

First potential biomarker for noise-induced hearing loss identified

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UConn Health researcher Kourosch Parham has found a new biomarker that may facilitate early diagnosis of hearing loss in patients before their condition becomes severe. Credit: Frank Barton/UConn Health Photo

A new study presented at the 53rd American Neurotology Society

Annual Spring Meeting reveals the first potential biomarker for noise-induced hearing loss. The findings of the collaborative research study were jointly presented by Sensorion and UConn Health.

The laboratory study identified changes in prestin [blood](#) levels, an outer hair cell protein, in a preclinical model with noise-induced [hearing loss](#). Researchers analyzed the blood samples for the amount of circulating blood serum prestin levels. The study showed that the severity of hearing loss correlated with amount of change in levels of prestin circulating in the blood.

"Noise-induced hearing loss is a devastating condition that significantly affects patients' quality of life," said Dr. Kourosh Parham, associate professor and director of research in UConn Health's Division of Otolaryngology, Head & Neck Surgery. "Working with Sensorion to arrive at these results has been an opportunity to introduce the field of otology to a new potential biomarker candidate for the future possible early diagnosis of hearing loss in patients before their condition becomes severe."

"The collaboration of Sensorion with UConn Health's Division of Otolaryngology has resulted in the discovery of a potentially vital [biomarker](#) for the early diagnosis of hearing loss," said Nawal Ouzren, chief executive officer of Sensorion. "As with many diseases, the earlier clinicians can diagnose a disease, the better our chances for effective intervention. Sensorion intends to integrate measuring prestin in the clinical trial of its lead compound SENS-401."

The oral presentation, "Noise-Induced Trauma Produces a Temporal Pattern of Change in Serum Levels of the Outer Hair Cell Biomarker Prestin," was presented at the American Neurotology Society Annual Spring Meeting.

Provided by University of Connecticut

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