

SM Table 1. Characteristics of included animal studies. All prestin blood level measurements were conducted by means of ELISA.

Author, Year, Journal	Title	Population	Summary	Audiological Assessment	Findings
Parham et al. <i>Hearing Research</i> 2019	Noise-induced trauma produces a temporal pattern of change in blood levels of the outer hair cell biomarker prestin	Male Wistar rats (6-9 weeks old)	Measurement of prestin blood levels at 4 h, 24 h, 48 h, 72 h, 7 and 14 days in 20 rats exposed to intense octave band noise for 2 h at either 110 or 120 dB SPL. Comparison with 26 naïve male rats.	Auditory brainstem responses (Tone-pips with 2 ms duration, 300 repetitions at a rate of 20/s, from 10 to 90 dB SPL with a 5 dB step, at 8, 16, and 24 kHz) & Distortion product otoacoustic emissions (80 /70 dB SPL, with an f2/f1 ratio of 1.2. At 4, 8, 16, 24, and 32 kHz) Day 0 & 14 [Histological evaluation of hair cell loss was held at day 14]	110 dB SPL group: Statistically non-significant, <5%, rise of prestin concentration at 4 hours post exposure, then a statistically significant gradual decrease to 10pg/ml (compared to baseline) at 14 days after exposure. 120 dB SPL group: 6 subjects presented increased prestin levels at 4 hours post exposure (22.8 ± 9 pg/mL) and 4 subjects decreased ones (17.3 ± 7 pg/mL). A statistically significant 10% decrease of prestin levels (compared to baseline) was

					observed at day 14 after exposure.
Dogan et al. <i>American Journal of Otolaryngology</i> 2018	Utilizing prestin as a predictive marker for the early detection of outer hair cell damage	Male Wistar rats (16–20 weeks old)	Measurement of prestin blood levels in 35 rats that received: 200 mg/kg/day of ampicillin for (10 LAG), 600 mg/kg/day of ampicillin for 10 days (6 HAG), one single dose of 5 mg/kg (9 LCIS), one single dose of 15 mg/kg (10 HCIS) and 10 controls.	Distortion product otoacoustic emissions (70/70 dB SPL, with an f2/f1 ratio of 1.22. at 2001, 3154, 4003, 6298 and 7998 Hz) [Histological assessment of stria vascularis, organ of Corti, spiral ganglion according to 4-point scoring system for cisplatin-induced ototoxicity defined by Freitas et al.]	Dose-dependent cochlear damage and increase of prestin blood concentration.
Naples et al. <i>Otology & Neurotology</i> 2018	Prestin as an Otologic Biomarker of Cisplatin Ototoxicity in a Guinea Pig Model	Guinea pigs	Measurement of prestin blood levels performed at days 0, 1, 2, 3, 7, and 14 post-cisplatin administration, in two groups of guinea pigs (one treated with diltiazem and one control)	Auditory brainstem responses - tone bursts of 4, 8, 16, 24, and 32 kHz, 5-ms (2-ms rise/fall time), delivered at a rate of 21/s - click-evoked	Rise in blood prestin levels (25.6%) at day 2 post cisplatin administration (precedes onset of significant ABR changes) in the control group. No prestin concentration rise in the diltiazem group.

Liba et al. <i>Otology & Neurotology</i> 2017	Changes in Blood Prestin Concentration After Exposure to Cisplatin	Mice Guinea pigs	Measurement of prestin blood levels in 30 mice and 10 guinea pigs at 1, 3, 7, 14 days after 1 single dose of cisplatin at 8 mg/kg. (five mice were sacrificed at each time point, all guinea pigs were tested at each time point)	Auditory brainstem responses - Clicks - Rate of 21/s - Step of 5 dB	Blood prestin concentrations rise, peak on days 7 (mice) and 3 (guinea pigs), decline back to or below baseline / control levels 14 days after treatment.
Parham and Dyhrfeld-Johnsen <i>Otology & Neurotology</i> 2016	Outer Hair Cell Molecular Protein, Prestin, as a Blood Biomarker for Hearing Loss: Proof of Concept.	Male Wistar rats	Measurement of prestin blood levels in 21 rats of 6-11 weeks old at day 14 after intense octave band noise for 2 to 3 hours and six controls.	Auditory brainstem responses - Tone-pips (5 ms duration at a rate of 21/s, 2 ms rise-fall time) at 8, 16, and 24 kHz from 90 dB SPL in steps of minimum 5 dB. Distortion product otoacoustic emissions - 70/70 dB SPL, f1:f2=1.2 - 4, 8, 16, 24, and 32 kHz	Noise-exposed rats demonstrated statistically significant decrease in prestin concentrations 14 days post-exposure

LAG, low aminoglycoside group; HAG, high aminoglycoside group; HCIS, high cisplatin; LCIS, low cisplatin