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Ventrus Biosciences to Merge With Assembly Pharmaceuticals

~ New Company, Assembly Biosciences, to Focus on First-in Class Technology for Treatment and Potential Cure of Hepatitis B Virus Infection, Affecting 350 Million Worldwide

~ Projected Multi-Billion Market Opportunity; No Curative Therapy Exists

~ Combined Teams Bring Experienced Leadership Capable of Driving Value

~ Anticipated Closing July 10, 2014, Pending Shareholder Approval

NEW YORK, SAN FRANCISCO and INDIANAPOLIS, May 19, 2014 (GLOBE NEWSWIRE) -- Ventrus Biosciences, Inc. has entered into a merger agreement with Assembly Pharmaceuticals, a privately held biopharmaceutical company, in an all-stock transaction. Upon the completion of the merger, the combined company will be renamed **Assembly Biosciences, Inc.** and trade on the Nasdaq Capital Market under the ticker "**ASMB**."

Once the merger is complete, the company will focus on the development of Assembly's novel, first-in-class small molecules to treat, and potentially cure, hepatitis B virus (HBV) infection. HBV is an underappreciated global epidemic with more than 350 million people worldwide chronically infected. Chronic HBV infection causes cirrhosis and liver failure, and it is a leading cause of liver cancer. Over 600,000 deaths each year are attributable to HBV. Current treatments can suppress the infection but require lifelong therapy since fewer than 10% of infections are currently cured.

"We believe this merger has tremendous potential. Assembly has amassed an enormous depth of scientific expertise and created a high quality drug discovery effort aimed at advancing its potentially curative therapies for HBV," said Dr. Russell Ellison, Chief Executive Officer and Chairman of Ventrus. "We believe combining the Ventrus and Assembly management teams, resources, and programs, will create a robust biopharmaceutical company with the capabilities to develop and commercialize this first-in-class curative approach to an underserved disease that afflicts hundreds of millions of people worldwide."

"This merger is an outstanding opportunity to progress our HBV platform and expeditiously bring a lead candidate into clinical development," said Derek Small, Chairman and Chief Executive Officer of Assembly. "Our board and management team believe that by joining with Ventrus, we can accelerate the creation of shareholder value as well as the timeline for development of our much-needed HBV therapeutics. We enthusiastically embraced this opportunity after carefully assessing multiple other attractive proposals to advance Assembly to the next stage."

Assembly has discovered a series of HBV Core Protein Allosteric Modulators (CpAMs) and has shown preclinical proof of principle with significant reductions in the HBV "S" antigen in *in vitro* experiments. HBV is a DNA-virus and Assembly's CpAMs target the function of intra-nuclear covalently closed circular DNA (a special DNA structure known as cccDNA). cccDNA drives establishment and survival of the virus, but no current therapies modulate its activity directly. Molecules that can modulate cccDNA are expected to have curative potential.

Assembly's CpAMs have shown they can selectively and potently reduce viral load, and the key viral antigens, HBV "S" antigen (HBsAg) and HBV "E" antigen (HBeAg). Reduction of HBsAg in patients is considered to be the best marker of a functional cure, and is a key clinical endpoint in development.

Experienced Leadership Capable of Driving Value

The proposed board and management team would consist of the following Ventrus and Assembly directors and officers, as well as one other director nominee:

- Chief Executive Officer and Chairman - Dr. Russell Ellison currently holds this title at Ventrus, and was previously Chief Medical Officer at Sanofi-Synthelabo, USA and at Hoffman-La Roche, Inc. in the USA. Previously he was Vice President. Clinical Development at Fibrogen. Dr. Ellison has also served as a director at several life sciences companies.
- President, Chief Operating Officer and Director- Derek Small is a co-founder of Assembly and serves as Chairman and CEO. Previously, he served as founding CEO, President, and Director of biopharmaceutical companies Naurex, Inc. and

Cofereon, Inc.

- Chief Financial Officer - David Barrett currently holds this title at Ventrus, and was previously CFO at Neuro-Hitech, Inc., at Overture Asset Managers and at Overture Financial Services. Previously he was a Manager at Deloitte & Touche. Mr. Barrett is a certified public accountant. Mr. Barrett serves as a director of other life sciences companies.

- Vice President of Research and Development and Chief Medical Officer - Uri Lopatin, MD, is a co-founder of Assembly and served in the same position there. He previously led the HBV programs at Gilead Sciences and Roche Pharmaceuticals.

- Chief Scientific Officer - Lee D. Arnold, PhD, has over 25 years of experience at Syntex, Pfizer, BASF/Abbott Bioresearch and OSI Pharmaceuticals. He played an integral role in the discovery of multiple innovative drug candidates that have advanced into development and is an inventor in over sixty patent filings including Tarceva® (erlotinib).

- Chairman of the Scientific Advisory Board for HBV and other virology programs - Adam Zlotnick, PhD., an Indiana University professor, and co-founder of Assembly, is a pioneer in the biophysics of viral capsid assembly and of elucidating the role of core protein in HBV. His research has resulted in the discovery of multiple families of small molecule CpAMs.

- The combined company's board of directors will include Myron Holubiak, Mark Auerbach and Tony Altig. The following individuals will join the current board:

    - Director - William Ringo, most recently Senior Vice President of Strategy and Business Development at Pfizer, retired from Eli Lilly after 28 years, as Product Group President for Oncology and Critical Care. He is also the former President and CEO of Abgenix, which was sold to Amgen for $2.2 billion. Mr. Ringo serves on several public company boards.

    - Director - Richard DiMarchi, PhD, is a co-founder of Assembly and has served on its board since inception. He currently is a professor at Indiana University and was previously Executive Vice President at Eli Lilly for over 20 years, where he discovered and developed major drugs including Humalin®, Humalog®, Forteo®, and Evista®. He is also a founder of multiple ventures including Ambrx. Marcadia and Colibrium.

Terms of the Proposed Transaction

Pursuant to the Merger Agreement, Ventrus will issue approximately 23 million shares of common stock to the Assembly stockholders. At the time of issuance, 20,322,760 of the shares will be issued common stock and 2,829,740 shares will be shares underlying stock options of Assembly. Consummation of this merger, expected to be completed by July 10, 2014, is subject to the approval by the Ventrus stockholders. This vote is required to meet Nasdaq requirements. The shares will represent approximately 49% of Ventrus' outstanding shares of common stock immediately after the Assembly merger, on a fully diluted basis.

About Assembly

Assembly Pharmaceuticals is a virology-focused biopharmaceutical company with a discovery platform and programs based on proprietary Core Protein Allosteric Modulators (CpAMs) for the treatment of viral infections, starting with hepatitis B (HBV). CpAMs can alter the activities of the HBV core protein, a unique viral protein with no human analogue that is involved in multiple stages of the HBV life cycle. In contrast to current therapies that only suppress HBV, Assembly Pharmaceutical's CpAMs may have curative potential by eliminating the viral reservoir in infected individuals.

About Ventrus

Ventrus BioSciences, Inc. is a development-stage specialty pharmaceutical company currently focused on the development of gastrointestinal (GI) products, including infections of the GI system. Ventrus believes it has completed clinical development of VEN 307 and has scheduled a meeting with the FDA on June 19, 2014 to discuss the filing of an NDA. Ventrus also has an early-stage program in microbiome therapeutics, VEN 310, which it is developing as an oral colonic delivery mechanism for bacteria, complex proteins, viral antigens and small molecules.

Please Note: The information provided herein contains estimates and other forward-looking statements regarding future events. Such statements are just predictions and are subject to risks and uncertainties that could cause the actual events or results to differ materially. These risks and uncertainties include, among others: the timing and the benefits of the business combination transaction, the risk that the businesses will not be integrated successfully, the requirement that our stockholders approve the transaction; our and Assembly's ability to satisfy customary closing conditions in connection with the transaction; the components, timing, cost and results of clinical trials and other development activities involving our product candidates; the unpredictability of the clinical development of our product candidates and of the duration and results of regulatory review of those candidates by the FDA and foreign regulatory authorities; our reliance on our lead product candidate, VEN 307; the

unpredictability of the size of the markets for, and market acceptance of, any of our products; our anticipated capital expenditures, our estimates regarding our capital requirements, and our need for future capital; our ability to retain and hire necessary employees and to staff our operations appropriately; and the possible impairment of, or inability to obtain, intellectual property rights and the costs of obtaining such rights from third parties. The reader is referred to the documents that we file from time to time with the Securities and Exchange Commission.

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