

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

FORM 6-K

**REPORT OF FOREIGN ISSUER PURSUANT TO RULE 13a-16 AND 15d-16 UNDER THE SECURITIES
EXCHANGE ACT OF 1934**

For the Month of April 2012

File No. 000-54598

Stellar Biotechnologies Inc.

(Name of Registrant)

332 E. Scott Street, Port Hueneme, CA 93041

(Address of principal executive offices)

Indicate by check mark whether the Registrant files or will file annual reports under cover of Form 20-F or Form 40-F.
FORM 20-F X FORM 40-F _____

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): _____

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): _____

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this Form 6-K to be signed on its behalf by the undersigned, thereunto duly authorized.

Stellar Biotechnologies Inc.
(Registrant)

Dated: April 11, 2012

By: /s/ "Darrell Brookstein"
Darrell Brookstein
Director

Exhibits:

99.1 News Release dated April 10, 2012



Stellar Biotechnologies Announces Exclusive Option to License Clostridium Difficile Technology

Stellar Executes Agreement with University of Guelph for Vaccine Research

Port Hueneme, CA (April 10, 2012) -- Stellar Biotechnologies, Inc. ("Stellar") (TSX-V: KLH) (U.S. PINKSHEETS: SBOTF) (Frankfurt: RBT) today announced that it has entered into an agreement with the University of Guelph (Ontario, Canada) for the exclusive option to license technology for the development of a vaccine candidate against Clostridium difficile infection ("CDI").

Clostridium difficile is a type of bacteria normally present in the intestine, but which can overgrow as a result of antibiotic use. CDI causes severe diarrhea and life-threatening intestinal conditions such as colitis. CDI is a major and growing cause of mortality and morbidity in hospitalized patients. In the United States, incidence of CDI is at a record high with 336,600 cases reported in 2009 and projected to continue to increase.

"The use of non-antibiotic-based approaches to control Clostridium difficile colonization may offer an important treatment option for CDI," said Herbert Chow, Ph.D., Stellar Vice President of Product Development. "Stellar is committed to identifying promising vaccine candidates such as for CDI or other disease targets that may be synergistic with our KLH platform."

Professor Mario A. Monteiro (University of Guelph) commented that, "It is very gratifying to our research group that Stellar is taking the lead in commercializing our C. difficile vaccine technology, and to see that our scientific discoveries may soon be available to the public and provide a significant positive impact on global health".

The cost of CDI-related treatments in the U.S. and European countries is estimated at more than \$7 billion a year. The recent emergence and spread of hyper-virulent strains of Clostridium difficile further underscore the importance of developing novel approaches to preventing and treating CDI.

For more about CDI, visit:

Public Health Agency of Canada <http://www.phac-aspc.gc.ca/id-mi/cdiff-eng.php>
Centers for Disease Control and Prevention <http://www.cdc.gov/Features/Vitalsigns/HAI/>

About the University of Guelph

The University of Guelph is ranked as one of Canada's top comprehensive universities because of its commitment to student learning and innovative research. University of Guelph is dedicated to cultivating the essentials for quality of life — water, food, environment, animal and human health, community, commerce, culture and learning. It also shares a profound sense of social responsibility, an obligation to address global issues and a concern for international development.

Contact:

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About Stellar Biotechnologies, Inc.

Stellar Biotechnologies, Inc. (TSX-V: KLH) (U.S. OTC: SBOTF) (Frankfurt: RBT) is the world leader in sustainable manufacture of Keyhole Limpet Hemocyanin (KLH). KLH is an important immune-stimulating protein used in wide-ranging therapeutic and diagnostic markets. Potent, yet proven safe in humans, KLH operates as both a vital component for conjugate vaccines (targeting cancer, autoimmune, and infectious diseases) as well as an antigen for measuring immune status. Stellar Biotechnologies was founded to address the growing demand for renewable, commercial-scale supplies of high-quality, GMP-grade KLH. Stellar has developed leading practices, facilities and proprietary capabilities to address this need. To receive regular updates, enter email at bottom of http://stellarbiotechnologies.com/investors/news_releases/

Contact:

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There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Readers should not place undue reliance on such statements. Except in accordance with applicable securities laws, the Company expressly disclaims any obligation to update any forward-looking statements or forward-looking statements that are incorporated by reference herein. This news release does not constitute an offer to sell, or a solicitation of an offer to buy any of the Company's securities set out herein in the United States, or to, or for the benefit or account of, a U.S. Person or person in the United States. Neither TSX Venture Exchange nor its Regulation Services Provider accepts responsibility for the adequacy or accuracy of these releases