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LAYING THE GROUNDWORK FOR CIRCUIT-BASED AUTISM THERAPIES

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Traditionally, medical therapies for neuropsychiatric disorders are developed as pharmaceuticals that are systemically distributed and thus have off-target effects. In contrast, modulating the activity of specific brain circuits using novel approaches may provide therapeutic benefit with fewer side effects. Using tools such as optogenetics, we are now able to activate or inhibit specific populations of neurons in experimental animals in real time to modulate behaviour. I will provide an overview of new approaches to brain stimulation and present recent work using these approaches to test the role of specific brain regions and cell types in social behaviour in autism model animals.

Biography

Audrey C Brumback completed her MD and PhD training at the University of Colorado and went on to perform Paediatric Neurology and Post-doctoral studies at the University of California, San Francisco. She is now an Assistant Professor at the Dell Medical School at the University of Texas at Austin where she runs a basic / translational research program and cares for children with autism in her Paediatric Neurology clinic.

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