For PTO-1594 Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/200; Tab settings To the Honorable Commission 1017429	U.S. Patent and Trademark Office
1. Name of conveying party(ies): Metabolix, Inc.	2. Name and address of receiving party(ies) Name:Monsanto Company Internal Address: Dana L. Wesley, Dir of M&A
Individual(s) General Partnership Corporation-State Other UWO 6.4.0	Street Address: 800 North Lindbergh City:St. Louis State: MO Zip: 63167 Individual(s) citizenship Association
Additional name(s) of conveying party(ies) attached? Yes No 3. Nature of conveyance: Assignment Security Agreement Other Execution Date: May 11, 2001	General Partnership Limited Partnership Corporation-State Delaware Other If assignee is not domiciled in the United States, a domestic representative designation is attached: Yes No (Designations must be a separate document from assignment) Additional name(s) & address(es) attached? Yes No
4. Application number(s) or registration number(s): A. Trademark Application No.(s) 75/445, 369 Additional number(s) at 5. Name and address of party to whom correspondence	B. Trademark Registration No.(s) 1,375,336; 1,843,987 tached Yes (No) 6. Total number of applications and registrations involved:
Concerning document should be mailed: Name:	7. Total fee (37 CFR 3.41)\$ 90.00 XXX Enclosed Authorized to be charged to deposit account
Street Address: 211 North Broadway Suite 3600	8. Deposit account number:
	(Attach duplicate copy of this page if paying by deposit account)
Derek C. Mays Name of Person Signing Total number of pages including	Signature Cover sheet, attachments, and document: Trademarks, Box Assignments Trademarks, Box Assignments

ratent & Trademarks, t Washington, D.C. 20231

SECURITY AGREEMENT

THIS SECURITY AGREEMENT (as may be amended, supplemented and otherwise modified from time to time, "Security Agreement") is made and effective as of May 12, 2001, by METABOLIX, INC., a Delaware corporation (including any successor or permitted assignee thereof, "Grantor"), in favor of MONSANTO COMPANY, a Delaware corporation (including any successor, assignee or transferee thereof, "Secured Party").

RECITALS

WHEREAS, Grantor and Secured Party entered into the Transaction Documents (as defined in a certain Asset Purchase Agreement by and between Grantor and Secured Party dated as of even date herewith (the "Asset Purchase Agreement")), including a promissory note in the amount of Two Million Dollars (\$2,000,000) (the "Note");

WHEREAS, the Note and the Asset Purchase Agreement require the execution of a security agreement by Grantor in favor of Secured Party encumbering all of the Assets, excluding the patents and patent applications identified on Schedule B of the Patent Assignment, and Licensed Assets transferred or licensed to Grantor pursuant to the Asset Purchase Agreement in favor of and for the benefit of Secured Party to secure the obligations of Grantor to Secured Party under the Note; and

WHEREAS, Grantor has determined that it is in its best interest to execute this Security Agreement inasmuch as Grantor will derive substantial direct and indirect benefits from the license of the Licensed Assets and purchase of the Assets pursuant to the Asset Purchase Agreement;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound hereby, Grantor and Secured Party hereby agree as follows:

- 1. <u>Definitions</u>. Unless otherwise defined herein, all capitalized terms shall have the meanings set forth in the Asset Purchase Agreement.
- 2. <u>Grant</u>. Grantor hereby grants to Secured Party an absolute, present, unconditional, continuing first priority security interest in and to Grantor's entire right, title and interest in and to the following property and rights (collectively, the "Collateral"):
- (a) the patents and patent applications identified on Schedule A of the Patent Assignment (the "Patents"), and all related rights as set forth in the Patent Assignment; and
 - (b) the Biological Materials; and

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- (c) the Marks (as defined in the Trademark Assignment), and all related rights as set forth in the Trademark Assignment; and
 - (d) the Zeneca Agreement; and
 - (e) the Licensed Assets; and
 - (f) the Know-How; and
 - (g) the Assumed Agreements; and
- (h) any and all claims and causes of action for past, present or future infringement of any of the Collateral, with the right, but not the obligation, to sue for and collect damages for infringement of the Collateral; and
- (i) any and all licenses or rights granted under any of the Collateral, and all license fees and royalties arising from such licenses or rights, to the extent permitted by such licenses or rights; and
- (j) any and all amendments, renewals, extensions, reissuances and replacements of any of the Collateral; and
- (k) any and all books, records, ledger cards, files, correspondence, technical specifications, manuals, computer software, computer printouts, tapes, disks and related data processing software and similar items relating exclusively to any of the Collateral in existence on the date hereof.
- 3. Requested Recordation. Grantor authorizes and requests that the Commissioner of Patents and Trademarks (and any state, foreign or other authorities to which this Security Agreement is submitted) to file and record this Security Agreement (and any corresponding or separate application forms of such jurisdiction) in order to publicly reflect Secured Party's interest in the Collateral.

4. Events of Default.

- (a) Upon the occurrence of an Event of Default (as defined in the Note), Grantor shall execute and deliver to Secured Party an absolute assignment transferring its entire right, title, and interest in and to the Collateral to Secured Party, including but not limited to an agreement to terminate any license granted by Secured Party to Grantor in any of the Collateral.
- (b) In addition to other rights and remedies provided for herein or otherwise available to Secured Party (including under the Note and/or applicable law), Secured Party may also exercise in respect of the Collateral all the rights and remedies of a secured party upon default under the UCC (whether or not the UCC applies to the affected Collateral). Upon

the occurrence of any Event of Default, Secured Party will have the immediate right to enforce and realize upon any and all Collateral the security granted under the Note and hereunder in any manner or order that Secured Party deems expedient without regard to any equitable principles of marshaling or otherwise. All rights and remedies available to Secured Party are to be considered cumulative in nature and may be exercised singularly or concurrently, and are not exclusive of any rights and remedies provided by applicable law. As used herein "UCC" means, the Uniform Commercial Code as in effect on the date hereof in the Commonwealth of Massachusetts, as the same may be revised from time to time; provided that if by reason of mandatory provisions of law, the perfection or the effect of perfection or non-perfection of the security interests granted hereunder in any Collateral is governed by the Uniform Commercial Code as in effect in a jurisdiction other than the Commonwealth of Massachusetts, "UCC" means the Uniform Commercial Code as in effect in such other jurisdiction for purposes of the provisions hereof relating to such perfection or effect of perfection or non-perfection.

- (c) Upon the occurrence of an Event of Default, without demand, advertisement or notice except as expressly specified herein or required by applicable law (all of which demands, advertisements and/or notices are hereby expressly waived by Grantor), Secured Party may also sell all or part of the Collateral at public or private sale, at any of Secured Party's offices or elsewhere, for cash, or credit or for future delivery, and upon such other terms as Secured Party may deem commercially reasonable. To the extent notice of sale is required by law, Grantor agrees that prior notice to Grantor of at least ten (10) calendar days indicating the time and place of any public sale or the time after which any private sale is to be made shall constitute reasonable notification. Secured Party shall not be obligated to make any sale of Collateral regardless of notice of sale having been given. Secured Party may adjourn any public or private sale from time to time by announcement at the time and place fixed therefor, and such sale (without further notice) may be made at the time and place to which it was so adjourned.
- (d) Upon the occurrence of an Event of Default, Secured Party may require Grantor to, and Grantor hereby agrees (at its expense) that it will, forthwith assemble all or part of the Collateral as directed by Secured Party and make it available to Secured Party at a place designated by Secured Party that is reasonably convenient to both Secured Party and Grantor.
- (e) Upon the occurrence of an Event of Default, upon the written request of Secured Party, Grantor will remit to Secured Party all cash proceeds received in respect of any sale of, or collection from, or other realization upon all or any part of the Collateral. All cash proceeds received by Secured Party from Grantor or otherwise in respect of any sale of, collection from, or other realization upon all or any part of the Collateral (in the discretion of Secured Party) may be held by Secured Party as additional Collateral for the secured obligations under the Note (the "Secured Obligations").
- 5. <u>Power of Attorney</u>. Grantor hereby irrevocably grants Secured Party a power of attorney, to act as Grantor's attorney-in-fact, with full authority in the name, place and

stead of Grantor, from time to time in Secured Party's discretion, to take any action and to execute any instrument which Secured Party may deem reasonably necessary or advisable to accomplish the purposes of this Security Agreement. This authority includes, without limitation, the following:

- without first obtaining Grantor's approval of or signature thereto, unless otherwise prohibited by applicable law) any application, form or other document in order to perfect, maintain, continue or otherwise protect Secured Party's interest or Grantor's rights in the Collateral, including, without limitation, executing and filing (i) any financing statement, any continuation statement or any amendment thereto, and (ii) any document in any proceeding before the United States Patent and Trademark Office or the relevant office of any state or foreign jurisdiction (including, without limitation, the filing of applications for renewal, affidavits of use, affidavits of incontestability and opposition, interference and cancellation proceedings) and to pay any fees and taxes in connection therewith or otherwise; and
- (b) To execute any assignment or other document required to acknowledge, register or perfect Secured Party's interest in any part of the Collateral without the signature of Grantor unless prohibited by applicable law.

The foregoing power of attorney is coupled with an interest and is irrevocable.

- Grantor, Grantor agrees to assist and fully cooperate in the execution or procurement of any further necessary assurance of title and first priority security interest to the Collateral, or any registrations or applications thereof, and at any time, upon the reasonable request of the Secured Party, shall execute and deliver any and all papers that may be necessary or desirable to perfect the title, and obtain and continue the first priority security interest, to the Collateral in the Secured Party, its successors, assigns or other legal representatives.
- 7. Release. The security interest granted herein will terminate (and all rights to the Collateral will revert to Grantor) upon payment in full of the Note (unconditionally and indefeasibly) or upon conversion of the total amount outstanding under the Note (including principal, interests and fees) into equity of Grantor in accordance with Section 5 of the Note. Upon any such termination, Secured Party (at Grantor's request and sole expense) will execute Upon any such termination, warranty or recourse of any kind whatsoever) and deliver to Grantor (without any representation, warranty or recourse of any kind whatsoever) such documents as Grantor may reasonably request and provide to Secured Party to evidence such termination.
- 8. <u>Covenants</u>. Grantor hereby covenants and agrees with Secured Party that until termination of the security interest granted herein,
- (a) Grantor shall not create, incur, assume or permit to exist any lien, encumbrance, charge or claim of any kind on the Collateral which is senior to the security

interest granted herein;

- (b) Grantor shall not sell, lease, exchange, transfer, assign, license, sublicense, convey, or otherwise dispose of any of its rights, title and interest in any of the Collateral to any person or entity without the prior written consent of Secured Party;
- (c) Grantor shall not hypothecate or grant a security interest in the Collateral unless such security interest is subordinate to that granted herein;
- (d) Grantor (i) will maintain (in a manner consistent with its historical practices) the quality of products and services offered under any Mark, (ii) will employ with all of the Marks (whether or not registered) an appropriate notice of such Mark, (iii) will employ with any Patent registered with the U.S. Patent and Trademark Office, or in a foreign country, an appropriate notice of such registration;
- (e) Grantor will not do or permit any act (or knowingly omit to do any act) whereby any of the Collateral may lapse or become abandoned, forfeited, invalid, dedicated to the public or unenforceable (except upon expiration of the end of an unrenewable term of a registration thereof, and except that Grantor shall not be required to prosecute any Patent application) without the prior written consent of Secured Party (which consent will not be unreasonably withheld while no Event of Default is occurring) unless such action would not have a material adverse affect on the Collateral as a whole;
- (f) Grantor will promptly notify Secured Party if Grantor believes (or has reason to believe) that (i) any application or registration relating to any material item of Collateral may become abandoned, dedicated to the public, placed in the public domain, invalid or unenforceable, or (ii) there has been or will be an adverse determination or development (including the institution of, or any determination or development in, any proceeding in the United States Patent and Trademark Office, the United States Copyright Office or any other Official Body) regarding Grantor's ownership of any material item of the Collateral, its right to register the same, or its right to keep, maintain and enforce the same unless such action would not have a material adverse affect on the Collateral as a whole;
- (g) If Grantor files an application for the registration of any Collateral with the United States Patent and Trademark Office, the United States Copyright Office or any other Official Body, then Grantor must notify Secured Party thereof within thirty (30) calendar days thereafter, and upon request of Secured Party, must promptly execute and deliver any and all agreements, instruments, documents and papers that Secured Party may request to evidence Secured Party's security interest in such Collateral;
- (h) Grantor will perform all acts and will pay all required fees and taxes (including in any proceeding before the United States Patent and Trademark Office, the United States Copyright Office or any other official body) to maintain each and every item of Collateral in full force and effect throughout the world and to pursue any application filed with

respect to the Collateral, including the filing of applications for renewal, affidavits of use, affidavits of incontestability and opposition, and interference and cancellation proceedings;

- (i) Grantor (i) will protect, defend and maintain the validity and enforceability of the Collateral, and (ii) will use its best efforts to detect infringements of the Collateral and promptly notify Secured Party in writing of material infringements detected;
- (j) Grantor will promptly notify Secured Party in writing upon obtaining knowledge of any event that materially adversely affects (i) the value of any material Collateral, or (ii) the rights and remedies of Secured Party in relation thereto, including the levy of any legal process against any of the Collateral;
- (k) Grantor, on a continuing basis, will make, execute, acknowledge and deliver, and will file and record in the proper filing and recording places in the United States, all such instruments, collateral agreements and filings (including all appropriate financing and continuation statements) with the United States Patent and Trademarks Office and the Register of Copyrights, and will take all such action as Secured Party may reasonably deem to be necessary or advisable to perfect or protect Secured Party's security interest in all Collateral and otherwise to carry out the intent and purpose of this Security Agreement, or for assuring and confirming to Secured Party the grant or perfection of a security interest in all Collateral;
- (l) Grantor will maintain all tangible items of Collateral with at least the same care as Grantor's other property, which care shall be, at a minimum, in accordance with normal industry practice; and
- (m) Grantor shall keep all tangible items of Collateral identifiable from and not commingled with Grantor's property of a similar kind at its chief executive offices unless Secured Party consents to the location of such items at another location (which consent shall not be unreasonably withheld while no Event of Default is occurring) and shall promptly notify Secured Party of any change in the location of its chief executive offices.
- 9. <u>Representations and Warranties</u>. Grantor represents and warrants to Secured Party until the termination of the security interest granted herein:
- (a) Grantor's chief executive office and principal place of business is located in Cambridge, Massachusetts. Grantor will not change its name or its chief executive office or its principal place of business without thirty (30) days prior written notice to Secured Party; and
- (b) Grantor is a corporation duly organized, validly existing and in good standing under the laws of Delaware. Grantor has all requisite power and authority to execute and deliver this Security Agreement and to perform its obligations hereunder. This Security Agreement constitutes a valid and binding obligation of Grantor, enforceable against Buyer in accordance with its respective terms except as the enforceability hereof may be limited

by bankruptcy, insolvency or other similar laws of general application relating to or affecting the enforcement of creditors' rights. Grantor's Board of Directors has approved, by resolution or unanimous written consent, of Grantor's execution of this Security Agreement and the consummation of all of the transactions contemplated hereby.

- (c) Assuming the proper filing of one or more financing statements identifying the Collateral with the proper state and/or local authorities, and any cover sheets or other documentation required for perfection in the United States Patent and Trademark Office, or any foreign patent and/or trademark office, this Security Agreement creates in favor of Secured Party a valid and enforceable security interest in the Collateral enforceable against Grantor hereunder with respect to such Collateral as security for the payment of the obligations and indebtedness of Grantor under the Note. This Security Agreement, along with any other documents required for perfection, is in appropriate form for filing with the United States Patent and Trademark Office.
- 10. <u>Inspection</u>. Grantor shall permit Secured Party and its representatives from time to time during normal business hours to inspect, examine, and audit the Collateral to confirm Secured Party's compliance with the terms of this Security Agreement.
- Secured Party Has No Duty. The rights and powers conferred upon Secured Party hereunder are solely to protect Secured Party's interest in the Collateral and do not impose any duty on Secured Party to exercise any such rights or powers. Secured Party has no duty as to any Collateral or as to the taking of any necessary steps to preserve rights against prior parties or any other rights pertaining to any Collateral.
- 12. <u>No Waiver</u>. No failure to exercise nor any delay in exercising on the part of Secured Party any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or privilege hereunder preclude any other or future exercise thereof or the exercise of any other right, power or privilege.
- Secured Party for all of its reasonable costs and out-of-pocket expenses incurred in connection with the enforcement or preservation of any rights under this Security Agreement, including, without limitation, the reasonable fees and disbursements of counsel to Secured Party.
- 14. Governing Law. This Security Agreement shall be governed by, and be construed and interpreted in all respects in accordance with, the laws of the State of Missouri applicable to contracts made and to be performed entirely within such state, without giving effect to its conflicts of law principles or rules.
- 15. Consent to Jurisdiction; Waiver of Venue Objection; Service of Process. WITHOUT LIMITING THE RIGHT OF THE SECURED PARTY TO BRING ANY ACTION OR PROCEEDING AGAINST THE GRANTOR OR AGAINST PROPERTY OF THE GRANTOR ARISING OUT OF OR RELATING TO THIS SECURITY

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AGREEMENT (AN "ACTION") IN THE COURTS OF OTHER JURISDICTIONS, THE GRANTOR HEREBY IRREVOCABLY SUBMITS TO AND ACCEPTS THE JURISDICTION OF ANY MISSOURI STATE COURT OR ANY FEDERAL COURT SITTING IN OR FOR ST. LOUIS COUNTY, AND THE GRANTOR HEREBY IRREVOCABLY AGREES THAT ANY ACTION MAY BE HEARD AND DETERMINED IN SUCH MISSOURI STATE COURT OR IN SUCH FEDERAL COURT. THE GRANTOR HEREBY IRREVOCABLY WAIVES AND DISCLAIMS, TO THE FULLEST EXTENT THAT THE GRANTOR MAY EFFECTIVELY DO SO, ANY DEFENSE OR OBJECTION (INCLUDING, WITHOUT LIMITATION, ANY DEFENSE OR OBJECTION TO VENUE BASED ON THE GROUNDS OF FORUM NON CONVENIENS) WHICH THE GRANTOR MAY NOW OR HEREAFTER HAVE TO THE MAINTENANCE OF ANY ACTION IN ANY JURISDICTION. THE GRANTOR HEREBY IRREVOCABLY AGREES THAT THE SUMMONS AND COMPLAINT OR ANY OTHER PROCESS IN ANY ACTION IN ANY JURISDICTION MAY BE SERVED BY MAILING (USING CERTIFIED OR REGISTERED MAIL, POSTAGE PREPAID) TO THE GRANTOR'S ADDRESS. SUCH SERVICE WILL BE COMPLETE ON THE DATE SUCH PROCESS IS SO DELIVERED, AND THE GRANTOR WILL HAVE THIRTY DAYS FROM SUCH COMPLETION OF SERVICE IN WHICH TO RESPOND IN THE MANNER PROVIDED BY LAW. THE GRANTOR MAY ALSO BE SERVED IN ANY OTHER MANNER PERMITTED BY LAW, IN WHICH EVENT THE GRANTOR'S TIME TO RESPOND SHALL BE THE TIME PROVIDED BY LAW.

- 17. Waiver of Jury Trial. TO THE FULLEST EXTENT PERMITTED BY LAW, THE GRANTOR HEREBY WAIVES AND DISCLAIMS ANY RIGHT TO TRIAL BY JURY (WHICH THE SECURED PARTY ALSO WAIVES AND DISCLAIMS) IN ANY ACTION, SUIT, PROCEEDING OR COUNTERCLAIM OF ANY KIND ARISING OUT OF OR RELATING TO THIS NOTE.
- with respect to the security interest granted herein are in addition and without prejudice to those set forth in the Note and the Transaction Documents, all terms and provisions of which are hereby incorporated herein by reference. This Security Agreement may be executed in any number of counterparts with the same effect as if all the signatures on such counterparts appeared on one document; each such counterpart will be deemed to be an original but all counterparts together will constitute one and the same instrument. In the event that any provisions of this Security Agreement are deemed to conflict with the Note, the provisions of the Note shall govern. This Security Agreement and various rights and obligations arising hereunder shall inure to the benefit of and be binding upon the parties, their successors and permitted assigns. Neither this Security Agreement nor any of the rights, interests, or obligations hereunder shall be transferred, delegated, or assigned by Grantor without the prior written consent of Secured Party. Any notices required to be, or otherwise, given hereunder shall be given as described in the Asset Purchase Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Security Agreement, as an instrument under seal (whether or not any such seals are physically attached hereto), through their duly authorized officers, as of the date first written above.

WITNESS:	METABOLI (as Grantor)	IX, INC.
By: FRANK SKRALY Name: Jad J Title: TEAM LEADER, MICROBIAL METABOLIC ENCLIMERING		MES J. BARBER ESIDENT
[CORPORATE SEAL]		
	Address:	303 Third Street Cambridge, MA 02142
	Facsimile:	(617) 492-1996
WITNESS:	MONSANTO	O COMPANY (arty)
By:	•	
	Address:	800 N. Lindbergh Blvd. St. Louis, MO 63167
	Facsimile:	

Signature page to the Security Agreement dated May 14, 2001

IN WITNESS WHEREOF, the parties hereto have executed this Security Agreement, as an instrument under seal (whether or not any such seals are physically attached hereto), through their duly authorized officers, as of the date first written above.

WITNESS:	METABOLIX, INC. (as Grantor)	
Ву:	By:	
Name: Litle:	Name:Title:	
Title:	Title:	
[CORPORATE SEAL]		
	Address: 303 Third Street Cambridge, MA 02142	
	Facsimile:	
WITNESS: By: W. Jall. lel	MONSANTO COMPANY (as Secured Party) By: Quan Luly	
J. VOID (and).	Name: DANA L. WESTERY Title: DIRECTOR MEA	
	Address: 800 N. Lindbergh Blvd. St. Louis, MO 63167	
	Facsimile:	

Signature page to the Security Agreement dated May 14, 2001

ACKNOWLEDGMENT

M	y Commission Expires:	MY COMMISSION EXPIRES JANUARY 24, 2008
N	otary Public	
	Dan T. S	with
James J. Barber acknowledge	ed said instrument to be hi	s/her free act and deed.
METABOLIX, INC. by authority of its board of		
INC., and that said instrument (i.e., the Securit	y Agreement) was signed	on behalf of said
by me duly sworn, did say that he/she is the P	resident and CEO	of METABOLIX,
2001, personally appeared <u>James J. 1</u>	Barber to me know	n personally, who, being
Before me, the undersigned, a N 2001, personally appeared <u>James</u> J. 1	Notary Public, on this $\frac{21^5}{}$	day of May,
COUNTY OF MIDDLESEX)	
) SS	
COMMONWEALTH OF MASSACHUSETT	S)	

Signature page to the Security Agreement dated May 14, 2001

ACKNOWLEDGMENT

STATE OF MISSORI)
COUNTY OF ST. LOUIS) SS)
2001, personally appeared Dana L. Wesme duly sworn, did say that he/she is the I COMPANY, and that said instrument (i.e., to MONSANTO COMPANY by authority of i	he Security Agreement) was signed on behalf of said
	Kathyn A. Sharp Notary Public
	My Commission Expires:
	KATHRYN A. SHARP Notary Public-Notary Seal STATE OF MISSOURI St. Louis County My Commission Expires December 11, 2004

Signature page to the Security Agreement dated May 14, 2001

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RECORDED: 06/04/2001