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

FORM 10-Q

(MARK ONE)

[X] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 30, 2004

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: 000-30111

LEXICON GENETICS INCORPORATED
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE	76-0474169
(STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)	(I.R.S. EMPLOYER IDENTIFICATION NUMBER)

8800 TECHNOLOGY FOREST PLACE
THE WOODLANDS, TEXAS 77381
(ADDRESS OF PRINCIPAL EXECUTIVE OFFICES AND ZIP CODE)

(281) 863-3000
(REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE)

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 [X] No [ ]

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act.

Yes [X] No [ ]

As of October 27, 2004, 63,431,822 shares of the registrant's common stock, par value $0.001 per share, were outstanding.

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LEXICON GENETICS INCORPORATED

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FACTORS AFFECTING FORWARD LOOKING STATEMENTS

This quarterly report on Form 10-Q contains forward-looking statements. These statements relate to future events or our future financial performance. We have attempted to identify forward-looking statements by terminology including "anticipate," "believe," "can," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "should" or "will" or the negative of these terms or other comparable terminology. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, including the risks outlined under "Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Factors," that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from any future results, levels or activity, performance or achievements expressed or implied by these forward-looking statements.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. We are not under any duty to update any of the forward-looking statements after the date of this quarterly report on Form 10-Q to conform these statements to actual results, unless required by law.

PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

LEXICON GENETICS INCORPORATED

CONSOLIDATED BALANCE SHEETS
(IN THOUSANDS, EXCEPT PAR VALUE)

	AS OF SEPTEMBER 30, 2004 (UNAUDITED)	AS OF DECEMBER 31, 2003
ASSETS		
Current assets:		
Cash and cash equivalents	$ 67,115	$ 81,915
Restricted cash	--	56,963
Short-term investments, including restricted investments of $430 and $551, respectively	30,556	22,123
Accounts receivable, net of allowance for doubtful accounts of $75 and $109, respectively	2,013	6,571
Prepaid expenses and other current assets	4,021	3,933
Total current assets	103,705	171,505
Property and equipment, net of accumulated depreciation of $39,634 and $31,941, respectively	82,439	83,676
Goodwill	25,798	25,798
Intangible assets, net of amortization of $3,860 and $2,960, respectively	2,140	3,040
Other assets	1,050	180
Total assets	$ 215,132	$ 284,199
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 3,929	$ 5,884
Accrued liabilities	6,691	4,757
Current portion of deferred revenue	20,835	21,125
Current portion of long-term debt	677	--
Total current liabilities	32,132	31,766
Deferred revenue, net of current portion	22,685	26,567
Long-term debt	37,120	56,344
Other long-term liabilities	1,205	3,306
Total liabilities	93,142	117,983
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $.01 par value; 5,000 shares authorized; no shares issued and outstanding	--	--
Common stock, $.001 par value; 120,000 shares authorized; 63,432 and 62,827 shares issued and outstanding	63	63
Additional paid-in capital	382,525	380,995
Deferred stock compensation	(24)	(899)
Accumulated deficit	(260,574)	(213,943)
Total stockholders' equity	121,990	166,216
Total liabilities and stockholders' equity	$ 215,132	$ 284,199

The accompanying notes are an integral part of these consolidated financial statements.

LEXICON GENETICS INCORPORATED

CONSOLIDATED STATEMENTS OF OPERATIONS
(IN THOUSANDS, EXCEPT PER SHARE AMOUNTS)
(UNAUDITED)

	THREE MONTHS ENDED SEPTEMBER 30,		NINE MONTHS ENDED SEPTEMBER 30,	
	2004	2003	2004	2003
Revenues:				
Subscription and license fees	$ 1,617	$ 8,029	$ 7,732	$ 15,441
Collaborative research	11,492	4,082	27,997	13,665
Compound libraries and other	--	--	--	32
Total revenues	13,109	12,111	35,729	29,138
Operating expenses:				
Research and development, including stock-based compensation of $0, $1,246, $416 and $3,801, respectively	22,485	21,224	67,466	61,852
General and administrative, including stock-based compensation of $0, $1,275, $411 and $3,827, respectively	4,573	5,755	14,259	17,538
Total operating expenses	27,058	26,979	81,725	79,390
Loss from operations	(13,949)	(14,868)	(45,996)	(50,252)
Interest and other income	405	386	1,194	1,170
Interest expense	(833)	(76)	(1,829)	(240)
Net loss	$(14,377)	$(14,558)	$(46,631)	$(49,322)
Net loss per common share, basic and diluted	$ (0.23)	$ (0.24)	$ (0.74)	$ (0.90)
Shares used in computing net loss per common share, basic and diluted	63,422	59,475	63,286	54,806

The accompanying notes are an integral part of these consolidated financial statements.

LEXICON GENETICS INCORPORATED

CONSOLIDATED STATEMENTS OF CASH FLOWS
(IN THOUSANDS)
(UNAUDITED)

	NINE MONTHS ENDED SEPTEMBER 30,	
	2004	2003
Cash flows from operating activities:		
Net loss	$(46,631)	$(49,322)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	7,976	7,647
Amortization of intangible assets, other than goodwill	900	900
Amortization of deferred stock compensation	827	7,628
Gain on disposal of property and equipment	--	(19)
Changes in operating assets and liabilities:		
(Increase) decrease in accounts receivable	4,558	(3,744)
(Increase) decrease in prepaid expenses and other current assets	(88)	717
(Increase) decrease in other assets	(870)	1,064
Increase in accounts payable and other liabilities	344	3,212
Decrease in deferred revenue	(4,172)	(4,181)
Net cash used in operating activities	(37,156)	(36,128)
Cash flows from investing activities:		
Purchases of property and equipment	(6,753)	(3,744)
Proceeds from disposal of property and equipment	15	47
(Increase) decrease in restricted cash	56,963	(27,476)
Purchases of investments	(37,272)	(23,849)
Maturities of investments	28,839	65,781
Net cash provided by investing activities	41,792	10,759
Cash flows from financing activities:		
Proceeds from issuance of common stock	1,577	50,278
Proceeds from debt borrowings	34,000	--
Repayment of debt borrowings	(52,547)	--
Repayment of other long-term liabilities	(2,466)	--
Net cash provided by (used in) financing activities	(19,436)	50,278
Net decrease in cash and cash equivalents	(14,800)	24,909
Cash and cash equivalents at beginning of period	81,915	39,362
Cash and cash equivalents at end of period	$ 67,115	$ 64,271
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 1,281	$ 4
Supplemental disclosure of non-cash investing and financing activities:		
Reversal of deferred stock compensation, in connection with stock options	$ 47	$ 92
Retirement of property and equipment	$ 298	$ 431

The accompanying notes are an integral part of these consolidated financial statements.

LEXICON GENETICS INCORPORATED

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

1. BASIS OF PRESENTATION

The accompanying unaudited consolidated financial statements of Lexicon Genetics Incorporated (Lexicon or the Company) have been prepared in accordance with generally accepted accounting principles for interim financial information and pursuant to the rules and regulations of the Securities and Exchange Commission (SEC). Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements.

In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair presentation have been included. Operating results for the nine-month period ended September 30, 2004 are not necessarily indicative of the results that may be expected for the year ended December 31, 2004.

The accompanying consolidated financial statements include the accounts of Lexicon and its subsidiaries. Intercompany transactions and balances are eliminated in consolidation.

For further information, refer to the financial statements and footnotes thereto included in Lexicon's annual report on Form 10-K for the year ended December 31, 2003, as filed with the SEC.

2. NET LOSS PER SHARE

Net loss per share is computed using the weighted average number of shares of common stock outstanding during the applicable period. Shares associated with stock options and warrants are not included because they are antidilutive. There are no differences between basic and diluted net loss per share for all periods presented.

3. STOCK-BASED COMPENSATION

Lexicon's stock-based compensation plans are accounted for under the recognition and measurement provisions of Accounting Principles Board (APB) Opinion No. 25, "Accounting for Stock Issued to Employees, and Related Interpretations." Under the intrinsic value method described in APB Opinion No. 25, no compensation expense is recognized if the exercise price of the employee stock option equals the market price of the underlying stock on the date of grant. Lexicon recognized no stock-based compensation expense during the three-month period ended September 30, 2004, $2.5 million during the three-month period ended September 30, 2003, and $0.8 million and $7.6 million during the nine-month periods ended September 30, 2004 and 2003, respectively, which expenses were primarily related to option grants made prior to Lexicon's April 2000 initial public offering. The following table illustrates the effect on net loss and net loss per share if the fair value recognition provisions of Financial Accounting Standards Board (FASB) No. 123 "Accounting for Stock Based Compensation," had been applied to all outstanding and unvested awards in each period:

	THREE MONTHS ENDED SEPTEMBER 30,		NINE MONTHS ENDED SEPTEMBER 30,	
	2004	2003	2004	2003
Net loss, as reported:	$(14,377)	$(14,558)	$(46,631)	$(49,322)
Add: Stock-based employee compensation expense included in reported net loss	--	2,521	827	7,628
Deduct: Total stock-based employee compensation expense determined under fair value based method for all awards	(3,842)	(6,638)	(12,590)	(19,684)
Pro forma net loss	$(18,219)	$(18,675)	$(58,394)	$(61,378)
Net loss per common share, basic and diluted				
As reported	$ (0.23)	$ (0.24)	$ (0.74)	$ (0.90)
Pro forma	$ (0.29)	$ (0.31)	$ (0.92)	$ (1.12)

4. DEBT OBLIGATIONS

Genentech Loan: On December 31, 2002, Lexicon borrowed $4.0 million under a note agreement with Genentech, Inc. The proceeds of the loan are to be used to fund research efforts under the alliance agreement with Genentech. The note matures on December 31, 2005, but the Company may prepay it at any time. The Company may repay the note, at its option, in cash, in shares of common stock valued at the then-current market price, or in a combination of cash and shares, subject to certain limitations. The note accrues interest at an annual rate of 8%, compounded quarterly.

Mortgage Loan: In October 2000, Lexicon entered into a synthetic lease agreement under which the lessor purchased the Company's existing laboratory and office buildings and animal facility in The Woodlands, Texas and agreed to fund the construction of additional facilities. Including the purchase price for the Company's existing facilities, the synthetic lease, as amended, provided funding of $54.8 million in property and improvements and required that the Company maintain restricted cash or investments to collateralize these borrowings. Lexicon adopted Financial Accounting Standards Board Interpretation No. 46, or FIN 46, "Consolidation of Variable Interest Entities - An Interpretation of ARB No. 51" on December 31, 2003. Lexicon determined that the lessor under the synthetic lease was a variable interest entity as defined by FIN 46, and that the Company absorbed a majority of the variable interest entity's expected losses. Accordingly, the Company consolidated the variable interest entity. In April 2004, Lexicon purchased the facilities subject to the synthetic lease, repaying the $54.8 million funded under the synthetic lease with proceeds from a $34.0 million third-party mortgage financing and $20.8 million in cash. The mortgage loan has a ten-year term with a 20-year amortization and bears interest at a fixed rate of 8.23%. As a result of the refinancing, all restrictions on the cash and investments that had secured the obligations under the synthetic lease were lifted.

5. COMMITMENTS AND CONTINGENCIES

In May 2002, Lexicon's subsidiary Lexicon Pharmaceuticals (New Jersey), Inc. leased a 76,000 square-foot laboratory and office space in Hopewell, New Jersey under an agreement which expires in June 2013. The lease provides for an escalating yearly rent payment of $1.3 million in the first year, $2.1 million in years two and three, $2.2 million in years four to six, $2.3 million in years seven to nine and $2.4 million in years ten and eleven. Lexicon is the guarantor of the obligations of its subsidiary under the lease. The Company is required to maintain restricted investments to collateralize the Hopewell lease. As of September 30, 2004, the Company had $430,000 in restricted investments to collateralize a standby letter of credit for this lease.

6. NEW COLLABORATION AGREEMENT

Lexicon established an alliance with Takeda Pharmaceutical Company Limited (Takeda) in July 2004 to discover new drugs for the treatment of high blood pressure. In the collaboration, Lexicon is using its gene knockout technology to identify drug targets that control blood pressure. Takeda will be responsible for the screening, medicinal chemistry, preclinical and clinical development and commercialization of drugs directed against targets selected for the alliance, and will bear all related costs. Lexicon received an upfront payment of $12 million from Takeda for the initial, three-year term of the agreement. This upfront payment will be recognized as revenue over the three-year contractual service period. Takeda has the option to extend the discovery portion of the alliance for an additional two years in exchange for further committed funding. Takeda will make research milestone payments to Lexicon for each target selected for therapeutic development. In addition, Takeda will make clinical development and product launch milestone payments to Lexicon for each product commercialized from the collaboration. Lexicon will also earn royalties on worldwide sales of drugs commercialized by Takeda.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OVERVIEW

We are a biopharmaceutical company focused on the discovery of breakthrough treatments for human disease. We are using gene knockout technology to systematically discover the physiological functions of genes in living mammals, or in vivo. We generate our gene function discoveries using knockout mice - mice whose DNA has been altered to disrupt, or "knock out," the function of the altered gene. Our patented gene trapping and gene targeting technologies enable us to rapidly generate these knockout mice by altering the DNA of genes in a special variety of mouse cells, called embryonic stem cells, which can be cloned and used to generate mice with the altered gene. We employ an integrated platform of advanced medical technologies to systematically discover and validate which genes, when knocked out, result in a favorable medical profile with pharmaceutical utility. We then pursue those genes and the proteins they encode as potential targets for therapeutic intervention in our drug discovery programs.

We employ internal resources and drug discovery alliances to discover potential small molecule drugs, therapeutic antibodies and therapeutic proteins for in vivo-validated drug targets that we consider to have high pharmaceutical value. We use our own sophisticated libraries of drug-like chemical compounds and an industrialized medicinal chemistry platform to identify small molecule drug candidates for our in vivo-validated drug targets. We have established alliances with Bristol-Myers Squibb Company to discover and develop novel small molecule drugs in the neuroscience field; Genentech, Inc. for the discovery of therapeutic proteins and antibody targets; with Takeda Pharmaceutical Company Limited for the discovery of new drugs for the treatment of high blood pressure; and with Abgenix, Inc. for the discovery and development of therapeutic antibodies based on several of our drug target discoveries. In addition, we have established collaborations and license agreements with many other leading pharmaceutical and biotechnology companies under which we receive fees and, in many cases, are eligible to receive milestone and royalty payments, for access to some of our technologies and discoveries for use in their own drug discovery efforts.

We derive substantially all of our revenues from drug discovery alliances, subscriptions to our databases, target validation collaborations for the development and, in some cases, analysis of the physiological effects of genes altered in knockout mice and technology licenses. To date, we have generated a substantial portion of our revenues from a limited number of sources.

Our operating results and, in particular, our ability to generate additional revenues are dependent on many factors, including our success in establishing research collaborations and technology licenses, expirations of our research collaborations and database subscriptions, the success rate of our discovery efforts leading to opportunities for new research collaborations and licenses, as well as milestone payments and royalties, the timing and willingness of collaborators to commercialize products which may result in royalties, and general and industry-specific economic conditions which may affect research and development expenditures. Our future revenues from collaborations and alliances are uncertain because our existing agreements have fixed terms or relate to specific projects of limited duration. Our future revenues from technology licenses are uncertain because they depend, in large part, on securing new agreements. We do not intend to offer subscriptions to our databases in the future. Our ability to secure future revenue-generating agreements will depend upon our ability to address the needs of our potential future collaborators and licensees, and to negotiate agreements that we believe are in our long-term best interests. We may determine that our interests are better served by retaining rights to our discoveries and advancing our therapeutic programs to a later stage, which could limit our near-term revenues. Because of these and other factors, our quarterly operating results have fluctuated in the past and are likely to do so

in the future, and we do not believe that quarter-to-quarter comparisons of our operating results are a good indication of our future performance.

Since our inception, we have incurred significant losses and, as of September 30, 2004, we had an accumulated deficit of $260.6 million. Our losses have resulted principally from costs incurred in research and development, general and administrative costs associated with our operations, and non-cash stock-based compensation expenses associated with stock options granted to employees and consultants prior to our April 2000 initial public offering. Research and development expenses consist primarily of salaries and related personnel costs, material costs, facility costs, depreciation on property and equipment, legal expenses resulting from intellectual property prosecution and other expenses related to our drug discovery and LexVision programs, the development and analysis of knockout mice and our other target validation research efforts, and the development of compound libraries. General and administrative expenses consist primarily of salaries and related personnel costs for executive, finance and other administrative personnel, facility costs, depreciation on property and equipment, professional fees and other corporate expenses. In connection with the expansion of our drug discovery programs and our target validation research efforts, we expect to incur increasing research and development costs. As a result, we will need to generate significantly higher revenues to achieve profitability.

CRITICAL ACCOUNTING POLICIES

Revenue Recognition

We recognize revenues when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed and determinable, and collectibility is reasonably assured. Payments received in advance under these arrangements are recorded as deferred revenue until earned.

Fees for access to our databases and other target validation resources are recognized ratably over the subscription or access period. Payments received under target validation collaborations are recognized as revenue as we perform our obligations related to such research to the extent such fees are non-refundable. Upfront fees and annual research funding under our drug discovery alliances are recognized as revenue on a straight-line basis over the estimated period of service, generally the contractual research term, to the extent they are non-refundable. Milestone-based fees are recognized upon completion of specified milestones according to contract terms. Non-refundable technology license fees are recognized as revenue upon the grant of the license, when performance is complete and there is no continuing involvement.

Revenues recognized from multiple element contracts are allocated to each element of the arrangement based on the relative fair value of the elements. The determination of fair value of each element is based on objective evidence. When revenues for an element are specifically tied to a separate earnings process, revenue is recognized when the specific performance obligation associated with the element is completed. When revenues for an element are not specifically tied to a separate earnings process, they are recognized ratably over the term of the agreement.

A change in our revenue recognition policy or changes in the terms of contracts under which we recognize revenues could have an impact on the amount and timing of our recognition of revenues.

Research and Development Expenses

Research and development expenses consist of costs incurred for company-sponsored as well as collaborative research and development activities. These costs include direct and research-related

overhead expenses and are expensed as incurred. Patent costs and technology license fees for technologies that are utilized in research and development and have no alternative future use are expensed when incurred.

Prior to preclinical development work, we are unable to segregate the costs related to research performed on drug candidates because the drug candidate is often not specifically identified until the later stages of our research. When we begin the formal preclinical process in preparation for filing an Investigational New Drug application, or IND, we intend to account on a program by program basis for the costs related to the development of the identified candidate. To date, we have not advanced any drug products into formal preclinical development.

Goodwill Impairment

Goodwill is not amortized, but is tested at least annually for impairment at the reporting unit level. We have determined that the reporting unit is the single operating segment disclosed in our current financial statements. Impairment is the condition that exists when the carrying amount of goodwill exceeds its implied fair value. The first step in the impairment process is to determine the fair value of the reporting unit and then compare it to the carrying value, including goodwill. We determined that the market capitalization approach is the most appropriate method of measuring fair value of the reporting unit. Under this approach, fair value is calculated as the average closing price of our common stock for the 30 days preceding the date that the annual impairment test is performed, multiplied by the number of outstanding shares on that date. A control premium, which is representative of premiums paid in the marketplace to acquire a controlling interest in a company, is then added to the market capitalization to determine the fair value of the reporting unit. If the fair value exceeds the carrying value, no further action is required and no impairment loss is recognized. Additional impairment assessments may be performed on an interim basis if we encounter events or changes in circumstances that would indicate that, more likely than not, the carrying value of goodwill has been impaired.

RESULTS OF OPERATIONS

Three Months Ended September 30, 2004 and 2003

Revenues. Total revenues and dollar and percentage changes as compared to the corresponding period in the prior year are as follows (dollar amounts are presented in millions):

	THREE MONTHS ENDED SEPTEMBER 30,	
	2004	2003
Total revenues	$13.1	$12.1
Dollar increase	$ 1.0	
Percentage increase ...	8%	

- Subscription and license fees - Revenue from subscriptions and license fees decreased 80% to $1.6 million due to decreased technology license fees and the termination of Incyte Corporation's subscription to our LexVision database in June 2004.

- Collaborative research - Revenue from collaborative research increased 182% to $11.5 million primarily due to our recognition of revenues under our neuroscience drug discovery alliance with Bristol-Myers Squibb, which was entered into in December 2003, our completion of a performance milestone under our therapeutic protein and antibody target discovery alliance with Genentech and the commencement of our hypertension drug discovery alliance with Takeda, which was entered into in July 2004. This was

offset in part by a decrease in revenues from target validation collaborations due to the scheduled conclusion of many of these arrangements.

Research and Development Expenses. Research and development expenses and dollar and percentage changes as compared to the corresponding period in the prior year are as follows (dollar amounts are presented in millions):

	THREE MONTHS ENDED SEPTEMBER 30,	
	2004	2003
Total research and development expense...	$ 22.5	$ 21.2
Dollar increase.....	$ 1.3	
Percentage increase.....	6%	

Research and development expenses consist primarily of salaries and other personnel-related expenses, stock-based compensation expenses, laboratory supplies, facility and equipment costs, consulting and other services. The change in the three months ended September 30, 2004 as compared to the corresponding period in 2003 resulted primarily from the following costs:

- Personnel - Personnel costs increased 21% to $10.9 million primarily due to increased personnel to support the expansion of our drug discovery programs, merit-based pay increases for employees and increasing employee benefit costs. Salaries, bonuses, employee benefits, payroll taxes, recruiting and relocation costs are included in personnel costs.

- Stock-based compensation - No stock-based compensation expense was recorded in the three months ended September 30, 2004 as a result of the completion, in January 2004, of the amortization of all deferred stock compensation relating to option grants made prior to our April 2000 initial public offering.

- Laboratory supplies - Laboratory supplies expense increased 28% to $3.9 million due primarily to increased purchases of consumables related to our drug discovery activities.

- Facilities and equipment - Facilities and equipment costs decreased 3% to $4.9 million primarily due to the elimination of rent expense for our facilities in The Woodlands, Texas as a result of our consolidation of the lessor under our synthetic lease on December 31, 2003 and subsequent refinancing of those facilities and the January 2004 expiration of the lease for our former facility in East Windsor, New Jersey. This is offset in part, by an increase in depreciation expense on our Woodlands facilities.

- Consulting and other services - Consulting and other services decreased 22% to $1.4 million primarily due to the termination in June 2004 of our subscription to a third-party database, offset in part by an increase in third-party research costs. Consulting and other services include subscriptions to third-party databases, technology licenses, legal and patent fees and third-party research.

- Other - Other costs increased by 25% to $1.3 million.

General and Administrative Expenses. General and administrative expenses and dollar and percentage changes as compared to the corresponding period in the prior year are as follows (dollar amounts are presented in millions):

	THREE MONTHS ENDED SEPTEMBER 30,	
	2004	2003
Total general and administrative expense.	$ 4.6	$ 5.8
Dollar decrease.....	$ 1.2	
Percentage decrease.....	21%	

General and administrative expenses consist primarily of personnel costs to support our research activities, stock-based compensation expense, facility and equipment costs and professional fees, such as legal fees. The change in the three months ended September 30, 2004 as compared to the corresponding period in 2003 resulted primarily from the following costs:

- Personnel - Personnel costs decreased 4% to $2.6 million. Salaries, bonuses, employee benefits, payroll taxes, recruiting and relocation costs are included in personnel costs.

- Stock-based compensation - No stock-based compensation expense was recorded in the three months ended September 30, 2004 as a result of the completion, in January 2004, of the amortization of all deferred stock compensation relating to option grants made prior to our April 2000 initial public offering.

- Facilities and equipment - Facilities and equipment costs decreased 21% to $0.7 million primarily due to the elimination of rent expense on our facilities in The Woodlands, Texas as a result of our consolidation of the lessor under our synthetic lease on December 31, 2003 and subsequent refinancing of those facilities and the January 2004 expiration of the lease for our former facility in East Windsor, New Jersey.

- Professional fees - Professional fees increased 91% to $0.6 million primarily due to increased legal fees.

- Other - Other costs increased 24% to $0.7 million.

Interest and Other Income. Interest and other income was $0.4 million in both the three months ended September 30, 2004 and the corresponding period in 2003.

Interest Expense. Interest expense increased to $0.8 million in the three months ended September 30, 2004 from $0.1 million in the corresponding period in 2003. This increase was attributable to the interest expense on the $34.0 million mortgage loan on our facilities in The Woodlands, Texas.

Net Loss and Net Loss Per Common Share. Net loss decreased 1% to $14.4 million in the three months ended September 30, 2004 from $14.6 million in the corresponding period in 2003. Net loss per common share decreased to $0.23 in the three months ended September 30, 2004 from $0.24 in the corresponding period in 2003. Net loss includes stock-based compensation expense of $2.5 million in the three months ended September 30, 2003.

Our quarterly operating results have fluctuated in the past and are likely to do so in the future, and we believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance.

Nine Months Ended September 30, 2004 and 2003

Revenues. Total revenues and dollar and percentage changes as compared to the corresponding period in the prior year are as follows (dollar amounts are presented in millions):

	NINE MONTHS ENDED SEPTEMBER 30,	
	2004	2003
Total revenues	$ 35.7	$ 29.1
Dollar increase	$ 6.6	
Percentage increase	23%	

- Subscription and license fees - Revenue from subscriptions and license fees decreased 50% to $7.7 million due to decreased technology license fees and the termination of Incyte's subscription to our LexVision database in June 2004.

- Collaborative research - Revenue from collaborative research increased 105% to $28.0 million primarily due to increased revenue under our neuroscience drug discovery alliance with Bristol-Myers Squibb, which was entered into in December 2003, our completion of a performance milestone under our therapeutic protein and antibody target discovery alliance with Genentech and the commencement of our hypertension drug discovery alliance with Takeda, which was entered into in July 2004. This was offset in part by a decrease in revenues from target validation collaborations due to the scheduled conclusion of many of these arrangements.

Research and Development Expenses. Research and development expenses and dollar and percentage changes as compared to the corresponding period in the prior year are as follows (dollar amounts are presented in millions):

	NINE MONTHS ENDED SEPTEMBER 30,	
	2004	2003
Total research and development expense	$ 67.5	$ 61.9
Dollar increase	$ 5.6	
Percentage increase	9%	

Research and development expenses consist primarily of salaries and other personnel-related expenses, stock-based compensation expenses, laboratory supplies, facility and equipment costs, consulting and other services. The change in 2004 as compared to 2003 resulted primarily from the following costs:

- Personnel - Personnel costs increased 23% to $32.3 million primarily due to increased personnel to support the expansion of our drug discovery programs, merit-based pay increases for employees and increasing employee benefit costs. Salaries, bonuses, employee benefits, payroll taxes, recruiting and relocation costs are included in personnel costs.

- Stock-based compensation - Stock based compensation expense, primarily relating to option grants made prior to our April 2000 initial public offering, decreased 89% to $0.4 million. All deferred stock compensation relating to these options was fully amortized as of January 31, 2004 when these options became fully vested.

- Laboratory supplies - Laboratory supplies expense increased 31% to $10.8 million due primarily to increased purchases of consumables, media and compounds related to our drug discovery activities.

- Facilities and equipment - Facilities and equipment costs increased 1% to $15.0 million primarily due to an increase in depreciation expense on our facilities in The Woodlands, Texas offset, in part, by the elimination in rent expense for those facilities as a result of our consolidation of the lessor under our synthetic lease on December 31, 2003 and subsequent refinancing of those facilities and the January 2004 expiration of the lease for our former facility in East Windsor, New Jersey.

- Consulting and other services - Consulting and other services decreased 4% to $5.2 million primarily due to the termination of our subscription to a third-party database offset, in part, by an increase in third-party research costs. Consulting and other services include subscriptions to third-party databases, technology licenses, legal and patent fees and third-party research.

- Other - Other costs increased by 16% to $3.7 million.

General and Administrative Expenses. General and administrative expenses and dollar and percentage changes as compared to the corresponding period in the prior year are as follows (dollar amounts are presented in millions):

	NINE MONTHS ENDED SEPTEMBER 30,	
	2004	2003
Total general and administrative expense...	$ 14.2	$ 17.5
Dollar decrease.....	$ 3.3	
Percentage decrease.....	19%	

General and administrative expenses consist primarily of personnel costs to support our research activities, stock-based compensation expense, facility and equipment costs and professional fees, such as legal fees. The change in 2004 as compared to 2003 resulted primarily from the following costs:

- Personnel - Personnel costs were $8.2 million in both periods. Salaries, bonuses, employee benefits, payroll taxes, recruiting and relocation costs are included in personnel costs.

- Stock-based compensation - Stock based compensation expense, primarily relating to option grants made prior to our April 2000 initial public offering, decreased 89% to $0.4 million. All deferred stock compensation relating to these options was fully amortized as of January 31, 2004 when these options became fully vested.

- Facilities and equipment - Facilities and equipment costs decreased 17% to $2.3 million primarily due to the elimination of rent expense on our facilities in The Woodlands, Texas as a result of our consolidation of the lessor under our synthetic lease on December 31, 2003 and subsequent refinancing of those facilities and the January 2004 expiration of the lease for our former facility in East Windsor, New Jersey.

- Professional fees - Professional fees increased 44% to $1.5 million primarily due to increased legal fees and other consulting fees.

- Other - Other costs increased 11% to $1.9 million.

Interest and Other Income. Interest and other income was $1.2 million in both the nine months ended September 30, 2004 and the corresponding period in 2003.

Interest Expense. Interest expense increased to $1.8 million in the nine months ended September 30, 2004 from $0.2 million in the corresponding period in 2003. This increase was attributable to the interest expense on the $54.8 million funded under the synthetic lease following our consolidation of the lessor on December 31, 2003 and, following our purchase of the facilities funded under the synthetic lease in April 2004, the interest expense on the $34.0 million mortgage loan used in financing such purchase.

Net Loss and Net Loss Per Common Share. Net loss decreased 5% to $46.6 million in the nine months ended September 30, 2004 from $49.3 million in the corresponding period in 2003. Net loss per common share decreased to $0.74 in the nine months ended September 30, 2004 from $0.90 in the corresponding period in 2003. Net loss includes stock-based compensation expense of $0.8 million and $7.6 million in the nine months ended September 30, 2004 and 2003, respectively.

LIQUIDITY AND CAPITAL RESOURCES

We have financed our operations from inception primarily through sales of common and preferred stock, contract and milestone payments to us under our collaboration, license and database subscription agreements, equipment financing arrangements and leasing arrangements. From our inception through September 30, 2004, we had received net proceeds of $294.7 million from issuances of common and preferred stock, including $203.2 million of net proceeds from the initial public offering of our common stock in April 2000 and $50.1 million from our July 2003 common stock offering. In addition, from our inception through September 30, 2004, we received $208.2 million in cash payments from database subscription and technology license fees, drug discovery alliances, target validation collaborations, sales of compound libraries and reagents, and government grants, of which $167.1 million had been recognized as revenues through September 30, 2004.

As of September 30, 2004, we had $97.7 million in cash, cash equivalents and short-term investments (including $0.4 million of restricted investments), as compared to $161.0 million (including $57.5 million of restricted cash and investments) as of December 31, 2003. We used cash of $37.2 million in operations in the nine months ended September 30, 2004. This consisted primarily of the net loss for the period of $46.6 million offset by non-cash charges of $8.0 million related to depreciation expense, $0.9 million related to amortization of intangible assets other than goodwill, and $0.8 million related to stock-based compensation expense; a $4.2 million decrease in deferred revenue; and changes in other operating assets and liabilities of $3.9 million. Investing activities provided cash of $41.8 million in the nine months ended September 30, 2004, principally as a result of the April 2004 refinancing of our synthetic lease with a conventional mortgage loan (discussed in the following paragraph), which resulted in the elimination of all restrictions on the $57.0 million of restricted cash that had secured our obligations under the synthetic lease. This was offset by $8.4 million of net purchases of short-term investments. We used cash of $19.4 million in financing activities. This consisted of the repayment of $54.8 million in obligations outstanding under the synthetic lease and principal repayments of $0.2 million on the mortgage loan, offset by cash proceeds of $34.0 million from the mortgage loan and $1.6 million from stock option exercises.

In October 2000, we entered into a synthetic lease agreement under which the lessor purchased our existing laboratory and office buildings and animal facility in The Woodlands, Texas and agreed to fund the construction of additional facilities. Including the purchase price for our existing facilities, the synthetic lease, as amended, provided funding of $54.8 million in property and improvements. We consolidated the lessor under our synthetic lease upon adoption of Financial Accounting Standards Board Interpretation No. 46 on December 31, 2003. In April 2004, we purchased these facilities from the lessor. In connection with such purchase, we repaid the $54.8 million funded under the synthetic lease with proceeds from a $34.0 million third-party mortgage financing and $20.8 million in cash. The mortgage

loan has a ten-year term with a 20-year amortization and bears interest at a fixed rate of 8.23%. As a result of the refinancing, all restrictions on the cash and investments that had secured our obligations under the synthetic lease were eliminated, leaving a total of $430,000 in restricted investments related to our New Jersey facility.

In May 2002, our subsidiary Lexicon Pharmaceuticals (New Jersey), Inc. signed a ten-year lease for a 76,000 square-foot facility in Hopewell, New Jersey. The term of the lease extends until June 30, 2013. The lease provides for an escalating yearly base rent payment of $1.3 million in the first year, $2.1 million in years two and three, $2.2 million in years four to six, $2.3 million in years seven to nine and $2.4 million in years ten and eleven. We are the guarantor of the obligations of our subsidiary under the lease.

In December 2002, we borrowed $4.0 million under a note agreement with Genentech. The proceeds of the loan are to be used to fund research efforts under our alliance with Genentech for the discovery of therapeutic proteins and antibody targets. The note matures on or before December 31, 2005, but we may prepay it at any time. We may repay the note, at our option, in cash, in shares of our common stock valued at the then-current market value, or in a combination of cash and shares, subject to certain limitations. The note accrues interest at an annual rate of 8%, compounded quarterly.

In July 2004, we established an alliance with Takeda Pharmaceutical Company Limited (Takeda) to discover new drugs for the treatment of high blood pressure. We received an upfront payment of $12 million from Takeda for the initial, three-year term of the agreement. Takeda has the option to extend the discovery portion of the alliance for an additional two years in exchange for further committed funding. Takeda will make research milestone payments to us for each target selected for therapeutic development. In addition, Takeda will make clinical development and product launch milestone payments to us for each product commercialized from the collaboration. We will also earn royalties on worldwide sales of drugs commercialized by Takeda.

Our future capital requirements will be substantial and will depend on many factors, including our ability to obtain alliance, collaboration and technology license agreements, the amount and timing of payments under such agreements, the level and timing of our research and development expenditures, market acceptance of our products, the resources we devote to developing and supporting our products and other factors. Our capital requirements will also be affected by any expenditures we make in connection with license agreements and acquisitions of and investments in complementary technologies and businesses. We expect to devote substantial capital resources to continue our research and development efforts, to expand our support and product development activities, and for other general corporate activities. We believe that our current unrestricted cash and investment balances and revenues we expect to derive from drug discovery alliances, technology licenses and target validation collaborations will be sufficient to fund our operations at least through the next two years. During or after this period, if cash generated by operations is insufficient to satisfy our liquidity requirements, we will need to sell additional equity or debt securities or obtain additional credit arrangements. Additional financing may not be available on terms acceptable to us or at all. The sale of additional equity or convertible debt securities may result in additional dilution to our stockholders.

DISCLOSURE ABOUT MARKET RISK

We are exposed to limited market and credit risk on our cash equivalents, which have maturities of three months or less at the time of purchase. We maintain a short-term investment portfolio which consists of U.S. government agency debt obligations, investment grade commercial paper, corporate debt securities and certificates of deposit that mature within twelve months, which we believe are subject to

limited market and credit risk. We currently do not hedge interest rate exposure or hold any derivative financial instruments in our investment portfolio.

We have operated primarily in the United States and substantially all sales to date have been made in U.S. dollars. Accordingly, we have not had any material exposure to foreign currency rate fluctuations.

RISK FACTORS

Our business is subject to certain risks and uncertainties, including those referenced below:

Risks Related to Our Business

- we have a history of net losses, and we expect to continue to incur net losses and may not achieve or maintain profitability

- we will need additional capital in the future and, if it is not available, we will have to curtail or cease operations

- any sale of additional equity securities in the future may be dilutive to our stockholders

- we are an early-stage company, and we may not successfully develop or commercialize any therapeutics or drug targets that we have identified

- we face substantial competition in the discovery of the DNA sequences of genes and their functions and in our drug discovery and product development efforts

- we rely heavily on our collaborators to develop and commercialize pharmaceutical products based on genes that we identify as promising candidates for development as drug targets and our collaborators' efforts may fail to yield pharmaceutical products on a timely basis, if at all

- we rely on several key collaborators for a significant portion of our revenues, the loss of any of which would negatively impact our business to the extent such losses are not offset by additional collaborators

- cancellations by or conflicts with our collaborators could harm our business

- we may be unsuccessful in developing and commercializing pharmaceutical products on our own

- we lack the capability to manufacture compounds for preclinical studies, clinical trials or commercial sales and will rely on third parties to manufacture our potential products, which may harm or delay our product development and commercialization efforts

- we may engage in future acquisitions, which may be expensive and time consuming and from which we may not realize anticipated benefits

- if we lose our key personnel or are unable to attract and retain additional personnel, we may be unable to pursue collaborations or develop our own products

- because all of our target validation operations are located at a single facility, the occurrence of a disaster could significantly disrupt our business

- our quarterly operating results have been and likely will continue to fluctuate, and we believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance

Risks Related to Our Industry

- our ability to patent our inventions is uncertain because patent laws and their interpretation are highly uncertain and subject to change

- our patent applications may not result in enforceable patent rights and, as a result, the protection afforded to our scientific discoveries may be insufficient

- if other companies and institutions obtain patents relating to our drug target or product candidate discoveries, we may be unable to obtain patents for our inventions based upon those discoveries and may be blocked from using or developing some of our technologies and products

- issued or pending patents may not fully protect our discoveries, and our competitors may be able to commercialize technologies or products similar to those covered by our issued or pending patents

- we may be involved in patent litigation and other disputes regarding intellectual property rights and may require licenses from third parties for our discovery and development and planned commercialization activities, and we may not prevail in any such litigation or other dispute or be able to obtain required licenses

- we use intellectual property that we license from third parties, and if we do not comply with these licenses, we could lose our rights under them

- we have not sought patent protection outside of the United States for some of our inventions, and some of our licensed patents only provide coverage in the United States, and as a result, our international competitors could be granted foreign patent protection with respect to our discoveries

- we may be unable to protect our trade secrets

- our efforts to discover, evaluate and validate potential targets for drug intervention and our drug discovery programs are subject to evolving data and other risks inherent in the drug discovery process

- our industry is subject to extensive and uncertain government regulatory requirements, which could significantly hinder our ability, or the ability of our collaborators, to obtain, in a timely manner or at all, government approval of products based on genes that we identify, or to commercialize such products

- if our potential products receive regulatory approval, we or our collaborators will remain subject to extensive and rigorous ongoing regulation

- the uncertainty of pharmaceutical pricing and reimbursement may decrease the commercial potential of any products that we or our collaborators may develop and affect our ability to raise capital

- we use hazardous chemicals and radioactive and biological materials in our business; any disputes relating to improper handling, storage or disposal of these materials could be time consuming and costly

- we may be sued for product liability

- public perception of ethical and social issues may limit or discourage the use of our technologies, which could reduce our revenues

For additional discussion of the risks and uncertainties that affect our business, see "Item 1. Business - Risk Factors" included in our annual report on Form 10-K for the year ended December 31, 2003, as filed with the Securities and Exchange Commission.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

See "Disclosure about Market Risk" under "Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations" for quantitative and qualitative disclosures about market risk.

ITEM 4. CONTROLS AND PROCEDURES

Lexicon's chief executive officer and chief financial officer have concluded that the Company's disclosure controls and procedures (as defined in Securities Exchange Act of 1934 (the "Exchange Act") Rules 13a-15(e) and 15d-15(e)) are sufficiently effective to ensure that the information required to be disclosed by the Company in the reports it files under the Exchange Act is gathered, analyzed and disclosed with adequate timeliness, accuracy and completeness, based on an evaluation of such controls and procedures as of the end of the period covered by this report.

Subsequent to the Company's evaluation, there were no significant changes in internal controls or other factors that could significantly affect internal controls, including any corrective actions with regard to significant deficiencies and material weaknesses.

PART II OTHER INFORMATION

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K

(a) Exhibits

EXHIBIT NO.	DESCRIPTION
+10.1	Collaboration Agreement, dated July 27, 2004, with Takeda Pharmaceutical Company Limited
10.2	Form of Stock Option Agreement with Officers under the 2000 Equity Incentive Plan
10.3	Form of Stock Option Agreement with Directors under the 2000 Non-Employee Directors' Stock Option Plan
31.1	Certification of CEO Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of CFO Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of CEO and CFO Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

- + Confidential treatment has been requested for a portion of this exhibit. The confidential portions of this exhibit have been omitted and filed separately with the Securities and Exchange Commission

(b) Reports on Form 8-K:

On July 29, 2004, we filed a Current Report on Form 8-K dated July 29, 2004 related to our issuance of a press release reporting our financial results for the quarter ended June 30, 2004, which press release included our consolidated balance sheet data and consolidated statements of operations data for the periods.

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.

LEXICON GENETICS INCORPORATED

Date: November 1, 2004 By: /s/ Arthur T. Sands

Arthur T. Sands, M.D., Ph.D.
President and Chief Executive Officer

Date: November 1, 2004 By: /s/ Julia P. Gregory

Julia P. Gregory
Executive Vice President, Corporate Development
and Chief Financial Officer

INDEX TO EXHIBITS

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+ Confidential treatment has been requested for a portion of this exhibit. The confidential portions of this exhibit have been omitted and filed separately with the Securities and Exchange Commission.

EXHIBIT 10.1

Confidential materials omitted and filed separately with the Securities and Exchange Commission. Asterisks denote omissions.

COLLABORATION AGREEMENT

BY

AND

BETWEEN

LEXICON GENETICS INCORPORATED

AND

TAKEDA PHARMACEUTICAL COMPANY LIMITED

JULY 27, 2004

COLLABORATION AGREEMENT

THIS COLLABORATION AGREEMENT (this "Agreement") is entered into and effective as of July 27, 2004 (the "Effective Date") by and between LEXICON GENETICS INCORPORATED, organized under the laws of the State of Delaware, United States of America, and having its principal place of business at 8800 TECHNOLOGY FOREST PLACE, THE WOODLANDS, TEXAS 77381-1160, UNITED STATES OF AMERICA ("Lexicon"), and TAKEDA PHARMACEUTICAL COMPANY LIMITED, organized under the laws of Japan and having its principal place of business at 1-1, DOSHOMACHI 4-CHOME, CHUO-KU, OSAKA 540-8645, JAPAN ("Takeda"). Lexicon and Takeda may each be referred to herein individually as a "Party" or, collectively, as "Parties."

RECITALS

WHEREAS, Takeda and Lexicon are each in the business of discovering, developing and commercializing novel and efficacious pharmaceutical products; and

WHEREAS, Lexicon has expertise in the identification and validation of targets having potential application for the identification and development of compounds for the prevention and/or treatment of hypertension and/or hypotension (or abnormal blood pressure); and

WHEREAS, Takeda wishes to collaborate with Lexicon in certain research and development activities using targets to identify and develop compounds that may become useful products for the prevention and/or treatment of hypertension and/or hypotension (or abnormal blood pressure) and diagnostics ancillary to such prevention and/or treatment; and

WHEREAS, Takeda wishes to receive and Lexicon is willing to transfer to Takeda certain rights relating to targets for purposes of research, development and commercialization of products for use in the prevention and/or treatment of hypertension and/or hypotension (or abnormal blood pressure) and diagnostics ancillary to such prevention and/or treatment.

NOW, THEREFORE, in consideration of the promises and undertakings set forth herein, the Parties agree as follows:

ARTICLE 1.

DEFINITIONS

Capitalized terms not otherwise defined herein will have the meaning set forth below:

1.1 "AFFILIATE" means any company or other business entity controlled by, controlling or under common control with a Party. For purposes of this Section 1.1, "control" means (a) in the case of corporate entities, direct or indirect ownership of more than fifty percent (50%) of the stock or shares entitled to vote for the election of directors; and (b) in the case of non-corporate

entities, direct or indirect ownership of more than fifty percent (50%) of the equity interest with the power to direct the management and policies of such non-corporate entities.

1.2 "APPLICABLE LAWS" means any laws, regulations, guidelines, or standards having the effect of law of any federal, national, multinational, state, provincial, county, city or other political subdivision, domestic or foreign, applicable to the activities contemplated hereunder, including the conduct of the Project.

1.3 "ANCILLARY DIAGNOSTIC PRODUCT" means a diagnostic product used to select patients to be given or prescribed a Pharmaceutical Product.

1.4 "ASSIGNED TARGET" shall have the meaning set forth in Section 4.4(a).

1.5 "CONDITIONAL MOUSE/MICE" means any mouse containing a mutation that is made or produced by Lexicon or any Affiliate of Lexicon in a single mouse gene using Cre/Lox or other recombinase technology so as to permit the interruption, disruption or deletion of the function of such mouse gene or a portion thereof on a conditional basis (e.g., in the presence of Cre or such other recombinase). A "line of Conditional Mice" means Conditional Mice having the same mutation in the same single gene.

1.6 "CONFIDENTIAL INFORMATION" means any and all non-public and proprietary Information that is disclosed by a Party to another Party in connection with this Agreement, including, without limitation, all Information disclosed under Article 2. Notwithstanding the foregoing, Confidential Information shall not include any part of such Information that:

(a) Was already known to the receiving Party as evidenced by the receiving Party's written records, other than under an obligation of confidentiality, at the time of disclosure;

(b) Was generally available to the public or was otherwise part of the public domain at the time of disclosure of such Information to the receiving Party;

(c) Became generally available to the public or otherwise becomes part of the public domain after disclosure of such Information and other than through any act or omission of the receiving Party in breach of this Agreement;

(d) Was subsequently lawfully disclosed to the receiving Party by a Third Party other than in contravention of a confidentiality obligation of such Third Party to the disclosing Party; or

(e) Was developed or discovered by employees of the receiving Party or Affiliates of the receiving Party who had no access to the Confidential Information of the disclosing Party as evidenced by the written records of the receiving Party.

Specific Confidential Information of a disclosing Party shall not be deemed to come under the foregoing exceptions merely because it is embraced by more general information that

is or becomes part of the public domain, or is known by, disclosed to or independently developed by the receiving Party.

1.7 "CONTROL" or "CONTROLLED" means, with respect to an item of Information or a Patent, possession of the ability, whether arising by ownership, in a whole or in part, or license, to assign or grant a license or sublicense under such item or Patent as provided for herein without violating the terms of any written agreement with any Third Party; provided, however, that in the case of Lexicon, such terms of the written agreements shall be limited to Pre-Existing Obligations.

1.8 "DILIGENT EFFORTS" means the carrying out of obligations or tasks by or on behalf of a Party in a sustained manner using good faith commercially reasonable and diligent efforts, which efforts shall be consistent with the exercise of prudent scientific and business judgment in accordance with the efforts such Party devotes to products or research, development or marketing projects of similar scientific and commercial potential including (a) setting and consistently seeking to achieve specific and meaningful objectives for carrying out such obligations, and (b) consistently making and implementing decisions and allocating resources designed to advance progress with respect to such objectives.

1.9 "EFFECTIVE DATE" shall have the meaning set forth in the introductory paragraph of this Agreement.

1.10 "ESCROW AGENT" means an independent Third Party consultant to the Parties with whom Takeda shall deposit a list of Excluded Targets and who shall notify Lexicon and Takeda which, if any, Targets submitted in accordance with Section 2.2(a)(iii) are Excluded Targets; provided that the Escrow Agent's notice to Takeda shall identify the Target only by the code assigned to such Target by Lexicon and not by sequence or otherwise in a manner that would reveal the identity of the Target.

1.11 "EXCLUDED TARGET" means a gene and the products encoded by such gene that Takeda has elected to exclude from consideration as a Selected Target. [**] Each Excluded Target shall be identified by the full-length cDNA and/or amino acid sequence of the gene or, in the event the gene has more than one splice variant form, by the full-length cDNA and/or amino acid sequence of at least one splice variant form of such gene. A list of such Excluded Targets shall be provided to the Escrow Agent who shall notify Lexicon and Takeda which, if any, Targets submitted in accordance with Section 2.2(a)(iii) are Excluded Targets [**].

1.12 "GENOME 5000 PROGRAM" means a project conducted by Lexicon to (a) analyze the physiological and behavioral phenotypes of Knock-Out Mice corresponding to approximately 5,000 human genes; and (b) based on such physiological and behavioral information, select targets for drug discovery programs that, when knocked out, exhibit favorable therapeutic profiles for the development of drug products.

1.13 "HIGH THROUGHPUT SCREENING SYSTEM/HTS SYSTEM" means a biochemical, cell-based screening or other assay system for the identification of Pharmaceutical Compounds that modulate the activity of a Target; provided that, in the case of the High Throughput Screening

System to be delivered by Lexicon to Takeda for LG105, such assay system meets the following criteria: [**].

1.14 [**] means [**].

1.15 "HYPERTENSION" means a condition in which a human patient or model organism has a higher than normal blood pressure.

1.16 "HYPOTENSION" means a condition in which a human patient or model organism has a lower than normal blood pressure.

1.17 "INFORMATION" means any data, results, inventions, information, know-how, processes, machines, trade secrets, techniques, methods, developments, materials, compositions of matter and other information of any type or kind.

1.18 "IND" means an Investigational New Drug application filed with the U.S. Food and Drug Administration or a similar application for the clinical testing of a Product in human subjects filed with a foreign regulatory authority.

1.19 "KNOCK-OUT MOUSE/MICE" means any mouse containing a mutation that is made or produced by Lexicon or any Affiliate of Lexicon in a single mouse gene so as to interrupt, disrupt or delete the function of such mouse gene or a portion thereof. A "line of Knock-Out Mice" means Knock-Out Mice having the same mutation in the same single gene.

1.20 "LAUNCH" means [**]. For clarity, (a) the sale of a Product for use in clinical trials or for compassionate use prior to Regulatory Approval shall not constitute [**] and (b) the sale of a Product to an Affiliate or licensee shall not constitute [**] unless such Affiliate or licensee is an end user of such Product. For purposes of this Section 1.20, "Regulatory Approval" means, with respect to a Product in a nation or, where applicable, a multinational jurisdiction, any approvals (including any applicable governmental price and reimbursement approvals), licenses, registrations or authorizations necessary for the manufacture, marketing and sale of such Product in such nation or such jurisdiction.

1.21 "LEVEL 1 PHENOTYPIC ANALYSIS" means the analysis of the phenotypes of Knock-Out Mice described in Exhibit 1.21.

1.22 "LEVEL 2 PHENOTYPIC ANALYSIS" means the analyses of the phenotypes of Knock-Out Mice described in Exhibit 1.22. The Level 2 Phenotypic Analysis for a given Target shall be as determined by the Steering Committee in accordance with the Steering Committee's authority pursuant to Section 3.4.

1.23 "LEXICON" shall have the meaning set forth in the introductory paragraph of this Agreement.

1.24 "LEXICON INDEMNITEES" shall have the meaning set forth in Section 10.2.

1.25 "LG105" means the certain Target designated by Lexicon as LG105.

1.26 "MAJOR EUROPEAN COUNTRY" means any of [**].

1.27 "MUTANT MOUSE/MICE" means Knock-Out Mouse/Mice, Conditional Mouse/Mice and/or [**].

1.28 "NET SALES" means, with respect to a Product, the gross amount invoiced by Takeda, its Affiliates, or any Third Party to whom Takeda or any of its Affiliates has granted license rights with respect to such Product, less: (a) trade, cash and quantity discounts, if any, actually allowed or paid; (b) returns, allowances and adjustments actually granted to customers; (c) freight, insurance and other transportation costs; and (d) taxes (excluding federal, state or local taxes based on income), duties, insurance or other governmental charges on sales, transportation, delivery, importation or use actually paid by Takeda, its Affiliates or licensees with respect to the sale of such Product. Sales between Takeda, its Affiliates and licensees shall be disregarded and only final sales to unrelated Third Parties shall be included (unless, and except to the extent that, such Affiliate or licensee is an end-user of the Product).

In the event that a Product is sold as part of a combination product, including, but not limited to, a formulation including more than two active pharmaceutical ingredients and a package including more than two different pharmaceutical products, the Net Sales of the combination product, for the purpose of determining royalty payments, shall be determined by multiplying the actual Net Sales of the combination product by the fraction A/(A+B), where A is the average sale price of a Product when sold separately in finished form and B is the average sale price of the other product(s) sold separately in finished form. In the event that such average sale price cannot be determined for either the Product or other product(s) in combination, the adjusted Net Sales for purpose of determining royalty payments shall be negotiated by the parties in good faith and in an equitable manner consistent with the intent of this Agreement, taking into account, among other things, (i) the extent to which the Product and the other product(s) are protected by issued and unexpired patents, (ii) the relative cost of manufacturing the Product and the other product(s) and (iii) other factors relevant to the relative value contributed by the Product and the other product(s) to Net Sales of the combination product. The Net Sales price for a combination product in a given country will be calculated once each calendar year and such price will be used during all applicable royalty reporting periods for the entire calendar year for such country, absent extraordinary conditions or events. When determining the average sale price of a Product and the other product(s) in the combination product, the average sale price will be calculated using data arising from the twelve (12) months preceding the calculation of the Net Sales price for the combination product.

Net Sales of Reversion Products by Lexicon, its Affiliates and licensees shall be determined in accordance with the same terms and conditions as are set forth above with respect to Net Sales of Products by Takeda, its Affiliates and licensees.

1.29 "PATENT" means: (a) all issued and existing patents, including any extensions, supplemental protection certificates, registrations, confirmations, reissues, reexaminations or renewals thereof and utility model filings; and (b) all pending applications, including any

provisional applications, converted provisional applications, continuing prosecution applications and continuation, divisional, or continuation-in-part applications thereof, for any of the foregoing.

1.30 "PHARMACEUTICAL COMPOUND" means (a) any small molecule compound, (b) any antisense compound, (c) any [**], that has a molecular weight of not more than [**], or (d) any other organic or synthetic molecule; but excluding any compound or molecule that consists of or incorporates as an active ingredient (i) a protein, whether naturally occurring or otherwise, [**], or (ii) an antibody or any fragment thereof.

1.31 "PHARMACEUTICAL PRODUCT" means a Pharmaceutical Compound that is designed to act through or is otherwise identified by use of a Selected Target. For purposes of clarity, [**].

1.32 "PHASE 1 CLINICAL TRIAL" means a human clinical trial in any country that is intended to initially evaluate the safety, pharmacokinetic and/or pharmacological effect of a Product in subjects in accordance with or otherwise in satisfaction of the requirements of 21 CFR 312.21(a). For purposes of this Agreement, "initiation of a first Phase 1 Clinical Trial" for a Product shall mean the first dosing of such Product into a human patient in a Phase 1 Clinical Trial.

1.33 "PHASE 2 CLINICAL TRIAL" means a human clinical trial in any country that is intended to initially evaluate the dosing and effectiveness of a Product for a particular indication or indications in patients with the disease or indication under study in accordance with or otherwise in satisfaction of the requirements of 21 CFR 312.21(b). For purposes of this Agreement, "initiation of a first Phase 2 Clinical Trial" for a Product shall mean the first dosing of such Product into a human patient in a Phase 2 Clinical Trial.

1.34 "PHASE 3 CLINICAL TRIAL" means a pivotal human clinical trial in any country the results of which could be used to establish safety and efficacy of a Product, as a basis for an New Drug Application filed with the U.S. Food and Drug Administration or a similar application for the marketing approval of a Product filed with a foreign regulatory authority, in accordance with or otherwise in satisfaction of the requirements of 21 CFR 312.21(c). For purposes of this Agreement, "initiation of a first Phase 3 Clinical Trial" for a Product shall mean the first dosing of such Product into a human patient in a Phase 3 Clinical Trial.

1.35 "PRE-EXISTING OBLIGATIONS" means the obligations of Lexicon with respect to certain Targets, if any, existing under agreements in effect prior to the Effective Date and separately disclosed to Takeda in writing as of the Effective Date.

1.36 "PRODUCT" means any Pharmaceutical Product and, if applicable, related Ancillary Diagnostic Product(s).

1.37 "PROJECT" means the project to be conducted by Lexicon, as further described in Article 2 of this Agreement and the Work Plan.

1.38 "PROJECT MANAGER" shall have the meaning set forth in Section 3.5.

1.39 "PUBLICATION" shall have the meaning set forth in Section 2.2(a)(iv)(a).

1.40 "RELEASED TARGET" shall have the meaning set forth in Sections 2.2(d) or 2.3(b), as applicable, and shall further include the certain Target designated by Lexicon as LG844.

1.41 "RESEARCH TERM" means the period commencing on the Effective Date and continuing until, and expiring on, the three (3) year anniversary of the Effective Date, unless extended in accordance with Section 2.4.

1.42 "REVERSION PRODUCT" means a Pharmaceutical Product (a) identified by Lexicon using a High Throughput Screening System generated by Takeda and turned over to Lexicon pursuant to Sections 2.2(d) or 2.3(b) and 4.5 or (b) licensed by Takeda to Lexicon pursuant to Section 2.3(c).

1.43 "SELECTED TARGET" means LG105 (unless LG105 is excluded from this Agreement before disclosure of the identity of LG105 to Takeda pursuant to Section 2.2(g)) and any Target or Supplemental Target selected by Takeda in accordance with Section 2.2(c).

1.44 "SELECTED TARGET IP RIGHTS" means any Information, Patent or ownership status of microorganism deposit that (a) is Controlled by a Party or any of its Affiliates, or is Controlled jointly by the Parties and/or any of their Affiliates, and (b) relates to (i) the composition of matter of a Selected Target, (ii) the use of Pharmaceutical Compounds acting through a Selected Target for the prevention or treatment of Hypertension and/or Hypotension (or abnormal blood pressure), or (iii) the use of a Selected Target in the identification and development of Pharmaceutical Compounds for the prevention or treatment of Hypertension and/or Hypotension (or abnormal blood pressure). For purposes of clarity, Selected Target IP Rights shall include Patent claims directed to, and other intellectual property rights in, (x) [**] and (y) [**]. Selected Target IP Rights shall also include claims, if any, of Patents Controlled by a Party or any of its Affiliates, or Controlled jointly by the Parties and/or any of their Affiliates, to [**]; provided that Selected Target IP Rights shall not include claims of any such Patent directed to [**].

1.45 "SELECTED TARGET PROJECT MATERIALS" means (a) any Mutant Mouse or other mouse containing a mutation made or produced by Lexicon or any Affiliate of Lexicon in the mouse ortholog of a Selected Target [**], (b) any progeny thereof containing such mutation, and (c) any cells, tissues and other biological materials derived from any of the foregoing.

1.46 "STEERING COMMITTEE" shall have the meaning set forth in Section 3.1.

1.47 "SUPPLEMENTAL TARGET" shall have the meaning set forth in Exhibit 1.47.

1.48 "TAKEDA" shall have the meaning set forth in the introductory paragraph of this Agreement.

1.49 "TAKEDA INDEMNITEES" shall have the meaning set forth in Section 10.1.

1.50 "TARGET" means a human gene and the products encoded by such gene, including, without limitation, (a) any [**] from such gene [**], (b) any [**] encoded by any such gene, and/or (c) any [**] encoded by any such gene; which human gene and/or products encoded thereby are identified in the course of the Project as having potential application for the identification and development of Pharmaceutical Compounds for the prevention and/or treatment of Hypertension or Hypotension (or abnormal blood pressure), as demonstrated by a phenotype of Mutant Mice suggestive of the utility of such human gene and/or products encoded thereby in such application. [**] Each Target shall be identified by the full-length cDNA and/or amino acid sequence of the gene or, in the event the gene has more than one splice variant form, by the full-length cDNA and/or amino acid sequence of at least one splice variant form of such gene.

1.51 "THIRD PARTY" means any person or legal entity other than Lexicon, Takeda or Affiliates of any of them.

1.52 "WORK PLAN" means the written plan set forth in Exhibit 1.52, as amended from time to time, describing activities to be carried out, as overseen by the Steering Committee. If there is any contradiction between the terms and conditions set forth in the Work Plan and the terms and conditions set forth in the body of this Agreement, the terms and conditions set forth in the body of this Agreement shall prevail.

ARTICLE 2.

RESEARCH & DEVELOPMENT COLLABORATION

2.1 PURPOSE AND OBJECTIVE OF COLLABORATION. Each of the Parties, in cooperation with the other Party, will utilize its expertise in conducting the Project for the purpose of discovering and developing novel and efficacious Pharmaceutical Products for the prevention and/or treatment of Hypertension or Hypotension (or abnormal blood pressure) and Ancillary Diagnostic Products, as further described in the Work Plan. In accordance with the terms and conditions set forth in Article 3, the Project will be overseen by the Steering Committee.

2.2 THE PROJECT. The Project will be carried out using the Genome 5000 Program to identify Targets for the discovery and development of Pharmaceutical Compounds with potential of becoming, after completion of development activities, novel and efficacious Pharmaceutical Products for the prevention and/or treatment of Hypertension or Hypotension (or abnormal blood pressure) and Ancillary Diagnostic Products. In connection with such activities, the Project will consist of two separate parts: (1) Lexicon, during the Research Term, will conduct Level 1 Phenotypic Analysis of Knock-Out Mice in the Genome 5000 Program, and (2) Lexicon, during the Research Term, will conduct Level 2 Phenotypic Analysis of Knock-Out Mice corresponding to Targets identified by Lexicon and Takeda as promising candidates, in each case as determined by the Steering Committee. Takeda will have the right, independently and at Takeda's discretion, to designate certain Targets as Selected Targets, under the terms set forth herein. Takeda will utilize Diligent Efforts to conduct screening of each Selected Target by use of a HTS System and/or other research tools and then to develop and commercialize Products identified by Takeda.

Each Party, in accordance with Applicable Laws, shall perform the activities in the Project for which such Party is responsible under the Work Plan and this Agreement.

(a) Identification of Targets.

(i) Lexicon shall use Diligent Efforts to identify Targets through its conduct of Level 1 Phenotypic Analysis screens of Knock-Out Mice in the Genome 5000 Program. The Parties acknowledge that Lexicon has completed Level 1 Phenotypic Analysis screens of [**] lines of Knock-Out Mice in the Genome 5000 Program as of the Effective Date. Lexicon shall use Diligent Efforts to perform Level 1 Phenotypic Analysis screens of a minimum of [**] additional lines of Knock-Out Mice [**] during the Research Term.

(ii) Lexicon and Takeda each shall review the Level 1 Phenotypic Analysis data for the line of Knock-Out Mice corresponding to each Target identified by Lexicon; provided that Lexicon shall not be required to disclose to Takeda the identity of such Target (by sequence or otherwise in a manner that would reveal the identity of the Target) except in accordance with Section 2.2(a)(iii) below. After such review, Takeda shall identify Targets as promising candidates in consultation with Lexicon, and the Steering Committee shall determine which Level 2 Phenotypic Analysis screens will be conducted with respect to such Targets. Lexicon shall use Diligent Efforts to complete Level 2 Phenotypic Analysis screens on each Target as promptly as reasonably practicable after such determination. The Parties shall at all times exercise good faith scientific judgment in making the determinations contemplated by this Section 2.2(a)(ii).

(iii) Takeda may request that Lexicon disclose to Takeda the identity of any Target (by sequence or otherwise in a manner that would reveal the identity of the Target) at any time after completion of Level 1 Phenotypic Analysis on the Target. Lexicon shall disclose to Takeda the identities of the Targets which are not Excluded Targets (and which have not already become Released Targets) at the time of Takeda's request in accordance with the procedures set forth in this Section 2.2(a)(iii). [**].

(A) Prior to first disclosing to Takeda the identity of any Target (by sequence or otherwise in a manner that would reveal the identity of the Target), Lexicon, promptly following [**], shall submit the identity of the Target to the Escrow Agent, who will notify Lexicon and Takeda whether such Target matches any Excluded Target [**].

(B) Notwithstanding anything to the contrary in this Section 2.2(a)(iii), Takeda may request that Lexicon disclose to Takeda the identity of a Target which matches any Excluded Target by written notice delivered to Lexicon within [**] of the Escrow Agent's notice under Section 2.2(a)(iii)(A) regarding such match, in which case (1) Lexicon shall disclose to Takeda the identity of such Target and (2) such Target shall no longer be an Excluded Target, and shall be subject to the terms and conditions of this Agreement applicable to other such Targets, including, without limitation, Sections 2.2(a)(iv) and 2.2(c).

(C) Takeda shall not be entitled to designate a Target as an Excluded Target following Lexicon's disclosure to Takeda of the identity of such Target in accordance with this Section 2.2(a)(iii).

(iv) Except as otherwise provided for in this Agreement, and without granting any right or license under any Patents or other intellectual property rights (including, without limitation, Selected Target IP Rights) Controlled by Lexicon with respect thereto, [**] following Lexicon's disclosure, in accordance with Section 2.2(a)(iii), of the identity of a Target that is not an Excluded Target, Takeda and its Affiliates shall not, unless such Target was designated as a Selected Target in accordance with Section 2.2(c) and has not become a Released Target, research, develop or commercialize any pharmaceutical product that specifically targets such Target for the prevention or treatment of Hypertension or Hypotension (or abnormal blood pressure) or any other indication in which Hypertension or Hypotension (or abnormal blood pressure) is implicated as a causative factor. For the avoidance of doubt, the Parties agree that this covenant not to compete is not meant to restrict Takeda or its Affiliates [**]; provided that such [**].

(A) The restrictions on Takeda and its Affiliates regarding a Target under this Section 2.2(a)(iv) shall terminate when and if the relation between such Target and the treatment or prevention of Hypertension or Hypotension (or abnormal blood pressure) becomes (other than through any act or omission of Takeda or its Affiliates in breach of this Agreement) available to (1) Takeda through disclosure by a Third Party who has a lawful right to do so or (2) the public through Publication of: (x)[**]; (y) [**]; or (z) [**]. For purposes of this Agreement, "Publication" means disclosure of Information to people in a part of the public by publication, presentation, distribution or other media or method, including, without limitation, through publication of a Patent.

(B) Notwithstanding anything to the contrary in this Section 2.2(a)(iv), if Takeda [**], Takeda [**] shall have the right, by notice delivered to Lexicon within [**] following [**]; provided that, in the event [**], Takeda must [**].

(b) Disclosure of Results. On a [**] basis during the Research Term, Lexicon shall provide Takeda with a written report, the format of which is set forth in Exhibit 2.2(b), disclosing the results and status of the Project, including, without limitation, (i) the number of lines of Knock-Out Mice for which Lexicon completed Level 1 Phenotypic Analysis in the preceding [**], (ii) a summary of the results of all Level 1 Phenotypic Analysis screens relating to Targets identified as a result of such screens during such period, (iii) summary of the results of all Level 2 Phenotypic Analysis screens conducted during such period relating to Targets that have not already been identified as Excluded Targets or become Released Targets, and (iv) [**]; provided that Lexicon shall not be required to disclose to Takeda the identity of any Target (by sequence or otherwise in a manner that would reveal the identity of the Target) except in accordance with Section 2.2(a)(iii). Concurrently with the delivery of such report, Lexicon shall provide to Takeda, in electronic format, copies of [**]. Lexicon shall also provide Takeda with [**] interim reports on the results of Level 2 Phenotypic Analysis screens relating to Targets that have not become Released Targets. Within [**] after the Effective Date, Lexicon shall provide

Takeda with a similar written report [**] regarding the results of Level 1 Phenotypic Analysis and Level 2 Phenotypic Analysis which Lexicon has completed before the Effective Date. After the Research Term, Lexicon shall provide Takeda with a similar [**] written report [**] with respect to Targets for which Lexicon has started or is required to start Level 2 Phenotypic Analysis screening at the end of the Research Term.

(c) Designation of Selected Targets. Within [**] after Takeda's receipt of the report contemplated by Section 2.2(b) that follows Lexicon's completion of Level 2 Phenotypic Analysis relating to a Target, Takeda, in its sole discretion, may designate such Target as a Selected Target (a "Selected Target") by informing Lexicon in writing of such designation; provided, however, that if Takeda requests the disclosure of the identity of a Target pursuant to Section 2.2(a)(iii) after its receipt of such report but within [**] thereafter, Takeda may make such designation of a Selected Target within [**] after Lexicon notifies Takeda of the identity of the Target. Takeda may designate any Target as a Selected Target if Lexicon started or is required to start Level 2 Phenotypic Analysis screening of such at any time prior to the expiration of the Research Term. Upon such designation, Takeda shall have the diligence obligations set forth in Section 2.3 with respect to such Selected Target.

(d) Maintenance or Release of Rights to Selected Targets. Takeda may maintain its rights with respect to a Selected Target by timely paying Lexicon the research milestone for such Selected Target, as specified in Section 5.2(a)(iii) for LG105 and Section 5.2(b) for Selected Targets other than LG105. Upon payment of the research milestone for any Selected Target, Lexicon shall assign (or license, as applicable) to Takeda all right, title and interest in, to and under the Selected Target IP Rights relating to such Selected Target that are Controlled by Lexicon or any Affiliate of Lexicon, all in accordance with Section 4.4. In the event Takeda fails to timely pay Lexicon the research milestone for such Selected Target, (i) such Selected Target shall become a "Released Target" for all purposes of this Agreement, (ii) Takeda's licenses with respect to such Selected Target (including, without limitation, Takeda's license under the Selected Target IP Rights and to Selected Target Project Materials) shall terminate, (iii) Takeda shall use Diligent Efforts to turn over or otherwise make available to Lexicon any High Throughput Screening System specific to such Selected Target generated by Takeda to identify, evaluate and develop Pharmaceutical Compounds acting through such Selected Target and Controlled by Takeda or any Affiliate of Takeda, and (iv) Takeda shall assign (or reassign, as applicable) to Lexicon all right, title and interest in, to and under the Selected Target IP Rights relating to such Selected Target (including, without limitation, all Patents with claims directed to such Selected Target IP Rights, [**] that are Controlled by Takeda or any Affiliate of Takeda, all in accordance with Sections 4.4 and 4.5.

(e) Transfer of Selected Target Project Materials. In connection with the Project, at no charge to Takeda, Lexicon shall generate Mutant Mice, including Knock-Out Mice, [**] and Conditional Mice for each Selected Target, and shall provide to Takeda such lines of Mutant Mice, together with a full description of the genetic characteristics of each such line, as are described below.

(i) Knock-Out Mice. As promptly as reasonably practicable after the designation of a Selected Target, Lexicon shall deliver to Takeda, for Takeda's and its Affiliates' use in connection with the development and commercialization of Products, [**] Knock-Out Mice corresponding to such Selected Target.

(ii) [**]. As promptly as reasonably practicable after, and subject to, Takeda's payment of the research milestone for a Selected Target, as specified in Section 5.2(a)(iii) for LG105 and Section 5.2(b) for Selected Targets other than LG105, Lexicon shall use Diligent Efforts to deliver to Takeda, for Takeda's and its Affiliates' use in connection with the development and commercialization of Products, [**] corresponding to such Selected Target.

(iii) Conditional Mice. As promptly as reasonably practicable after, and subject to, Takeda's payment of the research milestone for a Selected Target, as specified in Section 5.2(a)(iii) for LG105 and Section 5.2(b) for Selected Targets other than LG105, Lexicon shall use Diligent Efforts to deliver to Takeda, for Takeda's and its Affiliates' use in connection with the development and commercialization of Products, [**] Conditional Mice corresponding to such Selected Target. To the extent such Conditional Mice incorporate Cre/Lox technology, they will be provided under the terms set forth in Exhibit 2.2(e).

[**].

(f) LG105 HTS System. The Parties acknowledge and agree that Lexicon, prior to the Effective Date, has designed and developed a working High Throughput Screening System for LG105. Lexicon shall provide Takeda with all materials necessary, including, for example, unique equipment, reagents and all applicable Information, to enable Takeda, within fifteen (15) days after the date of Lexicon's disclosure to Takeda of the identity of LG105 pursuant to Section 2.2(g) below, to utilize such LG105 HTS System for the screening of compounds contained in Takeda libraries or libraries available to Takeda from Third Parties. For purposes of illustration, Lexicon shall provide sufficient materials to permit Takeda to complete [**]. Lexicon shall cooperate with Takeda in establishing workable HTS System for use with LG105 in Takeda's research facilities in Japan as soon as practicable.

(g) LG105 Patent Rights. Within [**] after the Effective Date, Lexicon shall submit the identity of LG105 to the Escrow Agent pursuant to the provisions of Section 2.2(a)(iii)(a). Promptly following the Escrow Agent's notice that LG105 does not match an Excluded Target, or Takeda's request under Section 2.2(a)(iii)(b) that Lexicon disclose the identity of LG105, Lexicon shall (i) disclose to Takeda the identity of LG105 and (ii) provide Takeda with copies of all of Lexicon's patent(s) and patent application(s) regarding LG105 and Third Parties' patent(s) and patent application(s) regarding LG105 of which Lexicon is aware. If the Escrow Agent provides notice that LG105 matches an Excluded Target and Takeda does not make a request under Section 2.2(a)(iii)(b), LG105 shall be excluded from this Agreement. In addition, Takeda shall have the right to exclude LG105 from this Agreement by providing notice to Lexicon in writing within [**] after Takeda has been informed of the identity of LG105 and received copies of all such patent(s) and patent application(s) pursuant to and in accordance with this Section 2.2(g). In the event that Takeda exercises its rights under the immediately preceding

sentence, LG105 shall become a Released Target pursuant to and in accordance with Section 2.2(d).

2.3 DILIGENCE OBLIGATIONS.

(a) Research, Development and Commercialization of Products. From and after the designation of each Selected Target (other than Selected Targets that have become Released Targets pursuant to Section 2.2(d) or Section 2.3(b)) and until the expiration of Takeda's payment obligations pursuant to Section 5.5(d), Takeda shall utilize Diligent Efforts, by itself or its licensees or other designees, (i) to design, develop and utilize a High Throughput Screening System and/or other research tools for such Selected Target and (ii) to pursue the research and development of, and to Launch in major markets throughout the world as expeditiously as reasonably possible, at least one Product that acts through each Selected Target and, following such Launch, to maximize sales of such Product(s), in each case in a manner consistent with the efforts Takeda devotes to products or research, development or marketing projects of similar market potential, profit potential or strategic value resulting from its own research efforts, based on conditions then prevailing; provided that, following Launch of a Product in the first major market (i.e., Japan, a Major European Country, or the United States of America), Takeda's use of Diligent Efforts with respect to such Product shall be determined on a country-by-country basis such that the sole and exclusive remedy for Lexicon in the event of Takeda's election to discontinue Diligent Efforts or upon Lexicon's exercise of its option in the event of Takeda's failure to satisfy its diligence obligations, as further set forth in Section 2.3(b), shall apply on a country-by-country basis. Within [**] after the end of each [**], Takeda shall prepare and provide Lexicon with a reasonably detailed written report of the activities conducted under this Agreement, and the results thereof, through such date with respect to the development and/or commercialization of Products. Such report shall, among other things, describe the progress and status of Takeda's research and development efforts in sufficient detail as to enable a reasonable assessment of whether such efforts constitute Diligent Efforts. Takeda shall immediately notify Lexicon in writing in the event Takeda elects to discontinue Diligent Efforts to research, develop and commercialize Products acting through a Selected Target.

(b) Discontinuation of Development or Failure to Satisfy Diligence Obligations. With respect to each Selected Target for which Takeda elects to discontinue Diligent Efforts to research, develop and commercialize Products, or otherwise fails to satisfy its diligence obligations under Section 2.3(a) above, at the option of Lexicon as its sole and exclusive remedy therefor, (i) such Selected Target shall become a "Released Target" for all purposes of this Agreement, (ii) Takeda's licenses with respect to such Selected Target (including, without limitation, Takeda's license under the Selected Target IP Rights and to Selected Target Project Materials) shall terminate, (iii) Takeda shall use Diligent Efforts to turn over or otherwise make available to Lexicon any High Throughput Screening System specific to such Selected Target generated by Takeda to identify, evaluate and develop Pharmaceutical Compounds acting through such Selected Target and Controlled by Takeda or any Affiliate of Takeda, and (iv) Takeda shall assign (or reassign, as applicable) to Lexicon all right, title and

interest in, to and under the Selected Target IP Rights relating to such Selected Target (including, without limitation, all Patents with claims directed to such Selected Target IP Rights, [**], all in accordance with Sections 4.4 and 4.5; provided, however, that, except for the case where Lexicon exercises its rights under this Section 2.3(b) as a result of Takeda's notice of its election to discontinue Diligent Efforts to research, develop and commercialize Products acting through a Selected Target, Lexicon may exercise the option set forth above in this Section 2.3(b) only in the case where (a) Lexicon shall first have given Takeda [**] prior written notice of Lexicon's intent to exercise its rights under this Section 2.3(b), stating the reasons and justification for its exercise of such rights [**], and (b) Takeda shall not have used Diligent Efforts during such [**] period to pursue the research and/or development of, and/or to Launch and/or maximize sales of, Products acting through such Selected Target. Notwithstanding the foregoing, in the event that, prior to Lexicon's exercise of its rights under this Section 2.3(b) with respect to a Selected Target, Takeda has paid the research milestone for such Selected Target, as specified in Section 5.2(a)(iii) for LG105 and Section 5.2(b) for Selected Targets other than LG105, (x) Takeda shall retain non-exclusive licenses under this Agreement with respect to such Selected Target (including, without limitation, under the Selected Target IP Rights Controlled by Lexicon or any Affiliate of Lexicon and to Selected Target Project Materials), on the terms (except for exclusivity) and subject to the conditions set forth in Section 4.2 and 4.3, and the milestone and royalty payment obligations of Article 5 and the payment provisions of Article 6, at the same rates set forth therein, shall continue to apply to all Products researched, developed or commercialized by Takeda, its Affiliates and licensees relating to such Selected Target; and (y) Takeda shall retain ownership of the Selected Target IP Rights relating to such Selected Target that are Controlled by Takeda or any Affiliate of Takeda (other than Selected Target IP Rights originally assigned by Lexicon to Takeda that were assigned by Lexicon to Takeda pursuant to Section 4.4(a), which shall nevertheless be reassigned to Lexicon), subject to a non-exclusive license to Lexicon, with the right to sublicense, of all such Selected Target IP Rights (including, without limitation, all Patents with claims directed to such Selected Target IP Rights, [**].

(c) Product Development Rights. In the event Lexicon exercises its rights in accordance with Section 2.3(b) above after [**], Takeda shall deliver to Lexicon copies of all data, information, registrations and applications therefor that are existing and available and reasonably necessary to enable Lexicon to pursue the development and commercialization of (i) such Product(s) and (ii) related back-up Pharmaceutical Compounds acting through the Selected Target that are covered by the same IND or for which a separate IND has been filed. Lexicon shall have the right, within the period of [**] following Takeda's delivery of such copies, to obtain an exclusive (even as to Takeda) license from Takeda for the research, development and commercialization of such Products and related back-up Pharmaceutical Compounds acting through such Selected Target, including, without limitation, all Patent claims and other intellectual property rights therein, by delivering written notice thereof to Takeda, subject to the milestone and royalty payment obligations set forth in Section 5.6 and Takeda's right in Section 4.6. With respect to each Selected Target and related Products and related back-up Pharmaceutical Compounds for which Lexicon exercises its right under this Section 2.3(c) to obtain an exclusive license, Takeda promptly shall prepare and deliver to Lexicon all materials and copies of all data and information, and shall assign and transfer to Lexicon all registrations and applications therefor relating to such Product and related back-up Pharmaceutical

Compounds, and Lexicon shall reimburse Takeda's reasonable expenses in connection therewith. Notwithstanding the foregoing, except as and to the extent as may be expressly agreed by Takeda, (a) the exclusive license granted to Lexicon in accordance with this Section 2.3(c) for the research, development and commercialization of a Product(s) and related back-up Pharmaceutical Compounds shall not include rights under any Patent Controlled by Takeda or an Affiliate of Takeda to [**], and (b) Lexicon shall not [**] except to the extent permitted under such license until [**].

2.4 EXTENSION OF RESEARCH TERM. At any time more than [**] prior to the end of the initial Research Term, Takeda, upon written notice to Lexicon and subject to payment to Lexicon of the fee set forth in Section 5.1(c), may extend the Research Term for an additional two (2) years.

ARTICLE 3.

MANAGEMENT OF THE PROJECT

3.1 FORMATION OF STEERING COMMITTEE. The Parties shall form a steering committee for the purpose of overseeing the Project (the "Steering Committee"), as set forth in this Article 3. The Steering Committee shall manage the Project with the priority of maximizing success at the earliest point in time. The Steering Committee shall be composed of [**] representatives qualified to evaluate and oversee the Project, of which [**] representatives shall be appointed by Lexicon and [**] by Takeda. The Steering Committee shall be chaired by a Takeda representative. As of the Effective Date, the representatives of the Steering Committee shall be as follows:

For Lexicon: [**]

For Takeda: [**]

Any Party may replace its representatives on the Steering Committee at any time upon written notice to the other Parties; provided, however, that such replacements, in the good faith judgment of the Party making such replacement, shall be qualified to evaluate and oversee the Project.

3.2 REGULAR MEETINGS. The Steering Committee shall meet at least [**] times per calendar year, or more frequently either in-person, by video conference or telephonically, as mutually agreed by the Parties, until the Project is completed or terminated. Meetings that are in-person will be held alternately at Lexicon and Takeda, unless mutually agreed otherwise. The Steering Committee shall designate one (1) representative to record and, within [**] after such meeting, distribute to the other Steering Committee members the minutes of each such meeting. Each Party shall bear its own costs and expenses associated with attending and participating in such meetings.

3.3 QUORUM; VOTING.

(a) Quorum. A quorum of the Steering Committee shall consist of [**] representatives; provided that at least [**] representatives appointed by Lexicon and [**] representatives appointed by Takeda are present. Representatives of the Steering Committee may attend a meeting of the Steering Committee either in-person, by video conference or telephonically, but not by proxy.

(b) Voting. Each representative will have one (1) vote on all matters on which the Steering Committee shall decide. In order for the Steering Committee to take any action, all representatives constituting a quorum must participate in the discussion and vote on such proposed action. Decisions of the Steering Committee shall require unanimous agreement by all representatives constituting a quorum; provided, however, that if there is not unanimous agreement by all representatives constituting a quorum on any proposed action or proposals, including, but not limited to, the items set forth in Section 3.4 for any reason, the Steering Committee shall request in writing that a decision on such proposed action or proposals be made by the management officers of the Parties designated below, or the appointed representatives of such management officers.

For Lexicon: Arthur T. Sands, M.D., Ph.D.,
President & CEO of Lexicon

For Takeda: Takashi Soda, Ph.D., General Manager
Pharmaceutical Research Division

In the event that a decision with respect to any proposed action or proposals has not been provided by such management officers, or the appointed representatives of such management officers, within [**] after the date of the written request by the Steering Committee, the matter shall be referred to a Third Party arbitrator or arbitrators, in accordance with the following procedures, whose decision shall be non-binding. In such event, the parties shall attempt to mutually agree upon a single independent Third Party arbitrator, who shall be a scientific professional with appropriate experience in the subject matter at issue in such disagreement, within [**] after the initial referral of such matter to the designated officers. If the Parties are unable to mutually agree upon one such person, then each Party shall appoint one independent Third Party scientific professional with appropriate experience in the subject matter at issue in such disagreement prior to the expiration of such [**] period, and within [**] after the initial referral of such matter to the designated officers, such person(s) shall select a single independent Third Party arbitrator, who shall be a scientific professional with appropriate experience in the subject matter at issue in such disagreement. Each Party shall present to the arbitrator all information presented to the Steering Committee and all other information as such Party reasonably desires regarding such disagreement. Within [**] after the initial referral of such matter to the designated officers, the arbitrator shall provide written notice to the parties regarding his or her determination regarding such disagreement. Either Party who is not satisfied with the notice may submit such matter to arbitration pursuant to Section 12.8(b) within [**]

after its receipt of the notice. If neither Party submits such matter to the arbitration within such [**] period, the determination by the arbitrator under this Section shall become binding and final.

3.4 AUTHORITY OF STEERING COMMITTEE. The Steering Committee shall be responsible for organizing the Project with the priority of maximizing success at the earliest point in time. The responsibilities of the Steering Committee with respect to the research to be conducted under the Work Plan shall include, without limitation, the following:

(a) Preparation, alteration, modification and implementation of the Work Plan;

(b) Monitoring progress of all aspects of the research to be conducted under the Work Plan;

(c) Evaluation of the quality, quantity and effectiveness of the personnel conducting the research under the Work Plan;

(d) Recommendation of Targets to Takeda for selection by Takeda as Selected Targets after completion of Level 2 Phenotypic Analysis of such Targets; and

(e) Reviewing Lexicon's assessment, disclosed to Takeda pursuant to Section 2.2(b), that a Target may have utility for the research and development of Pharmaceutical Compounds in the treatment of diseases and conditions other than Hypertension and Hypotension (or abnormal blood pressure), and the basis for such assessment.

Notwithstanding anything to the contrary, the Steering Committee shall have no authority to alter, modify or amend any of the rights and obligations of the Parties set forth under this Agreement.

3.5 PROJECT MANAGERS. Lexicon and Takeda shall each appoint a project manager (each, a "Project Manager"). The Project Managers shall be the principal point of contact among the Parties with respect to daily running of the Project. The Lexicon Project Manager shall keep the Takeda Project Manager fully informed regarding the status of the Project, including, without limitation, providing the Takeda Project Manager with [**] written reports detailing the status of the Project, and meeting in-person with the Takeda Project Manager upon request by Takeda. The joint responsibilities of the Project Managers shall include, without limitation, making recommendations to the Steering Committee, day-to-day oversight of the Project, approval of non-material changes in the Work Plan but only upon unanimous agreement of both Project Managers, and oversight of resources related to the Project. The Project Managers shall submit to the Steering Committee a proposed agenda of items requiring the Steering Committee's review, with a view to providing the Steering Committee as much notice as is reasonably practicable before each Steering Committee meeting.

3.6 VISITS TO FACILITIES. Upon reasonable advance written request from Takeda, Lexicon shall permit representatives from Takeda to visit facilities of Lexicon and its Affiliates, [**], used in activities associated with the Project. Such visits shall be permitted with such

frequency and to such extent as may be reasonably necessary for Takeda to review, evaluate and participate in the Project.

ARTICLE 4.

ACCESS, LICENSE GRANTS, AND TRANSFERS OF RIGHTS

4.1 GENOME 5000 PROGRAM. During the Research Term, subject to the terms and conditions of this Agreement, Lexicon hereby grants to Takeda exclusive access to the Genome 5000 Program for the purpose of identification and selection of Targets for the research, development and commercialization of Pharmaceutical Products for use in Hypertension or Hypotension (or abnormal blood pressure).

4.2 SELECTED TARGET LICENSE GRANT. Subject to the terms and conditions of this Agreement, and subject to any applicable Pre-Existing Obligations, from and after the time that a Target is designated as a Selected Target (until, if applicable, such Selected Target becomes a Released Target), Lexicon hereby grants to Takeda a worldwide, exclusive (even as to Lexicon) license, including the right to grant sublicenses, under the Selected Target IP Rights Controlled by Lexicon or any Affiliate of Lexicon to use such Selected Targets for and in the research, development and commercialization of Products. [**]. Notwithstanding the foregoing, in the event Lexicon disclosed to Takeda the prospective utility of such Selected Target for the research and development of Pharmaceutical Compounds for the prevention and/or treatment of diseases and conditions other than Hypertension and Hypotension (or abnormal blood pressure) pursuant to Section 2.2(b) prior to the designation of such Selected Target under Section 2.2(c), [**], (a) Lexicon shall retain rights under the Selected Target IP Rights for and in the research, development and commercialization of Pharmaceutical Compounds for the prevention and/or treatment of such other diseases and conditions (but not for the prevention and/or treatment of Hypertension and Hypotension (or abnormal blood pressure)), including the right to grant licenses under such rights, which rights shall be exclusive (even as to Takeda) in the case of Patent claims specifically directed to the utility of such Selected Target for the research and development of Pharmaceutical Compounds for the prevention and/or treatment of diseases and conditions other than Hypertension and Hypotension (or abnormal blood pressure), and non-exclusive otherwise, and (b) the rights granted to Takeda under the preceding sentence shall be exclusive (even as to Lexicon) in the case of Patent claims specifically directed to the utility of such Selected Target for the research and development of Pharmaceutical Compounds for the prevention and/or treatment of Hypertension and Hypotension (or abnormal blood pressure), including, but not limited to, the Patent claims described in Section 1.44(b)(ii) and (iii) relating to such Selected Target, and (subject to the exclusive rights retained by Lexicon for the prevention and/or treatment of such other diseases and conditions, as set forth above) non-exclusive otherwise. Any sublicense under this Section 4.2 shall be set forth in a written agreement containing confidentiality, non-use, ownership of intellectual property and audit provisions consistent with and no less restrictive than those contained herein, shall be subject and subordinate to the terms and conditions of this Agreement, and shall obligate the sublicensee to make the milestone and royalty payments to Lexicon required hereunder; provided that Takeda shall remain responsible for all payments due to Lexicon hereunder. Lexicon shall prepare, file,

prosecute and maintain Patents and Information with respect to the Selected Target IP Rights, and shall not, during the term of the license contemplated by this Section 4.2, sell, assign, deliver, convey, transfer, set over or license any such Patent or Information to any Third Party, except as may be provided in Pre-Existing Obligations, if any; provided that nothing herein shall restrict Lexicon's right to grant licenses under the claims of any such Patent or any such Information that are outside the scope of the Selected Target IP Rights.

4.3 SELECTED TARGET PROJECT MATERIALS LICENSE GRANT. Subject to the terms and conditions of this Agreement, from and after the time that a Target is designated as a Selected Target (until, if applicable, such Selected Target becomes a Released Target), Lexicon hereby grants to Takeda a worldwide, non-exclusive license under the Patents and Information Controlled by Lexicon or any Affiliate of Lexicon to use Selected Target Project Materials corresponding to such Selected Target, solely in support of Takeda's research and development of Products for use in Hypertension or Hypotension (or abnormal blood pressure) pursuant to the rights and licenses granted in Section 4.2 and/or the assignments granted pursuant to Section 4.4. Such license shall include the right to grant sublicenses to Third Parties in connection with, and incident to, a sublicense granted to such Third Party under the rights and licenses granted under Section 4.2. [**].

4.4 INTELLECTUAL PROPERTY ASSIGNMENT.

(a) Selected/Assigned Target. Subject to the terms and conditions of this Agreement, and subject to any applicable Pre-Existing Obligations, at such time as Takeda pays the research milestone payment corresponding to any Selected Target, whether with respect to LG105 pursuant to Section 5.2(a)(iii) or with respect to a Selected Target other than LG105 pursuant to Section 5.2(b), Lexicon and any and all Affiliates of Lexicon will irrevocably sell, assign, deliver, convey, transfer and set over to Takeda all right, title and interest in, to and under the Selected Target IP Rights relating to such Selected Target (including, without limitation, all Patents with claims directed to such Selected Target IP Rights) that are Controlled by Lexicon or any Affiliate of Lexicon. The effective date of the sale, assignment, delivery, conveyance, transfer and setting over of any particular Selected Target (hereinafter, an "Assigned Target") shall be the date of payment by Takeda of the research milestone payment corresponding to such Selected/Assigned Target. Each and every sale, assignment, delivery, conveyance, transfer and setting over of an Assigned Target shall be memorialized in an Assignment and Transfer Agreement substantially in the form of the Form Assignment and Transfer Agreement set forth in Exhibit 4.4, executed and delivered to Takeda effective as of the effective date of the sale, assignment, delivery, conveyance, transfer and setting over of such Assigned Target. Lexicon acknowledges and agrees that, subject to the terms and conditions of this Agreement, and subject to any applicable Pre-Existing Obligations, Lexicon has an obligation to sell, assign, deliver, convey, transfer and set over to Takeda full and complete title to the Selected Target IP Rights in each Assigned Target, free and clear from any and all encumbrances.

(b) Licenses under Selected Target IP Rights. Any license granted by Takeda under Selected Target IP Rights assigned to Takeda pursuant to Section 4.4(a) relating to an Assigned Target shall be set forth in a written agreement containing confidentiality, non-use,

ownership of intellectual property and audit provisions consistent with and no less restrictive than those contained herein, shall be subject and subordinate to the terms and conditions of this Agreement, and shall obligate the licensee to make the milestone and royalty payments to Lexicon required hereunder; provided that Takeda shall remain responsible for all payments due to Lexicon hereunder.

(c) Grantback Rights. In the event that any Patent assigned by Lexicon to Takeda pursuant to Section 4.4(a) contains claims directed to any compound or molecule that consists of or incorporates as an active ingredient (i) a protein, whether naturally occurring or otherwise, [**], or (ii) an antibody or any fragment thereof, or the use thereof for the prevention and/or treatment of any disease or condition, Takeda hereby grants to Lexicon a worldwide, exclusive, royalty-free license, including a right to grant sublicense rights, under such Patent claims for all purposes outside the research, development and commercialization of Products, until, if applicable, such Patent is reassigned by Takeda to Lexicon pursuant to Section 4.4(d). [**]. In the event that any Patent assigned by Lexicon to Takeda pursuant to Section 4.4(a) contains claims directed to the use of the Selected/Assigned Target for the research and development of Pharmaceutical Compounds for the prevention and/or treatment of diseases and conditions other than Hypertension and Hypotension (or abnormal blood pressure), and Lexicon disclosed such utility to Takeda pursuant to Section 2.2(b) prior to the designation of such Selected Target under Section 2.2(c), [**], Takeda hereby grants to Lexicon a worldwide, royalty-free license, including a right to grant sublicense rights, under such Patent for and in the research, development and commercialization of Pharmaceutical Compounds for the prevention and/or treatment of such other diseases and conditions (but not for the prevention and/or treatment of Hypertension and Hypotension (or abnormal blood pressure)), until, if applicable, such Patent is reassigned by Takeda to Lexicon pursuant to Section 4.4(d), which license shall be exclusive (even as to Takeda) in the case of Patent claims specifically directed to the utility of such Selected Target for the research and development of Pharmaceutical Compounds for the prevention and/or treatment of diseases and conditions other than Hypertension and Hypotension (or abnormal blood pressure), and non-exclusive otherwise. In the event that Lexicon obtains the issuance of a Patent claiming an improvement made by Lexicon to any HTS System for a Released Target turned over to Lexicon by Takeda pursuant to Section 4.5, which improvement has applications for genes and gene products in addition to such Released Target and would, absent the rights and licenses granted hereunder, infringe a Patent Controlled by Takeda, Lexicon shall grant to Takeda a royalty-free, non-exclusive, perpetual license to use such improvement; it being understood and agreed that Lexicon shall have no right or license under such Patent Controlled by Takeda except as set forth in Section 4.5.

(d) Released Targets. Subject to the terms and conditions of this Agreement, (i) at such time as any Selected Target for which Takeda has not paid the research milestone (as specified in Section 5.2(a)(iii) for LG105 and Section 5.2(b) for Selected Targets other than LG105) becomes a Released Target, Takeda and any and all Affiliates of Takeda will irrevocably sell, assign, deliver, convey, transfer and set over to Lexicon all right, title and interest in, to and under the Selected Target IP Rights relating to such Selected Target (including, without limitation, all Patents with claims directed to such Selected Target IP Rights) that are Controlled by Takeda or any Affiliate of Takeda; and (ii) at such time as any Selected Target for

which Takeda has paid the research milestone (as specified in Section 5.2(a)(iii) for LG105 and Section 5.2(b) for Selected Targets other than LG105) becomes a Released Target, Takeda and any and all Affiliates of Takeda will irrevocably sell, reassign, deliver, convey, transfer and set over to Lexicon all right, title and interest in, to and under the Selected Target IP Rights relating to such Selected Target (including, without limitation, all Patents with claims directed to such Selected Target IP Rights) that were originally assigned by Lexicon to Takeda pursuant to Section 4.4(a). The effective date of the sale, assignment, delivery, conveyance, transfer and setting over of any particular Released Target shall be the date such Selected Target became a Released Target. Each and every sale, assignment, delivery, conveyance, transfer and setting over of a Released Target shall be memorialized in an Assignment and Transfer Agreement substantially in the form of the Form Assignment and Transfer Agreement set forth in Exhibit 4.4, executed and delivered to Lexicon effective as of the effective date of the sale, assignment, delivery, conveyance, transfer and setting over of such Selected Target. Takeda acknowledges and agrees that, subject to the terms and conditions of this Agreement, Takeda has an obligation to sell, assign, deliver, convey, transfer and set over to Lexicon full and complete title to the Selected Target IP Rights in each Released Target, free and clear from any and all encumbrances.

4.5 DELIVERABLES. Concurrently with the assignment to Takeda of the Selected Target IP Rights with respect to an Assigned Target (or, in the case of a Selected Target that is subject to Pre-Existing Obligations that prevent such assignment, promptly following such time as Takeda pays the research milestone payment corresponding to such Selected Target), Lexicon shall deliver to Takeda all [**] that are in Lexicon's or its Affiliates' physical possession or control. Such [**] may include, for example, but shall not be limited to, the following:

- [**] of such Assigned/Selected Target;
- [**] of such Assigned/Selected Target;
- [**] of such Assigned/Selected Target and [**];
- [**] of such Assigned/Selected Target;
- [**] necessary or useful to file and prosecute patent applications covering such Assigned/Selected Target [**];
- [**] specific to such Assigned Target, and necessary or useful for validation of such Assigned Target; and
- [**] to such Assigned/Selected Target [**] and/or obtained under the Project, including without limitation [**] of such Assigned/Selected Target, [**] of such Assigned/Selected Target mRNA [**].

Takeda shall be similarly obligated, with respect to Selected Targets (whether or not Assigned Targets) that become Released Targets, to deliver or make available to Lexicon all [**]

that are in Takeda's physical possession or control. Takeda shall use Diligent Efforts to turn over to Lexicon, only for Lexicon's in-house research use, any High Throughput Screening System generated by Takeda specific to the Released Target and Controlled by Takeda or any Affiliate of Takeda so that Lexicon can identify, evaluate and develop Pharmaceutical Compounds acting through such Released Target and shall provide Lexicon with general information which Takeda deems is useful for Lexicon's use of the HTS System regarding the Released Target. Notwithstanding the foregoing, except as and to the extent specifically provided in Section 2.3(c), Takeda shall have no obligation under this Section 4.5 to disclose any Information about [**] of any Pharmaceutical Compounds or to provide any [**] to Lexicon.

4.6 TAKEDA'S RIGHT OF NEGOTIATION FOR REVERSION PRODUCTS. In the event that Lexicon desires to negotiate with any Third Party a license or similar rights (including, but not limited to, co-promotion and co-marketing) to a Reversion Product, then Lexicon shall give a written notice of such desire to Takeda. Takeda shall have a period of [**] to indicate by a written notice to Lexicon that Takeda desires to negotiate towards an agreement (a "Reversion Product License Agreement") under which Lexicon would grant to Takeda such license or rights. Within such [**] period, the Parties shall negotiate exclusively and in good faith. If within such [**] period Takeda notifies Lexicon of its desire to negotiate such a license or rights, the Parties shall negotiate in good faith towards a Reversion Product License Agreement for a total period of up to [**] (including the initial [**] period). During the [**] period, the negotiation shall remain exclusive. If the Parties fail to execute and deliver a Reversion Product License Agreement within the [**] period, Lexicon shall have a period of [**], after the expiry of the [**] negotiation period for Takeda, during which Lexicon shall be permitted to grant the license or similar rights to any Third Party; provided that Lexicon shall not [**]. If Lexicon does not grant the license or similar rights to a Third Party during such [**] period in accordance with this Section 4.6, Takeda's right to the exclusive negotiation under this Section 4.6 shall continue in full force and effect. Nothing in this Section 4.6 shall be deemed to obligate Lexicon to enter into any such exclusive license with Takeda. For Reversion Products that [**], Takeda's rights under this Section 4.6 shall terminate upon the completion of [**] of a Reversion Product acting through such Released Target.

ARTICLE 5.

PAYMENTS

5.1 UPFRONT FEE.

(a) Fee. Within [**] after the Effective Date, Takeda shall pay to Lexicon an upfront fee equal to twelve million dollars ($US12,000,000) in consideration to Lexicon for Lexicon's performing the Project and other obligations under this Agreement and granting to Takeda the exclusive access right under Section 4.1 and other rights under this Agreement.

(b) Refund. In the event that Lexicon fails to perform the minimum number of Level 1 Phenotypic Analysis screens required [**] during the Research Term as set forth in Section 2.2(a)(i) by the end of [**], Lexicon, within [**] after the end of [**], shall refund to

Takeda a pro-rata portion of the upfront fee paid to Lexicon by Takeda pursuant to Section 5.1(a). For purposes of illustration, if at the end of [**] of the Research Term, Lexicon has performed a total of [**] Level 1 Phenotypic Analysis screens required [**], Lexicon shall refund to Takeda [**], such amount calculated as follows: [**].

(c) Extension of Research Term. In the event that Takeda extends the Research Term pursuant to and in accordance with Section 2.4, Takeda shall pay Lexicon an additional [**].

5.2 RESEARCH MILESTONES.

(a) LG105.

(i) Within [**] after the Effective Date, Takeda shall pay to Lexicon [**] in consideration for the delivery by Lexicon to Takeda of the materials and Information contemplated by Section 2.2(f) regarding a High Throughput Screening System for use with LG105;

(ii) Within [**] following Lexicon's written notice to Takeda of [**], Takeda shall pay to Lexicon an additional [**]; provided that such payment shall be due no earlier than [**] after the date that Lexicon delivers to Takeda the materials and Information contemplated by Section 2.2(f) regarding a High Throughput Screening System for use with LG105; and

(iii) Within [**] after the date that Lexicon delivers to Takeda the materials and Information contemplated by Section 2.2(f) regarding a High Throughput Screening System for use with LG105, but in no event more than [**] after the Effective Date, Takeda shall pay to Lexicon [**]; provided that [**].

Notwithstanding anything to the contrary, in the event that Takeda, in Takeda's sole discretion, notifies Lexicon of its election to discontinue research on LG105 prior to the date the research milestone payment specified in Section 5.2(a)(iii) becomes due, Takeda will have no obligation to make such research milestone payment to Lexicon.

Takeda shall be required to make the research milestone payments to Lexicon specified in Section 5.2(a)(i) and (ii) on the dates such payments becomes due even if Takeda notifies Lexicon of its election to discontinue research on LG105 prior to such date; provided, however, that Takeda shall be released from the payments set forth in Section 5.2(a)(i) and (ii) if LG105 is excluded from this Agreement pursuant to Section 2.2(g); provided, further, that should Takeda not [**] within the [**] period after the delivery of it to Takeda, the due date of the payment set forth in Section 5.2(a)(i) and (ii) shall be extended for additional [**]; and provided, further, that should Takeda not [**] within such [**] extended period, LG105 shall become a Released Target pursuant to and in accordance with Section 2.2(d) and Takeda shall be released from the payment set forth in Section 5.2(a)(i) and (ii).

(b) Selected Targets Other than LG105. Within [**] after Takeda's designation of each Selected Target other than LG105, Takeda shall pay to Lexicon [**] with respect to such Selected Target; provided that [**]. Notwithstanding anything to the contrary, in the event that Takeda, in Takeda's sole discretion, notifies Lexicon of its election to discontinue research on such a Selected Target prior to the date the research milestone payment specified in this Section 5.2(b) with respect to such Selected Target becomes due, Takeda will have no obligation to make such research milestone payment to Lexicon.

5.3 DEVELOPMENT MILESTONES. Within [**] after the first achievement of each milestone event by Takeda, or an Affiliate or licensee of Takeda for each Pharmaceutical Product, Takeda shall pay to Lexicon the development milestone payment corresponding to such event, as set forth below:

Milestone Event	Milestone Payment
Filing of a first IND	$[**]
Initiation of a first Phase 1 Clinical Trial	$[**]
Initiation of a first Phase 2 Clinical Trial	$[**]
Initiation of a first Phase 3 Clinical Trial	$[**]

In the event that any subsequent Pharmaceutical Product in addition to a first Pharmaceutical Product is obtained by Takeda as a consequence of use of any single, particular Selected Target, the amount to be paid by Takeda to Lexicon upon achievement of any development milestone event with respect to any such subsequent Pharmaceutical Product(s) under this Section 5.3 shall be equal to [**] of the amount set forth in foregoing table.

The development milestone payment under this Section 5.3 shall be paid only once for a single Pharmaceutical Product regardless of formulations or indications. Takeda shall not be required to make the development milestone payment for different or additional formulations or indications for the Pharmaceutical Product.

For purposes of clarification, Takeda shall have no obligation to make any development milestone payment under this Section 5.3 for any Ancillary Diagnostic Product.

5.4 LAUNCH MILESTONES. Within [**] after the first Launch by Takeda, or an Affiliate or licensee of Takeda of each Pharmaceutical Product in each of (a) Japan, (b) a Major European Country, and (c) the United States of America, Takeda shall pay to Lexicon a launch milestone payment, as set forth below:

Launch Event	Launch Payment
First Launch in the first of either Japan, a Major European Country, or the United States of America	$[**]
First Launch in the second of either Japan, a Major European Country, or the United States of America	$[**]
First Launch in the third of either Japan, a Major European Country, or the United States of America	$[**]

For purposes of clarification, notwithstanding anything to the contrary, the maximum amount that Takeda will be obligated to pay to Lexicon pursuant to this Section 5.4 with respect to any single Pharmaceutical Product that is the first Pharmaceutical Product obtained from a single, particular Selected Target will be [**], and Takeda shall have no obligation to pay any amount to Lexicon under this Section 5.4 in excess of [**] with respect to the Launch of such first Pharmaceutical Product; provided, however, that in the event that one or more subsequent Pharmaceutical Products in addition to a first Pharmaceutical Product is obtained by Takeda as a consequence of use of any single, particular Selected Target, the amount to be paid by Takeda to Lexicon upon achievement of any Launch milestone event with respect to any such subsequent Pharmaceutical Product(s) under this Section 5.4 shall be equal to [**] of the amount set forth in foregoing table.

The Launch milestone payment under this Section 5.4 shall be paid only once for a single Pharmaceutical Product regardless of formulations or indications. Takeda shall not be required to make the Launch milestone payment for different or additional formulations or indications for the Pharmaceutical Product.

For purposes of clarification, Takeda shall have no obligation to make any Launch milestone payment under this Section 5.4 for any Ancillary Diagnostic Product.

5.5 ROYALTIES.

(a) Royalty Rates. For each Product, Takeda shall pay to Lexicon the following cumulative royalties as a percent of aggregate annual Net Sales of such Product:

Net Sales Amount	Royalty Rate
Annual worldwide Net Sales up to $[**]	[**]%
Annual worldwide Net Sales in excess of $[**] and up to $[**]	[**]%
Annual worldwide Net Sales in excess of $[**] and up to $[**]	[**]%
Annual worldwide Net Sales in excess of $[**]	[**]%

For purpose of illustration, if annual worldwide Net Sales in a particular calendar year is $[**], then the royalties to be paid by Takeda to Lexicon hereunder will be $[**].

(b) Applicable Year. Annual worldwide Net Sales shall be calculated on a calendar year basis.

(c) Royalty Reduction. In the event that any payments are required to be made to any Third Party in respect of the [**] pursuant the terms of a license obtained by Takeda or its Affiliates under Patent(s) Controlled by such Third Party that, in Takeda's reasonable judgment, would be infringed, in the absence of such license, by the [**] of a Product in any country, then Takeda may deduct [**] of such payments actually paid to the Third Party from the royalties payable to Lexicon pursuant to this Section 5.5; provided, however, that in no circumstances shall the royalties payable to Lexicon with respect to any portion of the Net Sales of such Product (as set forth in the foregoing table) be reduced below [**] of such Net Sales.

(d) Royalty Term. The obligation of Takeda to pay royalties to Lexicon with respect to Net Sales of any particular Product pursuant to this Section 5.5 shall commence, on a Product-by-Product and country-by-country basis, on the date of Launch of such Product in such country by Takeda, or an Affiliate or licensee of Takeda, and shall continue for the longer of (i) the term of any Patents Controlled by a Party with a valid claim covering the composition of matter of such Product and providing marketing exclusivity for such Product in such country or (ii) [**] after the Launch of such Product in such country. After expiration of Takeda's royalty payment obligation pursuant to this Section 5.5(d), Takeda shall have a paid up, royalty-free right and license with respect to such Product.

5.6 REVERSION PRODUCTS.

(a) Development Milestones. Within [**] after the first achievement of each milestone event by Lexicon, or an Affiliate or licensee of Lexicon for each Reversion Product (other than Reversion Products licensed to Takeda pursuant to Section 4.6), Lexicon shall pay to Takeda the development milestone payment corresponding to such event, as set forth below:

Milestone Event	Milestone Payment: Reversion Product identified by Lexicon using a High-Throughput Screening System generated by Takeda and turned over to Lexicon pursuant to Sections 2.2(d) or 2.3(b) and 4.5	Milestone Payment: Reversion Product licensed by Takeda to Lexicon pursuant to Section 2.3(c)
Filing of a first IND	$[**]	$[**]
Initiation of a first Phase 1 Clinical Trial	$[**]	$[**]
Initiation of a first Phase 2 Clinical Trial	$[**]	$[**]
Initiation of a first Phase 3 Clinical Trial	$[**]	$[**]

In the event that any subsequent Reversion Product in addition to a first Reversion Product is obtained by Lexicon as a consequence of use of any single, particular Released Target, the amount to be paid by Lexicon to Takeda upon achievement of any development milestone event with respect to any such subsequent Reversion Product(s) under this Section 5.6(a) shall be equal to [**] of the amount set forth in foregoing table.

The development milestone payment under this Section 5.6(a) shall be paid only once for a single Product regardless of formulations or indications. Lexicon shall not be required to make the development milestone payment for different or additional formulations or indications for the Product.

(b) Launch Milestones. Within [**] after the first Launch by Lexicon, or an Affiliate or licensee of Lexicon of each Reversion Product (other than Reversion Products licensed to Takeda pursuant to Section 4.6), in each of (a) Japan, (b) a Major European Country, and (c) the United States of America, Lexicon shall pay to Takeda launch milestone payment, as set forth below:

Launch Event	Milestone Payment: Reversion Product identified by Lexicon using a High-Throughput Screening System generated by Takeda and turned over to Lexicon pursuant to Sections 2.2(d) or 2.3(b) and 4.5	Milestone Payment: Reversion Product licensed by Takeda to Lexicon pursuant to Section 2.3(c)
First Launch in the first of either Japan, a Major European Country, or the United States of America	$[**]	$[**]
First Launch in the second of either Japan, a Major European Country, or the United States of America	None	$[**]
First Launch in the third of either Japan, a Major European Country, or the United States of America	None	$[**]

For purposes of clarification, notwithstanding anything to the contrary, the maximum amount that Lexicon will be obligated to pay to Takeda pursuant to this Section 5.6(b) with respect to any single Reversion Product that is the first Reversion Product obtained from a single, particular Released Target will be (i) [**] in the case of a Reversion Product identified by Lexicon using a High-Throughput Screening System generated by Takeda and turned over to Lexicon pursuant to Sections 2.2(d) or 2.3(b) and 4.5 and (ii) [**] in the case of a Reversion Product licensed by Takeda to Lexicon pursuant to Sections 2.3(c), and Lexicon shall have no obligation to pay any amount to Takeda under this Section 5.6(b) in excess of (x) [**] in the case of a Reversion Product identified by Lexicon using a High-Throughput Screening System generated by Takeda and turned over to Lexicon pursuant to Sections 2.2(d) or 2.3(b) and 4.5 and (y) [**] in the case of a Reversion Product licensed by Takeda to Lexicon pursuant to Sections 2.3(c), with respect to the Launch of such first Reversion Product; provided, however, that in the event that one or more subsequent Reversion Products in addition to a first Reversion Product is obtained by Lexicon as a consequence of use of any single, particular Released Target, the amount to be paid by Lexicon to Takeda upon achievement of any Launch milestone event with respect to any such subsequent Reversion Product(s) under this Section 5.6(b) shall be equal to [**] of the amount set forth in foregoing table.

The Launch milestone payment under this Section 5.6(b) shall be paid only once for a single Reversion Product regardless of formulations or indications. Lexicon shall not be

required to make the Launch milestone payment for different or additional formulations or indications for the Reversion Product.

(c) Royalty Rates. For each Reversion Product (other than Reversion Products licensed to Takeda pursuant to Section 4.6), Lexicon shall pay to Takeda the following cumulative royalties as a percent of aggregate annual Net Sales of such Product:

	Royalty Rate	
Net Sales Amount	Reversion Product identified by Lexicon using a High-Throughput Screening System generated by Takeda and turned over to Lexicon pursuant to Sections 2.2(d) or 2.3(b) and 4.5	Reversion Product licensed by Takeda to Lexicon pursuant to Section 2.3(c)
Annual worldwide Net Sales up to $[**]	[**]%	[**]%
Annual worldwide Net Sales in excess of $[**] and up to $[**]	[**]%	[**]%
Annual worldwide Net Sales in excess of $[**] and up to $[**]	[**]%	[**]%
Annual worldwide Net Sales in excess of $[**]	[**]%	[**]%

For purpose of illustration, if annual worldwide Net Sales of Reversion Product licensed by Takeda to Lexicon pursuant to Section 2.3(c) in a particular calendar year is $[**], then the royalties to be paid by Lexicon to Takeda hereunder will be $[**].

(d) Applicable Year. Annual worldwide Net Sales shall be calculated on a calendar year basis.

(e) Royalty Reduction. In the event that any payments are required to be made to any Third Party in respect of the [**] pursuant the terms of a license obtained by Lexicon or its Affiliates under Patent(s) Controlled by such Third Party that, in Lexicon's reasonable judgment, would be infringed, in the absence of such license, by the [**] of a Reversion Product in any country, then Lexicon may deduct [**] of such payments actually paid to the Third Party from the royalties payable to Lexicon pursuant to this Section 5.6; provided, however, that in no circumstances shall the royalties payable to Takeda with respect to any

portion of the Net Sales of such Reversion Product (as set forth in the foregoing table) be reduced below (i) [**] of such Net Sales in the case of a Reversion Product identified by Lexicon using a High-Throughput Screening System generated by Takeda and turned over to Lexicon pursuant to Sections 2.2(d) or 2.3(b) and 4.5 or (ii) [**] of such Net Sales in the case of a Reversion Product licensed by Takeda to Lexicon pursuant to Sections 2.3(c).

(f) Royalty Term. The obligation of Lexicon to pay royalties to Takeda with respect to Net Sales of any particular Reversion Product pursuant to this Section 5.6 shall commence, on a Reversion Product-by-Reversion Product and country-by-country basis, on the date of Launch of such Reversion Product in such country by Lexicon, or an Affiliate or licensee of Lexicon, and shall continue for the longer of (i) the term of any Patents Controlled by a Party with a valid claim covering the composition of matter of such Reversion Product and providing marketing exclusivity for such Reversion Product in such country or (ii) [**] after the Launch of such Reversion Product in such country. After expiration of Lexicon's royalty payment obligation pursuant to this Section 5.6(f), Lexicon shall have a paid up, royalty-free right and license with respect to such Reversion Product.

(g) Payment Provisions. The payment provisions of Article 6 will apply to Lexicon, with respect to all payments to be made to Takeda under this Section 5.6, to the same extent such provisions apply to Takeda, with respect to payments to be made to Lexicon under Sections 5.3, 5.4 and 5.5.

ARTICLE 6.

PAYMENT PROVISIONS

6.1 MODE OF PAYMENT. All payments shall be made by direct wire transfer of US dollars in immediately available funds in the requisite amount to such bank account as Lexicon may from time to time designate by written notice to Takeda.

6.2 ROYALTY REPORTS AND PAYMENTS. Takeda shall, following the Launch of a Product for which a royalty is due to Lexicon pursuant to Section 5.5, make written reports and payments to Lexicon within [**] after the close of each calendar quarter. Each such report shall show for the just-ended calendar quarter details on a country by country basis of the quantities of Product sold, gross receipts from such sales, deductions from such receipts as permitted under Section 1.28, Net Sales, the royalties calculated to be due to Lexicon on such Net Sales pursuant to Section 5.5, the amount of any payments actually paid by Takeda to any Third Party and the amount of any reduction in the royalties to be paid to Lexicon pursuant to Section 5.5(c), and the royalty amount due and payable to Lexicon. The exchange rate to be used for converting foreign currencies into US dollars shall be as published in The Wall Street Journal, Eastern U.S. Edition for the purchase of US dollars on the last business day of the calendar quarter for which a royalty amount is due and payable to Lexicon. Concurrently with providing each such report, Takeda shall pay Lexicon the royalty amount in US dollars due and payable to Lexicon for the period covered by such report. For [**] after the end of each calendar year, Takeda shall keep, and shall require its licensees and sublicensees, as applicable, to keep (all in accordance with

generally accepted accounting principles, consistently applied), complete and accurate records in sufficient detail to properly reflect all gross sales and Net Sales and to enable the royalties payable hereunder to be determined regarding such calendar year.

6.3 INTEREST ON LATE PAYMENTS. All payments due under this Agreement shall be paid by the due date for payment as specified in this Agreement. If any due and payable amount is not paid in full on or before such due date as determined under the term of this Agreement, then without prejudice to any other right or remedy available, an interest charge will be imposed on the overdue sum on a daily basis at a rate equal to the lesser of (i) [**], and (ii) the maximum rate allowable by Applicable Laws.

6.4 TAXES. In the event that any milestones, royalties or other payment due to Lexicon are subject to withholding tax required by Applicable Laws to be paid to the taxing authority of any country, the amount of such tax may be withheld from the applicable milestones, royalties or other payment due Lexicon. Takeda shall promptly pay such tax on behalf of Lexicon, shall furnish Lexicon with a certificate of withholding tax so deducted or its equivalent for Lexicon's avoidance of duplicate taxation in United States, and shall maintain official receipts of payment of any such withholding taxes and shall forward copies of such receipts to Lexicon. Takeda may not deduct any other withholding or any other governmental charges from the payments agreed upon under this Agreement, except to the extent same are paid on behalf of, or for the benefit of, Lexicon.

6.5 AUDITS.

(a) Audit Rights; Procedure. Upon the written request of Lexicon, and not more than [**] in each Takeda fiscal year, Takeda shall permit an independent certified public accounting firm of an internationally recognized standing selected by Lexicon, and reasonably acceptable to Takeda (such acceptance not to be unreasonably withheld or delayed), at Lexicon's expense, to have access during normal business hours, and upon [**] prior written notice, only to such of the records of Takeda and its Affiliates as may be reasonably necessary to verify the accuracy of any financial reports to Lexicon set forth in Section 6.2 with respect to the preceding [**] calendar years. The accounting firm will disclose to Lexicon whether the reports are correct or incorrect and, if incorrect, the amount by which the reports reveal an underpayment to Lexicon and relevant details of the underpayment; provided that any such details will be deemed Confidential Information of Takeda. Such accounting firm will disclose no other information to Lexicon.

(b) Additional Payments; Cost Reimbursement. If such accounting firm concludes that additional payments were owed during such calendar year, Takeda shall pay the additional payments, with interest from the date such amount was originally due and payable at a rate equal to the lesser of (i) [**], or (ii) the maximum rate allowable by Applicable Laws, within [**] after the date Lexicon delivers to Takeda such accounting firm's written report, unless the additional payment is disputed by Takeda pursuant to Section 6.5(d). If the amount of the underpayment is greater than [**] of the total amount owed for the period in question and [**], then Takeda shall, in addition, reimburse Lexicon for its reasonable costs related to such audit.

(c) Confidentiality. Lexicon shall treat all information subject to review under this Section 6.5 as Confidential Information of Takeda and in accordance with the confidentiality provisions of Article 8, and will cause its accounting firm to enter into a confidentiality agreement with Takeda reasonably acceptable in form and substance to Takeda, obligating such accounting firm to retain all information reviewed by such accounting firm pursuant to this Section 6.5 in confidence pursuant to the terms and conditions of such confidentiality agreement.

(d) Audit Disputes. If Takeda in good faith disputes the conclusion of the accounting firm under Section 6.5(b) above that Takeda owes additional royalties or other payments, or any specific aspect of the conclusion, then Takeda will inform Lexicon in writing within [**] after receiving a copy of the audit containing such conclusion, specifying in detail the reasons for disputing such conclusion. Lexicon and Takeda shall promptly thereafter meet and negotiate in good faith a resolution to such dispute. In the event that the Parties are unable to resolve such dispute within [**] after the date of Takeda's written notice to Lexicon, the matter will be resolved in accordance with Section 12.8. In the event that resolution of any such dispute is made in favor of Lexicon, interest will be payable on any additional royalties or other payments determined to be due to Lexicon in the manner provided in Section 6.5(b).

ARTICLE 7.

INTELLECTUAL PROPERTY

7.1 OWNERSHIP OF GENOME 5000 PROGRAM. Subject to the terms and conditions set forth in this Agreement, as between Lexicon and Takeda, Lexicon shall retain sole ownership of the Genome 5000 Program and any intellectual property rights therein.

7.2 OWNERSHIP OF INVENTIONS.

(a) Inventions by Takeda. Subject to the terms and conditions set forth in this Agreement, any invention made by employees of Takeda, and any and all patents and patent applications covering such invention, shall be owned by Takeda, and, as between Takeda and Lexicon, Takeda shall have the sole right to take any and all steps necessary, consistent with Applicable Laws, to obtain the entire right, title and interest in, to and under such invention and such patents and patent applications.

(b) Inventions by Lexicon. Subject to the terms and conditions set forth in this Agreement, any invention made by employees of Lexicon, and any and all patents and patent applications covering such invention, shall be owned by Lexicon, and, as between Lexicon and Takeda, Lexicon shall have the sole right to take any and all steps necessary, consistent with Applicable Laws, to obtain the entire right, title and interest in, to and under such invention and such patents and patent applications. Promptly after a Target becomes a Selected Target, if it has not already done so, Lexicon shall file a U.S. patent application relating to Selected Target IP Rights with respect to such Selected Target, in consultation with Takeda.

(c) Inventions by Takeda and Lexicon. Subject to the terms and conditions set forth in this Agreement, any invention made by employees of Takeda and by employees of Lexicon jointly, and any and all patents and patent applications covering such invention, shall be owned by Takeda and Lexicon jointly, and Takeda and Lexicon shall take all steps necessary, consistent with Applicable Laws, to obtain the entire right, title and interest in, to and under such invention and such patents and patent applications.

7.3 PATENT PROSECUTION.

(a) First Right to Prosecute. A Party shall have the first right to file, prosecute and maintain the Patents covering technology that such Party solely owns, whether in accordance with Sections 7.1 and 7.2, as applicable, or by assignment pursuant to Section 4.4.

(b) Right of Review. During the Research Term, Lexicon shall provide to Takeda a status report on all Patents Controlled by Lexicon or any Affiliates of Lexicon covering Selected Target IP Rights. The first such report shall be provided to Takeda within [**] after the Effective Date and, thereafter, supplement reports shall be provided to Takeda on a quarterly basis. Takeda shall have a right to request and, promptly after any such request, receive from Lexicon reasonable additional information with respect to any patent application and/or patent in any such report. Notwithstanding Section 7.3(a), each Party shall provide the other Party with a reasonable opportunity to review and provide substantive input to material decisions relating to the prosecution and maintenance of the Patents covering Selected Target IP Rights, including the scope and content and when, where and whether to file patent applications for such technology. The Party with rights to file, prosecute and maintain the Patents covering such Selected Target IP Rights shall furnish to the other Party copies of documents relevant to any such prosecution and maintenance, subsequent to initial filing by the first Party reasonably in advance of expiration of the priority year in order to provide the other Party a meaningful opportunity to comment thereon and to participate in all decision making regarding such prosecution and maintenance. For purposes of clarification, each Party shall consider all substantive input and comments provided by the other Party regarding the prosecution of such patent applications and the maintenance of such patents. With respect to patent applications and patents owned solely by a Party, such Party at its sole discretion, shall have authority to make all decisions regarding prosecution of such solely owned patent applications and maintenance of such solely owned patents, taking into account the other Party's interest as well as its own. With respect to Patents owned jointly by Takeda and Lexicon, the Parties agree that [**] shall have authority to make decisions regarding prosecution of such jointly owned patent applications and maintenance of such jointly owned patents without the consent of [**] and costs and expenses incurred in such prosecution and maintenance shall be borne by [**]. [**].

(c) Abandonment. Each Party agrees not to finally abandon any claims of the Patents covering Selected Target IP Rights without providing the other Party written notice of the first Party's decision not less than [**] prior to any deadline or date imposed by an office with authority and jurisdiction in any country where such patent application is being prosecuted or such patent is being maintained. Upon receipt of such notice from the Party with rights to prosecute and maintain such Patents, the other Party may, in its sole discretion, initiate and/or

continue prosecution activities with respect to such patent application and/or maintenance activities with respect to such patent, and the first Party, upon such other Party's decision to initiate and/or continue such activities, shall assign, deliver, transfer and set over to such other Party all interest Controlled by the first Party in, to and under such patent application and patent. Each Party shall provide the other Party reasonable cooperation, and shall make available to such other Party, at reasonable times and under appropriate conditions, all relevant personnel, records, papers, information, samples, specimens, and the like in its possession necessary to prosecute such patent application and/or maintain such patent assigned to such other Party pursuant to this Section 7.3(c). [**].

7.4 PATENT ENFORCEMENT.

(a) Notice. If a Party becomes aware that a Third Party may be infringing any issued patent that is either (i) jointly owned by Takeda and Lexicon, (ii) Controlled by Lexicon or any Affiliates of Lexicon and licensed to Takeda under the terms and conditions of this Agreement, or (iii) assigned by Lexicon to Takeda under the terms and conditions of this Agreement, then such Party shall promptly notify the other Party in writing of such infringement.

(b) First Enforcement Right. Lexicon shall have the first right, but not the obligation, to institute, prosecute and control an enforcement action with respect to any issued patent Controlled by Lexicon and licensed to Takeda under the terms and conditions of this Agreement. Takeda shall have the first right, but not the obligation, to institute, prosecute and control an enforcement action with respect to any issued patent that is assigned by Lexicon to Takeda under the terms and conditions of this Agreement. [**], in its own name or, if required by Applicable Laws, in its own name and in the name of [**], shall have the first right, but not the obligation, to institute, prosecute and control an enforcement action with respect to any issued patent that is owned by Takeda and Lexicon jointly. The Party controlling an enforcement action shall keep the other Party informed on a reasonably timely basis, consult with the other Party and consider in good faith the reasonable comments of the other Party, both prior to and during any such enforcement action.

(c) Back-Up Enforcement Right. If a Party having the first right to institute and prosecute an enforcement action with respect to any issued patent pursuant to Section 7.4(b) fails to institute and prosecute such an enforcement action or fails to otherwise institute a proceeding to abate the infringement within a period of [**] after receiving written notice or otherwise having knowledge of the infringement as provided above in Section 7.4(a), then the other Party, to the extent permitted under Applicable Laws, shall have the right, but not the obligation, to institute, prosecute and control such an enforcement action or to otherwise institute a proceeding to abate such infringement.

(d) Participation. A Party that is not the Party controlling an enforcement action with respect to any issued patent pursuant to Section 7.4(b) or Section 7.4(c) may elect to participate, and participate, in such enforcement action, and be represented in such action or proceeding using legal counsel of such Party's own choice, at such Party's expense.

(e) Cooperation.

(i) In the event that a Party institutes and prosecutes an enforcement action with respect to any issued patent pursuant to this Section 7.4, the other Party shall cooperate to the extent requested by the Party controlling such enforcement action and as reasonably necessary, including for example permitting such enforcement action to be conducted in its name if required under Applicable Laws. In addition, all documents obtained from an alleged infringer shall be made available to the other Party upon request of such other Party. The external, but not internal, costs of such cooperation shall be borne by the Party that requested such cooperation.

(ii) In addition, upon the reasonable request of a Party controlling any such enforcement action, the other Party shall join the enforcement action, and be represented in such action or proceedings using legal counsel of such other Party's own choice, at such other Party's expense.

(iii) A Party shall not settle any enforcement action or proceeding relating to any issued patent under this Section 7.4 without the prior written consent of the other Party, which consent shall not be unreasonably withheld, conditioned or delayed.

(f) Costs and Expenses. Except as expressly set forth in Section 7.4(e), each Party shall be responsible for and shall bear any and all costs and expenses incurred by such Party (both external and internal) in an enforcement action with respect to any issued patent instituted and prosecuted in accordance with this Section 7.4. No Party shall have any responsibility to reimburse or otherwise bear any cost or expense incurred by the other Party in any enforcement action.

(g) Recovery of Damages. Any recovery of damages and costs in any enforcement action, or any settlement of any enforcement action, with respect to an issued patent pursuant to this Section 7.4 shall be applied as follows: (i) first, to reimburse the external, but not internal, costs and expenses (including reasonable attorneys' fees and costs) actually incurred by the Party that controlled such enforcement action, including for example cost and expenses of the other Party borne by the Party that controlled such enforcement action; and (ii) second, to reimburse the external, but not internal, costs and expenses (including reasonable attorneys' fees and costs) actually incurred by the other Party to the extent that such other Party participated in such enforcement action pursuant to Section 7.4(d) or Section 7.4(e). In the event that, after reimbursement of costs and expenses as set forth herein, an amount of such recovery remains, the remainder amount shall be allocated [**] between the Parties.

7.5 DEFENSE AGAINST THIRD PARTY CLAIMS OF PATENT INFRINGEMENT.

(a) Notice.

(i) Lexicon shall notify Takeda in writing of any allegations from a Third Party, whether threatened or made, that Lexicon's conduct of the Project, whether based on use of the Genome 5000

Program or on use of a Target identified by use of the Genome 5000 Program, infringes the intellectual property rights of such Third Party. Such notice shall be provided promptly after Lexicon becomes aware of such allegations, whether threatened or made.

(ii) In the event that Lexicon receives notice that it or any of its Affiliates have been named as a defendant in a legal proceeding by a Third Party alleging infringement of a Third Party patent or other intellectual property right as a result of Lexicon's conduct of the Project, whether based on use of the Genome 5000 Program or on use of a Target identified by use of the Genome 5000 Program, Lexicon shall notify Takeda in writing immediately after the receipt of such notice. Lexicon's written notice to Takeda shall include a copy of any summons or complaint (or the equivalent thereof) received by Lexicon or its Affiliate.

(iii) In addition, Lexicon, promptly after the date of receipt, shall provide to Takeda each and any copy of any allegation of alleged invalidity or non-infringement of a patent or patents Controlled by Lexicon and licensed to Takeda under the terms and conditions of this Agreement, any declaratory judgment action with respect to any patent or patents Controlled by Lexicon and licensed to Takeda under the terms and conditions of this Agreement, or any other similar legal action or proceeding with respect to any patent or patents Controlled by Lexicon and licensed to Takeda under the terms and conditions of this Agreement.

(b) Defense. Lexicon, at its own cost and expense, shall defend, and in accordance with Section 10.1 hold Takeda harmless from, any legal action by a Third Party alleging patent infringement based upon Lexicon's conduct of the Project, whether based on use of the Genome 5000 Program or on use of a Target identified by use of the Genome 5000 Program. Takeda, at its own cost and expense, shall defend, and in accordance with Section 10.2 hold Lexicon harmless from, any legal action by a Third Party alleging patent infringement based upon Takeda's research, development or commercialization of a Product, including, without limitation, any use of a Selected Target in connection therewith.

ARTICLE 8.

CONFIDENTIALITY

8.1 CONFIDENTIALITY OBLIGATIONS. Each Party agrees that, during the Research Term and for a period of [**] thereafter, such Party will keep, and will ensure that its officers, directors, employees and agents keep, completely confidential and will not publish or otherwise disclose and will not use for any purpose except as permitted hereunder any Confidential Information of the other Party; provided, however, that [**].

Each Party may disclose Confidential Information of the other Party to the extent such disclosure is reasonably necessary in filing or prosecuting patent applications, prosecuting or defending litigation, complying with applicable governmental regulations, granting a permitted sublicense of rights hereunder or conducting clinical trials or otherwise in performing obligations or exercising rights hereunder. If a Party is required to make a disclosure of the other Party's Confidential Information, such Party will give reasonable advance notice to the other Party of

such disclosure requirement, will cooperate with the other Party in efforts to secure confidential treatment of such Confidential Information prior to disclosure, and, save to the extent inappropriate in the case of patent applications, will use all reasonable efforts to secure confidential treatment of such Information prior to disclosure (whether through protective orders or confidentiality agreements or otherwise).

Each Party represents and warrants that it has or will obtain written agreements from each of its employees and consultants who perform work relating to this Agreement, which agreements will obligate such persons to similar obligations of confidentiality and non-use, and to assign to such Party all inventions made by such persons during the course of performing research under the Project.

8.2 PRESS RELEASES. Neither Party shall make any public announcement concerning this Agreement or the terms hereof without the prior written consent of the other Party. Notwithstanding the foregoing, (i) the Parties shall issue a press release in the form attached as Exhibit 8.2, and (ii) to the extent that a Party is required by Applicable Laws to make any announcement or disclosure concerning this Agreement or the terms hereof, such Party shall consult with the other Party and, [**], reach agreement with such other Party regarding the content of the announcement or disclosure prior to the date of such announcement or disclosure.

ARTICLE 9.

REPRESENTATIONS AND WARRANTIES

9.1 REPRESENTATIONS AND WARRANTIES BY TAKEDA. Takeda represents and warrants that: (i) it is duly organized and validly existing under the laws of the jurisdiction of its incorporation and has full corporate power and authority to enter into this Agreement; (ii) it is in good standing with all relevant governmental authorities; (iii) it has taken all corporate action necessary to authorize the execution and delivery of this Agreement and the performance of its obligations under this Agreement; (iv) it is and during the term of this Agreement will remain in compliance with all Applicable Laws; and (v) the performance of its obligations under this Agreement does not conflict with, or constitute a default under its charter documents, or any contractual obligation, or any court order.

9.2 REPRESENTATIONS AND WARRANTIES BY LEXICON. Lexicon represents and warrants that: (i) it is duly organized and validly existing under the laws of the jurisdiction of its incorporation and has full corporate power and authority to enter into this Agreement; (ii) it is in good standing with all relevant governmental authorities; (iii) it has taken all corporate action necessary to authorize the execution and delivery of this Agreement and the performance of its obligations under this Agreement; (iv) it is and during the term of this Agreement will remain in compliance with all Applicable Laws; (v) the performance of its obligations under this Agreement does not conflict with, or constitute a default under its charter documents, or any contractual obligation, or any court order; (vi) its annual report on Form 10-K for the year ended December 31, 2003 and its quarterly report on Form 10-Q for the quarterly period ended March 31, 2004, as filed with the Securities and Exchange Commission, do not contain any

untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; (vii) the consolidated financial statements (together with the related notes thereto) included in such annual report on Form 10-K and quarterly report on Form 10-Q have been prepared in accordance with generally accepted accounting principles applied on a consistent basis during the periods and at the dates involved (except as may be indicated in the notes thereto) and fairly present, in all material respects, its consolidated financial condition and results of the operations and cash flows as of the respective dates indicated and for the respective periods specified; (viii) it owns or has valid, binding and enforceable licenses or other rights to use any [**] necessary to conduct its business in the manner in which it has been and is contemplated to be conducted, and without any conflict with the rights of others, except for such conflicts which, if determined adversely to it, would not have, singly or in the aggregate, adverse effect on its ability to perform its obligations under this Agreement [**]; (ix) it has provided Takeda with true and correct copies (subject to redaction of certain financial provisions thereof) of all agreements under which there are Pre-Existing Obligations; (x) it has not granted, sold, assigned, conveyed, pledged or otherwise transferred to any Third Party, and during the term of this Agreement will not grant, sell, assign, convey, pledge or otherwise transfer to any Third Party, any rights in any [**] that would conflict with any right or interest granted, sold, assigned, conveyed, pledged or otherwise transferred to Takeda at anytime during the term of this Agreement, or that would constitute a default under the terms and conditions of this Agreement; (xi) it has enforceable written agreements with all of its employees [**] assigning to Lexicon ownership of all intellectual property rights created in the course of their employment; (xii) to its actual knowledge, the performance of its obligations under this Agreement [**] do not infringe any proprietary right of any Third Party; (xiii) there is no litigation pending or, to its actual knowledge, threatened by any Third Party against Lexicon or any of its Affiliates relating to the Genome 5000 Program claiming infringement of any proprietary right of such Third Party; (xiv) it has [**]; (xv) to its actual knowledge, there is [**]; (xvi) neither it nor any of its Affiliates has [**]; and (xvii) it shall [**].

9.3 DISCLAIMER OF WARRANTIES. EXCEPT AS SPECIFICALLY SET FORTH HEREIN, NEITHER PARTY MAKES ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, NON-INFRINGEMENT, AND ANY OTHER STATUTORY WARRANTY.

9.4 LIMITED LIABILITY. EXCEPT AS SPECIFICALLY SET FORTH IN THIS AGREEMENT, NEITHER LEXICON NOR TAKEDA WILL BE LIABLE WITH RESPECT TO ANY MATTER ARISING UNDER THIS AGREEMENT UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY PUNITIVE, EXEMPLARY, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOST PROFITS.

ARTICLE 10.

INDEMNIFICATION

10.1 INDEMNIFICATION BY LEXICON. Lexicon shall indemnify, defend and hold Takeda and its Affiliates, agents, employees, officers and directors (the "Takeda Indemnitees") harmless from and against any and all liability, damage, loss, cost or expense (including reasonable attorneys' fees) arising out of Third Party claims or suits related to: (i) Lexicon's [**] failure to perform, its obligations under this Agreement; (ii) breach by Lexicon of its representations and warranties under this Agreement; (iii) Lexicon's manufacture, use, sale, offer for sale or import of any Reversion Product obtained by Lexicon under the terms and conditions of this Agreement; or (iv) product liability claims arising from use or sale of any Reversion Product marketed and sold by Lexicon or an Affiliate or licensee of Lexicon; provided, however, that Lexicon's obligations pursuant to this Section 10.1 will not apply to the extent such claims or suits result from the gross negligence or willful misconduct of any of the Takeda Indemnitees. Notwithstanding the foregoing, Lexicon shall have no obligation to defend or indemnify the Takeda Indemnitees with respect to Third Party claims arising out of breach by Takeda of its representations and warranties set forth in this Agreement.

10.2 INDEMNIFICATION BY TAKEDA. Takeda shall indemnify, defend and hold Lexicon and its Affiliates, agents, employees, officers and directors (the "Lexicon Indemnitees") harmless from and against any and all liability, damage, loss, cost or expense (including reasonable attorneys' fees) arising out of Third Party claims or suits related to: (i) Takeda's [**] failure to perform, its obligations under this Agreement; (ii) breach by Takeda of its representations and warranties under this Agreement; (iii) Takeda's manufacture, use, sale, offer for sale or import of any Product obtained by Takeda by use of a Selected Target under the terms and conditions of this Agreement; or (iv) product liability claims arising from use or sale of any Product marketed and sold by Takeda or an Affiliate or licensee of Takeda; provided, however, that Takeda's obligations pursuant to this Section 10.2 will not apply to the extent such claims or suits result from the gross negligence or willful misconduct of any of the Lexicon Indemnitees. Notwithstanding the foregoing, Takeda shall have no obligation to defend or indemnify the Lexicon Indemnitees with respect to Third Party claims arising out of breach by Lexicon of its representations and warranties set forth in this Agreement.

10.3 NOTIFICATION OF CLAIM; CONDITIONS TO INDEMNIFICATION OBLIGATIONS. As a condition to a Party's right to receive indemnification under this Article 10, it shall: (i) promptly provide written notice (a "Claim Notice") to the other Party as soon as it becomes aware of a claim or suit for which indemnification may be sought pursuant hereto (provided that the failure to give a Claim Notice promptly shall not prejudice the rights of an indemnified Party except to the extent that the failure to give such prompt notice materially adversely affects the ability of the indemnifying Party to defend the claim or suit); (ii) cooperate with the indemnifying Party in the defense of such claim or suit, at the expense of the indemnifying Party; and (iii) if the indemnifying Party confirms in writing to the indemnified Party its intention to defend such claim or suit within [**] of receipt of the Claim Notice, permit the indemnifying Party to control the defense of such claim or suit, including without limitation the right to select defense counsel;

provided that if the indemnifying Party fails to (x) provide such confirmation in writing within the [**] period; or (y) diligently and reasonably defend such suit or claim at any time, its right to defend the claim or suit shall terminate immediately in the case of (x) and otherwise upon [**] written notice to the indemnifying Party and the indemnified Party may assume the defense of such claim or suit at the sole expense of the indemnifying Party and may settle or compromise such claim or suit without the consent of the indemnifying Party. In no event, however, may the indemnifying Party compromise or settle any claim or suit in a manner which admits fault or negligence on the part of any indemnified Party or that otherwise materially affects such indemnified Party's rights under this Agreement or requires any payment by an indemnified Party without the prior written consent of such indemnified Party. Except as expressly provided above, the indemnifying Party will have no liability under this Article 10 with respect to claims or suits settled or compromised without its prior written consent.

ARTICLE 11.

TERM AND TERMINATION

11.1 TERM. This Agreement will commence upon the Effective Date and, unless earlier terminated as provided herein, shall expire upon the latest to occur of (i) the expiration of the Research Term, (ii) the expiration of Takeda's payment obligations pursuant to Section 5.5(d), and (iii) the expiration of Lexicon's payment obligations pursuant to Section 5.6(f).

11.2 TERMINATION UPON MATERIAL BREACH. Material failure by a Party to comply with any of its obligations contained herein shall entitle the Party not in default to give to the Party in default written notice (a "Default Notice") specifying the nature of the default, requiring such defaulting Party to cure such default, and stating the non-defaulting Party's intention to terminate this Agreement if such default is not cured. If a default is not cured within [**] or within another reasonable time period the Parties have agreed upon after the date the Default Notice was sent, then the Party not in default shall be entitled, without prejudice to any of its other rights conferred on it by this Agreement, and in addition to any other remedies available to it by law or in equity, to terminate this Agreement by written notice of termination (the "Termination Notice") to the defaulting Party.

11.3 TERMINATION UPON BANKRUPTCY. Either Party may terminate this Agreement by a registered letter to the other Party with the immediate effect if the other Party becomes insolvent or a petition in bankruptcy or corporate reorganization or any similar relief is filed by or against the other Party, or a receiver is appointed with respect to any of assets of the other Party, or liquidation proceeding is commenced against the other Party. All rights and licenses granted under or pursuant to this Agreement by each Party as a licensor or sublicensor are, and shall otherwise be deemed to be, for purposes of Section 365(n) of Title XI, U.S. Code (the "Bankruptcy Code"), licenses (or, if applicable, sublicenses) of rights to "intellectual property" as defined under Section 101(35A) of the Bankruptcy Code. The Parties agree that each licensee (or, if applicable, sublicensee) of such rights under this Agreement shall retain and may fully exercise all rights and elections it would have in the case of a licensor (or sublicensor) bankruptcy under the Bankruptcy Code. Each Party agrees during the term of this Agreement to

create or maintain current copies, or if not amenable to copying, detailed descriptions or other appropriate embodiments, of all such intellectual property licensed or sublicensed to the other Party.

11.4 CONSEQUENCES OF TERMINATION OR EXPIRATION.

(a) Accrued Rights. Termination or expiration of this Agreement for any reason will be without prejudice to any rights that will have accrued to the benefit of a Party prior to such termination or expiration. Termination or expiration of this Agreement will not relieve a Party from accrued payment obligations or from obligations which are expressly indicated to survive termination or expiration of this Agreement.

(b) Survival. The following Articles and Sections of this Agreement shall survive termination or expiration for any reason: Articles 6, 7, 8, 10 and 12, and Sections 2.3, 4.4(c), 5.3 through 5.6, 9.3, 9.4 and 11.4.

ARTICLE 12.

GENERAL PROVISIONS

12.1 RELATIONSHIP OF THE PARTIES. Nothing in this Agreement is intended or will be deemed to constitute a partnership, agency or employer-employee relationship between the Parties. Neither Party will incur any debts or make any commitments for the other.

12.2 ASSIGNMENTS. Except as expressly provided herein, neither this Agreement nor any interest hereunder will be assignable, nor any other obligation delegable, by a Party without the prior written consent of the other Party; provided, however, that either Party shall have the right to assign this Agreement without consent to any Affiliate or to any successor in interest by way of merger, consolidation or other business reorganization or the sale of all or substantially all of its assets in a manner such that the assigning Party will remain liable and responsible for the performance and observance of all of its duties and obligations hereunder. This Agreement shall be binding upon successors and permitted assigns of the Parties. Any assignment not in accordance with this Section 12.2 will be null and void.

12.3 FURTHER ACTIONS. Each Party agrees to execute, acknowledge and deliver such further instruments and to do all such other acts as may be necessary or appropriate in order to carry out the express provisions of this Agreement. For purposes of illustration, and not limitation, each Party agrees to cooperate with the other Party by executing, acknowledging and delivering instruments and taking acts necessary and appropriate to (i) accomplish the assignments of materials and related intellectual property as further described in Sections 4.4 and 4.5, and (ii) prosecute, maintain and enforce such intellectual property.

12.4 FORCE MAJEURE. Neither Party shall be liable to the other for failure or delay in the performance of any of its obligations under this Agreement for the time and to the extent such failure or delay is caused by earthquake, riot, civil commotion, war, strike, flood, or

governmental acts or restriction that is beyond the reasonable control of the respective Party. The Party affected by such force majeure will provide the other Party with full particulars thereof as soon as it becomes aware of the same (including its best estimate of the likely extent and duration of the interference with its activities), and will use commercially reasonable efforts to overcome the difficulties created thereby and to resume performance of its obligations as soon as practicable. If the performance of any obligation under this Agreement is delayed owing to a force majeure for any continuous period of more than [**], the Parties hereto will consult with respect to an equitable solution, including the possibility of the mutual termination of this Agreement.

12.5 ENTIRE AGREEMENT OF THE PARTIES; AMENDMENTS. This Agreement and the letter agreement executed between the Parties as of the Effective Date regarding the Pre-Existing Obligations constitute and contain the entire understanding and agreement of the Parties respecting the subject matter hereof and cancels and supersedes any and all prior and contemporaneous negotiations, correspondence, understandings and agreements between the Parties, whether oral or written, regarding such subject matter. If there is any contradiction between the terms and conditions set forth in the body of this Agreement and the terms and conditions set forth in any exhibit attached hereto, the terms and conditions set forth in the body of this Agreement shall prevail. No waiver, modification or amendment of any provision of this Agreement will be valid or effective unless made in writing and signed by all of the Parties.

12.6 CAPTIONS. The captions to this Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any of the provisions of this Agreement.

12.7 GOVERNING LAW. This Agreement is to be construed in accordance with and governed by the internal laws of the State of New York (as permitted by Section 5-1401 of the New York General Obligations Law, or any similar successor provision) without giving effect to any choice of law rule that would cause the application of the laws of any jurisdiction other than the internal laws of the State of New York to the rights and duties of the Parties.

12.8 DISPUTE RESOLUTION.

(a) In the event of any controversy or claim arising out of, relating to or in connection with any provision of this Agreement or the rights or obligations of the Parties hereunder, the Parties will try to settle their differences amicably between themselves as contemplated herein. Either Party may initiate such informal dispute resolution by sending written notice of the dispute, and an intent to arbitrate such dispute, to the other Party. Within [**] after such notice (a "Dispute Notice"), the Parties shall meet in person to negotiate in good faith a resolution to the dispute within [**] of the first such meeting.

(b) If the Parties are not able to resolve a dispute pursuant to Section 12.8(a), then either Party may initiate arbitration in accordance with the commercial arbitration rules of the American Arbitration Association ("AAA") then in force; provided, however, that any such dispute regarding the validity or enforcement of an issued patent shall be heard by a court of competent jurisdiction in the country where such patent exists. The Parties shall agree upon and appoint one (1) arbitrator within [**] after the notice of arbitration is received by all Parties and,

failing such agreement, either Party may apply under the applicable rules of the AAA for the appointment of an arbitrator, and the selection of an arbitrator under such rules of the AAA shall be final and binding on the Parties. Such arbitrator shall have appropriate experience in the biopharmaceutical industry and be independent of each of the Parties. The Parties shall use their best efforts to conclude the arbitration within [**] after the arbitrator has been appointed. The place of arbitration shall be New York, New York, United States of America. The arbitration proceedings shall be in the English language. Any award rendered by the arbitrator shall be in the English language, and shall be final and binding upon both of the Parties. The arbitrator may, upon competent proof, grant any remedy or relief that the arbitrator deems just and equitable under the terms and conditions of this Agreement; provided, however, that, notwithstanding any provision of Applicable Law, the arbitrator shall have no authority to grant or otherwise award punitive or exemplary damages against either Party. Nothing in this Agreement shall be deemed as preventing any Party from seeking injunctive relief (or any other provisional remedy) from any court having jurisdiction over the Parties and the subject matter of the dispute as necessary to protect any Party's name, proprietary information, trade secrets, know-how or any other proprietary rights. Judgment upon the award may be entered in any court having jurisdiction, or application may be made to such court for judicial acceptance of the award and/or an order of enforcement as the case may be.

12.9 NOTICES AND DELIVERIES. Any notice, request, delivery, approval or consent required or permitted to be given under this Agreement will be in writing and will be deemed to have been sufficiently given if delivered in person, transmitted by telecopier (receipt verified) or by express courier service (signature required) or [**] after it was sent by registered letter, return receipt requested (or its equivalent); provided that no postal strike or other disruption is then in effect or comes into effect within [**] after such mailing, to the Party to which it is directed at its address or facsimile number shown below or such other address or facsimile number as such Party will have last given by notice to the other Party.

If to Lexicon, addressed to:

Lexicon Genetics Incorporated
8800 Technology Forest Place
The Woodlands, Texas 77381
United States of America
Attn.: President
Telephone: (281) 863-3000
Facsimile: (281) 863-8095

With a copy to:

Attn.: General Counsel
Telephone: (281) 863-3000
Facsimile: (281) 863-8010

If to Takeda, addressed to:

Takeda Pharmaceutical Company Limited
Pharmaceutical Research Division
17-85, Jusohonmachi 2-chome, Yodogawa-ku
Osaka 532-8686, Japan
Attn.: Director, Strategic Research Planning
Telephone: 06-6300-6166
Facsimile: 06-6300-6834

With a copy to:

Attn.: General Manager, Legal Department
Telephone: 06-6204-2044
Facsimile: 06-6204-2055

12.10 WAIVER. A waiver by either Party of any of the terms and conditions of this Agreement in any instance will not be deemed or construed to be a waiver of such term or condition for the future, or of any subsequent breach hereof. All rights, remedies, undertakings, obligations and agreements contained in this Agreement will be cumulative and none of them will be in limitation of any other remedy, right, undertaking, obligation or agreement of either Party.

12.11 SEVERABILITY. When possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under Applicable Laws, but if any provision of this Agreement is held to be prohibited by or invalid under Applicable Laws, such provision will be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of this Agreement. The Parties will make a good faith effort to replace the invalid or unenforceable provision with a valid one which in its economic effect is most consistent with the invalid or unenforceable provision.

12.12 COUNTERPARTS. This Agreement may be executed simultaneously in counterparts, any one of which need not contain the signature of more than one Party but all such counterparts taken together will constitute one and the same agreement.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized officers as of the Effective Date, each copy of which will for all purposes be deemed to be an original.

LEXICON GENETICS INCORPORATED	TAKEDA PHARMACEUTICAL COMPANY LIMITED
By: _____	By:_____
Name: Arthur T. Sands, M.D., Ph. D.	Name: Takashi Soda, Ph.D.
Title: President and Chief Executive Officer	Title: Member of the Board General Manager, Pharmaceutical Research Division

EXHIBIT 1.21

LEVEL 1 PHENOTYPIC ANALYSIS

Level 1 Phenotypic Analysis is an initial screen designed to identify primary characteristics resulting from selected mutations in Knock-Out Mice. Level 1 Phenotypic Analysis currently includes the following assays, which may be changed from time to time (a) by the Steering Committee, at the Steering Committee's reasonable scientific discretion, for assays employed in evaluating Hypertension or Hypotension (or abnormal blood pressure), and (b) at Lexicon's reasonable scientific discretion, after good faith consultation with Takeda, for assays in other categories.

[**]

EXHIBIT 1.22

LEVEL 2 PHENOTYPIC ANALYSIS

Level 2 Phenotypic Analysis includes the following assays, which may be changed from time to time by the Steering Committee at its reasonable scientific discretion:

[**]

EXHIBIT 1.47

SUPPLEMENTAL TARGETS

Lexicon hereby grants to Takeda an exclusive option to select as a Selected Target, in accordance with the terms of the Agreement, one of the Supplemental Targets disclosed to Takeda before the Effective Date and described below as Programs #1 and #2; provided that such selection will be made no later than [**] after Takeda's receipt of the results of Level 2 Phenotypic Analysis for Programs #1 and #2; provided, however, that the identity of Programs #1 and/or #2 shall be disclosed to Takeda upon Takeda's written request after the completion of the procedure pursuant to Section 2.2(a)(iii). If selected, such Supplemental Target will be deemed a Selected Target and treated as the same way (e.g., with respect to Takeda's rights and obligations relating to research, development and commercialization, and Launch milestones and royalty payments) as Selected Targets other than LG105, except that [**].

Lexicon will use Diligent Efforts to provide Takeda with the results of Level 2 Phenotypic Analysis screens for Programs #1 and #2 by [**].

If Takeda does not select one of the Supplemental Targets corresponding to either Program #1 or #2, Takeda will have, and Lexicon hereby grants to Takeda, an exclusive option to select as a Selected Target, in accordance with the terms of the Agreement, the Supplemental Target disclosed to Takeda before the Effective Date and described below as Program #3 under the same condition as the Supplemental Targets corresponding to Programs #1 and #2. Lexicon will use Diligent Efforts to provide Takeda with the results of Level 2 Phenotypic Analysis screens for Program #3 as soon as practicable.

PROGRAM #1

[**]

PROGRAM #2

[**]

PROGRAM #3

[**]

EXHIBIT 1.52

WORK PLAN

Level 1 Phenotypic Analysis

- During each year, Lexicon will conduct Level 1 Phenotypic Analysis with respect to [**].

- Lexicon will disclose [**] which showed hypotensive or hypertensive phenotype.

- Steering Committee will select Targets (`Candidates') for Level 2 Phenotypic Analysis based on disclosed data of Level 1 Phenotypic Analysis.

Level 2 Phenotypic Analysis

- Steering Committee will decide the Level 2 Phenotypic Analysis menu for each candidate.

- Takeda will select Targets for internal evaluation from the data of Level 2 Phenotypic Analysis.

After the selection of a Target by Takeda, Lexicon will generate [**] Conditional Mice in which the desired mutation(s) corresponds to such Target.

EXHIBIT 2.2(b)

REPORT FORMAT

[**]

EXHIBIT 2.2(e)

CRE-LOX TERMS

The following provisions shall apply to the extent that any Conditional Mice containing one or more lox sites in their genomes are provided to Takeda under this Agreement:

(a) Subject to the terms of this Agreement, Lexicon hereby grants to Takeda and its Affiliates the non-transferable (except as provided in (b) below), non-exclusive right under the Cre-Lox Technology to use, breed and cross-breed the Conditional Mice, subject to the following restrictions:

(i) Takeda shall have the right to use the Cre-Lox Technology solely with said Conditional Mice, including without limitation the right to cross-breed Conditional Mice with one or more Cre Mice or with any other mouse; and Takeda shall have the right to independently make or develop one or more Cre Mice solely for use with said Conditional Mice.

(ii) Except as specifically set forth above, Takeda shall not otherwise practice under the Cre-Lox Patents without first obtaining a license from DuPont Pharmaceutical Company or its successors.

(b) Takeda shall not transfer the Conditional Mice or any progeny or material in any way derived therefrom to any Third Party, except as follows: Takeda may transfer the Conditional Mice (or any progeny or material in any way derived from such Conditional Mice) to academic and corporate collaborators, provided that each such academic and corporate collaborator has first entered into a material transfer agreement with Takeda in a form reasonably acceptable to Lexicon.

(c) No right is granted to Takeda to sell (or lease or otherwise transfer for consideration) or develop or manufacture for sale (or lease or other transfer for consideration) any product, the manufacture, use, sale or importation of which would infringe a Valid Claim of the Cre-Lox Patents, including but not limited to any product which is manufactured using a composition or method which would infringe a Valid Claim of the Cre-Lox Patents.

(d) Subject to the restricted non-exclusive rights granted to Takeda, Lexicon (and its licensors as applicable) shall retain all rights to the Conditional Mice (and any progeny or material in any way derived from such Conditional Mice).

For purposes of this Exhibit 2.2(e), the capitalized terms not otherwise defined in this Agreement shall have the following meanings:

"Cre-Lox Patent Rights" means the United States and foreign patents and patent applications listed on Appendix A to this Exhibit 2.2(e), any continuation-in-part, continuation or divisional applications thereof, any patent granted on any aforesaid patent application and any

extension, revival, re-examination or reissue of any such patent, and any continuations, continuations-in-part, divisionals, reissues, extensions or foreign counterparts of any of the foregoing, which Lexicon has the right to sublicense hereunder. The terms "Cre" and "lox" (also referred to as "loxP") have the meanings as described and embodied by the Cre-Lox Patent Rights.

"Cre-Lox Technology" means all the inventions described, embodied by and claimed in the Cre-Lox Patent Rights.

"Cre Mouse" means any mouse cell or mouse (i) having no lox sites in its genome and (ii) containing DNA capable of expressing a Cre recombinase protein.

"Valid Claim" means either (i) a claim of an issued and unexpired patent which has not been held permanently revoked, unenforceable or invalid by a decision of a court or other governmental agency of competent jurisdiction, unappealable or unappealed within the time allowed for appeal and that is not admitted to be invalid or unenforceable through reissue, disclaimer or otherwise, or (ii) a claim of a pending patent application that has [**].

APPENDIX A

CRE-LOX PATENT RIGHTS

Country	Application Serial No.	Patent No.	Issue Date	Expiry Date
USA		4,959,317	9/25/90	9/25/2007
CANADA		1,293,460	12/24/91	12/24/2008
IRELAND		60421	7/8/94	10/6/2006
JAPAN		272166	11/21/97	10/6/2006
EPO		0 220 009	2/10/93	10/6/2006
AUSTRIA		E0085649	2/10/93	10/6/2006
BELGIUM		0 220 009	2/10/93	10/6/2006
FRANCE		0 220 009	2/10/93	10/6/2006
GREAT BRITAIN		0 220 009	2/10/93	10/6/2006
GERMANY		3687734	2/10/93	10/6/2006
GREECE		3007809	2/10/93	10/6/2006
ITALY		0 220 009	2/10/93	10/6/2006
LUXEMBOURG		0 220 009	2/10/93	10/6/2006
NETHERLANDS		0 220 009	2/10/93	10/6/2006
SWEDEN		0 220 009	2/10/93	10/6/2006
SWITZERLAND		0 220 009	2/10/93	10/6/2006

EXHIBIT 4.4

FORM ASSIGNMENT AND TRANSFER AGREEMENT

see attached

ASSIGNMENT

WHEREAS, _____, ASSIGNOR, a corporation organized and existing under the laws of the State of _____, United States of America, and having a place of business at _____, is the owner of the entire right, title and interest in, and to the United States Letters Patent No. _____, which issued from United States Letters Patent Application Serial No. _____ entitled "_____," and of the invention therein described; and

WHEREAS, _____, ASSIGNEE, a corporation organized and existing under the laws of _____, and having a place of business at _____, is desirous of obtaining the entire right, title and interest in, to and under such patent and such invention.

NOW, THEREFORE, in consideration of the sum of One Dollar ($1.00) to ASSIGNOR in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the invention, including the right to sue for past infringement, and the patent and all divisions, renewals and continuations thereof, and all patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which have been filed or may hereafter be filed for the invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from the patent under the patent laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which have been granted or may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and

ASSIGNOR HEREBY authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument; and

ASSIGNOR HEREBY covenants and agrees that it has the full right to convey the entire interest herein assigned, and that ASSIGNOR has not executed, and will not execute, any agreement in conflict herewith; and

ASSIGNOR HEREBY further covenants and agrees that ASSIGNOR will communicate to ASSIGNEE, its successors, legal representatives and assigns, any material facts known to ASSIGNOR respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for the invention in all countries.

IN WITNESS AND IN TESTIMONY WHEREOF, I, as a duly authorized representative of ASSIGNOR, hereunto set my hand and seal this _____ day of April 1999.

_____

_____

By: _____

_____

State of)
) SS.:
County of)

On this _____ day of _____, before me, a Notary Public in and for the State and County aforesaid, personally appeared _____, to me known and known to me to be the person of that name, who signed and sealed the foregoing instrument, and he acknowledged the same to be his free act and deed.

_____,
Notary Public.

EXHIBIT 8.2

PRESS RELEASE

LEXICON GENETICS AND TAKEDA ESTABLISH COLLABORATION TO DEVELOP NEW DRUGS FOR HIGH BLOOD PRESSURE

THE WOODLANDS, TEXAS, JULY 28, 2004 - Lexicon Genetics Incorporated (Nasdaq: LEXG) and Takeda Pharmaceutical Company Limited today announced the formation of a collaboration to develop new drugs for the treatment of high blood pressure. The alliance is designed to accelerate the development and commercialization of new drugs directed against promising hypertension targets discovered in Lexicon's Genome5000(TM) program.

In the collaboration, Takeda will have exclusive access to all drug targets from Lexicon's Genome5000 program that control blood pressure. In this program, Lexicon is using its proprietary gene knockout technology to rapidly discover the functions of 5,000 of the most pharmaceutically important genes in the human genome. Takeda will be responsible for the screening, medicinal chemistry, preclinical and clinical development and commercialization of drugs directed against Lexicon's novel blood pressure targets, and will bear all related costs.

Lexicon will receive an upfront payment of $12 million from Takeda for the initial, three-year term of the agreement. Takeda has the option to extend the discovery portion of the alliance for an additional two years in exchange for further committed funding. Takeda will make research milestone payments to Lexicon for each target selected for therapeutic development. In addition, Takeda will make clinical development and product launch milestone payments to Lexicon for each product commercialized from the collaboration. Lexicon will also earn royalties on worldwide sales of drugs commercialized by Takeda.

The collaboration is intended to bring novel therapeutics to patients suffering from high blood pressure by combining Lexicon's physiology-based approach to understanding gene function with Takeda's global leadership in the research, development and sales of hypertension drugs. Global sales of hypertension drugs exceeded $22 billion in 2003, and the potential market for new hypertension therapies is significant. The American Heart Association estimates that as many as 50 million Americans have high blood pressure, and that 25 percent of people with high blood pressure are on inadequate therapy.

"Takeda has a well established global hypertension franchise and is committed to creating a sustainable leadership position in this disease area," said Arthur T. Sands, M.D., Ph.D., president and chief executive officer of Lexicon. "With Lexicon's robust drug discovery pipeline, it is important to form strategic collaborations to rapidly advance our novel programs into clinical development. Forming such an alliance with a recognized leader like Takeda is the best way to accelerate discoveries in this field toward commercialization."

"In addition to our in-house research for the creation of new drugs, Takeda is pursuing all means of enhancing its R&D pipeline, including external drug discovery and development alliances," said Takashi Soda, Ph.D., director, general manager of the pharmaceutical research division of Takeda. "We are confident that Lexicon's Genome5000(TM) program will provide us with

important drug targets for treatment of hypertension, which will enable us to create a new generation of anti-hypertensive drugs."

ABOUT LEXICON GENETICS

Lexicon Genetics is a biopharmaceutical company focused on the discovery of breakthrough treatments for human disease. Lexicon is systematically discovering the physiological and behavioral functions of genes to identify potential points of therapeutic intervention, or drug targets. Lexicon makes these discoveries using its proprietary gene knockout technology to model the physiological effects that could be expected from prospective drugs directed against novel targets. The Company has advanced knockout-validated targets into drug discovery programs in six therapeutic areas: diabetes and obesity, cardiovascular disease, cancer, immune system disorders, ophthalmic disease, and psychiatric and neurological disorders. Lexicon is working both independently and through strategic collaborations and alliances to accelerate the development and commercialization of its discoveries. Additional information about Lexicon is available through its corporate website, www.lexicon-genetics.com.

ABOUT TAKEDA PHARMACEUTICAL COMPANY LIMITED

Takeda, located in Osaka, Japan, is a research-based global company with its main focus on pharmaceuticals. As the largest pharmaceutical company in Japan and one of the global leaders of the industry, Takeda is committed to striving toward better health for individuals and progress in medicine by developing superior pharmaceutical products. Additional information about Takeda is available through its corporate website, www.takeda.com.

SAFE HARBOR STATEMENT

This press release contains "forward-looking statements," including statements about Lexicon's growth and future operating results, discovery and development of products, strategic alliances and intellectual property, as well as other matters that are not historical facts or information. These forward-looking statements are based on management's current assumptions and expectations and involve risks, uncertainties and other important factors, specifically including those relating to Lexicon's ability to develop drug candidates from its discoveries, achieve its operational objectives, obtain patent protection for its discoveries and establish strategic alliances, that may cause Lexicon's actual results to be materially different from any future results expressed or implied by such forward-looking statements. Information identifying such important factors is contained under "Factors Affecting Forward-Looking Statements" and "Business - Risk Factors" in Lexicon's annual report on Form 10-K for the year ended December 31, 2003, as filed with the Securities and Exchange Commission. Lexicon undertakes no obligation to update or revise any such forward-looking statements, whether as a result of new information, future events or otherwise.

# # #

CONTACT FOR LEXICON GENETICS:
Bobbie Faulkner
Investor Relations
281/863-3503
bfaulkner@lexgen.com

TAKEDA AND LEXICON GENETICS TO ESTABLISH COLLABORATION TO DEVELOP NEW DRUGS FOR HIGH BLOOD PRESSURE

Osaka, Japan, July 28 2004 - Takeda Pharmaceutical Company Limited ("Takeda") announced today that the formation of a collaboration of joint research with Lexicon Genetics Incorporated, The Woodlands, Texas ("Lexicon"), for development of new drugs for high blood pressure.

In this joint research, Takeda will have exclusive access to all drug targets from Lexicon's Genome5000 that control blood pressure for three-year term of the agreement, and will evaluate and verify the targets to create the new generation of drugs for treatment of hypertension. Takeda has paid an upfront payment of $12 million to Lexicon upon conclusion of the agreement. Takeda will pay milestone for each target selected for development and when the development project reaches certain stage, and also royalty once the product from this joint research is commercialized. Further financial detail is not disclosed.

"In addition to our in-house research for the creation of new drugs, Takeda is pursuing all means of enhancing its R&D pipeline, including external drug discovery and development alliances," said Takashi Soda, Ph.D., director, general manager of the pharmaceutical research division of Takeda. "We are confident that Lexicon's Genome5000(TM) program will provide us with important drug targets for treatment of hypertension, which will enable us to create a new generation of anti-hypertension drugs."

"Takeda has a well established global hypertension franchise and is committed to creating a sustainable leadership position in this disease area," said Arthur T. Sands, M.D., Ph.D., president and chief executive officer of Lexicon. "With Lexicon's robust drug discovery pipeline, it is important to form strategic collaborations to rapidly advance our novel programs into clinical development. Forming such an alliance with a recognized leader like Takeda is the best way to accelerate discoveries in this field toward commercialization."

Takeda is allocating resources mainly to its four core therapeutic areas(*)as priority of research & development including life-style related diseases, and accelerating all the processes from the drug discovery to product launch under the MPDRAP strategy(**). Research for anti-hypertensive drugs is positioned as one of the most important projects for life-style related diseases area.

(*) Four core therapeutic areas:
life-style related diseases
cancer and urological diseases, including gynecological disorders
central nervous system diseases, including bone and joint diseases
life-cycle management of drugs for digestive system disorders

(**) MPDRAP strategy:
MPDRAP is an abbreviation of each function of Marketing, Production, Development, Research, Alliance and Patent. Through comprehensive evaluation of each project across the internal divisions, Takeda is realizing even more appropriate resource allocation and rapid R&D processes by improving the speed and strategic focus of decision-making.

ABOUT TAKEDA PHARMACEUTICAL COMPANY LIMITED

Takeda, located in Osaka, Japan, is a research-based global company with its main focus on pharmaceuticals. As the largest pharmaceutical company in Japan and one of the global leaders of the industry, Takeda is committed to striving toward better health for individuals and progress in medicine by developing superior pharmaceutical products. Additional information about Takeda is available through its corporate website, www.takeda.com.

ABOUT LEXICON GENETICS

Genetics is a biopharmaceutical company focused on the discovery of breakthrough treatments for human disease. Lexicon is systematically discovering the physiological and behavioral functions of genes to identify potential points of therapeutic intervention, or drug targets. Lexicon makes these discoveries using its proprietary gene knockout technology to model the physiological effects that could be expected from prospective drugs directed against novel targets. The Company has advanced knockout-validated targets into drug discovery programs in six therapeutic areas: diabetes and obesity, cardiovascular disease, cancer, immune system disorders, ophthalmic disease, and psychiatric and neurological disorders. Lexicon is working both independently and through strategic collaborations and alliances to accelerate the development and commercialization of its discoveries. Additional information about Lexicon is available through its corporate website, www.lexicon-genetics.com.

# # #

EXHIBIT 10.2

STOCK OPTION AGREEMENT

(OFFICER INCENTIVE STOCK OPTION)

THIS STOCK OPTION AGREEMENT (this "Agreement"), effective as of _____ (the "Grant Date"), is by and between LEXICON GENETICS INCORPORATED, a Delaware corporation (the "Company"), and _____ ("Optionee").

To carry out the purposes of the Lexicon Genetics Incorporated 2000 Equity Incentive Plan (the "Plan"), by providing Optionee the opportunity to purchase shares of Common Stock, par value $0.001 per share, of the Company ("Stock"), and in consideration of the mutual agreements and other matters set forth herein and in the Plan, the Company and Optionee hereby agree as follows:

1. Grant of Option. The Company hereby grants to Optionee the right and option (the "Option") to purchase all or any part of an aggregate of _____ shares of Stock, on the terms and conditions set forth in this Agreement and in the Plan. The Option shall be treated as an "incentive stock option" within the meaning of section 422(b) of the Internal Revenue Code of 1986, as amended (the "Code"), to the maximum extent permitted under the Code, and as a non-statutory stock option to the extent it exceeds the limitations imposed by the Code for incentive stock options.

2. Exercise Price. The price at which Optionee may purchase Stock upon exercise of the Option (the "Exercise Price") shall be $_____ per share, which has been determined to be the Fair Market Value (as defined in the Plan) of the Stock on the Grant Date. The Exercise Price is subject to adjustment under certain circumstances as provided in the Plan.

3. Term. The Option shall expire on the 10th anniversary of the Grant Date, subject to earlier termination under the circumstances specified in Section 8 of this Agreement.

4. Exercisability and Vesting. (a) Subject to the terms and conditions set forth in this Agreement and the Plan, the Option may be exercised, in whole or in part, at any time and from time to time during the term of the Option, to purchase the number of shares of Stock that have vested and become exercisable in accordance with this Agreement. The Option shall vest and become exercisable with respect to (i) 25% of the total number of shares of Stock subject to the Option on _____ and (ii) an additional 1/48 of the total number of shares subject to the Option each month thereafter; provided that such options shall become vested with respect to all remaining unvested shares in the event of a Change in Control (as defined below); and provided further, that, upon the termination of Optionee's Continuous Service (as defined in the Plan), the Option shall cease to vest and shall terminate with respect to all shares of Stock that have not vested and become exercisable prior to such time.

(b) A "Change in Control" shall be deemed to have occurred if any of the following shall have taken place: (i) any "person" (as such term is used in Sections 13(d) and 14(d)(2) of the Securities Exchange Act of 1934 (the "Exchange Act")) other than Gordon Cain is or becomes the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act, or any successor provisions thereto), directly or indirectly, of securities of the Company representing 35% or more of the combined voting power of the Company's then-outstanding voting securities; (ii) the approval by the stockholders of the Company of a reorganization, merger, or consolidation, in each case with respect to which persons who were stockholders of the Company immediately prior to such reorganization, merger or consolidation do not, immediately thereafter, own or control more than 50% of the combined voting power of the reorganized, merged or consolidated Company's then-outstanding

securities entitled to vote generally in the election of directors in substantially the same proportions as their ownership of the Company's outstanding voting securities prior to such reorganization, merger or consolidation; (iii) a liquidation or dissolution of the Company or the sale of all or substantially all of the Company's assets; (iv) in the event any person is elected by the stockholders of the Company to the Company's board of directors (the "Board") who has not been nominated for election by a majority of the Board or any duly appointed committee thereof; or (v) following the election or removal of directors, a majority of the Board consists of individuals who were not members of the Board two years before such election or removal, unless the election of each director who is not a director at the beginning of such two-year period has been approved in advance by directors representing at least a majority of the directors then in office who were directors at the beginning of the two-year period. The Compensation Committee of the Board, in its discretion, may deem any other corporate event affecting the Company to be a "Change in Control" hereunder.

5. Procedures for Exercise. Subject to the terms and conditions set forth in this Agreement and the Plan, the Option may be exercised by delivery to the Company at its principal executive office of (i) written notice addressed to the Secretary of the Company specifying the number of shares of Stock as to which the Option is being exercised and (ii) payment in full of the Exercise Price for such shares. The Exercise Price shall be paid in cash or in such other manner as may be authorized by the administrator of the Plan in accordance with the terms of the Plan. If the offering, sale and delivery of the shares of Stock issuable upon exercise of the Option have not been registered under the Securities Act of 1933 (the "Securities Act"), the Company may require Optionee, as a condition to Optionee's exercise of the Option, to enter into a stock purchase agreement containing such representations and warranties as the Company may deem necessary to permit the issuance of the Stock purchased upon exercise of the Option in compliance with the Securities Act and applicable state securities laws.

6. No Rights of Ownership in Stock Before Issuance. No person shall be entitled to the rights and privileges of stock ownership with respect to any shares of Stock issuable upon exercise of the Option until such shares have been issued in accordance with the terms of this Agreement and the Plan.

7. Non-Transferability. The Option may not be transferred by Optionee otherwise than by will or the laws of descent and distribution or pursuant to a qualified domestic relations order (as defined in Title I of the Employee Retirement Income Security Act of 1974, as amended, or the rules thereunder).

8. Termination of Option. If Optionee's Continuous Service is terminated for any reason other than (i) the Disability (as defined in the Plan) or death of Optionee or (ii) the Company's termination of Optionee's employment without cause, the Option shall remain exercisable, with respect to the shares of Stock that had vested under the terms of this Agreement before the date of such termination, for a period of 90 days after the date of such termination (but in no event later than the expiration date of the Option specified in Section 3 of this Agreement), following which 90-day period this Agreement and Optionee's right to exercise the Option shall terminate. If Optionee's Continuous Service is terminated because of (i) the Disability or death of Optionee or (ii) the Company's termination of Optionee's employment without cause, the Option shall remain exercisable, with respect to the shares of Stock that had vested under the terms of this Agreement before the date of such termination, for a period of one year after the date of such termination (but in no event later than the expiration date of the Option specified in Section 3 of this Agreement), following which one-year period this Agreement and Optionee's right to exercise the Option shall terminate; provided that the Option shall not be treated as an "incentive stock option" within the meaning of the Code if the Option is exercised more than 90 days following the termination of Optionee's Continuous Service as a result of the Company's termination of Optionee's employment without cause. Notwithstanding the foregoing, if the employment of Optionee by the Company is terminated for cause, this Agreement and Optionee's right to exercise any portion of the Option, whether or not vested, shall terminate at the commencement of business on the date of such termination. For purposes of this Agreement, "cause" shall mean (x) the breach of a material obligation of

Optionee under any agreement between Optionee and the Company, (y) gross negligence or willful or intentional wrongdoing or misconduct on the part of Optionee, or (z) Optionee's conviction of a felony offense or a crime involving moral turpitude.

9. Withholding of Tax. To the extent that the Company is required under applicable federal or state income tax laws to withhold any amount on account of any present or future tax imposed as a result of the exercise of the Option, Optionee shall pay the Company, at the time of such exercise, funds in an amount sufficient to permit the Company to satisfy such withholding obligations in full. If Optionee fails to pay such amount, the Company shall be authorized (i) to withhold from any cash remuneration then or thereafter payable to Optionee any tax required to be withheld or (ii) to refuse to issue or transfer any shares otherwise required to be issued pursuant to the terms of this Agreement.

10. Status of Stock. (a) Unless the offering, sale and delivery of the shares of Stock issuable upon exercise of the Option have been registered under the Securities Act, Optionee agrees that any shares of Stock purchased upon exercise of the Option shall be acquired for investment without a view to distribution, within the meaning of the Securities Act, and shall not be sold, transferred, assigned, pledged or hypothecated in the absence of an effective registration statement under the Securities Act and applicable state securities laws or an applicable exemption from the registration requirements of the Act and any applicable state securities laws. Optionee further agrees that the shares of Stock which Optionee may acquire by exercising the Option will not be sold or disposed of in any manner which would constitute a violation of any other applicable federal or state securities laws. In addition, Optionee agrees (i) that the certificates representing the shares of Stock issued under this Agreement may bear such legend or legends as the administrator of the Plan deems appropriate in order to assure compliance with applicable securities laws, and (ii) that the Company may give instruction to its transfer agent, if any, to stop transfer of the shares of Stock issued under this Agreement on the stock transfer records of the Company, if such proposed transfer would, in the opinion of counsel to the Company, constitute a violation of any applicable securities law or any such agreements.

(b) Optionee further agrees that the Option granted herein shall be subject to the requirement that if at any time the administrator of the Plan shall determine, in its discretion, that the listing, registration or qualification of the shares of Stock subject to such Option upon any securities exchange or market or under any state or federal law, or the consent or approval of any governmental regulatory body, is necessary or desirable as a condition of, or in connection with, the purchase or issuance of shares of Stock hereunder, such Option may not be exercised in whole or in part unless such listing, registration, qualification, consent or approval shall have been effected or obtained free of any conditions not reasonably acceptable to the administrator of the Plan.

11. Stock Option Plan. The Plan, a copy of which is available for inspection by Optionee or other persons entitled to exercise this Option at the Company's principal executive office during business hours, is incorporated by reference in this Agreement. The Option is subject to, and the Company and Optionee agree to be bound by, all of the terms and conditions of the Plan. In the event of a conflict between this Agreement and the Plan, the terms of the Plan shall control. Subject to the terms of the Plan, the administrator of the Plan shall have authority to construe the terms of this Agreement, and the determinations of the administrator of the Plan shall be final and binding on Optionee and the Company.

12. Binding Agreement. This Agreement shall be binding upon and inure to the benefit of any successors to the Company and all persons lawfully claiming under Optionee.

13. Governing Law. This Agreement and all actions taken hereunder shall be governed by and construed in accordance with the laws of the State of Delaware.

IN WITNESS WHEREOF, the Company has caused this Agreement to be duly executed and Optionee has executed this Agreement as of the day and year first above written.

LEXICON GENETICS INCORPORATED

By: _____
Arthur T. Sands, M.D., Ph.D.
President and Chief Executive Officer

OPTIONEE

_____

EXHIBIT 10.3

STOCK OPTION AGREEMENT

(NON-EMPLOYEE DIRECTOR STOCK OPTION)

THIS STOCK OPTION AGREEMENT (this "Agreement"), effective as of _____ (the "Grant Date"), is by and between LEXICON GENETICS INCORPORATED, a Delaware corporation (the "Company"), and _____ ("Optionee").

To carry out the purposes of the Lexicon Genetics Incorporated 2000 Non-Employee Directors' Stock Option Plan (the "Plan"), by providing Optionee the opportunity to purchase shares of Common Stock, par value $0.001 per share, of the Company ("Stock"), and in consideration of the mutual agreements and other matters set forth herein and in the Plan, the Company and Optionee hereby agree as follows:

1. Grant of Option. The Company hereby grants to Optionee the right and option (the "Option") to purchase all or any part of an aggregate of _____ shares of Stock, on the terms and conditions set forth in this Agreement and in the Plan. The Option shall be treated as a non-statutory stock option and not as an "incentive stock option" within the meaning of section 422(b) of the Internal Revenue Code of 1986, as amended (the "Code").

2. Exercise Price. The price at which Optionee may purchase Stock upon exercise of the Option (the "Exercise Price") shall be $_____ per share, which has been determined to be the Fair Market Value (as defined in the Plan) of the Stock on the Grant Date. The Exercise Price is subject to adjustment under certain circumstances as provided in the Plan.

3. Term. The Option shall expire on the 10th anniversary of the Grant Date, subject to earlier termination under the circumstances specified in Section 8 of this Agreement.

4. Exercisability and Vesting. Subject to the terms and conditions set forth in this Agreement and the Plan, the Option may be exercised, in whole or in part, at any time and from time to time during the term of the Option, to purchase the number of shares of Stock that have vested and become exercisable in accordance with this Agreement. The Option shall vest and become exercisable with respect to [1/12 of the total number of shares of Stock subject to the Option each month after grant for 12 months after the Grant Date (For annual grants)] [1/60 of the total number of shares of Stock subject to the Option each month after grant for five years after the Grant Date (For initial grants)]; provided that, such vesting schedule may be accelerated upon a change in control of the Company pursuant to the provisions of the Plan and; provided further, that, upon the termination of Optionee's Continuous Service (as defined in the Plan), the Option shall cease to vest and shall terminate with respect to all shares of Stock that have not vested and become exercisable prior to such time.

5. Procedures for Exercise. Subject to the terms and conditions set forth in this Agreement and the Plan, the Option may be exercised by delivery to the Company at its principal executive office of (i) written notice addressed to the Secretary of the Company specifying the number of shares of Stock as to which the Option is being exercised and (ii) payment in full of the Exercise Price for such shares. The Exercise Price shall be paid in cash or in such other manner as may be authorized by the administrator of the Plan in accordance with the terms of the Plan. If the offering, sale and delivery of the shares of Stock issuable upon exercise of the Option have not been registered under the Securities Act of 1933 (the "Securities Act"), the Company may require Optionee, as a condition to Optionee's exercise of the Option, to enter into a stock purchase agreement containing such representations and warranties as the Company may deem necessary to

permit the issuance of the Stock purchased upon exercise of the Option in compliance with the Securities Act and applicable state securities laws.

6. No Rights of Ownership in Stock Before Issuance. No person shall be entitled to the rights and privileges of stock ownership with respect to any shares of Stock issuable upon exercise of the Option until such shares have been issued in accordance with the terms of this Agreement and the Plan.

7. Non-Transferability. The Option may not be transferred by Optionee otherwise than (i) by will or the laws of descent and distribution, by instrument to an inter vivos or testamentary trust or by gift to a member of Optionee's immediate family, in each case in accordance with the terms of the Plan, or (ii) pursuant to a qualified domestic relations order (as defined in Title I of the Employee Retirement Income Security Act of 1974, as amended, or the rules thereunder).

8. Termination of Option. If Optionee's Continuous Service is terminated for any reason other than the Disability (as defined in the Plan) or death of Optionee, the Option shall remain exercisable, with respect to the shares of Stock that had vested under the terms of this Agreement before the date of such termination, for a period of six months after the date of such termination (subject to extension as provided in the Plan, but in no event later than the expiration date of the Option specified in Section 3 of this Agreement), following which six-month period this Agreement and Optionee's right to exercise the Option shall terminate. If Optionee's Continuous Service is terminated because of Disability of Optionee, the Option shall remain exercisable, with respect to the shares of Stock that had vested under the terms of this Agreement before the date of such termination, for a period of 12 months after the date of such termination (but in no event later than the expiration date of the Option specified in Section 3 of this Agreement), following which 12-month period this Agreement and Optionee's right to exercise the Option shall terminate. If (i) Optionee's Continuous Service is terminated because of death of Optionee or (ii) Optionee dies within the three-month period after the termination of Optionee's Continuous Service for a reason other than death, the Option shall remain exercisable, with respect to the shares of Stock that had vested under the terms of this Agreement before the date of death, for a period of 18 months after the date of such termination (but in no event later than the expiration date of the Option specified in Section 3 of this Agreement), following which 18-month period this Agreement and the right to exercise the Option shall terminate. Notwithstanding the foregoing, if the Optionee is removed from the Company's Board of Directors for cause in accordance with the Company's Bylaws, this Agreement and Optionee's right to exercise any portion of the Option, whether or not vested, shall terminate at the commencement of business on the date of such removal.

9. Withholding of Tax. To the extent that the Company is required under applicable federal or state income tax laws to withhold any amount on account of any present or future tax imposed as a result of the exercise of the Option, Optionee shall pay the Company, at the time of such exercise, funds in an amount sufficient to permit the Company to satisfy such withholding obligations in full. If Optionee fails to pay such amount, the Company shall be authorized (i) to withhold from any cash remuneration then or thereafter payable to Optionee any tax required to be withheld or (ii) to refuse to issue or transfer any shares otherwise required to be issued pursuant to the terms of this Agreement.

10. Status of Stock. (a) Unless the offering, sale and delivery of the shares of Stock issuable upon exercise of the Option have been registered under the Securities Act, Optionee agrees that any shares of Stock purchased upon exercise of the Option shall be acquired for investment without a view to distribution, within the meaning of the Securities Act, and shall not be sold, transferred, assigned, pledged or hypothecated in the absence of an effective registration statement under the Securities Act and applicable state securities laws or an applicable exemption from the registration requirements of the Act and any applicable state securities laws. Optionee further agrees that the shares of Stock which Optionee may acquire by exercising the Option will not be sold or disposed of in any manner which would constitute a violation of any other applicable federal or state

securities laws. In addition, Optionee agrees (i) that the certificates representing the shares of Stock issued under this Agreement may bear such legend or legends as the administrator of the Plan deems appropriate in order to assure compliance with applicable securities laws, and (ii) that the Company may give instruction to its transfer agent, if any, to stop transfer of the shares of Stock issued under this Agreement on the stock transfer records of the Company, if such proposed transfer would, in the opinion of counsel to the Company, constitute a violation of any applicable securities law or any such agreements.

(b) Optionee further agrees that the Option granted herein shall be subject to the requirement that if at any time the administrator of the Plan shall determine, in its discretion, that the listing, registration or qualification of the shares of Stock subject to such Option upon any securities exchange or market or under any state or federal law, or the consent or approval of any governmental regulatory body, is necessary or desirable as a condition of, or in connection with, the purchase or issuance of shares of Stock hereunder, such Option may not be exercised in whole or in part unless such listing, registration, qualification, consent or approval shall have been effected or obtained free of any conditions not reasonably acceptable to the administrator of the Plan.

11. Stock Option Plan. The Plan, a copy of which is available for inspection by Optionee or other persons entitled to exercise this Option at the Company's principal executive office during business hours, is incorporated by reference in this Agreement. The Option is subject to, and the Company and Optionee agree to be bound by, all of the terms and conditions of the Plan. In the event of a conflict between this Agreement and the Plan, the terms of the Plan shall control. Subject to the terms of the Plan, the administrator of the Plan shall have authority to construe the terms of this Agreement, and the determinations of the administrator of the Plan shall be final and binding on Optionee and the Company.

12. Binding Agreement. This Agreement shall be binding upon and inure to the benefit of any successors to the Company and all persons lawfully claiming under Optionee.

13. Governing Law. This Agreement and all actions taken hereunder shall be governed by and construed in accordance with the laws of the State of Delaware.

IN WITNESS WHEREOF, the Company has caused this Agreement to be duly executed and Optionee has executed this Agreement as of the day and year first above written.

LEXICON GENETICS INCORPORATED

By: _____
Arthur T. Sands, M.D., Ph.D.
President and Chief Executive Officer

OPTIONEE

_____
[Name]

EXHIBIT 31.1

CERTIFICATIONS

I, Arthur T. Sands, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lexicon Genetics Incorporated;

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 officers 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)) 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 quarterly report is being prepared;

   b) 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

   c) 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 that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting;

5. The registrant's other certifying officers 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 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: November 1, 2004

/s/ Arthur T. Sands

Arthur T. Sands, M.D., Ph.D.
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATIONS

I, Julia P. Gregory, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lexicon Genetics Incorporated;

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 officers 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)) 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 quarterly report is being prepared;

   b) 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

   c) 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 that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting;

5. The registrant's other certifying officers 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 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: November 1, 2004

/s/ Julia P. Gregory

Julia P. Gregory
Executive Vice President, Corporate Development
and Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. 1350, as adopted), Arthur T. Sands, M.D., Ph.D., Chief Executive Officer of Lexicon Genetics Incorporated ("Lexicon"), and Julia P. Gregory, Chief Financial Officer of Lexicon, each hereby certify that:

1. Lexicon's Quarterly Report on Form 10-Q for the period ended September 30, 2004, and to which this Certification is attached as Exhibit 32.1 (the "Periodic Report"), fully complies with the requirements of section 13(a) or section 15(d) of the Securities Exchange Act of 1934, and

2. The information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of Lexicon.

IN WITNESS WHEREOF, the undersigned have set their hands hereto as of the 1st day of November, 2004.

By: /s/ Arthur T. Sands

Arthur T. Sands, M.D., Ph.D.
President and Chief Executive Officer

By: /s/ Julia P. Gregory

Julia P. Gregory
Executive Vice President,
Corporate Development and
Chief Financial Officer