

IDENIX PHARMACEUTICALS INC  
Form SC 13D/A  
August 10, 2012

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

**SCHEDULE 13D/A**

**Under the Securities Exchange Act of 1934  
(Amendment No. 7)\***

**Idenix Pharmaceuticals, Inc.**

(Name of Issuer)

**Common Stock**

(Title of Class of Securities)

**45166R 20 4**

(CUSIP Number)

**Thomas Lynch, Esq.  
Novartis Pharma AG  
Lichtstrasse 35  
CH-4056 Basel, Switzerland  
+41 61 324 8323**

**Adam H. Golden, Esq.  
Kaye Scholer LLP  
425 Park Avenue  
New York, New York 10022  
(212) 259-8000**

(Name, Address and Telephone Number of Person  
Authorized to Receive Notices and Communications)

**July 31, 2012**

(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box. o

**Note:** Schedules filed in paper format shall include a signed original and five copies of the Schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

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The information required on this cover page shall not be deemed to be filed for the purpose of Section 18 of the Securities Exchange Act of 1934 ( Exchange Act ) or otherwise subject to the liabilities of that section of the Exchange Act but shall be subject to all other provisions of the Exchange Act (however, see the Notes).

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1 Name of Reporting Person  
 I.R.S. Identification Nos. of Above Person (entities only)\*  
 NOVARTIS AG

2 Check the Appropriate Box if a Member of a Group\*  
 (a)   
 (b)

3 SEC Use Only

4 Source of Funds\*  
 AF

5 Check Box if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6 Citizenship or Place of Organization  
 SWITZERLAND

	7	Sole Voting Power
		0
Number of Shares Beneficially Owned by Each Reporting Person With	8	Shared Voting Power
		33,320,674
	9	Sole Dispositive Power
		0
	10	Shared Dispositive Power
		33,320,674

11 Aggregate Amount Beneficially Owned by Each Reporting Person  
 33,320,674

12 Check Box if the Aggregate Amount in Row (11) Excludes Certain Shares\*

13 Percent of Class Represented by Amount in Row (11)  
 25.5%(1)

14 Type of Reporting Person\*  
 CO

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\*SEE INSTRUCTIONS

(1) The beneficial ownership percentage is determined (i) based on 108,451,642 outstanding shares of Common Stock as reported in the Company's Prospectus Supplement filed with the Securities and Exchange Commission on August 2, 2012, and (ii) after giving effect to the Public Offering of 22,000,000 shares of Common Stock described in Item 4 below (but assuming the Over-Allotment Option (described in Item 4) is not exercised).

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1	Name of Reporting Person I.R.S. Identification Nos. of Above Person (entities only)* NOVARTIS PHARMA AG	
2	Check the Appropriate Box if a Member of a Group* (a) <input type="radio"/> (b) <input type="radio"/>	
3	SEC Use Only	
4	Source of Funds* WC	
5	Check Box if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="radio"/>	
6	Citizenship or Place of Organization SWITZERLAND	
Number of Shares Beneficially Owned by Each Reporting Person With	7	Sole Voting Power 0
	8	Shared Voting Power 33,320,674
	9	Sole Dispositive Power 0
	10	Shared Dispositive Power 33,320,674
11	Aggregate Amount Beneficially Owned by Each Reporting Person 33,320,674	
12	Check Box if the Aggregate Amount in Row (11) Excludes Certain Shares* <input type="radio"/>	
13	Percent of Class Represented by Amount in Row (11) 25.5%(1)	
14	Type of Reporting Person* CO	

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\*SEE INSTRUCTIONS

(1) The beneficial ownership percentage is determined (i) based on 108,451,642 outstanding shares of Common Stock as reported in the Company's Prospectus Supplement filed with the Securities and Exchange Commission on August 2, 2012, and (ii) after giving effect to the Public Offering of 22,000,000 shares of Common Stock described in Item 4 below (but assuming the Over-Allotment Option (described in Item 4) is not exercised).

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### Item 1. Security and Issuer

This Amendment No. 7 to Schedule 13D (this Amendment) amends the initial statement on Schedule 13D filed with the Securities and Exchange Commission on July 27, 2004, as previously amended on September 7, 2005, November 2, 2005, May 20, 2009, June 18, 2010, April 20, 2011 and December 15, 2011 (the Original Schedule 13D) relating to Common Stock (the Common Stock), par value \$0.001 per share, of Idenix Pharmaceuticals, Inc., a Delaware corporation (the Company). The address of the Company's principal executive offices is 60 Hampshire Street, Cambridge, Massachusetts 02139.

Except as otherwise described herein, the information contained in the Original Schedule 13D remains in effect. Capitalized terms used but not defined in this Amendment shall have the respective meanings set forth with respect thereto in the Original Schedule 13D.

### Item 2. Identity and Background

No change except as described below.

(a) - (c) and (f). The name, business address, present principal occupation or employment and citizenship of the executive officers and members of the Board of Directors of each of the Reporting Persons is set forth on Schedule I hereto and is incorporated herein by reference.

(d) and (e). Neither the Reporting Persons nor, to the best knowledge of each of them, any of the persons listed on Schedule I hereto with respect to each such Reporting Person during the last five years, (i) has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or (ii) was a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

### Item 3. Source and Amount of Funds or Other Consideration

No change except as described below.

Novartis Pharma acquired the following shares of Common Stock pursuant to the exercise of stock subscription rights under the Stockholders Agreement:

On February 23, 2012, Novartis Pharma acquired 35,735 shares of Common Stock for \$2.41 per share or an aggregate of \$86,121.35.

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On February 23, 2012, Novartis Pharma acquired 366 shares of Common Stock for \$2.47 per share or an aggregate of \$904.02.

On February 23, 2012, Novartis Pharma acquired 2,493 shares of Common Stock for \$2.56 per share or an aggregate of \$6,382.08.

On February 23, 2012, Novartis Pharma acquired 997 shares of Common Stock for \$2.69 per share or an aggregate of \$2,681.93.

On February 23, 2012, Novartis Pharma acquired 997 shares of Common Stock for \$2.78 per share or an aggregate of \$2,771.66.

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On February 23, 2012, Novartis Pharma acquired 1,321 shares of Common Stock for \$2.85 per share or an aggregate of \$3,764.85.

On February 23, 2012, Novartis Pharma acquired 3,117 shares of Common Stock for \$2.90 per share or an aggregate of \$9,039.30.

On February 23, 2012, Novartis Pharma acquired 8,960 shares of Common Stock for \$2.96 per share or an aggregate of \$26,521.60.

On February 23, 2012, Novartis Pharma acquired 427 shares of Common Stock for \$2.97 per share or an aggregate of \$1,268.19.

On February 23, 2012, Novartis Pharma acquired 232 shares of Common Stock for \$3.04 per share or an aggregate of \$705.28.

On February 23, 2012, Novartis Pharma acquired 4,336 shares of Common Stock for \$3.17 per share or an aggregate of \$13,745.12.

On February 23, 2012, Novartis Pharma acquired 3,093 shares of Common Stock for \$3.79 per share or an aggregate of \$11,722.47.

On February 23, 2012, Novartis Pharma acquired 39 shares of Common Stock for \$5.10 per share or an aggregate of \$198.90.

On February 23, 2012, Novartis Pharma acquired 11,433 shares of Common Stock for \$5.11 per share or an aggregate of \$58,422.63.

On February 23, 2012, Novartis Pharma acquired 7,402 shares of Common Stock for \$5.46 per share or an aggregate of \$40,414.92.

On February 23, 2012, Novartis Pharma acquired 883 shares of Common Stock for \$5.79 per share or an aggregate of \$5,112.57.

On February 23, 2012, Novartis Pharma acquired 436 shares of Common Stock for \$5.80 per share or an aggregate of \$2,528.80.

On February 23, 2012, Novartis Pharma acquired 493 shares of Common Stock for \$6.52 per share or an aggregate of \$3,214.36.

On February 23, 2012, Novartis Pharma acquired 2,133 shares of Common Stock for \$7.39 per share or an aggregate of \$15,762.87.

The source of funds for the acquisitions set forth above was Novartis Pharma's working capital.

Item 4. Purpose of Transaction

No change except as described below.

As of July 31, 2012, Novartis Pharma entered into a Termination and Revised Relationship Agreement (the Termination and Revised Relationship Agreement ) with the Company and



Idenix (Cayman) Limited, pursuant to which, among other things, certain agreements between the Company and Novartis Pharma and its affiliates were terminated, including (a) the Development, License and Commercialization Agreement, dated as of May 8, 2003, as amended, and (b) the Letter Agreement, dated as of March 21, 2003, as amended, regarding the election, approval and removal of the Company's chief financial officer. In consideration for Novartis Pharma relinquishing its rights under the terminated agreements and certain rights under the Former Stockholders Agreement (as described below), pursuant to the Termination and Revised Relationship Agreement, the Company agreed to (i) continue Novartis Pharma's license and other rights with respect to telbivudine (Tyzeka®/Sebivo®), provided, that Novartis Pharma is no longer required to pay milestones or royalties in connection with such license, (ii) grant Novartis Pharma certain rights to conduct studies evaluating combinations of any of the Company's and Novartis Pharma's products for the treatment of hepatitis C virus, and (iii) make certain royalty payments to Novartis Pharma which are subject to off-setting royalty payments to the Company. The description of the Termination and Revised Relationship Agreement is qualified by reference to the full text thereof, which is included as an exhibit hereto and incorporated herein by reference.

As of July 31, 2012, the Amended and Restated Stockholders Agreement, dated as of July 27, 2004, as amended (the Former Stockholders Agreement), was further amended and restated by that certain Second Amended and Restated Stockholders Agreement among the Company, Novartis Pharma and the other parties identified therein (the Restated Stockholders Agreement). Set forth below is a summary of amendments to the Former Stockholders Agreement effectuated by the Restated Stockholders Agreement. Except as set forth below, the description of the Former Stockholders Agreement set forth in the Original Schedule 13D is applicable to the Restated Stockholders Agreement.

#### Registration Rights

Under the Restated Stockholders Agreement, Novartis Pharma maintains its rights to cause the Company to register for resale, under the Securities Act of 1933, as amended, shares held by Novartis Pharma and/or its affiliates.

#### Stock Purchase Rights

Under the Former Stockholders Agreement, if the Company issued any shares of capital stock, subject to certain exceptions, Novartis Pharma had the right to purchase such number of shares required to maintain its percentage ownership of the Company's voting stock for the same consideration per share paid by others acquiring the Company's stock. Under the Restated Stockholders Agreement, Novartis Pharma continues to have stock purchase rights, however, such rights have been modified and as so modified are described below:

Under the Restated Stockholders Agreement, if the Company issues any shares of its capital stock or securities that are convertible into, or exchangeable for, shares of its capital stock (subject to certain exceptions), Novartis Pharma has the right to purchase up to such number of shares required for it to maintain its percentage ownership of the Company's voting stock for 30 days following the issuance of any such shares. If Novartis Pharma exercises such right within 15 days of issuance, the price Novartis Pharma will be required to pay will be equal to the price per share paid by the other investors in the offering. If Novartis Pharma exercises such right after such 15 day period, the price Novartis Pharma will be required to pay will be equal to 110% of the price per share paid by the other investors in the offering.

In addition, under the Restated Stockholders Agreement, the Company is required to deliver to Novartis Pharma a report within ten days after the end of each quarter indicating the number of shares of the Company's capital stock issued pursuant to exercised convertible securities or as restricted stock or other stock based awards, subject to certain limited exceptions, during such quarter to the Company's directors, officers, employees, or consultants pursuant to any compensation or equity incentive plan. For 45 days following delivery of such report, Novartis Pharma has the option to purchase such number of shares of the type so issued, at the same purchase price paid per security so issued, equal to the result obtained by dividing (a) the product of (i) the Novartis Percentage multiplied by (ii) the number of shares or units of the Company's capital stock or convertible securities so issued by (b) the result obtained by subtracting (x) the Novartis Percentage from (y) one. The Novartis Percentage means the result obtained by dividing (a) the number of shares of the Company's voting stock owned by Novartis Pharma and its affiliates immediately prior to such issuance by (b) the total number of shares of the Company's voting stock outstanding immediately prior to such issuance. If Novartis Pharma exercises its option to purchase any such securities and the securities are issued without a purchase price payable in cash by the recipient of such securities, the price Novartis Pharma will be required to pay will be the par value of the shares.

#### Board of Directors

Pursuant to the Former Stockholders Agreement, the Company was required to use its reasonable best efforts to nominate for election to the Company's board of directors at least one designee of Novartis Pharma for so long as Novartis Pharma and its affiliates owned at least 19.4% of the Company's voting stock and two designees of Novartis Pharma for so long as Novartis Pharma and its affiliates owned at least 30% of the Company's voting stock. In addition, pursuant to the Former Stockholders Agreement, for so long as a designee of Novartis Pharma was a member of the Company's board of directors, such director was entitled to be a member of each committee of the Company's board of directors (unless not permitted by applicable securities laws or exchange rules and regulations, in which case Novartis Pharma had the right to appoint a non-voting observer to any such affected committee). Pursuant to the Restated Stockholders Agreement, this requirement was modified to require the Company to use its reasonable best efforts to nominate for election to the Company's board of directors one designee of Novartis Pharma for so long as Novartis Pharma and its affiliates own 15% or more of the Company's voting stock. For so long as the designee of Novartis Pharma is a member of the Company's board of directors, such designee continues to maintain its right to be a member of each committee of the Company's board of directors (unless not permitted by applicable securities laws or exchange rules and regulations, in which case Novartis Pharma has the right to appoint a non-voting observer to any such affected committee).

#### Approval Rights

Pursuant to the Former Stockholders Agreement, Novartis Pharma and its affiliates had approval rights over a number of corporate actions that the Company or its subsidiaries may take, including the authorization or issuance of additional shares of Common Stock and significant acquisitions and dispositions, so long as Novartis Pharma and its affiliates owned at least 19.4% of the Company's voting stock. Pursuant to the Restated Stockholders Agreement, these approval rights have been removed.

Amendments and Waivers

The Restated Stockholders Agreement modified the Amendment and Waivers section of the Former Stockholders Agreement.

Pursuant to the Restated Stockholders Agreement, the rights and obligations of the parties thereto may not be waived, modified, supplemented or amended without the written consent of:

(i) the Company; and

(ii) the holders of a majority of the Company's voting stock held by Novartis Pharma and its affiliates.

Novartis Pharma may acquire from the Company from time to time additional shares of Common Stock by exercising the stock purchase rights described above.

The description of the Restated Stockholders Agreement is qualified by reference to the full text thereof, which is included as an exhibit hereto and incorporated herein by reference.

In addition, on August 2, 2012, the Company announced the pricing of an underwritten registered public offering (the Public Offering) of 22,000,000 shares of Common Stock at a public offering price of \$8.00 per share. The underwriters in connection with the Public Offering have a 30-day over-allotment option (the Over-Allotment Option) from August 2, 2012 to purchase an additional 3,300,000 shares of Common Stock. Novartis Pharma has the right under the Restated Stockholders Agreement to purchase its pro rata portion of the Common Stock issued in the Public Offering. As a result of the Public Offering, Novartis Pharma's record and beneficial ownership (and Novartis' beneficial ownership) of Common Stock was reduced to 25.5% of the shares of Common Stock (assuming the Over-Allotment Option is not exercised).

Item 5. Interest in Securities of the Issuer

No change except as described below.

(a) and (b). Novartis is the beneficial owner of 33,320,674 shares of Common Stock representing 25.5% of the outstanding shares of Common Stock (or 24.9% if the Over-Allotment Option is exercised), all of which shares are owned directly by Novartis Pharma. Novartis has shared power to vote or direct the vote and shared power to dispose or to direct the disposition of all shares of Common Stock beneficially owned by it.

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Novartis Pharma is the record and beneficial owner of 33,320,674 shares of Common Stock, representing 25.5% of the outstanding shares of Common Stock (or 24.9% if the Over-Allotment Option is exercised). Novartis Pharma has shared power to vote or direct the vote and shared power to dispose or to direct the disposition of all shares of Common Stock beneficially owned by it.

To the best knowledge of each of the Reporting Persons, none of the persons listed on Schedule I hereto with respect to such Reporting Person is the beneficial owner of any shares of Common Stock.

(c). Neither the Reporting Persons nor, to the best knowledge of each of the Reporting Persons, any of the persons listed on Schedule I has engaged in any transaction in the Common Stock in the past 60 days.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

No change except as provided below and in Item 4 hereof.

Novartis Pharma has agreed in a lock-up agreement (the "Lock-Up Agreement") entered into on July 31, 2012 with J.P. Morgan Securities LLC ( "J.P. Morgan"), as representative of the underwriters in the Public Offering, not to (i) sell or otherwise dispose of or transfer, directly or indirectly, any shares of Common Stock or any securities convertible into, exercisable or exchangeable for Common Stock, (ii) enter into any hedging agreements with respect to the Common Stock or such other securities or (iii) demand registration of the Common Stock with the Securities and Exchange Commission (other than "piggyback" registration to the extent the Company initiates a registration), until 60 days after the date of the prospectus relating to the Public Offering. Novartis Pharma is permitted to sell, transfer or hedge sooner, subject to certain conditions, in the following circumstances:

- with written consent of J.P. Morgan;
- as a bona fide gift, provided the donee agrees to be bound by restrictions in the Lock-Up Agreement;
- pursuant to the exercise of any option to purchase shares of Common Stock, provided that the underlying shares of Common Stock continue to be subject to the restrictions in the Lock-Up Agreement;
- with respect to shares of Common Stock acquired in open market transactions after the completion of the Public Offering;
- transfers to its Affiliates (as defined in Rule 12b-2 of the Exchange Act) or transfers by or on behalf of any employee benefit plan maintained by Novartis Pharma or its Affiliates, provided the transferee agrees to be bound by the restrictions in the Lock-Up Agreement; and
- transfers pursuant to a Rule 10b5-1 trading plan.

The description of the Lock-Up Agreement is qualified by reference to the full text thereof, which is included as an exhibit hereto and incorporated herein by reference.

Item 7. Material to be Filed as Exhibits

No change except for the additional exhibit described below.



Exhibit 4 Certification of Authority, dated as of August 8, 2012, of Novartis AG.

Exhibit 5 Certification of Authority, dated as of August 8, 2012, of Novartis Pharma AG.

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\*Confidential treatment requested as to certain portions, which portions have been separately filed with the Securities and Exchange Commission.

**SIGNATURES**

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: August 10, 2012

NOVARTIS AG

By: */s/ Martin Henrich*  
Name: Dr. Martin Henrich  
Title: Authorized Signatory

By: */s/ Knut Mager*  
Name: Knut Mager  
Title: Authorized Signatory

NOVARTIS PHARMA AG

By: */s/ Sarah Clements*  
Name: Sarah Clements  
Title: Head Legal Speciality Care

By: */s/ Tony Rosenberg*  
Name: Tony Rosenberg  
Title: Head Partnering & Emerging Businesses

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**SCHEDULE I to Form 13-D/A****DIRECTORS AND EXECUTIVE OFFICERS OF NOVARTIS AG AND NOVARTIS PHARMA AG****DIRECTORS AND EXECUTIVE OFFICERS OF NOVARTIS AG**

The name, address, citizenship and present principal occupation or employment of each of the directors and executive officers of Novartis AG are set forth below. Unless otherwise indicated below, each occupation set forth opposite an individual's name refers to employment with Novartis AG.

<b>Name</b>	<b>Relationship to Novartis AG</b>	<b>Principal Occupation</b>	<b>Citizenship</b>
Daniel L. Vasella, M.D.	Chairman of the Board of Directors	Chairman of the Board of Directors  Novartis Campus, 4002 Basel, Switzerland	Swiss
Ulrich Lehner, Ph.D.	Vice Chairman of  the Board of Directors	Member of Shareholder's Committee of Henkel AG & Co. KGaA, manufacturer and vendor of consumer products; Henkelstrasse 67,  40191 Düsseldorf, Germany	German
Dimitri Azar, M.D., MBA	Director	Dean of the College of Medicine and Professor of Ophthalmology, Bioengineering and Pharmacology at the University of Illinois at Chicago  1853 W. Polk Street  Room 131 (M/C 784)  Chicago, IL 60612	American
William R. Brody, M.D., Ph.D.	Director	President of the Salk Institute for Biological Studies, 10010 North Torrey Pines Road, La Jolla, CA 92037, USA	American
Srikant Datar, Ph.D.	Director	Arthur Lowes Dickinson Professor at the Graduate School of Business Administration at Harvard University  Harvard Business School, Soldiers Field, Boston, MA 02163, USA	American

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<b>Name</b>	<b>Relationship to Novartis AG</b>	<b>Principal Occupation</b>	<b>Citizenship</b>
Ann Fudge	Director	Member of the Board of General Electric Company, diversified technology, media, and financial services corporation; 3135 Easton Turnpike, Fairfield, CT 06828, USA	American
Pierre Landolt	Director	Chairman of the Sandoz Family Foundation; 85 Avenue Général-Guisan, CH-1009 Pully, Switzerland	Swiss
Enrico Vanni, Ph.D.	Director	Independent Consultant  Novartis International AG  Novartis Campus, 4002 Basel  Switzerland	Swiss
Andreas von Planta, Ph.D.	Director	Partner at the law firm of Lenz & Staehelin; Route de Chêne 30, CH-1211 Geneva 17, Switzerland	Swiss
Dr. Ing. Wendelin Wiedeking	Director	Entrepreneur  Novartis International AG  Novartis Campus, 4002 Basel  Switzerland	German
Marjorie M. Yang	Director	Chairman of the Esquel Group, textile and apparel manufacturer; The Esquel Group, 12/F, Harbour Centre, 25 Harbour Road, Wanchai, Hong Kong, People's Republic of China	Chinese
Rolf M. Zinkernagel, M.D.	Director	Professor at the Institute of Experimental Immunology, University of Zurich, Schmelzbergstrasse 12, CH-8091 Zurich, Switzerland	Swiss
Joseph Jimenez	Member of the Executive Committee, Chief Executive Officer	Member of the Executive Committee, Chief Executive Officer  Novartis Campus, 4002 Basel, Switzerland	American
Jürgen Brokatzky-Geiger, Ph.D.	Member of the Executive Committee, Head of Human Resources	Member of the Executive Committee, Head of Human Resources	German

Novartis Campus, 4002 Basel,  
Switzerland

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Kevin Buehler	Member of the Executive Committee, Head of Alcon Division	Member of the Executive Committee, Head of Alcon Division  6201 South Freeway Fort Worth, Texas 76134	American
Felix R. Ehrat, Ph.D.	Member of the Executive Committee, Group General Counsel	Member of the Executive Committee, Group General Counsel  Novartis Campus, 4002 Basel, Switzerland	Swiss
David Epstein	Member of the Executive Committee, Head of Novartis Pharmaceuticals Division	Member of the Executive Committee, Head of Novartis Pharmaceuticals Division  Novartis Campus, 4002 Basel, Switzerland	American
Mark C. Fishman, M.D.	Member of the Executive Committee, President of the Novartis Institutes for BioMedical Research	Member of the Executive Committee, President of the Novartis Institutes for BioMedical Research  250 Massachusetts Avenue Cambridge, MA 02139	American
Jeff George	Member of the Executive Committee; Head of Sandoz Division	Member of the Executive Committee, Head of Sandoz Division  Novartis Campus, 4002 Basel, Switzerland	American
George Gunn, MRCVS	Member of the Executive Committee; Head of Novartis Animal Health and Corporate Responsibility Divisions	Member of the Executive Committee, Head of Novartis Animal Health and Corporate Responsibility Divisions  Novartis Campus, 4002 Basel, Switzerland	British
Andrin Oswald, M.D.	Member of the Executive Committee, Head of Novartis Vaccine and Diagnostics Division	Member of the Executive Committee, Head of Novartis Vaccine and Diagnostics Division  350 Massachusetts Avenue Cambridge, MA 02139	Swiss
Jonathan Symonds	Member of the Executive Committee, Chief Financial Officer	Member of the Executive Committee, Chief Financial Officer  Novartis Campus, 4002 Basel, Switzerland	British



Brian McNamara	Permanent attendee of the Executive Committee, Division Head, Novartis OTC	Permanent attendee of the Executive Committee, Division Head, Novartis OTC 200 Kimball Drive Parsippany, NJ 07054-0622	American
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DIRECTORS AND EXECUTIVE OFFICERS OF NOVARTIS PHARMA AG

The name, address, citizenship and present principal occupation or employment of each of the directors and executive officers of Novartis Pharma AG are set forth below. Unless otherwise indicated below, each occupation set forth opposite an individual's name refers to employment with Novartis Pharma AG.

<b>Name</b>	<b>Relationship to Novartis Pharma AG</b>	<b>Principal Occupation</b>	<b>Citizenship</b>
Daniel L. Vasella, M.D.	Chairman of the Board of Directors	Chairman of the Board of Directors of Novartis AG	Swiss
Director		Novartis Campus, 4002 Basel, Switzerland	
Joseph Jimenez	Member of the Board of Directors	Chief Executive Officer of Novartis AG	American
Director		Novartis Campus, 4002 Basel, Switzerland	
Jonathan Symonds	Member of the Board of Directors	Chief Financial Officer of Novartis AG	British
Director		Novartis Campus, 4002 Basel, Switzerland	
Felix R. Ehrat,	Member of the Board of Directors	General Counsel of Novartis AG	Swiss
PhD		Novartis Campus, 4002 Basel, Switzerland	
David Epstein	Head of Novartis Pharmaceuticals Division	Member of the Executive Committee of Novartis AG, Head of Novartis Pharmaceuticals Division	American
		Novartis Campus, 4002 Basel, Switzerland	

**JOINT FILING AGREEMENT**

In accordance with Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended, each of the persons named below agrees to the joint filing of a Statement on Schedule 13D (including amendments thereto) with respect to the common stock, par value \$0.001 per share, of Idenix Pharmaceuticals, Inc., a Delaware corporation.

Date: August 10, 2012

NOVARTIS AG

By: */s/ Martin Henrich*  
Name: Dr. Martin Henrich  
Title: Authorized Signatory

By: */s/ Knut Mager*  
Name: Knut Mager  
Title: Authorized Signatory

NOVARTIS PHARMA AG

By: */s/ Sarah Clements*  
Name: Sarah Clements  
Title: Head Legal Speciality Care

By: */s/ Tony Rosenberg*  
Name: Tony Rosenberg  
Title: Head Partnering & Emerging Businesses

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