or (iii) shall file a voluntary petition in bankruptcy; or (iv) shall file any petition, answer, or document seeking for itself any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation pertinent to such circumstances; or (v) shall seek or consent to or acquiesce in the appointment of any trustee, receiver, or liquidator of Borrower or of all or any substantial part (i.e., 33 1/3% or more) of the assets or property of Borrower; or (vi) shall cease operations of its business as its business has normally been conducted, or terminate substantially all of its employees; or (vii) Borrower or its directors or majority shareholders shall take any action initiating any of the foregoing actions described in clauses (i) through (vi); or (B) either (i) forty-five (45) days shall have expired after the commencement of an involuntary action against Borrower seeking reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation, without such action being dismissed or all orders or proceedings thereunder affecting the operations or the business of Borrower being stayed; or (ii) a stay of any such order or proceedings shall thereafter be set aside and the action setting it aside shall not be timely appealed; or (iii) Borrower shall file any answer admitting or not contesting the material allegations of a petition filed against Borrower in any such proceedings; or (iv) the court in which such proceedings are pending shall enter a decree or order granting the relief sought in any such proceedings; or (v) forty-five (45) days shall have expired after the appointment, without the consent or acquiescence of Borrower, of any trustee, receiver or liquidator of Borrower or of all or any substantial part of the properties of Borrower without such appointment being vacated; or

9.7 Attachments; Judgments. Any portion of Borrower's assets is attached or seized, or a levy is filed against any such assets, or a judgment or judgments is/are entered for the payment of money, individually or in the aggregate, of at least \$500,000, and such judgment remains unstayed for a period of ten (10) days, or Borrower is enjoined or in any way prevented by court order from conducting any part of its business; or

9.8 Other Obligations. The occurrence of any default under any agreement or obligation of Borrower involving any Indebtedness which results in a right by a third party or parties, whether or not exercised, to accelerate the maturity of such Indebtedness in excess of \$250,000, or the occurrence of any default under any agreement or obligation of Borrower that could reasonably be expected to have a Material Adverse Effect; or

9.9 Stop Trade. At any time after Lender has received shares of Common Stock pursuant to the terms set forth in Section 2.3(e), an SEC stop trade order or NASDAQ market trading suspension of the Common Stock shall be in effect for five (5) consecutive days or five (5) days during a period of ten (10) consecutive days, excluding in all cases a suspension of all trading on a public market, provided that Borrower shall not have been able to cure such trading suspension within thirty (30) days of the notice thereof or list the Common Stock on another public market within sixty (60) days of such notice.

SECTION 10. REMEDIES

10.1 General. Upon and during the continuance of any one or more Events of Default, (i) Lender may, at its option, accelerate and demand payment of all or any part of the Secured Obligations together with a Prepayment Charge and declare them to be immediately due and payable (provided, that upon the occurrence of an Event of Default of the type described in Section 9.6, the Notes and all of the Secured Obligations shall automatically be accelerated and made due and payable, in each case without any further notice or act), and (ii) Lender may notify any of Borrower's account debtors to make payment directly to Lender, compromise the amount of any such account on Borrower's behalf and endorse Lender's name without recourse on any such payment for deposit directly to Lender's account. Lender may exercise all rights and remedies with respect to the Collateral under the Loan Documents or otherwise available to it under the UCC and other applicable law, including the right to release, hold, sell, lease, liquidate, collect, realize upon, or otherwise dispose of all or any part of the Collateral and the right to occupy, utilize, process and commingle the Collateral. All Lender's rights and remedies shall be cumulative and not exclusive.

10.2 Collection; Foreclosure. Upon the occurrence and during the continuance of any Event of Default, Lender may, at any time or from time to time, apply, collect, liquidate, sell in one or more sales, lease or otherwise dispose of, any or all of the Collateral, in its then condition or following any commercially reasonable preparation or processing, in such order as Lender may elect. Any such sale may be made either at public or private sale at its place of business or elsewhere. Borrower agrees that any such public or private sale may occur upon ten (10) calendar days' prior written notice to Borrower. Lender may require Borrower to assemble the Collateral and make it available to Lender at a place designated by Lender that is reasonably convenient to Lender and Borrower. The proceeds of any sale, disposition or other realization upon all or any part of the Collateral shall be applied by Lender in the following order of priorities:

First, to Lender in an amount sufficient to pay in full Lender's costs and professionals' and advisors' fees and expenses as described in Section 11.11;

Second, to Lender in an amount equal to the then unpaid amount of the Secured Obligations (including principal, interest, and the Default Rate interest), in such order and priority as Lender may choose in its sole discretion; and

Finally, after the full, final, and indefeasible payment in Cash of all of the Secured Obligations, to any creditor holding a junior Lien on the Collateral, or to Borrower or its representatives or as a court of competent jurisdiction may direct.

Lender shall be deemed to have acted reasonably in the custody, preservation and disposition of any of the Collateral if it complies with the obligations of a secured party under the UCC.

10.3 No Waiver. Lender shall be under no obligation to marshal any of the Collateral for the benefit of Borrower or any other Person, and Borrower expressly waives all rights, if any, to require Lender to marshal any Collateral.

10.4 Cumulative Remedies. The rights, powers and remedies of Lender hereunder shall be in addition to all rights, powers and remedies given by statute or rule of law and are cumulative. The exercise of any one or more of the rights, powers and remedies provided herein shall not be construed as a waiver of or election of remedies with respect to any other rights, powers and remedies of Lender.

SECTION 11. MISCELLANEOUS

11.1 Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be prohibited by or invalid under such law, such provision shall be ineffective only to the extent and duration of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

11.2 Notice. Except as otherwise provided herein, any notice, demand, request, consent, approval, declaration, service of process or other communication (including the delivery of Financial Statements) that is required, contemplated, or permitted under the Loan Documents or with respect to the subject matter hereof shall be in writing, and shall be deemed to have been validly served, given, delivered, and received upon the earlier of: (i) the day of transmission by facsimile or hand delivery or delivery by an overnight express service or overnight mail delivery service; or (ii) the third calendar day after deposit in the United States mails, with proper first class postage prepaid, in each case addressed to the party to be notified as follows:

- (a) If to either Lender:
HERCULES TECHNOLOGY II, L.P.
Legal Department
Attention: Chief Legal Officer and Kathy Conte
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
Facsimile: 650-473-9194
Telephone: 650-289-3060

- (b) If to Borrower:
ACELRX PHARMACEUTICALS, INC.
Attention: Chief Financial Officer
575 Chesapeake Drive
Redwood City, CA 94063
Facsimile: 650-216-6500
Telephone: 650-216-3511

or to such other address as each party may designate for itself by like notice.

11.3 Entire Agreement; Amendments. This Agreement, the Notes, and the other Loan Documents constitute the entire agreement and understanding of the parties hereto in respect of the subject matter hereof and thereof, and supersede and replace in their entirety any prior proposals, term sheets, letters, negotiations or other documents or agreements,

whether written or oral, with respect to the subject matter hereof or thereof (including Lender's proposal letter dated April 27, 2011). None of the terms of this Agreement, the Notes or any of the other Loan Documents may be amended except by an instrument executed by each of the parties hereto.

11.4 No Strict Construction. The parties hereto have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the parties hereto and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Agreement.

11.5 No Waiver. The powers conferred upon Lender by this Agreement are solely to protect its rights hereunder and under the other Loan Documents and its interest in the Collateral and shall not impose any duty upon Lender to exercise any such powers. No omission or delay by Lender at any time to enforce any right or remedy reserved to it, or to require performance of any of the terms, covenants or provisions hereof by Borrower at any time designated, shall be a waiver of any such right or remedy to which Lender is entitled, nor shall it in any way affect the right of Lender to enforce such provisions thereafter.

11.6 Survival. All agreements, representations and warranties contained in this Agreement, the Notes and the other Loan Documents or in any document delivered pursuant hereto or thereto shall be for the benefit of Lender and shall survive the execution and delivery of this Agreement and the expiration or other termination of this Agreement.

11.7 Successors and Assigns. The provisions of this Agreement and the other Loan Documents shall inure to the benefit of and be binding on Borrower and its permitted assigns (if any). Borrower shall not assign its obligations under this Agreement, the Notes or any of the other Loan Documents without Lender's express prior written consent, and any such attempted assignment without such consent shall be void and of no effect. Subject to Section 11.13, Lender may assign, transfer, or endorse its rights hereunder and under the other Loan Documents without prior notice to Borrower, and all of such rights shall inure to the benefit of Lender's successors and assigns.

11.8 Governing Law. This Agreement, the Notes and the other Loan Documents have been negotiated and delivered to Lender in the State of California, and shall have been accepted by Lender in the State of California. Payment to Lender by Borrower of the Secured Obligations is due in the State of California. This Agreement, the Notes and the other Loan Documents shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

11.9 Consent to Jurisdiction and Venue. All judicial proceedings (to the extent that the reference requirement of Section 11.10 is not applicable) arising in or under or related to this Agreement, the Notes or any of the other Loan Documents may be brought in any state or federal court located in the State of California. By execution and delivery of this Agreement, each party hereto generally and unconditionally: (a) consents to nonexclusive personal jurisdiction in Santa Clara County, State of California; (b) waives

any objection as to jurisdiction or venue in Santa Clara County, State of California; (c) agrees not to assert any defense based on lack of jurisdiction or venue in the aforesaid courts; and (d) irrevocably agrees to be bound by any judgment rendered thereby in connection with this Agreement, the Notes or the other Loan Documents. Service of process on any party hereto in any action arising out of or relating to this Agreement shall be effective if given in accordance with the requirements for notice set forth in Section 11.2, and shall be deemed effective and received as set forth in Section 11.2. Nothing herein shall affect the right to serve process in any other manner permitted by law or shall limit the right of either party to bring proceedings in the courts of any other jurisdiction.

11.10 Mutual Waiver of Jury Trial / Judicial Reference.

(a) Because disputes arising in connection with complex financial transactions are most quickly and economically resolved by an experienced and expert person and the parties wish applicable state and federal laws to apply (rather than arbitration rules), the parties desire that their disputes be resolved by a judge applying such applicable laws. EACH OF BORROWER AND LENDER SPECIFICALLY WAIVES ANY RIGHT IT MAY HAVE TO TRIAL BY JURY OF ANY CAUSE OF ACTION, CLAIM, CROSS-CLAIM, COUNTERCLAIM, THIRD PARTY CLAIM OR ANY OTHER CLAIM (COLLECTIVELY, "CLAIMS") ASSERTED BY BORROWER AGAINST LENDER OR ITS ASSIGNEE OR BY LENDER OR ITS ASSIGNEE AGAINST BORROWER. This waiver extends to all such Claims, including Claims that involve Persons other than Borrower and Lender; Claims that arise out of or are in any way connected to the relationship between Borrower and Lender; and any Claims for damages, breach of contract, tort, specific performance, or any equitable or legal relief of any kind, arising out of this Agreement, any other Loan Document.

(b) If the waiver of jury trial set forth in Section 11.10(a) is ineffective or unenforceable, the parties agree that all Claims shall be resolved by reference to a private judge sitting without a jury, pursuant to Code of Civil Procedure Section 638, before a mutually acceptable referee or, if the parties cannot agree, a referee selected by the Presiding Judge of the Santa Clara County, California. Such proceeding shall be conducted in Santa Clara County, California, with California rules of evidence and discovery applicable to such proceeding.

(c) In the event Claims are to be resolved by judicial reference, either party may seek from a court identified in Section 11.9, any prejudgment order, writ or other relief and have such prejudgment order, writ or other relief enforced to the fullest extent permitted by law notwithstanding that all Claims are otherwise subject to resolution by judicial reference.

11.11 Professional Fees. Borrower promises to pay Lender's fees and expenses necessary to finalize the loan documentation, including but not limited to reasonable attorneys fees, UCC searches, filing costs, and other miscellaneous expenses. In addition, Borrower promises to pay any and all reasonable attorneys' and other professionals' fees and expenses (including fees and expenses of in-house counsel) incurred by Lender after

the Closing Date in connection with or related to: (a) the Loan; (b) the administration, collection, or enforcement of the Loan; (c) the amendment or modification of the Loan Documents; (d) any waiver, consent, release, or termination under the Loan Documents; (e) the protection, preservation, sale, lease, liquidation, or disposition of Collateral or the exercise of remedies with respect to the Collateral; (f) any legal, litigation, administrative, arbitration, or out of court proceeding in connection with or related to Borrower or the Collateral, and any appeal or review thereof; and (g) any bankruptcy, restructuring, reorganization, assignment for the benefit of creditors, workout, foreclosure, or other action related to Borrower, the Collateral, the Loan Documents, including representing Lender in any adversary proceeding or contested matter commenced or continued by or on behalf of Borrower's estate, and any appeal or review thereof.

11.12 Confidentiality. Lender acknowledges that certain items of Collateral and information provided to Lender by Borrower are confidential and proprietary information of Borrower, if and to the extent such information either (x) is marked as confidential by Borrower at the time of disclosure, or (y) should reasonably be understood to be confidential (the "Confidential Information"). Accordingly, Lender agrees that any Confidential Information it may obtain in the course of acquiring, administering, or perfecting Lender's security interest in the Collateral shall not be disclosed to any other person or entity in any manner whatsoever, in whole or in part, without the prior written consent of Borrower, except that Lender may disclose any such information: (a) to its own directors, officers, employees, accountants, counsel and other professional advisors and to its affiliates if Lender in its sole discretion determines that any such party should have access to such information in connection with such party's responsibilities in connection with the Loan or this Agreement and, provided that such recipient of such Confidential Information either (i) agrees to be bound by the confidentiality provisions of this paragraph or (ii) is otherwise subject to confidentiality restrictions that reasonably protect against the disclosure of Confidential Information; (b) if such information is generally available to the public through no fault of Collateral Agent or Lender; (c) if required or appropriate in any report, statement or testimony submitted to any governmental authority having or claiming to have jurisdiction over Lender; (d) if required or appropriate in response to any summons or subpoena or in connection with any litigation, to the extent permitted or deemed advisable by Lender's counsel; (e) to comply with any legal requirement or law applicable to Lender; (f) to the extent reasonably necessary in connection with the exercise of any right or remedy under any Loan Document, including Lender's sale, lease, or other disposition of Collateral after default; (g) to any participant or assignee of Lender or any prospective participant or assignee; provided, that such participant or assignee or prospective participant or assignee agrees in writing to be bound by this Section prior to disclosure; or (h) otherwise with the prior consent of Borrower; provided, that any disclosure made in violation of this Agreement shall not affect the obligations of Borrower or any of its affiliates or any guarantor under this Agreement or the other Loan Documents.

11.13 Assignment of Rights. Borrower acknowledges and understands that Lender may sell and assign all or part of its interest hereunder and under the Note(s) and Loan Documents to any person or entity (an "Assignee"), provided, however, that (i) Lender shall not sell or assign any of its rights pursuant to Section 8 of this Agreement without the express written consent of Borrower, which consent may be withheld by

Borrower in its sole discretion, and any such attempted assignment without such consent shall be void and of no effect and (ii) any transfer by Lender of the Note shall be subject to compliance with applicable federal and state securities laws. After such assignment the term "Lender" as used in the Loan Documents shall mean and include such Assignee, and such Assignee shall be vested with all rights, powers and remedies of Lender hereunder with respect to the interest so assigned; but with respect to any such interest not so transferred, Lender shall retain all rights, powers and remedies hereby given. No such assignment by Lender shall relieve Borrower of any of its obligations hereunder. Lender agrees that in the event of any transfer by it of the Note(s), it will endorse thereon a notation as to the portion of the principal of the Note(s), which shall have been paid at the time of such transfer and as to the date to which interest shall have been last paid thereon.

11.14 Revival of Secured Obligations. This Agreement and the Loan Documents shall remain in full force and effect and continue to be effective if any petition is filed by or against Borrower for liquidation or reorganization, if Borrower becomes insolvent or makes an assignment for the benefit of creditors, if a receiver or trustee is appointed for all or any significant part of Borrower's assets, or if any payment or transfer of Collateral is recovered from Lender. The Loan Documents and the Secured Obligations and Collateral security shall continue to be effective, or shall be revived or reinstated, as the case may be, if at any time payment and performance of the Secured Obligations or any transfer of Collateral to Lender, or any part thereof is rescinded, avoided or avoidable, reduced in amount, or must otherwise be restored or returned by, or is recovered from, Lender or by any obligee of the Secured Obligations, whether as a "voidable preference," "fraudulent conveyance," or otherwise, all as though such payment, performance, or transfer of Collateral had not been made. In the event that any payment, or any part thereof, is rescinded, reduced, avoided, avoidable, restored, returned, or recovered, the Loan Documents and the Secured Obligations shall be deemed, without any further action or documentation, to have been revived and reinstated except to the extent of the full, final, and indefeasible payment to Lender in Cash.

11.15 Counterparts. This Agreement and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so delivered shall be deemed an original, but all of which counterparts shall constitute but one and the same instrument.

11.16 No Third Party Beneficiaries. No provisions of the Loan Documents are intended, nor will be interpreted, to provide or create any third-party beneficiary rights or any other rights of any kind in any person other than Lender and Borrower unless specifically provided otherwise herein, and, except as otherwise so provided, all provisions of the Loan Documents will be personal and solely between the Lender and the Borrower.

11.17 Publicity. Lender may use Borrower's name and logo, and include a brief description of the relationship between Borrower and Lender, in Lender's marketing materials.

SECTION 12. COLLATERAL AGENT

12.1 Appointment of Agent. Hercules Technology II, L.P. is hereby appointed as Collateral Agent hereunder and under the other Loan Documents and each Lender hereby authorizes Hercules Technology II, L.P. to act as Collateral Agent in accordance with the terms hereof and the other Loan Documents. Collateral Agent hereby agrees to act in its capacity as such upon the express conditions contained herein and the other Loan Documents, as applicable. The provisions of this Section 12 are solely for the benefit of Collateral Agent and each Lender and Borrower shall have any rights as a third party beneficiary of any of the provisions thereof.

12.2 Powers and Duties. Each Lender irrevocably authorizes Collateral Agent to take such action on such Lender's behalf and to exercise such powers, rights and remedies hereunder and under the other Loan Documents as are specifically delegated or granted to Collateral Agent by the terms hereof and thereof, together with such powers, rights and remedies as are reasonably incidental thereto. Collateral Agent may exercise such powers, rights and remedies and perform such duties by or through its agents or employees. Collateral Agent may accept payments of principal, interest, fees and expenses due under the Loan Documents from and deposits from Borrower on the account or benefit for any Lender.

(SIGNATURES TO FOLLOW)

IN WITNESS WHEREOF, Borrower and Lender have duly executed and delivered this Loan and Security Agreement as of the day and year first above written.

BORROWER:

ACELRX PHARMACEUTICALS, INC.

Signature: /s/ James Welch

Print Name: James Welch

Title: Chief Financial Officer

Accepted in Palo Alto, California:

LENDER:

HERCULES TECHNOLOGY II, L.P.

By: Hercules Technology SBIC
Management, LLC, its General
Partner

By: Hercules Technology Growth
Capital, Inc., its Manager

Signature: /s/ K. Nicholas Martitsch

Print Name: K. Nicholas Martitsch

Title: Associate General Counsel

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.

Signature: /s/ K. Nicholas Martitsch

Print Name: K. Nicholas Martitsch

Title: Associate General Counsel

[Signature Page to Loan and Security Agreement]

Table of Addenda, Exhibits and Schedules

Addendum 1:	SBA Provisions
Exhibit A:	Advance Request Attachment to Advance Request
Exhibit B-1:	Term Note for Hercules Technology II, L.P.
Exhibit B-2:	Term Note for Hercules Technology Growth Capital, Inc.
Exhibit C:	Name, Locations, and Other Information for Borrower
Exhibit D:	Borrower's Patents, Trademarks, Copyrights and Licenses
Exhibit E:	Borrower's Deposit Accounts and Investment Accounts
Exhibit F:	Compliance Certificate
Exhibit G:	Joinder Agreement
Exhibit H:	Reserved
Exhibit I:	ACH Debit Authorization Agreement
Schedule 1	Subsidiaries
Schedule 1A	Existing Permitted Indebtedness
Schedule 1B	Existing Permitted Investments
Schedule 1C	Existing Permitted Liens
Schedule 5.3	Consents, Etc.
Schedule 5.5	Actions Before Governmental Authorities
Schedule 5.8	Tax Matters
Schedule 5.9	Intellectual Property Claims
Schedule 5.10	Intellectual Property
Schedule 5.11	Borrower Products
Schedule 5.14	Capitalization
Exhibit J:	Repayment Election Notice

ADDENDUM 1 to LOAN AND SECURITY AGREEMENT

(a) *Borrower's Business.* For purposes of this Addendum 1, Borrower shall be deemed to include its "affiliates" as defined in Title 13 Code of Federal Regulations Section 121.103. Borrower represents and warrants to Hercules Technology II, L.P. ("Hercules II") as of the Closing Date, and covenants to Hercules II for a period of one year after the Closing Date with respect to subsections 2, 3, 4, 5, 6 and 7 below, as follows:

1. **Size Status.** As of December 31, 2010, Borrower did not have tangible net worth in excess of \$18 million or average net income after Federal income taxes (excluding any carry-over losses) for the preceding two completed fiscal years then ended in excess of \$6 million;
2. **No Relender.** Borrower's primary business activity does not involve, directly or indirectly, providing funds to others, purchasing debt obligations, factoring, or long-term leasing of equipment with no provision for maintenance or repair;
3. **No Passive Business.** Borrower is engaged in a regular and continuous business operation (excluding the mere receipt of payments such as dividends, rents, lease payments, or royalties). Borrower's employees are carrying on the majority of day to day operations. Borrower will not pass through substantially all of the proceeds of the Loan to another entity;
4. **No Real Estate Business.** Borrower is not classified under Major Group 65 (Real Estate) or Industry No. 1531 (Operative Builders) of the SIC Manual. The proceeds of the Loan will not be used to acquire or refinance real property unless Borrower (x) is acquiring an existing property and will use at least 51 percent of the usable square footage for its business purposes; (y) is building or renovating a building and will use at least 67 percent of the usable square footage for its business purposes; or (z) occupies the subject property and uses at least 67 percent of the usable square footage for its business purposes.
5. **No Project Finance.** Borrower's assets are not intended to be reduced or consumed, generally without replacement, as the life of its business progresses, and the nature of Borrower's business does not require that a stream of cash payments be made to the business's financing sources, on a basis associated with the continuing sale of assets (e.g., real estate development projects and oil and gas wells). The primary purpose of the Loan is not to fund

production of a single item or defined limited number of items, generally over a defined production period, where such production will constitute the majority of the activities of Borrower (e.g., motion pictures and electric generating plants).

6. No Farm Land Purchases. Borrower will not use the proceeds of the Loan to acquire farm land which is or is intended to be used for agricultural or forestry purposes, such as the production of food, fiber, or wood, or is so taxed or zoned.
7. No Foreign Investment. The proceeds of the Loan will not be used substantially for a foreign operation. At the time of the Loan, Borrower will not have more than 49 percent of its employees or tangible assets located outside the United States. The representation in this subsection (7) is made only as of the date hereof and shall not continue for one year as contemplated in the first sentence of this Section 1.

(b) *Small Business Administration Documentation*. Hercules II acknowledges that Borrower completed, executed and delivered to Hercules II SBA Forms 480, 652 and 1031 (Parts A and B) together with a business plan showing Borrower's financial projections (including balance sheets and income and cash flows statements) for the period described therein and a written statement (whether included in the purchase agreement or pursuant to a separate statement) from Hercules II regarding its intended use of proceeds from the sale of securities to Hercules II (the "Use of Proceeds Statement"). Borrower represents and warrants to Hercules II that the information regarding Borrower and its affiliates set forth in the SBA Form 480, Form 652 and Form 1031 and the Use of Proceeds Statement delivered as of the Closing Date is accurate and complete.

(c) *Inspection*. The following covenants contained in this Section (c) are intended to supplement and not to restrict the related provisions of the Loan Documents. Subject to the preceding sentence, Borrower will permit, for so long as Hercules II holds any debt or equity securities of Borrower, Hercules II or its representative, at Hercules II's expense, and examiners of the SBA to visit and inspect the properties and assets of Borrower, to examine its books of account and records, and to discuss Borrower's affairs, finances and accounts with Borrower's officers, senior management and accountants, all at such reasonable times as may be requested by Hercules II or the SBA.

(d) *Annual Assessment*. Promptly after the end of each calendar year (but in any event prior to February 28 of each year) and at such other times as may be reasonably requested by Hercules II, Borrower will deliver to Hercules II a written assessment of the economic impact of Hercules II's investment in Borrower, specifying the full-time equivalent jobs created or retained in connection with the investment, the impact of the investment on the businesses of Borrower in terms of expanded revenue and taxes, other economic benefits resulting from the investment (such as technology development or commercialization, minority business development, or expansion of exports) and such

other information as may be required regarding Borrower in connection with the filing of Hercules II's SBA Form 468. Hercules II will assist Borrower with preparing such assessment. In addition to any other rights granted hereunder, Borrower will grant Hercules II and the SBA access to Borrower's books and records for the purpose of verifying the use of such proceeds. Borrower also will furnish or cause to be furnished to Hercules II such other information regarding the business, affairs and condition of Borrower as Hercules II may from time to time reasonably request.

(e) *Use of Proceeds*. Borrower will deliver to Hercules II from time to time promptly following Hercules II's request, a written report, certified as correct by Borrower's Chief Financial Officer, verifying the purposes and amounts for which proceeds from the Loan have been disbursed. Borrower will supply to Hercules II such additional information and documents as Hercules II reasonably requests with respect to its use of proceeds and will permit Hercules II and the SBA to have access to any and all Borrower records and information and personnel as Hercules II deems necessary to verify how such proceeds have been or are being used.

(f) *Activities and Proceeds*. Neither Borrower nor any of its affiliates (if any) will engage in any activities or use directly or indirectly the proceeds from the Loan for any purpose for which a small business investment company is prohibited from providing funds by the SBIC Act, including 13 C.F.R. §107.720. Without obtaining the prior written approval of Hercules II, Borrower will not change within 1 year of the date hereof, Borrower's current business activity to a business activity which a licensee under the SBIC Act is prohibited from providing funds by the SBIC Act.

(g) *Redemption Provisions*. Notwithstanding any provision to the contrary contained in the Certificate of Incorporation of Borrower, as amended from time to time (the "Charter"), if, pursuant to the redemption provisions contained in the Charter, Hercules II is entitled to a redemption of its Warrant, such redemption (in the case of Hercules II) will be at a price equal to the redemption price set forth in the Charter (the "Existing Redemption Price"). If, however, Hercules II delivers written notice to Borrower that the then current regulations promulgated under the SBIC Act prohibit payment of the Existing Redemption Price in the case of an SBIC (or, if applied, the Existing Redemption Price would cause the Series C Preferred Stock to lose its classification as an "equity security" and Hercules II has determined that such classification is unadvisable), the amount Hercules II will be entitled to receive shall be the greater of (i) fair market value of the securities being redeemed taking into account the rights and preferences of such securities plus any costs and expenses of Hercules II incurred in making or maintaining the Warrant, and (ii) the Existing Redemption Price where the amount of accrued but unpaid dividends payable to Hercules II is limited to Borrower's earnings plus any costs and expenses of Hercules II incurred in making or maintaining the Warrant; provided, however, the amount calculated in subsections (i) or (ii) above shall not exceed the Existing Redemption Price.

(h) *Cost of Money*. Notwithstanding any provision to the contrary contained in the Loan Documents, all interest and fees charged pursuant to the Loan Documents shall comply with the provisions of 13 C.F.R. § 107.855, including, without limitation, that such amounts shall not exceed the Cost of Money ceiling (as defined hereafter). The current Cost of Money ceiling for this Loan is fourteen percent.

(i) *Compliance and Resolution.* Borrower agrees that a failure to comply with Borrower's obligations under this Addendum, or any other set of facts or circumstances where it has been asserted by any governmental regulatory agency (or Hercules II believes that there is a substantial risk of such assertion) that Hercules II and its affiliates are not entitled to hold, or exercise any significant right with respect to, any securities issued to Hercules II by Borrower, will constitute a breach of the obligations of Borrower under the financing agreements between Borrower and Hercules II. In the event of (i) a failure to comply with Borrower's obligations under this Addendum; or (ii) an assertion by any governmental regulatory agency (or Hercules II believes that there is a substantial risk of such assertion) of a failure to comply with Borrower's obligations under this Addendum, then (i) Hercules II and Borrower will meet and resolve any such issue in good faith to the satisfaction of Borrower, Hercules II, and any governmental regulatory agency, and (ii) upon request of Hercules II, Borrower will cooperate and assist with any assignment of the financing agreements from Hercules II to Hercules Technology Growth Capital, Inc.

EXHIBIT A
ADVANCE REQUEST

To: Lender:

Date: _____, 20__

Hercules Technology II, L.P.
Hercules Technology Growth Capital, Inc.
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
Facsimile: 650-473-9194
Attn:

AcelRx Pharmaceuticals, Inc. ("Borrower") hereby requests from Hercules Technology II, L.P. and Hercules Technology Growth Capital, Inc. (collectively, "Lender") an Advance in the amount of Ten Million Dollars (\$10,000,000.00) on _____, ____ (the "Advance Date") pursuant to the Loan and Security Agreement between Borrower and Lender (the "Agreement"). In addition, Borrower directs Lender to (i) retain the Facility Charge and reimbursement of Lender's current expenses and (ii) payoff the Pinnacle Ventures facility in accordance with the payoff letter. Capitalized words and other terms used but not otherwise defined herein are used with the same meanings as defined in the Agreement.

Please:

(a) Issue a check payable to Borrower

or

(b) Wire Funds to Borrower's account

Bank: _____

Address: _____

ABA Number: _____

Account Number: _____

Account Name: _____

Borrower represents that the conditions precedent to the Advance set forth in the Agreement are satisfied and shall be satisfied upon the making of such Advance, including but not limited to: (i) that no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing; (ii) that the representations and warranties set forth in the Agreement and in the Warrant are and shall be true and correct in all material respects on and as of the Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date; (iii) that Borrower is in compliance with all the terms and provisions set forth in each Loan Document on its part to be observed or performed; and (iv) that as of the Advance Date, no fact or condition exists that would (or would, with the passage of time, the giving of notice, or both) constitute an Event of Default under the Loan Documents. Borrower understands and acknowledges that Lender has the right to review the financial information supporting this representation and, based upon such review in its sole discretion, Lender may decline to fund the requested Advance.

Borrower hereby represents that Borrower's corporate status and locations have not changed since the date of the Agreement or, if the Attachment to this Advance Request is completed, are as set forth in the Attachment to this Advance Request.

Borrower agrees to notify Lender promptly before the funding of the Loan if any of the matters which have been represented above shall not be true and correct on the Borrowing Date and if Lender has received no such notice before the Advance Date then the statements set forth above shall be deemed to have been made and shall be deemed to be true and correct as of the Advance Date.

Executed as of _____, 20__.

BORROWER: AcelRx Pharmaceuticals, Inc.

SIGNATURE: _____

TITLE: _____

PRINT NAME: _____

[Signature Page to Advance Request]

ATTACHMENT TO ADVANCE REQUEST

Dated: _____

Borrower hereby represents and warrants to Lender that Borrower's current name and organizational status is as follows:

Name: AcelRx Pharmaceuticals, Inc.

Type of organization: Corporation

State of organization: Delaware

Organization file number:

Borrower hereby represents and warrants to Lender that the street addresses, cities, states and postal codes of its current locations are as follows:

EXHIBIT B-1

THIS SECURED CONVERTIBLE TERM PROMISSORY NOTE HAS NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND, ACCORDINGLY, MAY NOT BE TRANSFERRED UNLESS (I) THIS NOTE HAS BEEN REGISTERED FOR SALE PURSUANT TO THE SECURITIES ACT OF 1933, AS AMENDED, (II) THIS NOTE MAY BE SOLD PURSUANT TO RULE 144, OR (III) THE BORROWER HAS RECEIVED AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO IT THAT SUCH TRANSFER MAY LAWFULLY BE MADE WITHOUT REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED.

SECURED CONVERTIBLE TERM PROMISSORY NOTE

\$10,000,000

Advance Date: June 29, 2011

FOR VALUE RECEIVED, AcelRx Pharmaceuticals, Inc., a Delaware corporation, for itself and each of its Subsidiaries (the "Borrower") hereby promises to pay to the order of Hercules Technology II, L.P., a Delaware limited partnership or the holder of this Note (the "Lender") at 400 Hamilton Avenue, Suite 310, Palo Alto, CA 94301 or such other place of payment as the holder of this Secured Term Promissory Note (this "Promissory Note") may specify from time to time in writing, in lawful money of the United States of America, the principal amount of Ten Million Dollars (\$10,000,000) or such other principal amount as Lender has advanced to Borrower, together with interest at a floating rate equal to the greater of either (i) 8.50% per annum plus the difference between the prime rate as reported in The Wall Street Journal and 5.25%, and (ii) 8.50% per annum, based upon a year consisting of 360 days, with interest computed daily based on the actual number of days in each month.

This Promissory Note is the Note referred to in, and is executed and delivered in connection with, that certain Loan and Security Agreement dated June 29, 2011, by and between Borrower and Lender (as the same may from time to time be amended, modified or supplemented in accordance with its terms, the "Loan Agreement"), and is entitled to the benefit and security of the Loan Agreement and the other Loan Documents (as defined in the Loan Agreement), to which reference is made for a statement of all of the terms and conditions thereof. All payments shall be made in accordance with the Loan Agreement, including the right of Borrower to pay a portion of the amounts due and owing under this Promissory Note in shares of Common Stock in accordance with, and subject to the limitations set forth in, Section 2.2(e) of the Loan Agreement (including the requirement that any shares of Common Stock issuable by Borrower upon conversion of this Note are subject to an effective resale registration statement or are eligible for resale to the public pursuant to Rule 144 without any limitation). All terms defined in the Loan Agreement shall have the same definitions when used herein, unless otherwise defined herein. An Event of Default under the Loan Agreement shall constitute a default under this Promissory Note.

Borrower waives presentment and demand for payment, notice of dishonor, protest and notice of protest under the UCC or any applicable law. Borrower agrees to make all payments under this Promissory Note without setoff, recoupment or deduction and regardless of any counterclaim or defense. This Promissory Note has been negotiated and delivered to Lender and

is payable in the State of California. This Promissory Note shall be governed by and construed and enforced in accordance with, the laws of the State of California, excluding any conflicts of law rules or principles that would cause the application of the laws of any other jurisdiction.

BORROWER:

ACELRX PHARMACEUTICALS, INC.

By:

Title:

EXHIBIT B-2

THIS SECURED CONVERTIBLE TERM PROMISSORY NOTE, AND ANY SECURITIES ISSUED UPON CONVERSION PURSUANT TO THIS SECURED CONVERTIBLE TERM PROMISSORY NOTE, HAVE NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND, ACCORDINGLY, MAY NOT BE TRANSFERRED UNLESS (I) SUCH SECURITIES HAVE BEEN REGISTERED FOR SALE PURSUANT TO THE SECURITIES ACT OF 1933, AS AMENDED, (II) SUCH SECURITIES MAY BE SOLD PURSUANT TO RULE 144, OR (III) THE BORROWER HAS RECEIVED AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO IT THAT SUCH TRANSFER MAY LAWFULLY BE MADE WITHOUT REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED.

SECURED CONVERTIBLE TERM PROMISSORY NOTE

\$10,000,000

Advance Date: June 29, 2011

FOR VALUE RECEIVED, AcelRx Pharmaceuticals, Inc., a Delaware corporation, for itself and each of its Subsidiaries (the "Borrower") hereby promises to pay to the order of Hercules Technology Growth Capital, Inc., a Maryland corporation or the holder of this Note (the "Lender") at 400 Hamilton Avenue, Suite 310, Palo Alto, CA 94301 or such other place of payment as the holder of this Secured Term Promissory Note (this "Promissory Note") may specify from time to time in writing, in lawful money of the United States of America, the principal amount of Ten Million Dollars (\$10,000,000) or such other principal amount as Lender has advanced to Borrower, together with interest at a floating rate equal to the greater of either (i) 8.50% per annum plus the difference between the prime rate as reported in The Wall Street Journal and 5.25%, and (ii) 8.50% per annum, based upon a year consisting of 360 days, with interest computed daily based on the actual number of days in each month.

This Promissory Note is the Note referred to in, and is executed and delivered in connection with, that certain Loan and Security Agreement dated June 29, 2011, by and between Borrower and Lender (as the same may from time to time be amended, modified or supplemented in accordance with its terms, the "Loan Agreement"), and is entitled to the benefit and security of the Loan Agreement and the other Loan Documents (as defined in the Loan Agreement), to which reference is made for a statement of all of the terms and conditions thereof. All payments shall be made in accordance with the Loan Agreement, including the right of Borrower to pay a portion of the amounts due and owing under this Promissory Note in shares of Common Stock in accordance with, and subject to the limitations set forth in, Section 2.2(e) of the Loan Agreement (including the requirement that any shares of Common Stock issuable by Borrower upon conversion of this Note are subject to an effective resale registration statement or are eligible for resale to the public pursuant to Rule 144 without any limitation). All terms defined in the Loan Agreement shall have the same definitions when used herein, unless otherwise defined herein. An Event of Default under the Loan Agreement shall constitute a default under this Promissory Note.

Borrower waives presentment and demand for payment, notice of dishonor, protest and notice of protest under the UCC or any applicable law. Borrower agrees to make all payments under this Promissory Note without setoff, recoupment or deduction and regardless of any counterclaim or defense. This Promissory Note has been negotiated and delivered to Lender and is payable in the State of California. This Promissory Note shall be governed by and construed and enforced in accordance with, the laws of the State of California, excluding any conflicts of law rules or principles that would cause the application of the laws of any other jurisdiction.

BORROWER:

ACELRX PHARMACEUTICALS, INC.

By:

Title:

EXHIBIT C

NAME, LOCATIONS, AND OTHER INFORMATION FOR BORROWER

1. Borrower represents and warrants to Lender that Borrower's current name and organizational status as of the Closing Date is as follows:

Name: AcelRx Pharmaceuticals, Inc.

Type of organization: Corporation

State of organization: Delaware

Organization file number:

2. Borrower represents and warrants to Lender that for five (5) years prior to the Closing Date, Borrower did not do business under any other name or organization or form except the following:

Name:

Used during dates of:

Type of Organization: Corporation

State of organization: Delaware

Organization file Number:

Borrower's fiscal year ends on _____

Borrower's federal employer tax identification number is: _____

3. Borrower represents and warrants to Lender that its chief executive office is located at _____.

EXHIBIT D

BORROWER'S PATENTS, TRADEMARKS, COPYRIGHTS AND LICENSES

EXHIBIT E

BORROWER'S DEPOSIT ACCOUNTS AND INVESTMENT ACCOUNTS

EXHIBIT F

COMPLIANCE CERTIFICATE

Hercules Technology II, L.P.
Hercules Technology Growth Capital, Inc.
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Reference is made to that certain Loan and Security Agreement dated June 29, 2011 and all ancillary documents entered into in connection with such Loan and Security Agreement all as may be amended from time to time, (hereinafter referred to collectively as the "Loan Agreement") between Hercules Technology II, L.P. and Hercules Technology Growth Capital, Inc., each as a Lender, and AcelRx Pharmaceuticals, Inc. (the "Company") as Borrower. All capitalized terms not defined herein shall have the same meaning as defined in the Loan Agreement.

The undersigned is an Officer of the Company, knowledgeable of all Company financial matters, and is authorized to provide certification of information regarding the Company; hereby certifies that in accordance with the terms and conditions of the Loan Agreement, the Company is in compliance for the period ending _____, 20__ of all covenants, conditions and terms and hereby reaffirms that all representations and warranties contained therein are true and correct on and as of the date of this Compliance Certificate with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date, after giving effect in all cases to any standard(s) of materiality contained in the Loan Agreement as to such representations and warranties. Attached are the required documents supporting the above certification. The undersigned further certifies that these are prepared in accordance with GAAP (except for the absence of footnotes with respect to unaudited financial statement and subject to normal year end adjustments) and are consistent from one period to the next except as explained below.

REPORTING REQUIREMENT	REQUIRED	CHECK IF ATTACHED
Interim Financial Statements	Monthly within 30 days	<input type="checkbox"/>
Interim Financial Statements	Within 45 days after each of the first 3 fiscal quarters of each fiscal year	<input type="checkbox"/>
Audited Financial Statements	FYE within 90 days	<input type="checkbox"/>

Very Truly Yours,

ACELRX PHARMACEUTICALS, INC.

By: _____

Name: _____

Its: _____

[Signature Page to Compliance Certificate]

EXHIBIT G

FORM OF JOINDER AGREEMENT

This Joinder Agreement (the "Joinder Agreement") is made and dated as of [], 20[], and is entered into by and between _____, a _____ corporation ("Subsidiary"), and HERCULES TECHNOLOGY II, L.P., a Delaware limited partnership, and HERCULES TECHNOLOGY GROWTH CAPITAL, INC., a Maryland corporation (collectively, "Lender").

RECITALS

A. Subsidiary's Affiliate, AcetRx Pharmaceuticals, Inc. ("Company") has entered into that certain Loan and Security Agreement dated June 29, 2011, with Lender, as such agreement may be amended (the "Loan Agreement"), together with the other agreements executed and delivered in connection therewith;

B. Subsidiary acknowledges and agrees that it will benefit both directly and indirectly from Company's execution of the Loan Agreement and the other agreements executed and delivered in connection therewith;

AGREEMENT

NOW THEREFORE, Subsidiary and Lender agree as follows:

1. The recitals set forth above are incorporated into and made part of this Joinder Agreement. Capitalized terms not defined herein shall have the meaning provided in the Loan Agreement.
2. By signing this Joinder Agreement, Subsidiary shall be bound by the terms and conditions of the Loan Agreement the same as if it were the Borrower (as defined in the Loan Agreement) under the Loan Agreement, mutatis mutandis, provided however, that Lender shall have no duties, responsibilities or obligations to Subsidiary arising under or related to the Loan Agreement or the other agreements executed and delivered in connection therewith. Rather, to the extent that Lender has any duties, responsibilities or obligations arising under or related to the Loan Agreement or the other agreements executed and delivered in connection therewith, those duties, responsibilities or obligations shall flow only to Company and not to Subsidiary or any other person or entity. By way of example (and not an exclusive list): (a) Lender's providing notice to Company in accordance with the Loan Agreement or as otherwise agreed between Company and Lender shall be deemed provided to Subsidiary; (b) a Lender's providing an Advance to Company shall be deemed an Advance to Subsidiary; and (c) Subsidiary shall have no right to request an Advance or make any other demand on Lender.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

SUBSIDIARY:

_____.

By:
Name:
Title:

Address:

Telephone: _____
Facsimile: _____

HERCULES TECHNOLOGY II, L.P.

By: Hercules Technology SBIC Management, LLC, its General Partner

By: Hercules Technology Growth Capital, Inc., its Manager

By: _____
Name: _____
Title: _____

Address:
400 Hamilton Ave., Suite 310
Palo Alto, CA 94301
Facsimile: 650-473-9194
Telephone: 650-289-3060

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.

By: _____
Name: _____
Title: _____

Address:
400 Hamilton Ave., Suite 310
Palo Alto, CA 94301
Facsimile: 650-473-9194
Telephone: 650-289-3060

EXHIBIT H

[RESERVED]

EXHIBIT I

ACH DEBIT AUTHORIZATION AGREEMENT

Hercules Technology II, L.P.
Hercules Technology Growth Capital, Inc.
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Re: Loan and Security Agreement dated June 29, 2011 between AcclRx Pharmaceuticals, Inc. ("Borrower") and Hercules Technology II, L.P. and Hercules Technology Growth Capital, Inc. (collectively, "Company") (the "Agreement")

In connection with the above referenced Agreement, the Borrower hereby authorizes the Company to initiate debit entries for the periodic payments due under the Agreement to the Borrower's account indicated below. The Borrower authorizes the depository institution named below to debit to such account.

DEPOSITORY NAME	BRANCH
CITY	STATE AND ZIP CODE
TRANSIT/ABA NUMBER	ACCOUNT NUMBER

This authority will remain in full force and effect so long as any amounts are due under the Agreement.

ACELRX PHARMACEUTICALS, INC.

By: _____

Date: _____

EXHIBIT J

REPAYMENT ELECTION NOTICE

[INSERT DATE]

Hercules Technology II, L.P.
Hercules Technology Growth Capital, Inc.
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Reference is made to that certain Loan and Security Agreement dated June 29, 2011 and all ancillary documents entered into in connection with such Loan and Security Agreement all as may be amended from time to time, (hereinafter referred to collectively as the "Loan Agreement") between Hercules Technology II, L.P. and Hercules Technology Growth Capital, Inc., each as a Lender, and AcclRx Pharmaceuticals, Inc. (the "Company") as Borrower. All capitalized terms not defined herein shall have the same meaning as defined in the Loan Agreement.

Borrower hereby irrevocably elects to make [the Principal Installment Payment in the amount of \$ ____ due on [_____] (the "Delivery Date") in shares of Common Stock in accordance with Section 2.2(e) of the Loan Agreement][an Optional Prepayment in the amount of \$ ____ on [_____] (the "Delivery Date") in shares of Common Stock in accordance with Section 2.2(e) of the Loan Agreement].¹ The number of shares of Common Stock to be delivered to Lender, on or prior to the Delivery Date, is [_____] , which amount was determined in accordance with Section 2.2(e) of the Loan Agreement. The stock certificates shall be delivered free and clear of any restrictive legends.

The Borrower hereby represents, warrants and certifies to Lender that, as of the date hereof, all of the Stock Payment Conditions have been satisfied. The Borrower acknowledges and agrees that its right to pay the [Principal Installment Payment][Optional Prepayment] in Common Stock in accordance with this Repayment Election Notice is subject to the satisfaction of all of the Stock Payment Conditions on the Delivery Date and, to the extent any of the Stock Payment Conditions are not satisfied on the Delivery Date, Borrower shall pay the [Principal Installment Payment][Optional Prepayment] in cash.

Sincerely,

ACELRX PHARMACEUTICALS, INC.

By: _____

Name: _____

Its: _____

¹ Note: In accordance with Section 2.2(e) of the Loan Agreement, the Delivery Date must be at least 10 days following the date of delivery of this Repayment Election Notice.



FOR IMMEDIATE RELEASE

AcelRx Secures \$20 Million Loan Financing Agreement, Expected to Extend Its Operating Cash Runway Into 2013

REDWOOD CITY, Calif., June 30, 2011 — AcelRx Pharmaceuticals, Inc. (Nasdaq: ACRX) (AcelRx) today announced that it has obtained a \$20 million secured loan agreement with Hercules Technology Growth Capital (Hercules). Upon the execution of this agreement with Hercules, AcelRx received \$10 million in the first tranche of the loan. The second tranche of up to \$10 million can be drawn, at AcelRx's option, any time prior to December 16, 2011. In addition, AcelRx announced that approximately \$2.8 million of the proceeds were used to repay the remaining obligations under its loan and security agreement entered into with Pinnacle Ventures LLC in 2008. AcelRx expects to use the remainder of the capital to fund development activities related to its ARX-01 product candidate and for general corporate purposes.

General terms of the loan arrangement include interest-only payments through June 2012, with the possibility of extending the interest-only period through September 2012 if certain product candidate development conditions are met. Subsequently, the principal, together with interest, will be repaid over the following 36 months. Further information with respect to the loan arrangement with Hercules is contained in a Current Report on Form 8-K filed today by AcelRx with the Securities and Exchange Commission.

“We are very pleased to add Hercules to an existing group of supportive and experienced partners,” said Richard King, AcelRx President and CEO. “This loan provides AcelRx with the resources to complete our third and last planned Phase 3 clinical trial for ARX-01, our product candidate for the treatment of post-operative pain. ARX-01 is designed to solve a number of issues experienced in the management of post-surgical pain by non-invasively delivering the high therapeutic index opioid sufentanil while eliminating programming errors with a non-programmable device. This loan is expected to extend our operating cash runway into the first quarter of 2013.”

Kathy Conte, Managing Director of Hercules added, “Hercules is excited to invest in a team that is looking to transform the management of post-operative pain with its lead product, ARX-01.”

About AcelRx Pharmaceuticals, Inc.

Based in Redwood City, CA, AcelRx Pharmaceuticals, Inc. (Nasdaq: ACRX) is a specialty pharmaceutical company focused on the development and commercialization of innovative therapies for the treatment of acute and breakthrough pain. AcelRx's lead product candidate, the ARX-01 Sufentanil NanoTab PCA System, which is in preparation for Phase 3 clinical development, is designed to solve the problems associated with post-operative intravenous patient-controlled analgesia which has been shown to cause harm to patients following surgery because of the side effects of morphine, the invasive IV route of delivery and the inherent potential for programming and delivery errors associated with the complexity of infusion pumps. AcelRx has two additional product candidates which have completed Phase 2 clinical development: ARX-02 for the treatment of cancer breakthrough pain, and ARX-03 for providing mild sedation, anxiety reduction and pain relief for patients undergoing painful procedures in a physician's office. A fourth product candidate, ARX-04, is a single dose, fast-onset sufentanil product for the treatment of moderate-to-severe acute pain that is expected to enter Phase 2 clinical development in the second half of 2011 under a grant from the US Army Medical Research and Material Command.

Forward Looking Statements

This press release contains forward-looking statements, including, but not limited to, statements related to AcelRx Pharmaceuticals' financial viability, the sufficiency of funds to support its clinical trials and operations, planned or anticipated future clinical development of AcelRx Pharmaceuticals' product candidates, the therapeutic and commercial potential of AcelRx Pharmaceuticals' product candidates, and statements related to future events under the loan and security agreement with Hercules, including its ability to access the second tranche funds under such agreement. These forward-looking statements are based on AcelRx Pharmaceuticals' current expectations and inherently

involve significant risks and uncertainties. AcelRx Pharmaceuticals' actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of these risks and uncertainties, which include, without limitation, risks related to: the success, cost and timing of AcelRx Pharmaceuticals' product development activities and clinical trials; the uncertain clinical development process, including the risk that planned clinical trials may not begin on time, have an effective design, enroll a sufficient number of patients, or be initiated or completed on schedule, if at all; its ability to obtain adequate clinical supplies of the drug and device components of its product candidates; its ability to attract funding partners or collaborators with development, regulatory and commercialization expertise; its ability to obtain sufficient financing to complete development and registration of its product candidates in the United States and Europe; its ability to obtain and maintain regulatory approvals of its product candidates; the market potential for its product candidates; the accuracy of AcelRx Pharmaceuticals' estimates regarding expenses, capital requirements and needs for financing; AcelRx Pharmaceuticals' ability to satisfy the conditions required to access the second tranche funds under the loan and security agreement with Hercules, extend the interest-only period under such agreement and repay a portion of the principal thereunder with common stock; and other risks detailed in the "Risk Factors" and elsewhere in AcelRx Pharmaceuticals' Securities and Exchange Commission filings and reports, including its Annual Report on Form 10-K for the year ended December 31, 2010 and its Quarterly Report on Form 10-Q for the period ended March 31, 2011. AcelRx Pharmaceuticals undertakes no duty or obligation to update any forward-looking statements contained in this release as a result of new information, future events or changes in its expectations.

Contact:

AcelRx Pharmaceuticals, Inc.
Jim Welch
Chief Financial Officer
650-216-3511
info@acelrx.com