PRESS RELEASE:

James Wilson, MD, PhD, from the University of Pennsylvania, Joins the Rett Syndrome Research Trust Gene Therapy Consortium

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James Wilson, MD, PhD, from the University of Pennsylvania, Joins the Rett Syndrome Research Trust's Gene Therapy Consortium

TRUMBULL, CT — The Rett Syndrome Research Trust (RSRT) is pleased to announce that James Wilson, MD, PhD, director of the University of Pennsylvania Gene Therapy Program and the Rose H. Weiss Orphan Disease Center, has joined our *Gene Therapy Consortium*.

Rett Syndrome is a severely disabling childhood neurological disorder caused by mutations in a gene called *MECP2*, which leads to diminished MeCP2 protein levels. Rett is not neurodegenerative and preclinical research has shown that the disorder is dramatically reversible once protein levels are restored. Thus, therapeutics that restore MeCP2 protein levels have the potential to provide profound benefit and potentially cure Rett Syndrome. In addition to delivery of the *MECP2* gene, alternative curative approaches currently funded by RSRT such as RNA editing, RNA trans-splicing, and *MECP2* reactivation require delivery of genes to the brain, and may also be considered "gene therapies".

In 2014 RSRT launched the original *Gene Therapy Consortium*, a collaboration of two gene therapy labs, Brian Kaspar, PhD (then at Nationwide Children's Hospital, now at AveXis) and Steven Gray, PhD (then at University of North Carolina Chapel Hill, now at University of Texas Southwestern) and two *MECP2* labs, Gail Mandel, PhD (Oregon Health and Sciences University) and Stuart Cobb, PhD (then at University of Glasgow, now at University of Edinburgh). Based on the encouraging data generated by this *Consortium* the biotech company, AveXis, is now advancing the lead *MECP2* gene therapy candidate toward clinical trials.

Dr. Wilson has been a pioneer and a leader in the gene therapy field for three decades and has played a pivotal role in the renaissance that the field is currently experiencing. He made a number of seminal discoveries including the discovery and development of the adeno-associated virus (AAV) that will be used by AveXis in the upcoming clinical trial. Dr. Wilson directs the Gene Therapy Program at The University of Pennsylvania, where one prominent research focus is improving delivery of genes to the brain.

"Recent advances by RSRT *Consortia* researchers are providing insights for novel genetic therapeutics that will very likely benefit from enhanced delivery and regulation. I believe this exciting collaboration will leverage our collective expertise and increase our ability to develop novel and improved gene therapies," stated Dr. Wilson.

Beyond traditional gene therapy, RSRT is also pursuing RNA approaches and biological approaches to reactivate the silent *MECP2* gene on the inactive X chromosome. The reagents for these approaches will also have to be delivered into cells via vectors so lessons learned via the *Gene Therapy Consortium* will be highly relevant.

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"Dr. Wilson's pioneering research has produced numerous breakthrough scientific discoveries that serve as the foundation for the success of many gene therapy programs. Current efforts to improve brain delivery in his lab are bolstered by major funding from several pharmaceutical and biotech partners and leveraged by collaboration with the expert scientists in these companies. This collaboration with Dr. Wilson has potential to accelerate development of our entire portfolio of gene therapies," commented Randall Carpenter, MD, Chief Scientific Officer of RSRT.

The Wilson lab is receiving an award of $1.6 million over two years for research specific to Rett Syndrome. The total RSRT investment in the *Gene Therapy Consortium* is $4.7 million.

"Last year RSRT announced *Roadmap to a Cure*, our three-year $33 million strategic research plan. The enthusiastic support of Rett families in the USA and around the world has made it possible for RSRT to recruit scientists, like Dr. Wilson, who are tops in their field to aggressively pursue curative approaches. As a mother of an adult daughter who suffers daily from the effects of Rett I know that time is of the essence. I am immensely grateful to our families and their network of supporters who make our work possible," said Monica Coenraads, Executive Director of RSRT.

About the Rett Syndrome Research Trust

The Rett Syndrome Research Trust (RSRT) is a nonprofit organization with a highly personal and urgent mission: a cure for Rett Syndrome and related *MECP2* disorders. RSRT operates at the nexus of global scientific activity enabling advances in knowledge and driving innovative research. In March of 2017 RSRT announced *Roadmap to a Cure*, a three-year, $33 million strategic research plan. The plan prioritizes four curative approaches with gene therapy as our lead program. In June of 2017 the biotechnology company, AveXis, announced its intent to advance RSRT's gene therapy program to clinical trials. Since 2008, RSRT has awarded $47 million to research. To learn more, please visit ***www.reverserett.org***

About Rett Syndrome

Rett Syndrome is a genetic neurological disorder that affects predominately girls but can rarely also affect boys. It strikes randomly, typically at the age of 12 to 18 months, and is caused by random mutations of the *MECP2* gene on the X chromosome. Rett Syndrome is devastating as it deprives young children of speech, hand use, and normal movement often including the ability to walk. Symptoms can also include anxiety, seizures, tremors, breathing difficulties, and severe gastrointestinal issues. While their bodies suffer, it is believed that their cognitive abilities remain largely intact. Although most children survive to adulthood, they require total round-the-clock care.