

Treatments for Tinnitus Evaluated in Animal Models

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There are few if any drugs that can reliably suppress tinnitus. Identifying potential drug candidates has been difficult because of the limited number of animal models that can rapidly and reliably screen potential drug treatments. We will use our two behavioural models, Schedule-Induced Polydipsia Avoidance Conditioning (SIPAC) and Gap-Prepulse Inhibition of Acoustic Startle (GPIAS) to determine if NS1883, a potassium channel agonist, can reliably suppress: Aim 1: Early Onset Noise Induced Tinnitus and/or Aim 2: Persistent Noise-Induced Tinnitus. We will induce tinnitus using unilateral, high-intensity noise exposure and document the presence of Early Onset Tinnitus (24-48 h) and Persistent Tinnitus (1-7 days). If tinnitus is present, we will administer NS1883 to determine if it can suppress Early Onset Tinnitus or Persistent Tinnitus. If NS1883 suppresses Early Onset or Persistent Tinnitus, the drug treatment will stop and we will determine if tinnitus reappears or if NS1883 permanently suppresses tinnitus. If tinnitus reappears, NS1883 will be administered again to determine if subsequent treatment will suppress tinnitus.

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