Assembly Biosciences Presents New Data Highlighting Hepatitis D Virus Entry Inhibitor ABI-6250 at the EASL Congress™ 2024

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-- Poster highlights promising preclinical profile of ABI-6250 ahead of entry into the clinic, expected by end of 2024 --

SOUTH SAN FRANCISCO, Calif., June 05, 2024 (GLOBE NEWSWIRE) -- Assembly Biosciences, Inc. (Nasdaq: ASMB), a biotechnology company developing innovative therapeutics targeting serious viral diseases, today announced new data for ABI-6250, the company's orally bioavailable, small molecule hepatitis D virus (HDV) entry inhibitor candidate, featured in a poster presentation at the European Association for the Study of the Liver (EASL) Congress™, taking place June 5-8, 2024, in Milan, Italy.

The poster presentation "Preclinical profiling of ABI-6250, a novel orally bioavailable small-molecule therapeutic candidate for the treatment of chronic hepatitis D" will highlight preclinical data that support the advancement of ABI-6250 into Phase 1 clinical studies.

Chronic HDV infection is considered the most serious form of viral hepatitis, and can result in liver cirrhosis, liver cancer, decompensated liver disease or death. ABI-6250 acts to prevent the entry of HDV into cells by blocking access to the sodium taurocholate cotransporting polypeptide (NTCP) bile acid transporter, which is a clinically validated target for HDV infection.

Results from preclinical evaluation included in this presentation demonstrate that ABI-6250 can effectively inhibit, at low nanomolar levels, HDV infection of the most prevalent genotypes (HDV-1,-2 and-3) in HepG2-NTCP cells. ABI-6250 also effectively inhibited NTCP-mediated bile acid uptake and demonstrated selectivity for the NTCP bile transporter versus other transporters *in vitro. In vivo*, ABI-6250 elevated total bile acids, indicating NTCP target engagement without increasing biomarkers for inhibition of other transporters, supporting the selectivity seen *in vitro* and providing a biomarker for target engagement in Phase 1a studies. The presentation also describes the preclinical pharmacokinetic (PK) profile of ABI-6250, which supports low, once-daily oral dosing in individuals with chronic HDV.

"Serious viral hepatitis caused by chronic HDV infection impacts millions of people globally, with limited treatment options available for this devastating disease," said Anuj Gaggar, MD, PhD, chief medical officer of Assembly Bio. "The preclinical data presented at EASL support the advancement of ABI-6250 into clinical development and underscore the early promise of the therapy as a once-daily, oral treatment option, which would represent an important therapeutic innovation similar to what we've seen for other chronic viral infections such as hepatitis B virus and HIV. We look forward to moving ABI-6250 into the clinic later this year and sharing further data with the liver disease community."

Assembly Bio intends to make the presentation available on the "Events & Presentations" page in the "Investors" section of its website at www.assemblybio.com. ABI-6250 is an investigational product candidate that has not been approved anywhere globally, and its safety and efficacy have not been established.

About Assembly Biosciences
Assembly Biosciences is a biotechnology company dedicated to the development of innovative small-molecule antiviral therapeutics designed to change the path of serious viral diseases and improve the lives of patients worldwide. Led by an accomplished team of leaders in virologic drug development, Assembly Bio is committed to improving outcomes for patients struggling with the serious, chronic impacts of herpesvirus, hepatitis B virus (HBV) and hepatitis delta virus (HDV) infections. For more information, visit assemblybio.com.

Forward-Looking Statements
The information in this press release contains forward-looking statements that are subject to certain risks and uncertainties that could cause actual results to materially differ. These risks and uncertainties include: Assembly Bio's ability to realize the potential benefits of its collaboration with Gilead, including all financial aspects of the collaboration and equity investments; Assembly Bio's ability to initiate and complete clinical studies involving its therapeutic product candidates, including studies contemplated by Assembly Bio's collaboration with Gilead, in the currently anticipated timeframes or at all; the occurrence of any event, change or other circumstance that could give rise to the termination of Assembly Bio's collaboration with Gilead; safety and efficacy data from clinical or nonclinical studies may not warrant further development of Assembly Bio's product candidates; clinical and nonclinical data presented at conferences may not differentiate Assembly Bio's product candidates from other companies' candidates; results of nonclinical studies may not be representative of disease behavior in a clinical setting and may not be predictive of the outcomes of clinical studies; and other risks identified from time to time in Assembly Bio's reports filed with the

U.S. Securities and Exchange Commission (the SEC). You are urged to consider statements that include the words may, will, would, could, should, might, believes, hopes, estimates, projects, potential, expects, plans, anticipates, intends, continues, forecast, designed, goal or the negative of those words or other comparable words to be uncertain and forward-looking. Assembly Bio intends such forward-looking statements to be covered by the safe harbor provisions contained in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. More information about Assembly Bio's risks and uncertainties are more fully detailed under the heading "Risk Factors" in Assembly Bio's filings with the SEC, including its most recent Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. Except as required by law, Assembly Bio assumes no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

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