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# Trevena Data Showcasing GPCR Biased Ligands Featured at Scientific Conferences

Founding Trevena Scientists to Deliver Oral Presentations at World Pharmaceutical Congress and Gordon Research Conference: Phosphorylation & G-Protein Mediated Signaling Networks

KING OF PRUSSIA, Pa.--(BUSINESS WIRE)-- Trevena Inc., a leader in the discovery of G-protein coupled receptor (GPCR) biased ligands, today announced that its scientists are presenting research data at two scientific conferences. These oral presentations highlight Trevena's research demonstrating that ligand bias at the angiotensin II type I receptor (AT1R) translates into differentiable and beneficial cardiovascular pharmacology in vivo. The first presentation took place at the Gordon Research Conference: Phosphorylation & G-Protein Mediated Signaling Networks held June 6-11, 2010 at the University of New England in Biddeford, Maine, where Jonathan Violin, Ph.D., Trevena's Head of Biology, presented on June 9 at 8:10 p.m. ET. The second presentation will be given at the 9<sup>th</sup> Annual World Pharmaceutical Congress being held June 15-17, 2010 at the Sheraton Philadelphia City Center in Philadelphia, Pennsylvania, where Scott DeWire, Ph.D., Senior Research Scientist at Trevena, will present on June 17 at 9:30 a.m. ET.

Trevena recently announced the initiation of a Phase 1 clinical trial of TRV120027, the first biased ligand to be discovered and tested in humans. TRV120027 is a titratable i.v. agent designed for the treatment of acute decompensated heart failure. While blocking angiotensin-mediated G-protein signaling at the AT1R receptor, TRV120027 simultaneously stimulates AT1R-specific  $\beta$ -arrestin signaling. In preclinical studies, this biased ligand has demonstrated a unique range of biological effects that are highly advantageous to patients with acute heart failure. The Phase 1 study of TRV120027 is a single-dose, dose escalation, crossover study in 2 cohorts of healthy subjects. The aims of the study are to assess the safety, tolerability and pharmacokinetics of TRV120027 and the results will inform dose selection and dosing regimens for subsequent studies of TRV120027 in patients with heart failure.

## About Biased Ligands and TRV120027

With approximately 40% of modern medicinal products targeting GPCRs and GPCRs remaining the largest class of targets currently under clinical evaluation, this group comprises the most successful drug target class. However, traditional GPCR ligands either turn on or turn off all of the signaling pathways engaged by a particular receptor, which can result in efficacy limitations and undesirable adverse effects. In contrast, Trevena's novel drug discovery approach is focused on discovering and developing a linked portfolio of GPCR ligands that are "biased" toward either activating or blocking specific signaling pathways mediated through individual GPCRs. These biased ligands selectively turn on or off

individual pathways, and in so doing provide an enhanced level of drug specificity. This specificity allows enhanced efficacy or decreased side effects to be designed into the drug candidate.

TRV120027 is a first-in-class agent that, due to its unique spectrum of biological effects, could provide a major advance in the treatment of acute heart failure. It targets AT1R, which plays a central role in the pathophysiology of heart failure. In a preclinical disease model of heart failure TRV120027 improves several of the key pathologies that are seen in heart failure in humans. Based on its profile in animals, TRV120027 is expected to rapidly provide symptomatic benefit while promoting an improvement in target organ function in patients suffering from acute heart failure.

## About Trevena

Trevena, Inc. is a leader in the discovery and development of GPCR biased ligand drugs. Trevena combines a powerful and efficient drug discovery platform with extensive development experience to yield a rich linked portfolio of novel medicines. Trevena's proprietary Advanced Biased Ligand Explorer, or ABLE(TM), platform includes customized assays, proprietary software, animal models and unique biological signaling information across multiple GPCRs that allow for the discovery, optimization and development of unique biased ligands into differentiated new medicines. The company's drug discovery technology is based on extensive research from the laboratories of leading scientists in the GPCR field - Robert J. Lefkowitz, M.D. and Howard A. Rockman, M.D. of Duke University Medical Center. Trevena's pipeline is currently focused on programs for cardiovascular and CNS indications with significant unmet medical needs. Founded in 2008, Trevena is based in King of Prussia, Pennsylvania and is a privately held company backed by leading investors including Alta Partners, Healthcare Ventures, NEA, Polaris and Yasuda Economic Development Corporation. For more information about the company, please visit [www.trevenainc.com](http://www.trevenainc.com).

Source: Trevena Inc.