Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2010

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number: 001-33277

SYNTA PHARMACEUTICALS CORP.
(Exact name of registrant as specified in its charter)

Delaware	**04-3508648**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
45 Hartwell Avenue Lexington, Massachusetts	**02421**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(781) 274-8200**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☐ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of April 30, 2010, the registrant had 40,487,085 shares of common stock outstanding.

Table of Contents

SYNTA PHARMACEUTICALS CORP.

INDEX TO FORM 10-Q

Table of Contents

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements.

SYNTA PHARMACEUTICALS CORP.

Condensed Consolidated Balance Sheets

(in thousands, except share and per share amounts)

(unaudited)

	March 31, 2010	December 31, 2009
Assets		
Current assets:		
Cash and cash equivalents	$ 57,917	$ 44,155
Prepaid expenses and other current assets	1,011	419
Total current assets	58,928	44,574
Property and equipment, net	3,463	3,978
Other assets	151	358
Total assets	$ 62,542	$ 48,910
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 1,462	$ 3,957
Accrued contract research costs	2,591	2,099
Other accrued liabilities	3,226	4,504
Capital lease obligations	1,185	1,262
Deferred collaboration revenue	4,573	4,647
Total current liabilities	13,037	16,469
Long-term liabilities:		
Capital lease obligations	528	799
Deferred collaboration revenue	5,588	6,731
Total long-term liabilities	6,116	7,530
Total liabilities	19,153	23,999
Stockholders' equity:		
Preferred stock, par value $0.0001 per share Authorized: 5,000,000 shares at March 31, 2010 and December 31, 2009; no shares issued and outstanding at March 31, 2010 and December 31, 2009	—	—
Common stock, par value $0.0001 per share Authorized: 100,000,000 shares at March 31, 2010 and December 31, 2009; 40,484,398 and 33,978,300 shares issued and outstanding at March 31, 2010 and December 31, 2009, respectively	4	3
Additional paid-in-capital	366,276	338,491
Accumulated deficit	(322,891)	(313,583)
Total stockholders' equity	43,389	24,911
Total liabilities and stockholders' equity	$ 62,542	$ 48,910

See accompanying notes to consolidated financial statements.

SYNTA PHARMACEUTICALS CORP.

Condensed Consolidated Statements of Operations

(in thousands, except share and per share amounts)

(unaudited)

	Three Months Ended March 31,	
	2010	**2009**
Collaboration revenues:		
License and milestone revenue	$ 1,143	$ 4,073
Cost sharing reimbursements, net	2,880	437
Total collaboration revenues	4,023	4,510
Operating expenses:		
Research and development	10,195	22,639
General and administrative	3,086	4,070
Restructuring	—	1,236
Total operating expenses	13,281	27,945
Loss from operations	(9,258)	(23,435)
Other (expense) income:		
Other (expense) income, net	(50)	(64)
Net loss	$ (9,308)	$ (23,499)
Net loss per common share:		
Basic and diluted net loss per common share	$ (0.24)	$ (0.69)
Basic and diluted weighted average number of common shares outstanding	39,451,592	33,872,016

See accompanying notes to consolidated financial statements.

SYNTA PHARMACEUTICALS CORP.

Condensed Consolidated Statements of Cash Flows

(in thousands)

(unaudited)

	Three Months Ended March 31,	
	2010	2009
Cash flows from operating activities:		
Net loss	$ (9,308)	$ (23,499)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Stock-based compensation expense	1,087	1,165
Depreciation and amortization	515	693
Changes in operating assets and liabilities:		
Collaboration receivable	(396)	16,000
Prepaid expenses and other current assets	(196)	435
Other assets	207	—
Accounts payable	(2,495)	7,284
Accrued contract research costs	492	583
Other accrued liabilities	(1,278)	860
Deferred collaboration revenue	(1,217)	6,454
Collaboration payable	—	2,251
Net cash (used in) provided by operating activities	(12,589)	12,226
Cash flows from investing activities:		
Purchases of marketable securities	—	(24,693)
Maturities of marketable securities	—	2,609
Purchases of property and equipment	—	(382)
Net cash used in investing activities	—	(22,466)
Cash flows from financing activities:		
Proceeds from issuance of common stock and exercise of common stock options, net of transaction costs	26,699	—
Payment of capital lease obligations	(348)	(650)
Net cash provided by (used in) financing activities	26,351	(650)
Net increase (decrease) in cash and cash equivalents	13,762	(10,890)
Cash and cash equivalents at beginning of period	44,155	52,045
Cash and cash equivalents at end of period	$ 57,917	$ 41,155
Supplemental disclosure of noncash operating, investing and financing activities:		
Acquisition of equipment under capital leases	$ —	$ 58
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 48	$ 100

See accompanying notes to consolidated financial statements.

SYNTA PHARMACEUTICALS CORP.

Notes to Consolidated Financial Statements

(1) Nature of Business

Synta Pharmaceuticals Corp. (the Company) was incorporated in March 2000 and commenced operations in July 2001. The Company is a biopharmaceutical company focusing on discovering, developing and commercializing small molecule drugs to extend and enhance the lives of patients with severe medical conditions, including cancer and chronic inflammatory diseases.

The Company is subject to risks common to emerging companies in the drug development and pharmaceutical industry including, but not limited to, uncertainty of product development and commercialization, lack of marketing and sales history, dependence on key personnel, uncertainty of market acceptance of products, product liability, uncertain protection of proprietary technology, potential inability to raise additional financing and compliance with the Food and Drug Administration (FDA) and other government regulations.

(2) Summary of Significant Accounting Policies

Basis of Presentation

The accompanying condensed consolidated financial statements are unaudited, have been prepared on the same basis as the annual financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments necessary to present fairly the Company's financial position as of March 31, 2010 and the consolidated results of operations and cash flows for the three months ended March 31, 2010 and 2009. The preparation of financial statements in conformity with accounting principles generally accepted in the United States (GAAP) requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from these estimates. The results of operations for the three months ended March 31, 2010 are not necessarily indicative of the results to be expected for the year ending December 31, 2010 or for any other interim period or any other future year. For more complete financial information, these condensed financial statements, and the notes hereto, should be read in conjunction with the audited financial statements for the year ended December 31, 2009 included in the Company's Annual Report on Form 10-K.

Principles of Consolidation

The consolidated financial statements include the financial statements of the Company and its wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. Significant items subject to such estimates and assumptions include contract research accruals, recoverability of long-lived and deferred tax assets, measurement of stock-based compensation, and the periods of performance under its collaborative research and development agreements. The Company bases its estimates on historical experience and various other assumptions that management believes to be reasonable under the circumstances. Changes in estimates are recorded in the period in which they become known. Actual results could differ from those estimates.

Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less at the date of purchase and an investment in a U.S. Treasury money market fund to be cash equivalents. Changes in cash and cash equivalents may be affected by shifts in investment portfolio maturities, as well as actual cash disbursements to fund operations.

The primary objective of the Company's investment activities is to preserve its capital for the purpose of funding operations and the Company does not enter into investments for trading or speculative purposes. The Company invests in money market funds and high-grade, short-term commercial paper, which are subject to minimal credit and market risk. The Company's cash is deposited in a highly rated financial institution in the United States. Declines in interest rates, however, would reduce future investment income.

Revenue Recognition

Collaboration and License Agreements

The Company's principal source of revenue is from collaborative research and development agreements, which may include upfront license payments, development milestones, reimbursement of research and development costs, profit sharing payments, sales milestones and royalties. The application of accounting rules requires subjective analysis and requires management to make estimates and assumptions about whether deliverables within multiple-element arrangements are separable from the other aspects of the contractual arrangement into separate units of accounting and to determine the fair value to be allocated to each unit of accounting.

The Company evaluates the multiple deliverables within its collaborations to determine whether the delivered elements that are the obligation of the Company have value to its collaborators on a stand-alone basis and whether objective reliable evidence of fair value of the undelivered items exists. Deliverables that meet these criteria are considered a separate unit of accounting. Deliverables that do not meet these criteria are combined and accounted for as a single unit of accounting. The appropriate recognition of revenue is then applied to each separate unit of accounting.

The Company's deliverables under its collaboration agreements, including the related rights and obligations, contractual cash flows and performance periods, are more fully described in Notes 9 and 10. Certain of the deliverables have been combined as a single unit of accounting.

The cash flows associated with the single unit of accounting from the research and development portions of the Company's collaborations are recognized as revenue using a time-based model. Under this model, cash flow streams are recognized as revenue over the estimated performance period. Upon achievement of milestones, as defined in the collaboration agreements, revenue is recognized to the extent the accumulated service time, if any, has occurred. The remainder is deferred and recognized as revenue ratably over the remaining estimated performance period. A change in the period of time expected to complete the deliverable is accounted for as a change in estimate on a prospective basis. Revenue is limited to amounts that are non-refundable and that the Company's collaborators are contractually obligated to pay to the Company.

Royalty revenues are based upon a percentage of net sales. Royalties from the sales of products included in the Roche Agreement will be recorded on the accrual basis when results are reliably measurable, collectibility is reasonably assured and all other revenue recognition criteria are met. Sales milestones, which are based upon the achievement of certain agreed-upon sales thresholds, will be recognized in the period in which the respective sales threshold is achieved and collectibility is reasonably assured.

Deferred Collaboration Revenue

Consistent with the Company's policy on revenue recognition, deferred collaboration revenue represents cash received and amounts earned and invoiced for licensing and option fees and milestones, as well as cash received and amounts invoiced for research and development services to be performed by the Company. Such amounts are reflected as deferred collaboration revenue until revenue can be recognized under the Company's revenue recognition policy. Deferred collaboration revenue is classified as current if management believes the Company will complete the earnings process and be able to recognize the deferred amount as revenue within 12 months of the balance sheet date. At March 31, 2010, total deferred collaboration revenue was approximately

$10.2 million, of which $4.6 million is current and is expected to be recognized as revenue during the next 12 months.

Stock-Based Compensation

The Company recognizes stock-based compensation expense based on the fair value of stock options granted to employees, officers and directors. The Company uses the Black-Scholes option pricing model as it is the most appropriate valuation method for its option grants. The Black-Scholes model requires inputs for risk-free interest rate, dividend yield, volatility and expected lives of the options. Since the Company has a limited history of stock activity, expected volatility for the period from April 1, 2009 through March 31, 2010 was based upon the weighted average historical volatility data of the Company's common stock and the historical volatility data from several guideline public biotechnology companies similar in size and value to the Company that also have stock compensation plans with similar terms. Prior to April 1, 2009, expected volatility was based solely on historical data from several guideline similar public biotechnology companies with similar stock compensation plans and terms. The Company will continue using its historical volatility and other similar public entity volatility information until its historical volatility alone is relevant to measure expected volatility for future option grants. The Company estimates the forfeiture rate based on historical data. Based on an analysis of historical forfeitures, the Company has applied a forfeiture rate of 10% to all options that vest upon completion of the first year of service following the date of grant. The analysis is re-evaluated at least annually and the forfeiture rate is adjusted as necessary. The risk-free rate for periods within the expected life of the option is based on the U.S. Treasury yield curve in effect at the time of the grant. The expected lives for options granted represent the period of time that options granted are expected to be outstanding. Since January 1, 2006 the Company has used the simplified method for determining the expected lives of options.

For awards with graded vesting, the Company allocates compensation costs on a straight-line basis over the requisite service period. The Company amortizes the fair value of each option over each option's service period, which is generally the vesting period.

The Company accounts for stock options issued to non-employees by valuing and remeasuring such stock options to the current fair value until the performance date has been reached.

For the three months ended March 31, 2010 and 2009, the fair value of each employee stock option award was estimated on the date of grant based on the fair value method using the Black-Scholes option pricing valuation model with the following weighted average assumptions:

	Three months ended March 31,	
	2010	2009
Risk-free interest rate	2.76%	1.78%
Expected life in years	6.25 years	6.25 years
Volatility	102%	70%
Expected dividend yield	—	—

The effect of stock-based compensation expense during the three months ended March 31, 2010 and 2009 was as follows (in thousands):

	Three months ended March 31,	
	2010	2009
Stock-based compensation expense by type of award:		
Employee stock options	$ 1,006	$ 1,075
Non-employee stock options	—	17
Restricted stock	81	73
Total stock-based compensation expense	$ 1,087	$ 1,165
Effect of stock-based compensation expense by line item:		
Research and development	$ 827	$ 896
General and administrative	260	269
Total stock-based compensation expense included in net loss	$ 1,087	$ 1,165

Unrecognized stock-based compensation expense as of March 31, 2010 was as follows (in thousands):

	Unrecognized stock compensation expense as of March 31, 2010	Weighted average remaining period (in years)
Employee stock options	$ 7,104	2.65
Restricted stock	530	0.89
Total	$ 7,634	2.52

Certain of the employee stock options granted by the Company are structured to qualify as incentive stock options (ISOs). Under current tax regulations, the Company does not receive a tax deduction for the issuance, exercise or disposition of ISOs if the employee meets certain holding requirements. If the employee does not meet the holding requirements, a disqualifying disposition occurs, at which time the Company may receive a tax deduction. The Company does not record tax benefits related to ISOs unless and until a qualifying disposition is reported. In the event of a disqualifying disposition, the entire tax benefit is recorded as a reduction of income tax expense. The Company has not recognized any income tax benefit for the share-based compensation arrangement due to the fact that the Company does not believe it is more likely than not it will recognize any deferred tax assets from such compensation cost recognized in the current period.

Comprehensive Loss

Comprehensive loss is defined as the change in equity of a business enterprise during a period from transactions, and other events and circumstances from non-owner sources. Changes in unrealized gains and losses on marketable securities represents the only difference between the Company's net loss and comprehensive loss. In the three months ended March 31, 2010 and 2009, net loss and comprehensive loss were the same.

Segment Reporting

Operating segments are determined based on the way management organizes its business for making operating decisions and assessing performance. The Company has only one operating segment, the discovery, development and commercialization of drug products.

Basic and Diluted Loss Per Common Share

Basic net loss per share is computed using the weighted average number of common shares outstanding during the period, excluding restricted stock that has been issued but is not yet vested. Diluted net loss per common share is computed using the weighted average number of common shares outstanding and the weighted average dilutive potential common shares outstanding using the treasury stock method. However, for the three months ended March 31, 2010 and 2009, diluted net loss per share is the same as basic net loss per share as the inclusion of weighted average shares of unvested restricted common stock and common stock issuable upon the exercise of stock options would be anti-dilutive.

The following table summarizes outstanding securities not included in the computation of diluted net loss per common share as their inclusion would be anti-dilutive:

	March 31,	
	2010	2009
Common stock options	5,882,982	4,465,593
Unvested restricted common stock	149,800	42,558

(3) Cash and Cash Equivalents

A summary of cash and cash equivalents held by the Company as of March 31, 2010 and December 31, 2009 is as follows:

	March 31, 2010			
	Cost	Unrealized gains	Unrealized losses	Fair value
	(in thousands)			
Cash and cash equivalents:				
Cash and money market funds (Level 1)	$ 57,917	$ —	$ —	$ 57,917

	December 31, 2009			
	Cost	Unrealized gains	Unrealized losses	Fair value
	(in thousands)			
Cash and cash equivalents:				
Cash and money market funds (Level 1)	$ 36,367	$ —	$ —	$ 36,367
U.S. government sponsored entities due within 3 months of date of purchase (Level 2)	7,788	—	—	7,788
	$ 44,155	$ —	$ —	$ 44,155

(4) Fair Value Measurements

The fair value of the Company's financial instruments reflects the amounts that would be received upon sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy has the following three levels:

Level 1—quoted prices in active markets for identical assets and liabilities.

Level 2—observable inputs other than quoted prices in active markets for identical assets and liabilities.

Level 3—unobservable inputs that reflect the Company's own assumptions about the assumptions market participants would use in pricing the asset or liability.

Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. As of March 31, 2010, all of the Company's financial assets that were subject to fair value measurements were valued based on an active market for identical assets and the Company had no financial liabilities that were subject to fair value measurement. The Company's financial assets valued based on Level 1 inputs consisted of cash and cash equivalents in a U.S. Treasury money market fund.

(5) Property and Equipment

Property and equipment consist of the following:

	March 31, 2010	December 31, 2009
	(in thousands)	
Laboratory equipment	$ 12,337	$ 12,337
Leasehold improvements	4,495	4,495
Computers and software	2,128	2,128
Furniture and fixtures	1,046	1,046
	20,006	20,006
Less accumulated depreciation and amortization	(16,543)	(16,028)
	$ 3,463	$ 3,978

Depreciation and amortization expenses of property and equipment, including equipment purchased under capital leases, were approximately $515,000 and $693,000 for the three months ended March 31, 2010 and 2009, respectively.

(6) Stockholders' Equity

Public Offering

In January 2010, the Company raised approximately $28.8 million in gross proceeds from the sale of an aggregate of 6,388,889 shares of its common stock at $4.50 per share in an underwritten public offering, including 5,555,556 shares in the initial closing and 833,333 shares in a second closing for the full exercise of the over-allotment option granted to the underwriters. The net offering proceeds after deducting approximately $2.1 million for underwriters' discounts, fees and commissions, legal, accounting, printing, listing and filing fees, and miscellaneous expenses were approximately $26.7 million.

(7) Stock Plans

The Company's 2006 Stock Plan provides for the grant of incentive stock options, nonstatutory stock options and non-vested stock to employees, officers, directors and consultants to the Company. A total of 5,100,000 shares of common stock are currently reserved for issuance under the 2006 Stock Plan. The 2006 Stock Plan contains an "evergreen" provision, which provides for an annual increase based on the lesser of 1,300,000 shares, 5% of the Company's then outstanding shares of common stock, or such other amount as the board of directors may determine. In February 2010, the board of directors determined not to increase the number of shares reserved. The administration of the 2006 Stock Plan is under the general supervision of the compensation committee of the board of directors. The exercise price of the stock options is determined by the compensation committee of the board of directors, provided that incentive stock options are granted at not less than fair market value of the common stock on the date of grant and expire no later than ten years from the date the option is granted. Options vest over one to four years.

As of March 31, 2010, under its 2001 Stock Plan, which was terminated in March 2006, the Company had options outstanding to purchase 2,093,770 shares of its common stock and had no shares available for future issuance.

As of March 31, 2010, under its 2006 Stock Plan, the Company had options outstanding to purchase 3,789,212 shares of its common stock, had outstanding 149,800 restricted shares of common stock and had available 1,076,543 shares available for future issuance.

The following table summarizes stock option activity during the three months ended March 31, 2010:

	Shares	Weighted average exercise price
Outstanding at January 1	4,900,598	$ 8.95
Options granted	1,151,942	4.02
Options exercised	(3,961)	2.49
Options cancelled	(165,597)	11.04
Outstanding at March 31	5,882,982	$ 7.93
Exercisable at March 31	3,594,536	$ 9.79

The weighted-average grant date fair values of options granted during the three months ended March 31, 2010 and 2009 were $3.28 and $4.38, respectively.

Included in the Company's stock options outstanding at March 31, 2010 were 179,055 options issued to non-employee consultants with a weighted average exercise price of $8.02 all of which are vested. The compensation expense was recorded over the respective vesting periods and was subject to variable accounting treatment prior to vesting, whereby the Company remeasured the fair value of the options at the end of each reporting period.

Non-Vested ("Restricted") Stock Awards With Service Conditions

The Company's share-based compensation plan provides for awards of restricted shares of common stock to senior management and non-employee directors. Restricted stock awards are subject to forfeiture if employment or service terminates during the prescribed retention period. Restricted shares issued to non-employee directors vest over the service period.

The following table summarizes unvested restricted shares during the three months ended March 31, 2010:

	Shares	Weighted average grant date fair value
Outstanding at January 1	48,107	$ 5.14
Granted	113,248	4.02
Vested	(11,555)	2.38
Cancelled	—	—
Outstanding at March 31	149,800	$ 4.51

(8) Other Accrued Liabilities

Other accrued liabilities consist of the following:

	March 31, 2010	December 31, 2009
	(in thousands)	
Compensation and benefits	$ 1,696	$ 2,792
Professional fees	1,038	1,229
Other	492	483
	$ 3,226	$ 4,504

(9) Collaborative License Agreement with Roche

In December 2008, as amended in February 2010, the Company and Hoffmann-La Roche (Roche) entered into a collaborative license agreement (the Roche Agreement) to discover, develop, and commercialize small-molecule drugs targeting CRACM channels. The goal of this alliance is to develop a novel category of oral, disease-modifying agents for the treatment of rheumatoid arthritis, asthma, chronic obstructive pulmonary disease, allergy, transplant rejection, and other autoimmune diseases and inflammatory conditions. The Roche Agreement consists of the following funding streams: an upfront license payment, product development milestones, reimbursements of certain research and development costs, sales milestones and product royalty payments.

Under the terms of the Roche Agreement, Roche funds research and development to be conducted by the Company, which includes discovery and certain early development activities for the Company's novel CRACM inhibitors. Roche will receive worldwide rights to develop and commercialize certain products identified prior to the end of the research period. For these licensed products, Roche is responsible for development and commercialization, while the Company retains certain co-development and co-promotion rights.

Pursuant to the Roche Agreement, the Company received a non-refundable upfront license payment of $16 million in January 2009. Roche will reimburse all of the Company's research, preclinical development and clinical development costs based upon research and development plans agreed to by the parties. These costs include committed research support over the initial two year research period, the duration of which may be extended upon mutual agreement by the parties. As of March 31, 2010, the Company has received approximately $14.4 million in research and development support under the Roche Agreement.

The Company is eligible to receive additional payments, for each of three licensed products, should specified development and commercialization milestones be successfully achieved. Development milestones across multiple indications of up to $245 million could be earned for the first product, and up to half of this amount could be earned for each of the second and third products. Commercialization milestones of up to $170 million could be earned for each of three products. The Company will receive tiered royalties on sales of all approved, marketed products. Roche may terminate the agreement on a licensed compound-by-licensed compound basis upon providing advance written notice, but may not do so with respect to all licensed compounds until after a specified date.

The $16 million non-refundable upfront license payment is being recognized ratably using the time-based model over the estimated 3.5 year performance period. In each of the three months ended March 31, 2010 and 2009, the Company recognized $1.1 million of license revenue under the Roche Agreement. Reimbursements of research and development costs to the Company by Roche are recorded as cost sharing revenue in the period in which the related research and development costs are incurred. In the three months ended March 31, 2010 and 2009, the Company recognized $2.9 million and $2.5 million, respectively, of cost sharing revenue under the Roche Agreement. Development milestones will be recognized as collaboration revenue using the time-based model over the same performance period through mid-2012. No development milestones have been achieved as of March 31, 2010.

(10) Collaborative Development, Commercialization and License Agreement with GSK

In 2007, the Company and GlaxoSmithKline (GSK) entered into a global collaborative development, commercialization and license agreement (the GSK Agreement) for the joint development and commercialization of elesclomol. The GSK Agreement consisted of the following funding streams: an upfront license payment, product development milestones, operational milestones, reimbursements of certain development costs, sales milestones, profit sharing payments and product royalty payments. In 2009, following the suspension of the Company's global Phase 3 clinical trial of elesclomol plus paclitaxel in metastatic melanoma, called the SYMMETRY trial, GSK terminated the GSK Agreement effective September 10, 2009. In accordance with the termination provisions of the GSK Agreement, all rights to the elesclomol program were returned to the Company. The Company may continue to develop elesclomol alone or with another partner and may pay GSK a low single-digit royalty on any potential future sales of elesclomol.

The $80 million non-refundable upfront license payment, together with $50 million in non-refundable operational milestones, the Company received from GSK were being recognized ratably using the time-based model over the estimated 15-year performance period. In the three months ended March 31, 2009, the Company recognized $2.9 million of license and milestone revenue under the GSK Agreement. Upon the effectiveness of the termination of the GSK Agreement in the third quarter of 2009, the Company accelerated the recognition of approximately $114.6 million of remaining deferred revenue from upfront payments and milestones received under the GSK Agreement as it has no further obligation for deliverables under the GSK Agreement.

Reimbursements of development costs to the Company by GSK were recorded as cost sharing revenue in the period in which the related development costs were incurred. Reimbursements by the Company to GSK for costs GSK incurred under the development program were recorded as a reduction of cost sharing revenue in the period in which the costs were incurred by GSK. In the three months ended March 31, 2009, the Company recognized, as a reduction to revenue, $2.0 million of net cost sharing reimbursements to GSK under the GSK Agreement.

(11) Restructuring

On March 12, 2009, the Company committed to a restructuring plan that consisted primarily of an immediate workforce reduction of approximately 90 positions, to a total of approximately 130 positions, to align its workforce to its revised operating plans following the suspension of its SYMMETRY clinical trial. In the first quarter of 2009, the Company recorded a restructuring charge of approximately $1.2 million for severance and estimated benefits continuation costs and outplacement services. In addition, the Company paid approximately $0.2 million in unused paid-time off that had been recognized as expense prior to the restructuring, including $0.1 million in the year ended December 31, 2008 and $0.1 million in the first quarter of 2009. The approximate $1.4 million in restructuring related payments for severance, unused paid-time off, benefits and outplacement services was paid in 2009.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read this discussion together with the consolidated financial statements, related notes and other financial information included elsewhere in this Quarterly Report on Form 10-Q. The following discussion may contain predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties, including those discussed under "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2009 filed with the Securities and Exchange Commission. These risks could cause our actual results to differ materially from any future performance suggested below.

Overview

We are a biopharmaceutical company focused on discovering, developing, and commercializing small molecule drugs to extend and enhance the lives of patients with severe medical conditions, including cancer and chronic inflammatory diseases. We have two clinical-stage drug candidates and several drug candidates in the preclinical and discovery stages. Each of our drug candidates was discovered and developed internally using our proprietary, unique chemical compound library and integrated discovery engine. We retain all rights to our drug candidates and programs, with the exception of our preclinical-stage calcium release activated calcium modulator, or CRACM, program which is partnered with Hoffmann-La Roche, or Roche.

We believe that our competitive advantages include the clinical and commercial potential of our drug candidates; the strength of our drug discovery platform; our ability to effectively manage large-scale clinical programs; our ability to enter into strategic partnerships with leading multinational pharmaceutical companies; and our network of research and clinical collaborations with leading investigators and institutions. We believe these competitive advantages provide us with multiple, sustainable-growth opportunities.

We were incorporated in March 2000 and commenced operations in July 2001. Since that time, we have been principally engaged in the discovery and development of novel drug candidates. We have funded our operations principally with $306.7 million in net proceeds from private and public offerings of our common stock and Series A convertible preferred stock, including $26.7 million in net proceeds from the sale of 6,388,889 shares of our common stock at $4.50 per share in an underwritten public offering that was completed in January 2010.

In addition to raising capital from financing activities, we have also received substantial capital from partnering activities. In October 2007, we entered into a global collaborative development, commercialization and license agreement with GlaxoSmithKline, or GSK, for the joint development and commercialization of elesclomol, one of our oncology drug candidates, which we refer to as the GSK Agreement. On June 10, 2009, following the suspension of our global Phase 3 clinical trial of elesclomol plus paclitaxel in metastatic melanoma, called the SYMMETRY trial, we received written notice from GSK of their intent to terminate the GSK Agreement. The collaboration terminated on September 10, 2009. In December 2008, as amended in February 2010, we entered into a collaborative license agreement with Roche, or the Roche Agreement, for our CRACM inhibitor program, which is currently in the lead optimization stage. As of March 31, 2010, we have received $160.4 million in nonrefundable partnership payments under these agreements with GSK and with Roche, including $96 million in upfront payments, $50 million in operational milestones and $14.4 million in research and development funding, which, together with the net cash proceeds from equity financings and the exercise of common stock warrants and options, provided aggregate net cash proceeds of approximately $468.6 million. We have also generated funds from government grants, equipment lease financings and investment income. We are engaged in preliminary partnership discussions for a number of our programs, which may provide us with additional financial resources if consummated.

We have devoted substantially all of our capital resources to the research and development of our drug candidates. Since our inception, we have had no revenues from product sales. As of March 31, 2010, we had an accumulated deficit of $322.9 million. We expect to incur significant operating losses for the foreseeable future as we advance our drug candidates from discovery through preclinical development and clinical trials, and seek regulatory approval and eventual commercialization. We will need to generate significant revenues from product sales to achieve future profitability and may never do so.

Oncology Programs

We have two clinical-stage programs and one preclinical-stage program in oncology:

STA-9090 (Hsp90 Inhibitor)

STA-9090 is a potent, injectable small molecule Hsp90 inhibitor drug candidate, with a novel chemical structure that is distinct from 17-AAG (tanespimycin) and other first generation, ansamycin-derivative Hsp90 inhibitors, such as IPI-504 (retaspimycin). Many of the known oncogenic proteins that play major roles in pathogenesis of solid tumor and hematologic malignancies are client proteins of Hsp90. By inhibiting Hsp90, STA-9090 causes the degradation of multiple client proteins and the subsequent death of cancer cells dependent on these proteins. STA-9090 has shown potent anti-cancer activity in a broad range of solid and hematologic cancers both *in vitro* and *in vivo*, as well as substantially greater potency and improved safety relative to first generation Hsp90 inhibitors. In clinical trials, STA-9090 has shown promising signs of single-agent clinical activity and an acceptable safety profile, without the serious liver and other toxicities observed with the first generation Hsp90 inhibitors nor the ocular toxicities observed with some of the next generation Hsp90 inhibitors.

STA-9090 potently inhibits Hsp90, a chaperone protein required for the proper folding and activation of other cellular proteins, particularly kinases. Many of these "client proteins" of Hsp90—such as AKT, BCR-ABL, BRAF, KIT, MET, EGFR, FLT3, HER2, PDGFRA, VEGFR—have been shown to be critical to cancer cell growth, proliferation, and survival and are the targets of clinically validated and approved cancer drugs such as Gleevec, Avastin, Herceptin, Sutent, Nexavar, Tarceva, and Erbitux. In preclinical studies, inhibiting Hsp90 causes the degradation of multiple client proteins and leads to cancer cell death. Because mutated kinases which no longer respond to treatment with kinase inhibitors remain dependent on Hsp90 for their activity, inhibiting Hsp90 offers the potential for treating cancers that have become resistant to targeted therapies such as kinase inhibitors. We believe that inhibiting kinases indirectly, by disrupting the chaperone activities of Hsp90, provides two advantages: first, a means to simultaneously attack multiple cancer-promoting kinases; and second, an ability to kill tumor cells with mutated kinases that have lost responsiveness to a direct kinase inhibitor.

STA-9090 Preclinical Results

Experiments conducted by us and by our collaborators at the Dana-Farber Cancer Institute, Brigham and Women's Hospital in Boston, University of Massachusetts Medical School in Worcester, The Ohio State University, University of Texas Health Center at San Antonio, and others have shown that STA-9090:

- potently inhibits many critical oncogenic proteins including HIF1alpha, KIT, MET, HER2, EGFR, AKT, CDK4, BCR-ABL, BRAF, RAF1, and WT1;
- shows an average of approximately 20 times greater potency than first generation Hsp90 inhibitors, such as 17-AAG, across a broad range of cancer cell lines tested, achieving, in certain cases, over 100 times greater potency;
- is active against a broad range of *in vivo* models of cancer including breast, colon, gastric, lung, gastrointestinal stromal tumors, or GIST, melanoma, osteosarcoma, prostate, acute myeloid leukemia, or AML, chronic myeloid leukemia, Burkitt's lymphoma, diffuse large B-cell lymphoma, and multiple myeloma;
- is active in models that are non-responsive or resistant to first-generation inhibitors, such as 17-AAG;
- accumulates selectively in tumors, with a tumor half-life up to 20 times longer in duration than the half-life in plasma or normal tissues such as lung or liver;
- demonstrates enhancement of activity when combined with several widely-used anti-cancer therapies including Taxol, Tarceva, and Avastin;
- has activity in models of cancer that have become resistant to approved tyrosine kinase inhibitors such as Gleevec, Sutent, Tarceva, and Sprycel —including the BCR-ABL T315I mutation in leukemia; the

EGFR T790M mutation in lung cancer; and the KIT V654A or D820A mutations in gastrointestinal stromal tumors; and

- generated pronounced single-agent tumor responses in a canine clinical trial, including over 80% tumor shrinkage in dogs with certain rapidly progressing cancers.

Many of these results were presented at recent scientific meetings including the April 2009 AACR meeting, the November 2009 AACR-NCI-EORTC meeting, the December 2009 ASH meeting, the January 2010 IASLC Targeted Therapies for the Treatment of Lung Cancer meeting and the March 2010 NCI ESMO Targeted Anticancer Targets meeting. We are actively continuing our collaborations with leading academic researchers, which we and the physicians we work with use to help guide our clinical trial choices. These choices include designing trials that enrich for those patients with disease characteristics most likely to respond to treatment with STA-9090.

STA-9090 Ongoing Clinical Trials

In November 2007 and January 2008, respectively, we initiated two Phase 1, open-label trials in patients with solid-tumor cancers to identify the maximum tolerated dose, or MTD, of STA-9090 based on twice- and once-a-week intravenous dosing schedules, respectively. In addition to an evaluation of safety and tolerability, patients in each of these trials are assessed for tumor response based on the Response Evaluation Criteria in Solid Tumors, or RECIST, criteria. In March 2009, we initiated a Phase 1 open-label clinical trial of STA-9090 in patients with hematologic cancers, with a twice-a-week dosing schedule. In September 2009, we initiated a Phase 1/2 trial in hematologic cancers with a once-a-week dosing schedule. In December 2009, we initiated Phase 2 trials of STA-9090 in non-small cell lung cancer, or NSCLC, and GIST.

In our Phase 1 solid tumor trials, we have escalated multiple dose level cohorts in each trial. To date, results have shown that STA-9090 is well tolerated, with the most common adverse events being mild to moderate fatigue and diarrhea, which have been manageable and reversible. In our once weekly Phase 1 trial, the MTD has been identified, with the dose limiting toxicities, or DLTs, being fatigue and diarrhea. To date, we have not seen organ specific DLTs such as liver or cardiac toxicities that have been seen with first generation Hsp90 programs.

We have also demonstrated the increase of certain biomarker activity with increasing doses of STA-9090. In addition to the acceptable safety profile and encouraging signs of biological activity, we have seen patients with confirmed tumor responses as defined by RECIST criteria, patients with substantial tumor shrinkage not qualifying as confirmed RECIST responses, and a number of cases of patients with prolonged stable disease. These patients had previously progressed or failed to respond to treatment with numerous anti-cancer therapies including chemotherapy as well as targeted agents such as Gleevec, Avastin, Sutent, and Tarceva. These signs of activity occurred in patients with lung cancer, renal cancer, gastrointestinal stromal tumors, melanoma, colorectal cancer, and certain leukemia types.

We expect that six to ten new trials for STA-9090 will be initiated in 2010, the majority of which will be investigator-sponsored. Two investigator-sponsored trials were initiated in the second quarter of 2010, one in colorectal cancer and one in ecophagogastric cancer. The specific choice of additional cancer indications and trial designs is being determined based on discussions with our clinical collaborators; further analysis of the results from our ongoing trials; the analysis of preclinical data generated by us and our collaborators; and the underlying science of the interaction between STA-9090 specifically, or Hsp90 inhibition more generally, with the proteins known to promote growth and proliferation in these cancer types.

Additional Hsp90 Inhibitors

We are currently developing a new series of Hsp90 inhibitor compounds that may be orally administered and may be more suitable for long-term treatment settings such as adjuvant and maintenance therapy. We have also characterized follow-on, small molecule, injectable Hsp90 inhibitors that provide additional options for future development. These compounds are in the lead optimization stage

Elesclomol (Oxidative Stress Inducer)

Elesclomol is a first-in-class, investigational drug candidate that triggers apoptosis (programmed cell death) in cancer cells. Cancer cells operate at high levels of reactive oxygen species (ROS), or oxidative stress. Elesclomol is believed to act by increasing the level of oxidative stress in cancer cells even further, beyond sustainable levels, inducing apoptosis. This mechanism of action, called oxidative stress induction, represents a novel way of selectively targeting and killing cancer cells.

In preclinical models, elesclomol showed potent anti-cancer activity against a broad range of cancer cell types, as well as an ability to enhance the efficacy of certain chemotherapy agents with minimal additional toxicity. In September 2006, we reported that in a 21-center, double-blind, randomized, controlled Phase 2b clinical trial in 81 patients with metastatic melanoma, elesclomol in combination with paclitaxel, or ELPAC, met the primary endpoint—doubling the median time patients survived without their disease progressing—compared to paclitaxel alone. The final results of this trial were published in the on-line version of the Journal of Clinical Oncology, or JCO, in October 2009 and appeared in the print version of the JCO in November 2009.

In November 2007, we announced the initiation of a Phase 3 clinical trial, the SYMMETRY trial, to evaluate treatment with ELPAC compared to paclitaxel alone in patients with metastatic melanoma. This trial was suspended in February 2009 based on an interim analysis that identified potential safety concerns. Preliminary results from this trial were presented at the American Society of Clinical Oncology meeting in May 2009 and Perspectives in Melanoma XIII Conference in October 2009. These results showed a differential response to treatment with elesclomol based on level of baseline lactate dehydrogenase, or LDH, an established prognostic biomarker in melanoma and a pre-specified stratification variable in the trial. The primary endpoint of progression-free survival, or PFS, was achieved in the normal LDH population, 68% of patients, with a significant improvement in median PFS (3.6 vs. 2.1 months, HR=0.76, p=0.027), an acceptable safety profile, and no impact on overall survival. In the elevated LDH population, 32% of patients, no difference was observed between the two arms of the trial for the primary endpoint (1.8 vs. 1.9 months, HR=1.10, p=0.549), and a negative impact was observed for the survival endpoint.

Elesclomol was well-tolerated in the SYMMETRY trial and most observed adverse events were National Cancer Institute Common Toxicity Criteria, or NCI CTC, Grade 1 or 2. The most common Grade 3 or higher adverse events in the treatment arm (ELPAC) compared to the control arm (paclitaxel alone) were neutropenia (6.8% vs. 2.5%), fatigue (4% vs. 1.2%), anemia (2.2% vs. 1.8%), dyspnea (2.2% vs. 1.8%), alopecia (1.9% vs. 2.8%), peripheral neuropathy (1.9% vs. 1.2%), vomiting (1.9% vs. 1.5%), and infusion related reaction (1.9% vs. 2.2%).

Results presented at the NCI-AACR-EORTC meeting in November 2009 demonstrated that elesclomol binds copper in plasma, facilitating its uptake into cells and enabling a transition between copper oxidation states inside the cell. Additional research by us and by our external collaborators has shown that this reaction disrupts the metabolic properties of cancer cell mitochondria and generates the oxidative stress that triggers programmed cell death. This ability of elesclomol to disrupt cancer cell mitochondria requires normal oxygen conditions. Under low oxygen conditions, often associated with elevated LDH levels, cancer cell metabolism shifts away from the mitochondria and elesclomol loses anti-cancer activity. These results, together with the results observed in the SYMMETRY trial, suggest that patients with elevated LDH levels should be excluded from future trials with elesclomol.

In late February 2010, we obtained approval from the U.S. Food and Drug Administration, or FDA, to resume clinical development of elesclomol in a specific protocol that excludes patients with elevated LDH levels. We intend to initiate one or more clinical trials of elesclomol during the second half of 2010, one of which will be in acute myeloid leukemia. We plan to use the next generation sodium salt formulation of elesclomol for all future clinical trials with elesclomol.

In December 2009, we presented results at the American Society for Hematology showing that elesclomol was highly active against AML cell lines and primary blast cells from AML patients.

GSK Elesclomol Alliance

In October 2007, as amended in June 2008, we entered into the GSK Agreement for the joint development and commercialization of elesclomol under which we received nonrefundable payments, including an $80 million upfront license fee and $50 million in operational milestone payments. On June 10, 2009, following the suspension of the SYMMETRY trial, we received written notice from GSK of their intent to terminate the GSK Agreement. The termination of the GSK Agreement was effective on September 10, 2009. In accordance with the termination provisions of the GSK Agreement, all rights to the elesclomol program have been returned to us as of the effective date of termination. Should we determine to continue the elesclomol program, we may do so either alone or with another partner. Under the termination provisions in the GSK agreement, we may be required to pay GSK a low single-digit royalty on future sales of elesclomol.

STA-9584 (Vascular Disrupting Agent)

STA-9584 is a novel, injectable, small molecule compound that appears to disrupt the blood vessels that supply tumors with oxygen and essential nutrients. In animal models, STA-9584 has been shown to target both new and established tumor blood vessels, in contrast to the mechanism of action of angiogenesis inhibitors such as Avastin, which only prevent the formation of new tumor vasculature. STA-9584 has shown strong anti-tumor activity in a broad range of preclinical cancer models, including prostate, lung, breast, melanoma, and lymphoma. These models have shown that STA-9584 may kill tumor cells directly, in addition to disrupting established tumor blood vessels. This program is currently in preclinical development.

Our Inflammatory Disease Programs

We have two preclinical-stage programs focusing on treatments for inflammatory diseases. Both of our inflammatory disease programs focus on oral, disease-modifying drug candidates that act through novel mechanisms and could potentially target multiple indications.

IL-12/23 Inhibitors

We have identified several small molecule IL-12/23 inhibitors with significantly improved pharmaceutical properties over our first generation oral inhibitor, apilimod. We believe that these compounds represent a promising opportunity to develop next generation drug candidates that could be administered orally and potentially address a wider range of serious inflammatory diseases such as rheumatoid arthritis, or RA, Crohn's disease, psoriasis and multiple sclerosis.

We are currently reviewing preliminary results from a Phase 2a clinical trial of apilimod in patients with RA. Based on our review of the preliminary results, we do not expect to continue development of apilimod in this indication, with this formulation and route of administration. We believe the pharmaceutical properties of this first generation compound and formulation are not optimized for systemic, oral administration and are currently exploring the possibility of using apilimod in alternative formulations, which may deliver locally higher concentrations.

CRACM Ion Channel Inhibitors

We have developed novel, small molecule inhibitors of CRACM ion channels expressed on immune cells. Our CRACM ion channel inhibitors have shown strong anti-inflammatory activity in preclinical studies both *in vitro* and *in vivo*, inhibiting T cell and mast cell activity, including cytokine release, degranulation, and immune cell proliferation. Potential applications include a wide range of inflammatory diseases and disorders for which modulating T cell and mast cell function has been shown to be critical, including RA, asthma, chronic obstructive pulmonary disease, or COPD, allergy, transplant rejection, and other autoimmune diseases and inflammatory conditions. In December 2008, we entered into a global partnership with Roche to further develop our CRACM inhibitors. In February 2010, we entered into an amendment of the underlying agreement with Roche. We currently have one compound in preclinical development and are targeting filing an IND application for this compound in 2011.

We also have additional CRACM inhibitors in lead optimization. Because there are a number of CRACM ion channel targets on immune cells, we believe that our next generation CRACM inhibitor compounds could potentially apply to different immune system diseases and address distinct therapeutic areas.

Roche CRACM Inhibitor Alliance

In December 2008, as amended in February 2010, we entered into the Roche Agreement to discover, develop, and commercialize small-molecule drugs targeting CRACM channels. The goal of this alliance is to develop a novel category of oral, disease-modifying agents for the treatment of RA, asthma, COPD, allergy, transplant rejection, and other autoimmune diseases and inflammatory conditions. Under the terms of the Roche Agreement, Roche funds research and development to be conducted by us, which includes discovery and certain early development activities for our novel CRACM inhibitors. Roche will receive worldwide rights to develop and commercialize certain products identified prior to the end of the research period. For these licensed products, Roche is responsible for development and commercialization, while we retain certain co-development and co-promotion rights.

The financial terms of the Roche Agreement include a $16 million non-refundable upfront license fee that we received in January 2009, and reimbursement by Roche of all of our research, preclinical development, and clinical development costs, based upon the research and development plans agreed to by the parties. These costs include committed research support over the initial two year research period, the duration of which may be extended upon mutual agreement by the parties. As of March 31, 2010, we have received approximately $14.4 million in research and development support under the Roche Agreement. We are also eligible to receive milestone payments and royalties for products developed as a result of this collaboration. Development milestones across multiple indications of up to $245 million could be earned for the first product, and up to half of this amount could be earned for each of the second and third products. Commercialization milestones of up to $170 million could be earned for each of three products. We will receive tiered royalties on sales of all approved, marketed products. Roche may terminate the agreement on a licensed compound-by-licensed compound basis upon providing advance written notice, but may not do so with respect to all licensed compounds until after a specified date.

Financial Operations Overview

Revenue

We have not yet generated any product revenue and do not expect to generate any product revenue in the foreseeable future, if at all. Our revenues have been generated primarily through partnership agreements with GSK and Roche. The terms of these agreements include payment to us of upfront license fees, milestone payments, research and development cost sharing and royalties. We will seek to generate revenue from product sales and from future collaborative or strategic relationships. Upfront license payments and milestones are recognized ratably as collaboration revenue using the time-based model over the estimated performance period and any changes in the estimated performance period could result in substantial changes to the period over which these revenues are recognized (see "Critical Accounting Policies and Estimates—Revenue Recognition"). In the future, we expect any revenue we generate will fluctuate from quarter-to-quarter as a result of the timing and amount of payments received under the Roche Agreement and from future collaborations or strategic relationships, and the amount and timing of payments we receive upon the sale of our drug candidates, to the extent any are successfully commercialized.

Research and Development

Research and development expense consists of costs incurred in connection with developing and advancing our drug discovery technology and identifying and developing our drug candidates. We charge all research and development expenses to operations as incurred.

Our research and development expense consists of:

- internal costs associated with research, preclinical and clinical activities;
- payments to third party contract research organizations, investigative sites and consultants in connection with our preclinical and clinical development programs;

- costs associated with drug formulation and supply of drugs for clinical trials;
- personnel related expenses, including salaries, stock-based compensation, benefits and travel; and
- overhead expenses, including rent and maintenance of our facilities, and laboratory and other supplies.

We do not know if we will be successful in developing our drug candidates. We believe that accurately projecting total program-specific expenses through commercialization is not possible at this time. The timing and amount of these expenses will depend upon the costs associated with potential future clinical trials of our drug candidates, and the related expansion of our research and development organization, regulatory requirements, advancement of our preclinical programs and product manufacturing costs, many of which cannot be determined with accuracy at this time based on our stage of development. This is due to the numerous risks and uncertainties associated with the duration and cost of clinical trials, which vary significantly over the life of a project as a result of unanticipated events arising during clinical development, including with respect to:

- the number of clinical sites included in the trial;
- the length of time required to enroll suitable subjects;
- the number of subjects that ultimately participate in the trials; and
- the efficacy and safety results of our clinical trials and the number of additional required clinical trials.

Our expenditures are subject to additional uncertainties, including the terms and timing of regulatory approvals and the expense of filing, prosecuting, defending or enforcing any patent claims or other intellectual property rights. In addition, we may obtain unexpected or unfavorable results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of some drug candidates or focus on others. A change in the outcome of any of the foregoing variables in the development of a drug candidate could mean a significant change in the costs and timing associated with the development of that drug candidate. For example, if the FDA or other regulatory authority were to require us to conduct clinical trials beyond those that we currently anticipate, or if we experience significant delays in any of our clinical trials, we would be required to expend significant additional financial resources and time on the completion of clinical development. Additionally, future commercial and regulatory factors beyond our control will evolve and therefore impact our clinical development programs and plans over time. In 2010, we anticipate that our overall research and development expenses for personnel and external costs will decrease principally due to non-recurring costs incurred in 2009 in connection with our elesclomol program that was suspended in the first quarter of 2009, as well as a realignment of our resources to focus on advancing the CRACM research program to identify the second licensed compound thereby shifting preclinical and clinical development of the first licensed compound to Roche. However, we anticipate that these decreases will be offset in part due to the further clinical advancement of STA-9090 and the planned restart of clinical development in elesclomol in the second half of 2010.

Beyond our current lead drug candidates, we anticipate that we will select drug candidates and research projects for further development on an ongoing basis in response to their preclinical and clinical success, as well as commercial potential.

General and Administrative

General and administrative expense consists primarily of salaries and related expenses for personnel in executive, finance, business and commercial development, investor and medical community relations, human resources and administrative functions. Other costs include stock-based compensation costs, directors' and officers' liability insurance premiums, legal costs of pursuing patent protection of our intellectual property, fees for general legal, accounting, public-company requirements and compliance, and other professional services, as well as overhead-related costs not otherwise included in research and development. In 2010, we anticipate that our overall general and administrative expenses will remain at levels similar to the second half of 2009.

Restructuring

On March 12, 2009, we committed to a restructuring plan that consisted primarily of an immediate workforce reduction of approximately 90 positions, to a total of approximately 130 positions, to align our workforce to our revised operating plans following the suspension of our SYMMETRY clinical trial. In the first quarter of 2009, we recorded a restructuring charge of approximately $1.2 million for severance and estimated benefits continuation costs and outplacement services. In addition, we paid approximately $0.2 million in unused paid-time off that had been recognized as expense prior to the restructuring, including $0.1 million in the year ended December 31, 2008 and $0.1 million in the first quarter of 2009. The approximate $1.4 million in restructuring related payments for severance, unused paid-time off, benefits and outplacement services was fully paid in 2009.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations are based on our financial statements which have been prepared in accordance with U.S. generally accepted accounting principles, or GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported periods. We are required to make estimates and judgments with respect to research contract accruals, the recoverability of long-lived and deferred tax assets, measurement of stock-based compensation and the periods of performance under collaborative research and development agreements. We base our estimates on historical experience, known trends and events, and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources and the reported amounts of revenues and expenses. Actual results may differ from these estimates under different assumptions or conditions.

There have been no significant changes to our critical accounting policies in 2010. You should read the following discussion of our reported financial results in conjunction with the critical accounting policies disclosed in our Annual Report on Form 10-K for the year ended December 31, 2009, as filed with the Securities and Exchange Commission on March 11, 2010.

Consolidated Results of Operations

Three Months Ended March 31, 2010 Compared with Three Months Ended March 31, 2009

Collaboration Revenue

	Three Months Ended March 31,		2010 to 2009 Change	
	2010	2009	$	%
	(dollars in millions)			
License and milestone revenue—Roche	$ 1.1	$ 1.1	—	—%
License and milestone revenue—GSK	—	2.9	(2.9)	(100)%
	1.1	4.0	(2.9)	(73)%
Cost sharing reimbursements, net—Roche	2.9	2.5	0.4	16%
Cost sharing reimbursements, net—GSK	—	(2.0)	2.0	(100)%
	2.9	0.5	2.4	480%
Total collaboration revenue	$ 4.0	$ 4.5	$ (0.5)	(11)%

In the three months ended March 31, 2010, license and milestone revenue decreased by $2.9 million over the three months ended March 31, 2009 due to the termination of the GSK Agreement that was effective in September 2009. In the three months ended March 31, 2010, cost sharing reimbursements increased by $2.4 million over the three months ended March 31, 2009, principally due to $2.0 million in non-recurring net cost sharing reimbursements due to GSK that were recognized in the first quarter of 2009. (See Notes 2, 9 and 10 in the accompanying condensed consolidated financial statements.)

Research and Development Expense

	Three Months Ended March 31,		2010 to 2009 Change	
	2010	2009	$	%
	(dollars in millions)			
Clinical-stage drug candidates				
STA-9090	$ 6.1	$ 2.3	$ 3.8	165%
Elesclomol	0.7	15.6	(14.9)	(96)%
Apilimod	0.1	0.2	(0.1)	(50)%
Total clinical-stage drug candidates	6.9	18.1	(11.2)	(62)%
CRACM	2.5	2.1	0.4	19%
Other early stage programs	0.8	2.4	(1.6)	(67)%
Total research and development	$ 10.2	$ 22.6	$ (12.4)	(55)%

In the three months ended March 31, 2010, costs incurred under our STA-9090 program increased by $3.8 million over the three months ended March 31, 2009, including increases of $2.9 million for personnel costs, related research supplies, operational overhead and stock compensation, and $0.9 million for external costs. These increases were principally due to the advancement of clinical development, including six ongoing clinical trials and supporting drug supply, as well as efforts in support of the planned initiation of six to ten new clinical trials in 2010 in additional cancer types, with the majority being investigator-sponsored trials.

In the three months ended March 31, 2010, costs incurred under our elesclomol program decreased by $14.9 million over the three months ended March 31, 2009, including decreases of $5.2 million for personnel costs, related research supplies, operational overhead and stock compensation, and $9.7 million for external costs. These decreases were principally due to non-recurring costs incurred in 2009 resulting from the suspension of our elesclomol program in the first quarter of 2009, offset in part by efforts in support of the planned restart of clinical development in the second half of 2010. On February 26, 2009, we suspended the SYMMETRY trial, which was initiated in the third quarter of 2007, as well as the additional ongoing clinical studies using the sodium salt, water soluble formulation of elesclomol, including the Phase 1/2 trial of elesclomol in combination with docetaxel and prednisone in prostate cancer that was initiated in the fourth quarter of 2008 and the monotherapy Phase 1 trial in solid tumors that was initiated in January 2009. Subsequently, on March 12, 2009, we committed to a restructuring that consisted primarily of an immediate workforce reduction.

In the three months ended March 31, 2010, costs incurred under our apilimod program decreased by $0.1 million over the three months ended March 31, 2009, due to a $0.1 million decrease for external costs.

In the three months ended March 31, 2010, costs incurred under our CRACM program increased by $0.4 million over the three months ended March 31, 2009, including an increase of $0.8 million for personnel costs, related research supplies, operational overhead and stock compensation, offset by a decrease of $0.4 million for external costs. The increase in internal-related costs reflects the realignment of our resources to focus on advancing the research program to identify the second licensed compound thereby shifting preclinical and clinical development of the first licensed compound to Roche.

In addition, in the three months ended March 31, 2010, costs incurred under our other early-stage programs decreased by $1.6 million over the three months ended March 31, 2009, due to decreases of $1.1 million for personnel costs, related research supplies, operational overhead and stock compensation, and $0.5 million for external costs.

General and Administrative Expense

	Three Months Ended March 31,		2010 to 2009 Change	
	2010	2009	$	%
	(dollars in millions)			
General and administrative	$ 3.1	$ 4.1	$ (1.0)	(24)%

The decrease in general and administrative expense principally resulted from decreases of $0.3 million for personnel costs and related overhead in connection with decreased headcount and stock compensation due in part to the workforce reduction in the first quarter of 2009, and $0.7 million in external professional fees, including intellectual property and general legal fees, public-company reporting and compliance costs, director and officer insurance premiums, investor and medical-community relations, commercial development and corporate taxes.

Other (Expense) Income, net

	Three Months Ended March 31,		2010 to 2009 Change	
	2010	2009	$	%
	(dollars in millions)			
Other (expense) income, net	$ (0.1)	$ (0.1)	—	—%

A decrease in interest expense due to lower capital equipment lease balances was offset in part by lower investment income due to declining interest rates and lower average cash balances.

Liquidity and Capital Resources

Cash Flows

The following table provides information regarding our cash position, cash flows and capital expenditures for the three months ended March 31, 2010 and 2009:

	Three Months Ended March 31,	
	2010	2009
	(dollars in millions)	
Cash, cash equivalents and marketable securities	$ 57.9	$ 84.8
Working capital	45.9	43.0
Cash flows (used in) provided by:		
Operating activities	(12.6)	12.2
Investing activities	—	(22.5)
Financing activities	26.4	(0.7)
Capital expenditures (included in investing activities)	—	(0.1)

In the three months ended March 31, 2010, our operating activities used cash of $12.6 million, including the receipt of $2.4 million in partnership payments by Roche offset by $15 million in net cash used in operations. In the three months ended March 31, 2009, our operating activities provided cash of $12.2 million, including the receipt of $29 million in partnership payments by GSK and Roche offset by $16.8 million in net cash used in operations. The use of cash in these periods principally resulted from our losses from operations, as adjusted for non-cash charges for depreciation and stock-based compensation, and changes in our working capital accounts.

Our investing activities used cash of $22.5 million in the three months ended March 31, 2009, including purchases of marketable securities in the amount of $24.7 million and purchases of property and equipment in the amount of $0.4 million, offset by sales and maturities of marketable securities of $2.6 million.

Our financing activities provided cash of $26.4 million in the three months ended March 31, 2010. In January 2010, we raised $26.7 million in net offering proceeds from the sale of 6,388,889 shares of our common stock at $4.50 per share in an underwritten public offering. We repaid $0.3 million and $0.7 million in capital equipment leases in the three months ended March 31, 2010 and 2009, respectively.

Contractual Obligations and Commitments

There have been no material changes to the contractual obligations and commitments included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2009.

Funding Requirements

We expect to continue to incur significant operating expenses in the foreseeable future as we:

- complete the ongoing and contemplated Phase 1, Phase 1/2 and Phase 2 clinical trials of STA-9090 in solid tumors and hematologic cancers and initiate additional clinical trials of STA-9090, if supported by the preclinical data or earlier clinical trial results;
- complete preclinical development of an additional Hsp90 inhibitor and initiate clinical trials of this compound, if supported by the preclinical data;
- continue to collect and evaluate the overall survival data from the suspended Phase 3 SYMMETRY trial of elesclomol and initiate additional clinical trials of elesclomol;
- complete preclinical development of STA-9584 and initiate clinical trials, if supported by positive preclinical data;
- advance our CRACM inhibitor program into clinical trials, if supported by positive preclinical data, to the extent that these activities are not funded by Roche under the Roche Agreement;
- discover, develop, and seek regulatory approval for backups of our current drug candidates and other new drug candidates;
- identify additional compounds or drug candidates and acquire rights from third parties to those compounds or drug candidates through licenses, acquisitions or other means; and
- commercialize any approved drug candidates.

Our funding requirements will depend on a number of factors, including:

- the progress and results of our ongoing Phase 1, Phase 1/2 and Phase 2 clinical trials of STA-9090, any additional Phase 1 or Phase 2 clinical trials of STA-9090 we may initiate and any later stage clinical trials we may initiate in the future based on the results of the earlier stage clinical trials;
- the progress and results of additional clinical trials of elesclomol that we expect to initiate;
- the results of our preclinical studies of STA-9584, and our decision to initiate clinical trials, if supported by the preclinical and other test results;
- our ability to fulfill our obligations under and otherwise maintain the Roche Agreement and for Roche to satisfy its obligations under the Roche Agreement, including payment of funding obligations and milestone payments;
- the costs, timing, and outcome of regulatory review of our drug candidates;

- the scope, progress, results, and cost of preclinical development, clinical trials, and regulatory review of any new drug candidates we may discover or acquire;
- the costs of preparing, filing, and prosecuting patent applications and maintaining, enforcing, and defending intellectual property-related claims;
- our ability to establish additional strategic collaborations and licensing or other arrangements on terms favorable to us;
- the costs to satisfy our obligations under potential future collaborations; and
- the timing, receipt, and amount of sales or royalties, if any, from elesclomol, apilimod, STA-9090, STA-9584, our CRACM inhibitors and our other potential products.

Liquidity

As of March 31, 2010, we had $57.9 million in cash and cash equivalents, an increase of $13.7 million from $44.2 million as of December 31, 2009. This increase principally reflects $26.7 million in net proceeds from the public offering of our common stock that we completed in January 2010 and $2.4 million in payments from Roche for research and development support, offset by cash used in operations as discussed under "Cash Flows" above.

We do not anticipate that we will generate product revenue in the foreseeable future, if at all. We expect our continuing operations to use cash over the next several years and such cash use may increase significantly from year to year. While we are engaged in multiple preliminary partnership discussions for each of our currently unpartnered programs—STA-9090, elesclomol, VDA, and apilimod—which could result in one or more new partnership agreements in 2010 that may include upfront payments and cost-sharing provisions, there is no guarantee we will be successful in entering into any such partnership agreements on commercially reasonable terms, if at all, or that we will receive any other revenue through these partnership efforts in the future. Based on our current operating levels, we expect our existing funds, together with expected research and development reimbursements and $5 million of milestone payments anticipated in connection with certain preclinical and clinical achievements under the Roche Agreement, will be sufficient to fund operations into 2012.

We may require significant additional funds earlier than we currently expect in order to conduct additional clinical trials and conduct additional preclinical and discovery activities. Because of the numerous risks and uncertainties associated with the development and commercialization of our drug candidates, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated clinical trials.

To the extent our capital resources are insufficient to meet our future capital requirements, we will need to finance our future cash needs through public or private equity offerings, collaboration agreements, debt financings or licensing arrangements. However, the credit markets and the financial services industry have recently been experiencing a period of turmoil and uncertainty that have made equity and debt financing more difficult to obtain. Additional funding may not be available to us on acceptable terms or at all. In addition, the terms of any financing may adversely affect the holdings or the rights of our stockholders. For example, if we raise additional funds by issuing equity securities or by selling convertible debt securities, further dilution to our existing stockholders may result. If we raise funds through collaboration agreements or licensing arrangements, we may be required to relinquish rights to our technologies or drug candidates, or grant licenses on terms that are not favorable to us.

If adequate funds are not available, we may be required to terminate, significantly modify or delay our research and development programs, reduce our planned commercialization efforts, or obtain funds through collaborators that may require us to relinquish rights to our technologies or drug candidates that we might otherwise seek to develop or commercialize independently. Conversely, we may elect to raise additional funds even before we need them if the conditions for raising capital are favorable, including through offerings of securities pursuant to our shelf registration statement on Form S-3, under which we currently have up to $121.2 million in securities available for issuance.

Certain Factors That May Affect Future Results of Operations

The Securities and Exchange Commission, or SEC, encourages companies to disclose forward-looking information so that investors can better understand a company's future prospects and make informed investment decisions. This Quarterly Report on Form 10-Q contains such "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995.

Words such as "may," "anticipate," "estimate," "expects," "projects," "intends," "plans," "believes" and words and terms of similar substance used in connection with any discussion of future operating or financial performance, identify forward-looking statements. All forward-looking statements are management's present expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those described in the forward-looking statements. These risks include, but are not limited to those set forth under the heading "Risk Factors" contained in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2009 that we have filed with the SEC.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this Quarterly Report on Form 10-Q might not occur. Stockholders are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this Quarterly Report on Form 10-Q. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to Synta or to any person acting on its behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Interest Rate Sensitivity. As of March 31, 2010, we had cash and cash equivalents of $57.9 million. Our cash is deposited in a highly rated financial institution in the United States and in a short-term U.S. Treasury money market fund. The primary objective of our investment activities is to preserve our capital for the purpose of funding operations and we do not enter into investments for trading or speculative purposes. We believe that we did not have material exposure to high-risk investments such as mortgage-backed securities, auction rate securities or other special investment vehicles, or SIV's, within our money-market fund investments. We believe that we do not have any material exposure to changes in fair value as a result of changes in interest rates. Declines in interest rates, however, would reduce future investment income. During the three months ended March 31, 2010, our investment income was negligible.

Capital Market Risk. We currently have no product revenues and depend on funds raised through other sources. One possible source of funding is through further equity offerings. Our ability to raise funds in this manner depends upon capital market forces affecting our stock price.

Item 4. Controls and Procedures.

(a) *Evaluation of Disclosure Controls and Procedures.* Our principal executive officer and principal financial officer evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act) as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on this evaluation, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

(b) *Changes in Internal Controls.* There were no changes in our internal control over financial reporting, identified in connection with the evaluation of such internal control that occurred during our last fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings.

We are currently not a party to any material legal proceedings.

Item 1A. Risk Factors.

There have been no material changes to the risk factors included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2009.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. (Removed and Reserved).

Item 5. Other Information.

None.

Item 6. Exhibits.

(a) *Exhibits*

†10.1	Amendment, dated February 5, 2010, to Collaboration and License Agreement, dated December 23, 2008, by and between the Registrant and F. Hoffmann-La Roche Ltd, and its affiliate, Hoffman-La Roche Inc.
31.1	Certification of principal executive officer under Section 302(a) of the Sarbanes-Oxley Act of 2002.
31.2	Certification of principal financial officer under Section 302(a) of the Sarbanes-Oxley Act of 2002.
32.1	Certifications of the principal executive officer and the principal financial officer under Section 906 of the Sarbanes-Oxley Act of 2002.

† Confidential portions of this document have been filed separately with the Securities and Exchange Commission pursuant to a request for confidential treatment.

Table of Contents

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 thereunto duly authorized.

SYNTA PHARMACEUTICALS CORP.

Date: May 4, 2010	By:	/s/ SAFI R. BAHCALL, PH.D. Safi R. Bahcall, Ph.D. President and Chief Executive Officer (principal executive officer)
Date: May 4, 2010	By:	/s/ KEITH S. EHRLICH, C.P.A. Keith S. Ehrlich, C.P.A. Vice President Finance and Administration, Chief Financial Officer (principal accounting and financial officer)

Exhibit 10.1

EXECUTION COPY

AMENDMENT TO COLLABORATION AND LICENSE AGREEMENT

This Amendment (the "Amendment") executed on the fifth (5th) day of February 2010 is effective as of the first (1st) day of January 2010 (the "Amendment Effective Date") and amends the Collaboration and License Agreement dated as of December 23, 2008, between SYNTA PHARMACEUTICALS CORP., a Delaware corporation having a principal office at 45 Hartwell Avenue, Lexington, MA 02421, U.S.A. ("SYNTA"), and F. HOFFMANN-LA ROCHE LTD, a Swiss corporation having a principal office located at Grenzacherstrasse 124, CH-4070 Basel, Switzerland ("ROCHE BASEL") and HOFFMANN-LA ROCHE INC., a New Jersey corporation having a principal office at 340 Kingsland Street, Nutley, New Jersey 07110, U.S.A. ("ROCHE NUTLEY"; ROCHE BASEL and ROCHE NUTLEY together referred to as "ROCHE") (the "Agreement").

INTRODUCTION

WHEREAS, SYNTA and ROCHE plan to substantively update the Research and Development objectives for the collaboration under the Agreement for the fourth (4th) Calendar Quarter of 2009 ("Q42009") and calendar year 2010;

WHEREAS, to meet such updated objectives, SYNTA and ROCHE desire to change the distribution of Research and Development activities between the Parties and to agree upon a revised budget for Research activities, and a revised Budget for Development activities, for Q42009 and calendar year 2010;

WHEREAS, the Parties may amend the Agreement by mutual written agreement pursuant to Section 14.5 of the Agreement;

WHEREAS, the Parties wish to amend the Agreement, as described herein.

NOW THEREFORE, for and in consideration of the mutual covenants contained in this Amendment, the Parties agree:

1. Definitions. Unless otherwise defined or amended by the terms of this Amendment, all initial capitalized defined terms used have the meanings as defined in the Agreement. Section 1.16 of the Agreement is revised in its entirety to read as follows:

"1.16. "CRAC Channel Inhibitor" means [***]."

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

Section 1.42 of the Agreement is revised in its entirety to read as follows:

"1.42. "Licensed Compound" means [***]. For further clarity, if ROCHE terminates a Licensed Compound in one or more regions pursuant to Section 12.3, such Licensed Compound shall continue to be deemed a Licensed Compound except as provided in Article XII unless and until ROCHE terminates such Licensed Compound in all Regions pursuant to Section 12.3 (whether ROCHE so terminates such Licensed Compound in all Regions simultaneously or terminates such Licensed Compound in all Regions over time). For the sake of clarity, any Licensed Compound shall also include all pro-drugs, metabolites, constitutional and geometric isomers, regioisomers, stereoisomers including enantiomers and diastereoisomers, salt forms, hydrates, solvates and polymorphs of such Licensed Compound, all of which shall constitute a single Licensed Compound. [***]."

2. R&D Activities. Notwithstanding anything to the contrary in the Agreement, with respect to calendar year 2010, the Parties have reallocated Research and Development activities, such that the Research Plan and Development Plan for calendar year 2010 are set forth in Exhibit A, Exhibit B and Exhibit C attached, and, with respect to Q42009, the Parties have reallocated Research and Development activities as set forth in Exhibit A. ROCHE shall fund the Research and Development activities for calendar year 2010 as set forth in Exhibit B. ROCHE shall fund all of ROCHE's Research and Development activities for Q42009, and shall fund all of SYNTA's Research and Development activities for Q42009 in accordance with the revised budget set forth on page 26 of the Powerpoint presentation dated August 31, 2009, titled "CRAC Channel Blocker Project, JRDC Report" (copy attached as Exhibit D) and presented to the JSC (the "Revised Q42009 Budget"), which the Parties hereby ratify as an amendment to the Research Plan and Development Plan for Q42009.

3. Compounds. Section 2.3.2 of the Agreement is revised in its entirety to read as follows: "The Research Program shall be conducted on Collaboration Compounds; provided, however, that if, in the course of the Research Program, it is determined that any such compound is not a CRAC Channel Inhibitor, such compound shall no longer be considered a Collaboration Compound, provided, further, that no Genentech CRAC Channel Inhibitors shall be included in the Research Program, and provided, further, that any Collaboration Compound that is not a Licensed Compound as of the end of the Research Term (a "Retained Compound") shall no longer be deemed a Collaboration Compound for purposes of this Agreement. Notwithstanding the foregoing, any [***] CRAC Channel Inhibitors for which ROCHE had conducted research prior to the Amendment Effective Date shall revert to ROCHE if such compound is not a Licensed Compound as of the end of the Research Term. The Parties currently envision that no more than a small minority of the Parties' Research activities during the Research Term shall be conducted with respect to the compounds referred to in the foregoing sentence;

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

during the Research Term and subject to mutual agreement, the Parties may modify the proportion of the Parties' Research activities devoted to such compounds. For the period of [***] ([***]) [***] following the end of the Research Term, any small-molecule compound Controlled by ROCHE or its Affiliates known or believed to be a CRAC Channel Inhibitor on which research or development is conducted by or on behalf of ROCHE or its Affiliates, as well as all pro-drugs, metabolites, constitutional and geometric isomers, regioisomers, stereoisomers including enantiomers and diastereoisomers, salt forms, hydrates, solvates, and polymorphs of such compound, shall be deemed to be a Licensed Compound for all purposes under the Agreement. The goal of the Research Program is for one or more Licensed Compounds to be approved for advancement into Development under Section 2.3.4."

4. Retained Compounds. (a) ROCHE hereby grants to SYNTA, effective as of the end of the Research Term, an exclusive, royalty-free, irrevocable, perpetual license, with the right to grant sublicenses, under the ROCHE Patent Rights, ROCHE Know-how, and ROCHE's interest in any Joint Patent Rights or Joint Know-how, in each case as of the end of the Research Term, Covering Retained Compounds and pharmaceutical products containing as an active pharmaceutical ingredient a Retained Compound ("Retained Products"), to research, develop, Manufacture, have Manufactured, use, Commercialize and import such Retained Compounds or Retained Products. Notwithstanding the above, Roche shall retain the right under the ROCHE Patent Rights, ROCHE Know-how, and ROCHE's interest in any Joint Patent Rights or Joint Know-how for ROCHE and its Affiliates to conduct their own internal research. (b) With respect to that subset of the ROCHE Patent Rights, ROCHE Know-how, Joint Patent Rights, and Joint Know-how licensed to SYNTA under Section 4(a) of this Amendment: (i) the provisions of Sections 8.2 (Prosecution and Maintenance of Patent Rights), 8.3 (Third Party Infringement), 8.4 (Patent Invalidity Claim), 8.6 (Certification Under Drug Price Competition and Patent Restoration Act) and 8.7 (Cooperation) of the Agreement shall remain in effect, and (ii) SYNTA shall have the first right, at its expense, to prosecute, maintain, enforce or defend, or initiate litigation under such provisions with respect to such subset of ROCHE Patent Rights or ROCHE Know-how, with ROCHE having the step-in rights of the non-initiating Party as set forth therein. (c) At the end of the Research Term, ROCHE shall assign to SYNTA its entire right, title, and interest in and to, and deliver to SYNTA copies of, all preclinical data, including pharmacology and biology data, in ROCHE's or its Affiliates' possession or control relating to and to the extent necessary for SYNTA to continue the research, development or Commercialization of Retained Compounds and Retained Products. (d) The definitions and provisions described in this Section 4 shall be interpreted, *mutatis mutandis*, to apply to the Retained Compounds and Retained Products.

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

5. Clinical Trials. Notwithstanding Sections 2.4.1 and 2.7.1 of the Agreement, ROCHE shall be responsible for the conduct of all Clinical Trials with respect to the relevant First Licensed Compound; provided, however, that (a) SYNTA shall have the right to review and comment on the IND and clinical protocols for the First Licensed Compound a reasonable period of time prior to its filing by or on behalf of ROCHE, and ROCHE shall reasonably consider SYNTA's comments with respect thereto; and (b) SYNTA shall have the right (itself or through its Affiliates or Third Parties), at SYNTA's option, to conduct a Phase 2a Clinical Trial for an Indication other than rheumatoid arthritis with respect to the relevant First Licensed Compound, provided, that such Indication is part of the Development Plan. Notwithstanding anything in the Agreement to the contrary, SYNTA shall have a Right of Reference or Use to the IND and any other regulatory filings with respect to such Licensed Compound to the extent necessary for the conduct of SYNTA's Development activities under this Agreement and ROCHE shall provide SYNTA with all reasonable assistance with respect to such filings and the conduct of such Phase 2a Clinical Trial. For the sake of clarity, Section 4.2.2 of the Agreement (regarding regulatory communications and correspondence) shall remain in effect unchanged.

6. Clarification of Approval for Advancement into Development. In the sixth sentence of Section 3.2.4, after " … the approval of advancement into Development (pursuant to Section 2.3.4)," the following language is hereby inserted: "the approval of Clinical Candidate Selection based on criteria similar to those for a similar ROCHE program,".

7. Implications of Research Term Extension. Notwithstanding anything to the contrary in the Agreement, if the Parties agree to extend the Research Term beyond its initial two (2) year term, then, with respect to each Contract Year during such extended Research Term, (a) all FTEs specified in the Research Plan for target biology activities shall be supplied by SYNTA, and (b) unless otherwise mutually agreed by the Parties and subject to SYNTA having the necessary FTEs, the number of SYNTA FTEs performing medicinal chemistry activities shall be greater than the number of ROCHE FTEs performing medicinal chemistry activities, with ROCHE bearing all costs for such SYNTA FTEs, in accordance with a Research Plan and budget mutually agreed by the Parties in good faith. The first sentence of Section 12.3 of the Agreement is hereby amended by replacing it with the following: "At any time after the Research Term, ROCHE shall have the right to terminate this Agreement in its entirety for any reason upon three (3) months prior written notice to SYNTA, such notice to be provided no earlier than ninety (90) days before the end of the Research Term".

8. Financial Provisions. The Development Event in Section 7.4(a) of the Agreement is hereby changed from "Initiation of GLP Toxicology Study" to "Earlier of JSC

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

Approval of Clinical Candidate Selection or Initiation of GLP Toxicology Study." In addition, Sections 7.6.1 and 7.6.2 of the Agreement are revised in their entirety to read as follows:

"7.6.1 Licensed Product Royalties. ROCHE shall pay to SYNTA royalties on the aggregate worldwide annual (on a calendar year basis) Net Sales of each Licensed Product in the Territory, on a Licensed Product-by-Licensed Product basis, as follows:

	Aggregate Worldwide Annual Net Sales of Licensed Product	**Royalty Rate**
(i)	First $[***]	[***]%
(ii)	Portion above $[***] and up to and including $[***]	[***]%
(iii)	Portion above $[***] and up to and including $[***]	[***]%
(iv)	Portion above $[***]	[***]%

7.6.2 Applicability of Royalty Rates to Net Sales in the Territory. Royalties payable pursuant to this Section 7.6 shall be paid at the rate applicable to the portion of Net Sales within each of the Net Sales levels during the applicable calendar year for such Licensed Product. For example, if, during a calendar year, aggregate worldwide annual Net Sales of a particular Licensed Product were equal to $[***], then the royalties payable by ROCHE would be calculated by adding (i) the royalties with respect to the first $[***] at the first-level percentage of [***] percent ([***]%) ($[***]), and (ii) the royalties with respect to the next $[***] at the second-level percentage of [***] percent ([***]%) ($[***]), for a total royalty of $[***]."

9. Clarifications. Upon termination of the Research Term, ROCHE shall return or provide to SYNTA or, at SYNTA's request, destroy all Confidential Information of either Party with respect to Retained Compounds and all copies and reproductions thereof and such Confidential Information shall thereafter be deemed to be Confidential Information of SYNTA, with SYNTA being deemed to be the disclosing Party and ROCHE being deemed to be the receiving Party with respect thereto; provided, however, that ROCHE's legal counsel may retain one copy of such Confidential Information for archival purposes. Notwithstanding the return or destruction of such Confidential Information, ROCHE shall continue to be bound by its obligations of confidentiality and other obligations under Article IX of the Agreement. During the Research Term, any Collaboration Compound not then meeting the criteria to be a Licensed Compound may be deemed to be a Licensed Compound by mutual written agreement of the Parties.

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

10. Patent Provisions.

(a) Section 8.2.1 of the Agreement is revised in its entirety to read as follows:

"8.2.1. Prosecution of SYNTA Patent Rights. SYNTA shall have the first right to prepare, file, prosecute and maintain SYNTA Patent Rights, [***] (subject to Sections 8.2.4.4(a) and 8.2.4.4(b)). ROCHE shall be given access to all documentation, filings and communications to or from the respective patent offices in connection with the prosecution and maintenance of the SYNTA Patent Rights, at reasonable times and upon reasonable written notice, which access shall consist of review of said documentation, filings and communications and receipt of copies thereof. SYNTA shall keep ROCHE informed of the status of all pending patent applications included in the SYNTA Patent Rights, and ROCHE shall have the right to comment on the prosecution of such pending patent applications and SYNTA, its agents and attorneys will implement the timely suggestions and comments provided in good faith by ROCHE regarding any such activities; provided that, if SYNTA disagrees with ROCHE's suggestions and comments, then SYNTA shall have the right to bring this matter to the JPC for resolution. SYNTA shall not discontinue prosecution or maintenance of any SYNTA Patent Rights (including selection of countries for foreign filing or entry into the PCT National Stage) without at least [***] ([***]) days' prior written notice to ROCHE. If SYNTA decides to discontinue prosecution or maintenance of any SYNTA Patent Rights, ROCHE shall have the option to assume responsibility for prosecuting and maintaining such SYNTA Patent Rights, at ROCHE's sole expense, and in such case, except for a change in responsibility for prosecuting and maintaining SYNTA Patent Rights under this Section 8.2.1, no changes in ownership or licensing terms pertaining to any SYNTA Patent Rights shall occur."

(b) Section 8.2.3 of the Agreement is revised in its entirety to read as follows:

"8.2.3. Prosecution of Joint Patent Rights. SYNTA shall be responsible for preparing, filing, prosecuting, or maintaining Joint Patent Rights in appropriate countries in the Territory. The out-of-pocket costs and expenses incurred to obtain, prosecute and maintain Joint Patent Rights shall be [***] (subject to Sections 8.2.4.4(a) and 8.2.4.4(b)). SYNTA shall keep ROCHE informed of the status of all pending applications disclosing Joint Inventions, and shall implement all of ROCHE's timely suggestions and comments provided in good faith regarding any aspect of such patent prosecution; provided that, if SYNTA disagrees with ROCHE's suggestions and comments, then SYNTA shall have the right to bring this matter to the JPC for resolution. SYNTA shall not discontinue prosecution or maintenance of any Joint Patent Right without at least [***] ([***]) days' prior written notice to ROCHE. If SYNTA decides to discontinue prosecution or maintenance of any Joint Patent Rights, ROCHE shall have the option to continue to prosecute and maintain such Joint Patent Rights, at ROCHE's sole expense, and in such case, except for the change in responsibility for prosecuting and maintaining Joint Patent

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

Rights under this Section 8.2.3, no changes in ownership or licensing terms pertaining to any such Joint Patent Rights shall occur."

(c) Section 8.2.4 of the Agreement is revised in its entirety to read as follows:

"8.2.4. Joint Patent Committee.

8.2.4.1. Formation and Membership. Within [***] ([***]) Business Days after the Amendment Effective Date, SYNTA and ROCHE shall establish a joint patent committee ("JPC") comprised of an equal number of representatives (one (1) or more as agreed by the Parties) from each of SYNTA and ROCHE. Each Party may change any one or more of its representatives to the JPC at any time upon written notice to the other Party. SYNTA's participation on the JPC after the expiration of the Research Term shall be at SYNTA's election.

8.2.4.2. Administrative Matters. The JPC shall appoint a chairperson from among its members, who will alternate annually between the representative(s) from SYNTA and the representative(s) from ROCHE, with the first chairperson (i.e., for calendar year 2010) to be a representative of SYNTA. The chairperson shall be responsible for calling meetings of the JPC, setting the meeting agendas and leading the meetings. A JPC member of the chairing Party shall serve as secretary of such meetings. The secretary shall promptly prepare and distribute to all members of the JPC draft minutes of the meeting for review and comment, including a list of any actions or decisions approved by the JPC, with the goal of distributing final approved minutes of each JPC meeting within thirty (30) days after the meeting.

8.2.4.3. Meetings. The JPC shall meet as needed, taking into account the responsibilities of the JPC, but not less than once during each Contract Year. The location of JPC meetings shall be as agreed by the Parties, and may be held in person (in which case such meetings shall alternate between the offices of SYNTA and ROCHE), or by telephone conference call or by videoconference. Each Party shall use reasonable efforts to cause its representatives to attend the meetings of the JPC. If one or more representatives of a Party is unable to attend a meeting, such Party may designate an alternate representative to attend such meeting in place of each absent representatives. Either Party may also request a special meeting of the JPC at any time by providing written notice to the other Party. Such meeting shall be convened at

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

such time as may be mutually agreed upon by the Parties, but in any event shall be held within fifteen (15) days after the date of such notice.

8.2.4.4. Responsibilities.

(a) The Parties, through the JPC, shall annually review and approve (such approval not to be unreasonably withheld, conditioned or delayed by either Party) an annual budget for SYNTA's preparation, filing, prosecution, and maintenance of SYNTA Patent Rights and Joint Patent Rights ("Patent Budget"), with a view to having an approved Patent Budget at least [***] ([***]) days prior to the start of each Contract Year. In addition, the Parties, through the JPC, may periodically review and approve revisions to the Patent Budget ("Revised Patent Budget"). [***]; provided, that (i) for the Contract Year commencing January 1, 2010, the Patent Budget shall be $[***]; and (ii) if, prior to the commencement of any given Contract Year after 2010, the JPC is unable to agree upon the Patent Budget for such Contract Year, the Patent Budget shall remain the same as the Patent Budget which was approved for the immediately-prior Contract Year, unless and until otherwise mutually agreed by the JPC. Subject always to the foregoing, (x) each Party shall have one (1) vote on the JPC with respect to the Patent Budget or Revised Patent Budget for each Contract Year, (y) both Parties must vote in the affirmative to approve the relevant Patent Budget or Revised Patent Budget, which vote may be taken at a meeting, by teleconference or videoconference or by written agreement, and (z) if the JPC does not approve a Patent Budget at least [***] ([***]) days prior to the start of each Contract Year, or if the amount of a proposed Revised Patent Budget is less than the Patent Budget, then either Party may refer the matter to the JSC for resolution pursuant to Section 3.2.4 (escalating to the Executive Officers and then to arbitration pursuant to Section 13.2, if not earlier resolved).

(b) With regard to any given Patent Right within the SYNTA Patent Rights or the Joint Patent Rights, ROCHE shall have the option of [***]; provided that, such option shall be exercised by ROCHE by written notice to Synta and shall be effective [***] ([***]) days from the date of such notice. When such option becomes effective, and subject to Sections 8.2.4.4(a), 8.2.4.4(b), and 8.2.4.4(c), a Revised Patent Budget shall be proposed to the JPC, to reflect a subtraction or reallocation of the costs and expenses for such non-paid Patent Right from the most recently approved Patent Budget or Revised Patent Budget.

(c) The JPC shall also be a forum for discussing strategy with respect to the preparation, filing, prosecution, maintenance and

enforcement of SYNTA Patent Rights, Joint Patent Rights and ROCHE Patent Rights, and defense against actual or threatened infringement claims made by Third Parties related to activities under this Agreement, but the Parties shall retain their decision-making authority as set forth in Sections 8.2.2, 8.2.6, 8.3 and 8.4 of the Agreement and Section 8.2.4.5 of this Amendment. Otherwise, and except for any disputes with respect to the amount of the Patent Budget or Revised Patent Budget (which shall remain subject to resolution pursuant to Section 8.2.4.4(a)), Roche shall have final decision-making authority over any disputes at the JPC.

8.2.4.5. Consequences of Not Paying Patent Costs or Incurring Costs Outside Patent Budget. If (a), pursuant to Section 8.2.4.4(b), ROCHE decides to not pay for costs and expenses related to the preparation, filing, prosecution, and maintenance of any given Patent Right within the SYNTA Patent Rights or the Joint Patent Rights, or (b) if SYNTA decides to prepare, file, prosecute and/or maintain any SYNTA Patent Rights or Joint Patent Rights, the costs of which are not covered by the most recently approved Patent Budget or Revised Patent Budget, and ROCHE does not pay for such costs, then: (i) any exclusive licenses granted to ROCHE under such SYNTA Patent Rights or under SYNTA's rights to such Joint Patent Rights shall become non-exclusive in the case of any such Patent Right to the extent that it claims screening techniques or assays and shall otherwise terminate, (ii) notwithstanding anything in Section 8.2.1, 8.2.3 or 8.2.6 or this Section 8.2.4 to the contrary, ROCHE shall no longer have the right to comment on the prosecution or extension of any pending patent applications included in such SYNTA Patent Rights or Joint Patent Rights, and SYNTA shall no longer have the obligation to consider or implement suggestions and comments of, or cooperate with, ROCHE regarding any such activities, and (iii) notwithstanding anything in Section 8.3.2, 8.3.4, 8.3.5, 8.3.6 or 8.4 or this Section 8.2.4 to the contrary, ROCHE shall no longer have the right to comment on, or assume responsibility for, the enforcement or defense of such SYNTA Patent Rights or Joint Patent Rights, SYNTA shall no longer have the obligation to consider comments of ROCHE or to consult with ROCHE regarding any such enforcement or defense activities and ROCHE shall not receive any share of any damages, settlements, accounts of profits or other financial compensation recovered with respect to such enforcement activities."

(d) The foregoing changes to Sections 8.2.1, 8.2.3 and 8.2.4 of the Agreement shall be considered effective as of January 1, 2010; provided, that, for purposes of Section 4(b) of this Amendment and Sections 12.6.7, 12.9 and 12.10.8 of the Agreement, Sections 8.2.1, 8.2.3 and 8.2.4 shall remain unchanged.

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

11. Affiliates. Genentech and its subsidiaries shall be Affiliates of ROCHE under the Agreement.

12. Confidentiality. The Parties will keep confidential the terms of this Amendment except (a) as required by law, and (b) either Party may disclose this Amendment as necessary to exercise or enforce such Party's rights under this Amendment.

13. Survival. The provisions of Sections 3, 4, 9, 10(d), 11, 12, 13 and 14 of this Amendment shall survive expiration or termination of the Agreement for any reason.

14. Effect on Agreement. Except as amended by this Amendment, the Agreement shall remain in full force and effect. After the date of this Amendment, every reference in the Agreement to the "Agreement" shall mean the Agreement as amended by this Amendment.

[Remainder of page intentionally left blank.]

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

IN WITNESS WHEREOF, the Parties have entered into this Amendment as of the Amendment Execution Date.

SYNTA PHARMACEUTICALS CORP.

By: /s/ Safi Bahcall
Name: Safi Bahcall
Title: President and CEO

F. HOFFMANN-LA ROCHE LTD

By: /s/ Nigel Sheall
Name: Nigel Sheall
Title: Head of Corporate Business Development

By: /s/ [ILLEGIBLE]
Name: [ILLEGIBLE]
Title: Head Legal Pharma

HOFFMANN-LA ROCHE INC.

By: /s/ Ivor MacLeod
Name: Ivor MacLeod
Title: Vice President & CFO

[Execution Page]

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

EXHIBIT A

Activities for Q42009 and Calendar Year 2010

Both Parties shall be responsible for the conduct of the Research and Development activities, as shown below:

[***]

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

EXHIBIT B

BUDGETS for Calendar Year 2010

[***]

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

EXHIBIT C

Estimated Best Case Timeline for Calendar Year 2010

The Parties agree and acknowledge that this plan reflects, as of the Amendment Effective Date, the Parties' good faith estimates of the timing associated with the specified Development activities, which may be subject to change.

[***]

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

EXHIBIT D

CRAC Channel Blocker Project, JRDC Report

[***]

Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to Synta Pharmaceuticals Corp.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

Exhibit 31.1

CERTIFICATIONS UNDER SECTION 302

I, Safi R. Bahcall, Ph.D., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Synta Pharmaceuticals Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 4, 2010

/s/ SAFI R. BAHCALL, PH.D.
Safi R. Bahcall, Ph.D.
President and Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATIONS UNDER SECTION 302

I, Keith S. Ehrlich, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Synta Pharmaceuticals Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 4, 2010

/s/ KEITH S. EHRLICH, C.P.A.
Keith S. Ehrlich, C.P.A.
Vice President, Finance and Administration,
Chief Financial Officer
(principal accounting and financial officer)

Exhibit 32.1

CERTIFICATIONS UNDER SECTION 906

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Synta Pharmaceuticals Corp., a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

The Quarterly Report on Form 10-Q for the period ended March 31, 2010 (the "Form 10-Q") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 4, 2010

/s/ SAFI R. BAHCALL, PH.D.
Safi R. Bahcall, Ph.D.
President and Chief Executive Officer
(principal executive officer)

Dated: May 4, 2010

/s/ KEITH S. EHRLICH, C.P.A.
Keith S. Ehrlich, C.P.A.
Vice President, Finance and Administration,
Chief Financial Officer
(principal accounting and financial officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.