

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

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**SCHEDULE 13D**  
Under the Securities Exchange Act of 1934  
(Amendment No. 6)

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**BioMimetic Therapeutics, Inc.**

(Name of Issuer)

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Common Stock, \$0.001 par value  
(Title of Class of Securities)

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09064X101  
(CUSIP Number)

Thorkil Kastberg Christensen  
Novo A/S  
Krogshøjvej 41  
Bagsvaerd, Denmark DK-2880

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

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June 25, 2009  
(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 ☐.

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

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

<b>1.</b>	NAMES OF REPORTING PERSONS  NOVO A/S		
<b>2.</b>	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
<b>3.</b>	SEC USE ONLY		
<b>4.</b>	SOURCE OF FUNDS WC		
<b>5.</b>	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) <input type="checkbox"/>		
<b>6.</b>	CITIZENSHIP OR PLACE OF ORGANIZATION Denmark		
<b>NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH</b>	<b>7.</b>	SOLE VOTING POWER 3,720,065	
	<b>8.</b>	SHARED VOTING POWER 0	
	<b>9.</b>	SOLE DISPOSITIVE POWER 3,720,065	
	<b>10.</b>	SHARED DISPOSITIVE POWER BY EACH REPORTING PERSON 0	
<b>11.</b>	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,720,065		
<b>12.</b>	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>		
<b>13.</b>	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 17.1%		
<b>14.</b>	TYPE OF REPORTING PERSON CO		

(1) This percentage is calculated based upon 21,697,348 shares of the Issuer's Common Stock outstanding (as of June 25, 2009), as set forth in the Issuer's Registration Statement on Form S-3 filed with the Securities and Exchange Commission on July 1, 2009.

**Introductory note:** This Amendment No. 6 to Schedule 13D (this “Amendment No. 6”) is being filed by the undersigned Reporting Person pursuant to Rule 13d-2(a) of the Rules and Regulations promulgated under the Securities and Exchange Act of 1934, as amended, to amend and supplement the statement on Schedule 13D as originally filed by the Reporting Person on March 20, 2007 and as subsequently amended by Amendment No. 1 to the Schedule 13D filed on July 9, 2007, Amendment No. 2 to the Schedule 13D filed on May 20, 2008, Amendment No. 3 to the Schedule 13D filed on June 26, 2008, Amendment No. 4 to the Schedule 13D filed on September 18, 2008, and Amendment No. 5 to the Schedule 13D filed on June 16, 2009 (as amended, the “Schedule 13D”). This Schedule 13D relates to the common stock of BioMimetic Therapeutics, Inc., a Delaware corporation (the “Company” or the “Issuer”). Capitalized terms used in this Amendment No. 6 and not otherwise defined herein have the meanings set forth in the Schedule 13D. The information set forth in response to each separate Item shall be deemed to be a response to all Items where such information is relevant.

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

Item 3 is hereby amended by adding the following:

On June 25, 2009, Novo A/S purchased 343,406 newly issued shares of common stock directly from the Issuer in a private placement transaction. The common stock was purchased at a price of \$8.50 per share, for an aggregate purchase price of \$2,918,951. As previously described, Novo A/S had entered into a Standby Purchase Agreement with the Issuer, dated April 4, 2009 (the “Standby Purchase Agreement”) in connection with a rights offering by the Issuer. The stock purchase was made pursuant to the Standby Purchase Agreement.

The purchase price paid by Novo A/S to purchase these additional shares of common stock under the Standby Purchase Agreement came from its working capital.

### **Item 4. Purpose of Transaction**

Item 4 is hereby amended by adding the following:

Novo A/S acquired the additional shares of Company common stock subject to the Standby Purchase Agreement for general investment purposes, in the ordinary course of its business, and not with the purpose of changing or influencing the control of the Company. Novo A/S retains the right to change its investment intent.

At the Company’s 2009 annual meeting of stockholders, held on June 18, 2009, Thorkil K. Christensen, the Chief Financial Officer of Novo A/S, was elected to serve a three year term as a member of the Company’s Board of Directors.

### **Item 5. Interest in Securities of the Issuer**

The information provided under Items 5(a) and 5(b) of the Schedule 13D is hereby amended and restated in its entirety as follows:

(a) Novo A/S beneficially owns 3,720,065 shares of Issuer common stock. Based upon 21,697,348 shares of the Issuer’s Common Stock outstanding as of June 25, 2009, as set forth in

the Issuer's Registration Statement on Form S-3 filed with the Securities and Exchange Commission on July 1, 2009, the shares of Issuer common stock beneficially owned by Novo A/S constitute approximately 17.1% of the common stock of the Issuer as calculated in accordance with Rule 13d-3(d)(1).

Except as described in this Schedule 13D, none of the persons or entities listed on Schedule I beneficially owns any common stock of the Issuer.

(b) Novo A/S holds the sole power to direct the vote as to, and to direct the disposition of, 3,720,065 shares of Issuer common stock.

Novo A/S is a Danish private limited liability company wholly owned by the Novo Nordisk Foundation. The Board of Directors of Novo A/S has sole voting and investment control over the shares owned by Novo A/S. The Board of Directors of Novo A/S is comprised of Ulf J. Johansson, Jorgen Boe, Goran Ando and Jeppe Christiansen, none of whom has individual voting or investment power with respect to such shares and each of whom disclaims beneficial ownership of the shares held by Novo A/S. Except as described in this Schedule 13D, none of the persons or entities listed on Schedule I has the power to direct the vote as to, or the disposition of, any common stock of the Issuer.

The information provided under Item 5(c) of the Schedule 13D is hereby amended and supplemented as follows:

(c) Except as set forth in this Schedule 13D, Novo A/S has not effected any transactions in Issuer common stock within the past 60 days and none of the persons or entities listed on Schedule I has effected any transactions in Issuer common stock within the past 60 days.

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

The information provided under Item 6 of the Schedule 13D is hereby amended and supplemented as follows:

As previously described, in the Standby Purchase Agreement the Company agreed to provide customary resale registration rights to Novo A/S, and to use its best efforts to have the resale registration statement declared effective by September 30, 2009. On July 1, 2008, the Company filed a registration statement on Form S-3 relating to the potential future resale from time to time of shares of Company Common Stock by certain stockholders, including the 343,406 shares subscribed for by Novo A/S pursuant to the Standby Purchase Agreement. That Form S-3 registration statement was declared effective by the SEC on July 10, 2009.

**Signature**

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.

Dated: July 20, 2009

NOVO A/S

/s/ Thorkil Kastberg Christensen

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By: Thorkil Kastberg Christensen

Its: Chief Financial Officer