

## **Trevena Presents Preclinical Data for TRV120027, a Biased AT1R Ligand, at the 14th Annual Heart Failure Society of America Meeting**

KING OF PRUSSIA, Pa.--(BUSINESS WIRE)-- Trevena Inc., the leader in the discovery and development of G-protein coupled receptor (GPCR) biased ligands, today announced that its scientists are presenting two posters featuring compelling preclinical pharmacology data on TRV120027 at the 14<sup>th</sup> Annual Heart Failure Society of America Meeting being held September 12-15, 2010 in San Diego. Both posters will be presented on Monday, Sept. 13, 2010. TRV120027 is the most advanced drug in Trevena's pipeline, and the first biased ligand to be tested in humans. Phase 1 clinical studies of the drug were successfully completed earlier this year. Trevena is working to develop TRV120027 for the treatment of acute decompensated heart failure.

Dr. David Soergel, Head of Clinical Development at Trevena, will present a poster highlighting the unique in vivo pharmacokinetic and pharmacodynamic profile of TRV120027, demonstrated in a rat model, including a reduction of systemic blood pressure and improved cardiac performance, coupled with a short half-life which will lead to rapid reversibility.

Dr. Guido Boerrigter of the Cardiorenal Research Laboratory at the Mayo Clinic will present a poster outlining joint preclinical work with Trevena that demonstrates for the first time the cardiorenal actions of a b-arrestin biased AT1R ligand. In a canine preclinical model of paced heart failure, TRV120027 showed a beneficial profile, causing cardiac unloading actions while preserving renal function.

While blocking angiotensin-mediated G-protein signaling at the AT1R receptor, TRV120027 simultaneously stimulates AT1R-specific b-arrestin signaling. In preclinical studies, this biased ligand has demonstrated a unique range of biological effects that will be beneficial for patients with acute heart failure. The Phase 1 study of TRV120027 was a single-dose, dose escalation, crossover study in two cohorts of healthy subjects. The aims of the study were to assess the safety, tolerability and pharmacokinetics of TRV120027 and the results will inform dose selection and dosing regimens for an upcoming study 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 ligands either turn on or turn off all of the signaling pathways engaged by a particular receptor, which can result in limited

efficacy 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 provide an enhanced level of drug specificity which 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. 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 Enterprise Development Company. For more information about the company, please visit [www.trevenainc.com](http://www.trevenainc.com).

Source: Trevena Inc.