



DECIBELTHERAPEUTICS

Decibel Therapeutics Presents at 2018 Annual Association for Research in Otolaryngology (ARO) Meeting

Boston, Mass., February 9, 2018 - Decibel Therapeutics, a biotechnology company focused on the protection, repair, and restoration of hearing, will present data from components of its end-to-end platform for the discovery and development of therapeutics. Decibel scientists have been selected to present four posters and deliver two podium presentations at the 41st Annual ARO Midwinter Meeting in San Diego, Calif.

“The discovery, development, and delivery of therapeutics is a cross-functional, integrated endeavor, and Decibel’s presentations at ARO highlight some of the tools that we utilize to establish a molecular understanding of cochlear biology to produce novel therapeutics,” said Michael Su, Chief Scientific Officer of Decibel Therapeutics. Decibel researchers have developed high-throughput approaches for identification of novel therapeutic targets utilizing cutting-edge genomics tools such as Perturb-Seq and RNA Scope, *in vitro* and *in vivo* assays for screening of therapeutic formulations, and robust *in vivo* models of ototoxicity to enable mechanistic understanding of potential therapeutics.

“Many of the challenges that the hearing field has experienced in advancing compounds through the clinic can be traced back to fundamental gaps in understanding of hearing biology. Over the last 18 months, Decibel has operationalized its proprietary hearing platform, while augmenting it through our recently announced research collaboration with Regeneron Pharmaceuticals, Inc.,” said Paula Cobb, Executive Vice President and Head of Corporate Development, Decibel Therapeutics. “Our tools and methods enable us to identify novel targets as well as test compounds in meaningful models to accelerate development of medicines for those at risk of hearing loss.”

The following is a summary of highlights from Decibel Therapeutics’ posters and presentations:

PS 167 | Characterization of Cisplatin-Induced Ototoxicity in a Mouse Model of Repeated Cisplatin Administration

- Cisplatin is commonly used to treat a variety of tumors, and permanent hearing loss is a frequent and severe side effect of treatment.
- Decibel Therapeutics has interrogated its model of Cisplatin-induced ototoxicity to examine cisplatin pharmacokinetics and the correlation with hearing loss, improving our understanding of susceptibility to cisplatin ototoxicity for therapeutic intervention.

PS 92 | High-throughput Perturbation of Genes in an Organoid Model of Hair Cell Differentiation

- We are utilizing new methods of single-cell RNA-Sequencing and genome editing to pioneer a promising technique known as Perturb-Seq that combines high-throughput genomic perturbations with a transcriptional readout.
- Ongoing work in our labs aims to scale these proof-of concept experiments to attain a systems-level understanding of the process by which supporting cells differentiate into cochlear hair cells.
- Information gained from these studies will guide future discovery in the identification of targets that promote hair cell reprogramming.

PD 89 | Organ-wide Mapping of Single-cell Transcriptomes from the Adult Mouse Cochlea

- The large-scale gene expression patterns associated with the diversity of cell types in the adult mammalian cochlea remain poorly understood, as does the way in which these patterns change during disease.
- In early 2017, Decibel Therapeutics identified over 40 new cell types in the adult mouse cochlea using single-cell RNA-Sequencing. Since then, we have further characterized these cells with the application of RNA scope technology to validate and localize mRNAs unique to each of these previously unknown cell types.

Additional oral and poster presentations with Decibel Therapeutics co-authors include:

PD 169 | A Surrogate *in vitro* Model for Assessing Compound Permeability Through the Round Window Membrane

PS 978 | Rapid Frequency Mapping and Quantification of Murine Hair Cells Along the Organ of Corti in Three Dimensional Images

PS 599 | Characteristics of Electrically-evoked Compound Action Potentials in a Large Clinical Database

About Decibel Therapeutics, Inc.

Decibel Therapeutics is building the world's first comprehensive, integrated drug discovery, translational research, and drug development platform to protect, repair, and restore hearing. Founded by world-leading hearing experts and launched in late 2015 by Third Rock Ventures with SR One, Decibel Therapeutics is committed to creating a world in which the benefits and joys of hearing are available to all. Decibel is headquartered in Boston, Mass.

For more information about Decibel Therapeutics, please visit www.decibeltx.com or follow @DecibelTx on Twitter.

###

Decibel Media Contact:

Katie Engleman
 W2Opure
 910-509-3977
kengleman@w2ogroup.com