

Tinnitus Research Update

Researchers at Georgetown University Medical Center (GUMC) in Washington, D.C., and the Technische Universität München (TUM), Germany, have announced that they have uncovered the brain malady responsible for tinnitus and chronic pain. “Identifying the problem,” they observe, “is the first step to developing effective therapies for these disorders, which afflict millions of people.”¹

The lead researchers are Josef Rauschecker, PhD,DSc, director of the Laboratory for Integrative Neuroscience & Cognition at GUMC, and Markus Ploner, MD, PhD, Professor of Human Pain Research at TUM.

According to the September 2015 news release by GUMC: “The scientists describe how the neural mechanisms that normally ‘gate’ or control noise and pain signals can become dysfunctional, leading to a chronic perception of these sensations. They traced the flow of these signals through the brain and showed where ‘circuit breakers’ should be working – but aren’t. . . Tinnitus can occur after the ears are damaged by loud noise, but even after the brain reorganizes itself, it continues to ‘hear’ a constant hum or drum. . . Areas of the brain [in the limbic system] responsible for these errant sensations act as a central gatekeeping system for perceptual sensations, whether produced externally or internally. . . Tinnitus and chronic pain occur when the system is compromised.”

Possible therapy? “Because these systems rely on transmission of dopamine and serotonin between neurons, drugs that modulate dopamine may help to restore sensory gating,” states Dr. Rauschecker.

See “Neuroscientists Uncover Brain Abnormalities Responsible for Tinnitus and Chronic Pain,” www.gumc.georgetown.edu/news, 10/17/2015;



Dr. Rauschecker
