

Publications

Journal Articles

Naidoo, J., Ren, Y., Rocco, M., Bielefeld, E., Clark, A., Kuo, H-C., McFarland, N., Avenarius, M., Takhar, M., Frank, G., Van Laar, V., Bankiewicz, K. Axonal transport of AAV vectors from the superior olivary complex yields high efficiency cochlea transduction in adult rodents. Molecular Therapy, 33: P4290-P4302.

Duhon, B.H., **Bielefeld, E.C.**, Ren, Y., Naidoo, J. (2024). Gene Therapy Advancements for the Treatment of Acquired and Hereditary Hearing Loss. Frontiers in Audiology and Otology, 2: 1423853.

Reynolds, A., **Bielefeld, E.C.** (2023). Music as a unique source of noise-induced hearing loss. Hearing Research, 430: 108706.

DeBacker, J.R., Hu, B.H., **Bielefeld, E.C.**, (2022). Mild hearing loss in C57BL6/J mice after exposure to antiretroviral compounds during gestation and nursing. International Journal of Audiology, in press.

Debacker, J.R., Langenek, B., **Bielefeld, E.C.** (2022). Hearing loss in offspring exposed to antiretrovirals during pregnancy and breastfeeding. Frontiers in Molecular Neuroscience, 15: 920528.

Harrison, R.T., DeBacker, J.R., Trevino, M., **Bielefeld, E.C.**, Lobarinas, E. (2022). Cochlear Preconditioning as a Modulator of Susceptibility to Hearing Loss. Antioxidants and Redox Signaling, 36, 1215-1228.

Bielefeld, E.C., Gonzalez, A., DeBacker, J.R. (2021). Changing the time intervals between cisplatin cycles alter its ototoxic side effect. Hearing Research, 404: 108204.

Chen, Y.Y., **Bielefeld, E.C.**, Mellott, J.G., Wang, W., Mafi, A., Yamoah, E.M., Bao, J. (2021). Early physiological and cellular indicators of cisplatin-induced ototoxicity. Journal of the Association for Research in Otolaryngology, 22: 107-126.

DeBacker, J.R., Harrison, R.T., **Bielefeld, E.C.** (2020). Cisplatin-induced threshold shift in the CBA/CaJ, C57BL/6J, BALB/cJ mouse models of hearing loss. Hearing Research, 387: 107878.

Harrison, R.T., **Bielefeld, E.C.** (2019). Assessing hidden hearing loss after impulse noise in a mouse model. Noise and Health, 21: 35-40.

Bielefeld, E.C., Harrison, R.T., DeBacker, J.R. (2019). Pharmaceutical otoprotection strategies to prevent impulse noise-induced hearing loss. The Journal of the Acoustical Society of America, 146, 3790.

- Bielefeld, E.C.,** Kobel, M.J. (2019). Advances and Challenges in Pharmaceutical Therapies to Prevent and Repair Cochlear Injuries From Noise. Frontiers in Cellular Neuroscience, 13, 285.
- Bielefeld, E.C.,** Markle, A., DeBacker, J.R., Harrison, R.T. (2018). Chronotolerance for cisplatin ototoxicity in the rat. Hearing Research, 370, 16-21.
- Yu, Y., Hu, B., Bao, J., Mulvany, J., **Bielefeld, E.,** Harrison, R.T., Neton, S.A., Thirumala, P., Chen, Y., Lei, D., Qiu, Z., Zheng, Q., Ren, J., Perez-Flores, M.C., Yamoah, E.N., Salehi, P. (2018). Otoprotective effects of *Stephania tetrandra* S. Moore herb isolate against acoustic trauma. Journal of the Association for Research in Otolaryngology (JARO), 19(6), 653-668.
- Harrison, R.T., **Bielefeld, E.C.** (2018). Little evidence for a chronotolerance effect for impulse noise exposure in the C57BL/6J mouse. Neuroscience Letters, 684, 127-131.
- Gombash, S.E., Cowley, C.J., Fitzgerald, J.A., Lepak, C.A., Neides, M., Hook, K., Todd, L., Wang, G.D., Mueller, C., Kaspar, B., **Bielefeld, E.C.,** Fischer, A.J., Wood, J., Foust, K.D. Systemic gene delivery transduces the enteric nervous system of guinea pigs and cynomolgus macaques. Accepted for publication in Gene Therapy.
- DeBacker, J.R., Harrison, R., **Bielefeld, E.C.** (2017). Long-term synergistic interaction of cisplatin-induced and noise-induced hearing losses. Ear and Hearing, 38, 282-291.
- Harrison, R.T., Seiler, B.M., **Bielefeld, E.C.** (2016). Ototoxicity of 12 mg/kg cisplatin in the Fischer 344/NHsd rat using multiple dosing strategies. Anticancer Drugs, 27(8), 780-786.
- Bielefeld, E.C.** (2015) Src inhibitors to prevent noise-induced hearing loss. Drug Discovery Today, 20, 760-765.
- Wieggers, J.S., **Bielefeld, E.C.,** Whitelaw, G.M. (2015). Utility of the Vivosonic Integrity™ auditory brainstem response system as a hearing screening device for difficult-to-test children. International Journal of Audiology, 54, 282-288.
- Harrison, R., DeBacker, J.R., **Bielefeld, E.C.** (2015). A low-dose regimen of cisplatin before high-dose cisplatin potentiates ototoxicity. The Laryngoscope, 125, E78-E83.
- Fetoni, A.R., **Bielefeld, E.C.,** Paludetti, G., Nicotera, T., Henderson, D. (2014). Role of p53 in noise-induced hearing loss: protection with pifithrin-alpha and a Src inhibitor. Neuroscience Research, 81-82, 30-37.
- Bielefeld, E.C.** (2014). Influence of dose and duration of isoflurane anesthesia on the auditory brainstem response in the rat. International Journal of Audiology, 53, 250-258.
- Bielefeld, E.C.** (2013). Age-related hearing loss patterns in Fischer 344/NHsd rats with cisplatin-induced hearing loss. Hearing Research, 306, 46-53.

- Bielefeld, E.C.** (2013). Reduction in noise-induced hearing loss with intra-cochlear application of an NADPH oxidase inhibitor. Journal of the American Academy of Audiology, 24, 1-13.
- Bielefeld, E.C.**, Tanaka, C.T., Chen, G.D., Coling, D., Li, M., Henderson, D, Fetoni, A.R. (2013). A Src-PTK inhibitor to reduce cisplatin ototoxicity while preserving its anti-tumor effect. Anticancer Drugs, 24(1), 43-51.
- Bielefeld, E.C.**, Hoglund, E.M., Feth, L.L. (2012). Noise-induced suprathreshold changes in forward masking of the rat auditory brainstem response. Hearing Research, 294, 64-72.
- Bielefeld, E. C.**, Hangauer, D., Henderson, D. (2011). Protection from impulse noise-induced hearing loss with novel Src-protein tyrosine kinase inhibitors. Neuroscience Research, 71, 348-354.
- Bielefeld, E.C.**, Wantuck, R., Henderson, D. (2011). Post-exposure treatment with a Src-PTK inhibitor in combination with NAC to reduce noise-induced hearing loss. Noise & Health, 13(53), 292-298.
- Yang, W.P., Hu, B.H., Chen, G.D., **Bielefeld, E.C.**, Henderson, D. (2011). L-NAC protect hair cells in the rat cochlea from injury of exposure to styrene. Journal of Clinical Otorhinolaryngology, Head, and Neck Surgery [Chinese], 25(4), 176-179.
- Bielefeld, E.C.** (2011). Re-thinking noise-induced and age-related hearing losses. Aging Clinical and Experimental Research, 23, 1-2.
- Bielefeld, E.C.**, Henderson, D. (2011). Mechanisms of Cisplatin Ototoxicity and Routes for Intervention. Published by ASHA: Perspectives on Hearing and Hearing Disorders: Research and Diagnostics, 15, 3-14. (Invited, editorial review only).
- Chen, G. D., Kermany, M.H., D'Elia, A., Ralli, M., Tanaka, C., **Bielefeld, E. C.**, Ding, D., Henderson, D., Salvi, R.J. (2010). Too much of a good thing: Long-term treatment with salicylate strengthens outer hair cell function but impairs auditory neural activity. Hearing Research, 265(1-2), 63-69.
- Bielefeld, E. C.**, Tanaka, C., Chen, G. D., Henderson, D. (2010). Age-related hearing loss: Is it a preventable condition? Hearing Research, 264, 98-107.
- Yang, W.P., Hu, B.H., Chen, G.D., **Bielefeld, E.C.**, Henderson, D. (2009). Protective effect of N-acetyl-L-cysteine (L-NAC) against styrene-induced cochlear injuries. Acta Otolaryngologica, 129(10), 1036-1043.
- Tanaka, C., **Bielefeld, E.C.**, Chen, G.D., Li, M., Henderson, D. (2009). Ameliorative effects of an augmented acoustic environment on age-related hearing loss in middle-aged Fischer 344/NHsd rats. Laryngoscope, 119(7), 1374-1379.

- Tanaka, C., **Bielefeld, E.C.**, Chen, G.D., Li, M., Henderson, D. (2009). The effects of acoustic environment after traumatic noise exposure on hearing and outer hair cells. Hearing Research, 250, 10-18.
- Chen, G.D., Li, M., Tanaka, C., **Bielefeld, E.C.**, Hu, B.H., Kermany, M.H., Salvi, R., Henderson, D. (2009). Aging outer hair cells (OHCs) in the Fischer 344 rat cochlea: Function and morphology. Hearing Research, 248, 39-47.
- Hu, B. H., Yang, W.P., **Bielefeld, E. C.**, Li, M., Chen, G. D., Henderson, D. (2008). Apoptotic outer hair cell death in the cochleae of aging Fischer 344/NHsd rats. Hearing Research, 241, 26-33.
- Bielefeld, E.C.**, Coling, D., Chen, G.D., Henderson D. (2008). Multiple dosing strategies with acetyl L-carnitine (ALCAR) fail to alter age-related hearing loss in the Fischer 344/NHsd rat. Journal of Negative Results in Biomedicine, 7(1), 4.
- Bielefeld, E. C.**, Coling, D., Chen, G. D., Li, M., Tanaka, C., Hu, B. H., Henderson, D. (2008). Age-related hearing loss in the Fischer 344/NHsd rat substrain. Hearing Research, 245(1-2), 48-57.
- Bielefeld, E.C.**, Kopke, R. D., Jackson, R. L., Coleman, J. K., Liu, J., Henderson, D. (2007). Noise protection with N-acetyl-l-cysteine (NAC) using a variety of noise exposures, NAC doses, and routes of administration. Acta Otolaryngologica, 127, 914-919.
- Kopke, R. D., Jackson, R. L., Coleman, J. K., Liu, J., **Bielefeld, E. C.**, Balough, B. J. (2007). NAC for noise: From the bench top to the clinic. Hearing Research, 226(1-2), 114-125.
- Bielefeld, E.C.**, Henderson D. (2007). Influence of sympathetic fibers on noise-induced hearing loss in the chinchilla. Hearing Research, 223, 11-19.
- Harris, K.C., **Bielefeld, E.**, Hu, B.H., Henderson, D. (2006) Increased resistance to free radical damage induced by low level sound conditioning. Hearing Research, 213, 118-129.
- Henderson, D., **Bielefeld, E.C.**, Harris, K.C., Hu, B.H. (2006). The Role of Oxidative Stress in Noise-induced Hearing Loss. Ear and Hearing, 27(1), 1-19.
- Bielefeld, E.C.**, Hynes, S., Pryznosch, D., Coleman, J.K.M., Liu, J., Henderson, D. (2005). A comparison of the protective effects of systemic administration of a pro-glutathione drug and a Src-PTK inhibitor. Noise & Health, 7(29), 24-30.
- Bielefeld, E.C.**, Hu, B.H., Harris, K.C., Henderson, D. (2005). Damage and threshold shift resulting from cochlear exposure to Paraquat-generated superoxide. Hearing Research, 207, 35-42.

Kopke, R., **Bielefeld, E.**, Liu, J., Zheng, J., Jackson, R., Henderson, D., Coleman, J.K. (2005). Prevention of impulse noise-induced hearing loss with antioxidants. Acta Otolaryngologica, 125(3), 235-243.

Imundo, J., **Bielefeld, E.**, Dodge, J., and Badura, L.L. (2001) Relationship between norepinephrine release in the hypothalamic paraventricular nucleus and circulating prolactin levels in the Siberian hamster: role of photoperiod and the pineal gland. Journal of Biological Rhythms, 161, 173-182.

Book Chapters

Bielefeld, E.C. (2022). Anatomy and Physiology of the Ear: Normal Function and the Damage Underlying Hearing Loss. In Meinke, D., Bright, K. (Eds). The Noise Manual, 6th Edition. American Industrial Hygiene Association, Falls Church, VA.

Escabi, C., Trevino, M., **Bielefeld, E.**, Lobarinas, E. (2020). Noise-Induced Hearing Loss and Drug Therapy; Basic and Translational Science. In Pucheu, S., Radizwon, K., Salvi, R.J. (Eds). New Therapies to Prevent or Cure Auditory Disorders. Springer, New York.

Bielefeld, E.C. (2011) Effects of Early Noise Exposure on Subsequent Age-Related Changes in Hearing. In: Le Prell, C.G., Henderson, D., Fay, R.R., and Popper, A.N. (Eds). Springer Handbook of Auditory Research: Noise-Induced Hearing Loss: Scientific Advances. Vol. 40. Springer Science and Business Media, LLC, New York.

Henderson, D., **Bielefeld, E.C.**, Lobarinas, E., and Tanaka, C. (2011) Noise-Induced Hearing Loss: Implication for Tinnitus. In: Møller, A.R., Langguth, B., DeRidder, D., and Kleinjung, T. (Eds.), Textbook of Tinnitus. Springer, New York. pp. 301-310.

Henderson, D., Hu, B.H., and **Bielefeld, E.** (2008) Patterns and Mechanisms of Noise-Induced Cochlear Pathology. In: Schacht, J., Popper, A.N., and Fay, R.R. (Eds.), Springer Handbook of Auditory Research: Auditory Trauma, Protection, and Repair. Vol. 31. Springer, New York. pp. 195-218.

Henderson, D., Hu, B.H., **Bielefeld, E.**, and Nicotera, T. (2007). Cellular Mechanisms of Noise-induced Hearing Loss. In Campbell, K.C.M. (Ed.) Pharmacology and Ototoxicity for Audiologists. Thomson Delmar Learning, Clifton Park, NY. pp 216-229.