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## Glutamatergic signaling in the inner ear: molecular mechanisms shaping development, function, and aging

The inner ear is responsible for our ability to perceive sound and detect head rotations. Not surprisingly, dysfunction of the inner ear can be enormously disabling. The auditory and vestibular structures of the inner rely on glutamatergic synapses between the sensory hair cells that detect sound and head position and the auditory and vestibular neurons that relay this sensory information to the brain. These glutamatergic synapses are heterogeneous in structure and function. My laboratory uses a diversity of techniques, including patch clamp electrophysiology, immunofluorescence, and genetics, to determine the molecular mechanisms underlying this heterogeneity and, in turn, function of the inner ear. These findings also direct new approaches to treat age-and disease-related dysfunction of the inner ear.

Date: Thursday, 19 October 2017 Hour: 13:00 Place: Sala Actes Pavelló de Govern, Bellvitge Health Sciences Campus





