PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: CHANGE OF NAME

CONVEYING PARTY DATA

Name	Execution Date
Chiron Corporation	04/20/2006

RECEIVING PARTY DATA

Name:	Novartis Vaccines and Diagnostics, Inc.
Street Address:	4560 Horton Street
City:	Emeryville
State/Country:	CALIFORNIA
Postal Code:	94608

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	09894845

CORRESPONDENCE DATA

Fax Number: (510)655-3542

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Email: melodi.dice@novartis.com

Correspondent Name: Novartis Vaccines & Diagnostics Inc

Address Line 1: P.O. Box 8097

Address Line 4: Emeryville, CALIFORNIA 94662-8097

ATTORNEY DOCKET NUMBER: PAT051273-US-NP

NAME OF SUBMITTER: Melodi Dice

Total Attachments: 16

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The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF INCORPORATION OF "CHIRON DELAWARE CORPORATION", FILED IN THIS OFFICE ON THE TWENTY-FIRST DAY OF NOVEMBER, A.D. 1986, AT 12 O'CLOCK P.M.

2108457 8100

DELAWARE

090782589

AUTHENTICATION: 7478358

PATENT REEL: 023352 FRAME: 0334

Jeffrey W. Bullock, Secretary of State

DATE: 08-17-09

You may verify this certificate online at corp.delaware.gov/authver.shtml

FILED

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CERTIFICATE OF INCORPORATION OF CHIRON DELAWARE CORPORATION

SHEETAN OF STREET

FIRST: The name of this corporation is: CHIRON DELAWARE CORPORATION.

SECOND: The address of the registered office of the corporation in the State of Delaware is 1209 Orange Street, the City of Wilmington, County of New Castle, and the name of its registered agent at that address is The Corporation Trust Company.

THIRD: The name and mailing address of the incorporator of the corporation is:

William G. Green Chiron DELAWARE CORPORATION c/o Brobeck, Phleger & Harrison One Market Plaza, Spear Street Tower San Francisco, CA 94105

FOURTH: The purpose of the corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FIFTH: This corporation is authorized to issue two classes of shares to be designated, respectively, "Preferre; Stock" and "common stock." The total number of shares which this corporation is authorized to issue is thirty-five million (35,000,000). Five million (5,000,000) shares shall be Preferred Stock and thirty million (30,000,000) shares shall be common stock. The Preferred Stock shall have a par value of \$0.01 per share; the common stock shall have a par value of \$0.01 per share.

A. Preferred Stock.

The Preferred Stock may be issued from time to time in one or more series. The Board of Directors is expressly authorized, in the resolution or resolutions providing for the issuance of any wholly unissued series of Preferred Stock, to fix, state and express the powers, rights, designations, preferences, qualifications, limitations and restrictions thereof, including without limitation: the rate of dividends upon which and the times at which dividends on shares of such series shall be payable and the preference, if any, which such dividends shall have relative to dividends on shares of any other class or classes or any

other series of stock of the corporation; whether such dividends shall be cumulative or noncumulative, and if cumulative, the date or dates from which dividends on shares of such series shall be cumulative; the voting rights, if any, to be provided for shares of such series; the rights, if any, which the holders of shares of such series shall have in the event of any voluntary or involuntary liquidation, dissolution or winding up of the affairs of the corporation; the rights, if any, which the holders of shares of such series shall have to convert such shares into or exchange such shares for shares of stock of the corporation, and the terms and conditions, including price and rate of exchange of such conversion or exchange; and the redemption rights (including sinking fund provisions), if any, for shares of such series; and such other powers, rights, designations, preferences, qualifications, limitations and restrictions as the Board of Directors may desire to so The Board of Directors is also expressly authorized to fix the number of shares constituting such series and to increase or decrease the number of shares of any series prior to the issuance of shares of that series and to increase or decrease the number of shares of any series subsequent to the issuance of shares of that series, but not to decrease such number below the number of shares of such series then outstanding in case the number of shares of any series shall be so decreased, the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series.

B. Common Stock.

The common stock may be issued from time to time in one or more series. Twenty-nine million five hundred thousand (29,500,000) shares of common stock are designated "Common Stock." All other serie if common stock shall collectively consist of five hundred thousand (500,000) shares and shall be designated, as a group, "Restricted Common Stock."

C. Restricted Common Stock.

l. Authority of Board to Fix Rights of Restricted Common Stock. The Board of Directors is expressly authorized, in the resolution or resolutions providing for the issuance of any wholly unissued series of Restricted Common Stock, to fix, state and express, within the limits expressed hereinbelow, the powers, designations, preferences and rights of the Restricted Common Stock, and the qualifications, limitations or restrictions thereof. The Board of Directors is also expressly authorized to fix

the number of shares constituting such series and to increase or decrease the number of shares of any series prior to the issuance of shares of that series and to increase or decrease the number of shares of any series subsequent to the issue of shares of that series, but not to decrease such number below the number of shares of such series then outstanding. In case the number of shares of any series shall be so decreased, the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series.

- 2. Specific Rights. The rights, preferences, privileges and restrictions of the Common Stock and Restricted Common Stock shall be identical in all respects, except as follows or, for the Restricted Common Stock, as fixed and determined by the Board of Directors within the limitations which follow:
 - (a) Conversion Rights. The Restricted Common Stock may be convertible into or exchangeable for Common Stock, at a conversion or exchange ratio of not more than one share of Common Stock for each share of Restricted Common Stock and upon such other terms and conditions as the Board of Directors may establish.
 - (b) Voting Rights. Subject to the special voting rights (if any) of the Preferred Stock set forth or determined as provided in this Article FIFTH, each holder of Common Stock of the corporation shall be entitled to one vote for each share of such stock outstanding in the name of such holder on the books of the corporation on the record date designated for the purpose of such vote, and each holder of Restricted Common Stock of the corporation shall be entitled, for each share of such Restricted Common Stock outstanding in the name of such holder on the books of the corporation on the record date designated for the purpose of such vote, to the number of votes as has been fixed by the Board of Directors, but the vote per share of Restricted Common Stock shall not be more than the proportionate vote of the Common Stock into which such Restricted Common Stock is convertible or exchangeable.

- (c) Dividend Rights. Subject to the prior rights (if any) of the holders of the Preferred Stock as to dividends, the holders of outstanding shares of Common Stock and Restricted Common Stock shall be entitled to receive, when and as declared by the Board of Directors, out of the assets of the corporation at the time legally available therefor, dividends at the rate determined by the Board of Directors; provided, however, that the dividend on each share of Restricted Common Stock shall be less than the proportionate dividend on each share of Common Stock into which it is convertible or exchangeable.
- (d) Liquidation Rights. event of any liquidation, dissolution or winding up of this corporation either voluntarily or involuntarily, but subject to the liquidation preference (if any) of the holders of the Preferred Stock by reason of their ownership thereof, the holders of Common Stock and Restricted Common Stock shall be entitled to receive pro rata the remaining assets of the corporation available for distribution to shareholders except that the amount per share paid in liquidation on each share of the Restricted Common Stock shall be less than the proportionate amount per share paid on each share of the Common Stock into which it is convertible or exchangeable.
- (e) Adjustments. The Board of Directors shall make appropriate adjustments to the conversion or exchange ratio and to the voting, dividend and liquidation rights of the Restricted Common Stock in the event of any stock split, stock dividend or similar transaction affecting the number of outstanding shares of Common Stock or Restricted Common Stock without the corporation's receipt of consideration therefor.

SIXTH: A Director of this corporation shall not be personally liable to this corporation or its stockholders for monetary damages for breach of fiduciary duty as a Director, except for liability (i) for any breach of the Director's duty of loyalty to this corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction

from which the Director derived any improper personal benefit. The foregoing sentence notwithstanding, if the Delaware General Corporation Law hereafter is amended to authorize further limitations of the liability of a director of a corporation, then a Director of this corporation, in addition to the circumstances in which a Director is not personally liable as set forth in the preceding sentence, shall not be liable to the fullest extent permitted by the Delaware General Corporation Law as so amended. Any repeal or modification of the foregoing provisions of this Article SIXTH by the stockholders of this corporation shall not adversely affect any right or protection of a Director of this corporation existing at the time of such repeal or modification.

SEVENTH: In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind from time to time any or all of the bylaws of the Corporation.

EIGHTH: This corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred on stockholders herein are granted subject to this reservation.

THE UNDERSIGNED, being the incorporator hereinbefore named, for the purpose of forming a corporation to do business both within and without the State of Delaware, and in pursuance of the Delaware General Corporation Law, does hereby make and file this Certificate of Incorporation.

William G Green



PAGE 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF

DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT

COPY OF THE CERTIFICATE OF AMENDMENT OF "CHIRON DELAWARE

CORPORATION", CHANGING ITS NAME FROM "CHIRON DELAWARE

CORPORATION" TO "CHIRON CORPORATION", FILED IN THIS OFFICE ON

THE TWENTY-FOURTH DAY OF DECEMBER, A.D. 1986, AT 10:01 O'CLOCK

A.M.

2108457 8100

090782589

DATE: 08-17-09

AUTHENTICATION: 7478359

PATENT REEL: 023352 FRAME: 0340

Jeffrey W. Bullock, Secretary of State

You may verify this certificate online at corp.delaware.gov/authver.shtml

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CERTIFICATE OF AMENDMENT OF CERTIFICATE OF INCORPORATION OF CHIRON DELAWARE CORPORATION

FILED 10:01 A-171 DEC 24 1986

Much Hile SECRETARY OF STATE

Chiron Delaware Corporation, a corporation organized and existing under the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify:

FIRST: The Corporation has not received any payment for any of its stock.

SECOND: The amendment to the Corporation's Certificate of Incorporation set forth in the following resolution approved by a majority of the Corporation's Board of Directors and was duly adopted in accordance with the provisions of Section 241 of the General Corporation Law of the State of Delaware:

"RESOLVED, that the Certificate of Incorporation of this corporation be amended by striking Article FIRST in its entirety and replacing therefor: 'FIRST: The name of this corporation is Chiron Corporation.'"

Chiron Delaware Corporation

BY:

Edward E. Penhoet President and Chief Executive Officer

ATTEST:

William G. Green

Secretary

B473-13-P-17Dec86

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The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER OF "CHIRON CORPORATION", CHANGING ITS NAME FROM "CHIRON CORPORATION" TO "NOVARTIS VACCINES AND DIAGNOSTICS, INC.", FILED IN THIS OFFICE ON THE NINETEENTH DAY OF APRIL, A.D. 2006, AT 12:25 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF MERGER IS THE TWENTIETH DAY OF APRIL, A.D. 2006, AT 12:01 O'CLOCK A.M.

2108457 8100

Jeffrey W. Bullock, Secretary of State AUTHENTICATION: 7478360

DATE: 08-17-09

PATENT REEL: 023352 FRAME: 0342

090782589

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware Secretary of State Division of Corporations Delivered 12:25 PM 04/19/2006 FILED 12:25 PM 04/19/2006 SRV 060363242 - 2108457 FILE

CERTIFICATE OF MERGER

of

NOVARTIS BIOTECH PARTNERSHIP, INC.

a Delaware corporation,

with and into

CHIRON CORPORATION

a Delaware corporation

Pursuant to Section 251(c) of the General Corporation Law of the State of Delaware (the "DGCL"), Chiron Corporation, a corporation organized and existing under the laws of the State of Delaware, does hereby certify as follows:

First: The name and state of incorporation of each of the constituent corporations of the merger (the "Constituent Corporations") are as follows:

<u>Name</u>

State of Incorporation

NOVARTIS BIOTECH PARTNERSHIP, INC.

Delaware

CHIRON CORPORATION

Delaware

Second: The Agreement and Plan of Merger, dated as of October 30, 2005, as amended, by and among Novartis Corporation, a New York corporation, Novartis Biotech Partnership, Inc., a Delaware corporation, Chiron Corporation, a Delaware corporation (the "Surviving Corporation"), and, for purposes of Section 10.14 thereof only, Novartis AG, a Swiss corporation (the "Merger Agreement"), has been approved, adopted, certified, executed and acknowledged by each of the Constituent Corporations in accordance with the requirements of Section 251 of the DGCL.

Third: The name of the surviving corporation of the merger is Chiron Corporation, subject to Article Fourth.

Fourth: At the effective time, the name of the Surviving Corporation shall be changed to Novartis Vaccines and Diagnostics, Inc. and the certificate of incorporation of the Surviving Corporation shall be amended and restated in the form of "Exhibit A," attached hereto and, as so amended, shall constitute the Amended and Restated Certificate of Incorporation of the Surviving Corporation. Said Certificate of Incorporation as so amended and changed shall continue to be the Certificate of Incorporation of said Surviving Corporation until further amended and changed in accordance with the provisions of the DGCL.

Fifth: The executed Merger Agreement is on file at the principal executive offices of the Surviving Corporation at 4560 Horton Street, Emeryville, California 94608.

Sixth: A copy of the Merger Agreement will be furnished by the Surviving Corporation, on request and without cost, to any stockholder of any Constituent Corporation.

Seventh: This Certificate of Merger shall be effective as of 12:01am on Thursday, April 20, 2006.

IN WITNESS WHEREOF, the undersigned has duly executed this Certificate of Merger as of this 19th day April, 2006.

CHIRON CORPORATION

Name: HOWARD H.PIEN

Title: Chairman of the Board; Chief Executive Officer

EXHIBIT A

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

NOVARTIS VACCINES AND DIAGNOSTICS, INC.

ARTICLE I

The name of the corporation is Novartis Vaccines and Diagnostics, Inc. (the "Corporation").

ARTICLE II

The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street City of Wilmington, County of New Castle. The name of the registered agent of the Corporation at such address is The Corporation Trust Company.

ARTICLE III

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

ARTICLE IV

The total number of shares of stock that the Corporation shall have authority to issue is 1,000 shares with a par value of \$0.01 per share. All such shares shall be of one class and shall be designated "Common Stock".

ARTICLE V

For the management of the business and for the conduct of the affairs of the Corporation, and in further definition, limitation and regulation of the powers of the Corporation and of its directors and stockholders, it is further provided that:

- Section 1. the number of directors of the Corporation shall be fixed by, or in the manner provided in, the By-laws of the Corporation;
- Section 2. in furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors is expressly authorized and empowered to make, alter, amend or repeal the By-laws of the Corporation in any manner not inconsistent with the laws of the State of Delaware or this Amended and Restated Certificate of Incorporation, subject to the power of the stockholders of the Corporation having voting power to alter, amend or repeal the By-laws of the Corporation;
- Section 3. in addition to the powers and authorities herein or by statute expressly conferred upon it, the Board of Directors may exercise all such powers and do all such acts and things as may be exercised or done by the Corporation, subject, nevertheless, to the provisions of the laws of the State of Delaware, this Amended and Restated Certificate of Incorporation and the By-laws of the Corporation;
- Section 4. any director or any officer elected or appointed by the stockholders or by the Board of Directors, or any committee thereof, may be removed at any time by the unanimous consent of the stockholders or in such other manner as shall be provided in the Bylaws of the Corporation; and
- Section 5. unless and except to the extent that the By-laws of the Corporation shall so require, the election of directors of the Corporation need not be by written ballot.

ARTICLE VI

No director shall be personally liable to the Corporation or any of its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (a) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (b) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (c) pursuant to Section 174 of the Delaware General Corporation Law, or (d) for any transaction from which the director derived an improper personal benefit. The foregoing sentence notwithstanding, if the Delaware General Corporation Law hereafter is amended to authorize further limitations of the liability of a director of a corporation, then a Director of this corporation, in addition to the circumstances in which a Director is not personally liable as set forth in the preceding sentence, shall not be liable to the fullest extent permitted by the Delaware General Corporation Law as so amended. Any repeal or modification of this ARTICLE VI by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification with respect to acts or omissions occurring prior to such repeal or modification.

ARTICLE VII

No contract or transaction between the Corporation and one or more of its directors or officers (or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are directors or officers, or have a

financial interest) shall be void or voidable solely for such reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof that authorizes the contract or transaction, or solely because his, her or their votes are counted for such purpose, if:

Section 1. the material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;

Section 2. the material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

Section 3. the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee thereof or the stockholders.

Common or interested directors shall be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee that authorizes any such contract or transaction. No director or officer shall be liable to account to the Corporation for any profit realized by him or her from or through such contract or transaction solely by reason of the fact that he or she or any other corporation, partnership, association or other organization in which he or she is a director or officer, or has a financial interest, was interested in such contract or transaction.

ARTICLE VIII

The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person, his or her testator or intestate is or was a director, officer, employee or agent of the Corporation or any predecessor of the Corporation, or is or was serving at the request of the Corporation or any predecessor of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts in connection with such action, suit or proceeding, in accordance with the laws of the State of Delaware, and to the full extent permitted by such laws. Expenses incurred in defending a civil, criminal, administrative or investigative action, suit or proceeding, by reason of the fact that such person, his or her testator or intestate is or was a director, officer, employee or agent of the Corporation or any predecessor of the Corporation, or is or was serving at the request of the Corporation or any predecessor of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise shall be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such person to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the

Corporation as authorized by relevant sections of the Delaware General Corporation Law. Such indemnification shall not be deemed exclusive of any other rights to which those seeking indemnification may be entitled under any by-law, agreement, vote of stockholders or disinterested directors or otherwise, including insurance purchased and maintained by the Corporation, both as to action in his or her official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

The foregoing provisions of this Article VIII shall be deemed to be a contract between the Corporation and each director who serves in such capacity at any time while this Article VIII is in effect, and any repeal or modification thereof shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought based on whole or in part upon any such state of facts.

ARTICLE IX

The Corporation reserves the right at any time and from time to time to amend, alter, change or repeal any provision contained in this Amended and Restated Certificate of Incorporation (including provisions as may hereafter be added or inserted in this Amended and Restated Certificate of Incorporation as authorized by the laws of the State of Delaware) in the manner now or hereafter prescribed by law; and all rights, preferences and privileges of whatsoever nature conferred upon stockholders, directors or any other persons whomsoever by and pursuant to this Amended and Restated Certificate of Incorporation in its current form or as hereafter amended are granted subject to the right reserved in this Article IX.

RECORDED: 10/09/2009