Thryv Therapeutics Presents Benefits of Therapeutic SGK1 Inhibition with THRV-1268 in a Murine Model of Atrial Fibrillation at American Heart Association Scientific Sessions

- Results from obesity-related atrial fibrillation model demonstrate reduced propensity for atrial fibrillation;
- Positive improvements in various pro-inflammatory and pro-fibrotic pathways point to possible role in heart failure;
- On-going *in vivo* studies with THRV-1268 heart failure models are expected in 2024.

Montreal, Quebec – November 8, 2023 – Thryv Therapeutics Inc., a clinical stage biotechnology company developing therapies for rare diseases including Congenital Long QT Syndrome (LQTS), atrial fibrillation, heart failure and resistant cancers, is pleased to announce an oral presentation of the effects of SGK-1 inhibition with its potent and selective inhibitor THRV-1268 on atrial fibrillation in an obese-mouse model. This abstract will be presented during the *Shocking Results: Basic Science Insights into Arrhythmias* session at the American Heart Association Annual Scientific Sessions in Philadelphia, PA.

"With an ever-increasing obese population, the incidence of obesity-related atrial fibrillation and heart failure is rising significantly. This pre-clinical study with THRV-1268 demonstrated statistically significant reductions in the frequency of induced arrhythmias and atrial fibrillation-related events in mice fed with a high fat diet. These data combined with the positive improvement in inflammatory and fibrotic signals proposes this SGK1 inhibitor as a novel therapeutic for the treatment of atrial fibrillation and potentially heart failure. We look forward to exploring this hypothesis next year in individuals who, despite standard of care, remain at high risk of developing repeated episodes of atrial fibrillation and potential heart failure," said Pirouz Shamszad, MD, Senior Vice President, Clinical Development at Thryv.

Atrial fibrillation (Afib) is the most common form of treated arrythmia and has been strongly associated with obesity. Atrial fibrillation may present as a rapid, slow, or abnormal heart rate and may lead to blood clots localized in the heart which can dislodge and increase the risk of stroke, heart failure and other heart-related complications. Obesity is a significant risk factor for the development of atrial fibrillation and a significant driver for the increasing prevalence of atrial fibrillation. Fibrosis, inflammation, and ion channel alteration have been implicated in the pathogenesis of obesity-related atrial fibrillation and heart failure. Atrial fibrillation is a global problem with worldwide prevalence of over 37 million cases, which is expected to further increase 60% by 2050 to an estimated 6 million people affected in the United States.

“Atrial fibrillation remains a challenging disease to treat, particularly in the setting of obesity. As a result, new therapeutic options are needed. These pre-clinical results demonstrate THRV-1268 effectively prevents the induction obesity-related atrial fibrillation and atrial arrhythmia burden. This is consistent with previous in vivo data where a genetically modified SGK “knock-out” mouse demonstrated similar benefits. Combined, these data warrant further pre-clinical and eventual clinical investigation,” said Aneesh Bapat, MD, Cardiac Electrophysiologist at Massachusetts General Hospital and Instructor in Medicine, Harvard Medical School, who served as the study’s investigator.

Thryv is also collaborating with Massachusetts General Hospital to conduct additional pre-clinical studies exploring the potential for THRV-1268 as a treatment for heart failure. In this ongoing study at MGH, heart failure is induced in mice through a 15-week regimen that includes a high-fat diet (HFD) intended to activate metabolic stress and L-NAME to induce hypertensive stress. Subsequently, THRV-1268 is administered for an additional 6 weeks to assess its impact on development of heart failure. It is believed SGK1 inhibition with THRV-1268 will reduce detrimental cardiovascular effects of concurrent metabolic and hypertensive stress through a reduction in fibrosis and inflammation. Data from this study is anticipated to be released in the second quarter of 2024.

About Thryv Therapeutics Inc.

Thryv Therapeutics Inc. (previously LQT Therapeutics Inc.) is a privately owned company based in Montreal, Quebec, Canada. Thryv Therapeutics is pioneering a precision medicine approach to treat Congenital Long QT Syndromes (LQTS), atrial fibrillation, heart failure and resistant cancers with potent and selective inhibitors of Serum Glucocorticoid inducible Kinase (SGK1). For more information, please visit www.thryvtrx.com.

Access the Abstract

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