

Curriculum vitae

Eric Charles Bielefeld

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Pronouns: he/him

Education

Undergraduate: State University of New York at Buffalo

1995-1999 Bachelor of Arts in Psychology and Speech and Hearing

Graduate: State University of New York at Buffalo

1999-2005 Doctor of Philosophy from the Department of Communicative Disorders and Sciences (CDS)

Experience

Academic Positions

2023-Present: Chair of the Department of Speech and Hearing Science at The Ohio State University

2022-2023: Vice Chair in the Department of Speech and Hearing Science at The Ohio State University

2022-2022: Faculty Fellow, Office of Academic Affairs, The Ohio State University

2021-Present: Professor in the Department of Speech and Hearing Science at The Ohio State University

2019-2021: Faculty Fellow, Office of Academic Affairs, The Ohio State University

2015-Present: Courtesy Appointment, Professor in the Department of Otolaryngology at The Ohio State University Wexner Medical Center

2015-2021: Associate Professor in the Department of Speech and Hearing Science at The Ohio State University

2010-2015: Assistant Professor in the Department of Speech and Hearing Science at The Ohio State University

2009-2010: Visiting Assistant Professor in the Department of Speech and Hearing Science at The Ohio State University

2005-2009: Research Assistant Professor in the Center for Hearing and Deafness of the

Department of Communicative Disorders and Sciences at State University of New York
at Buffalo

Teaching

2010-Present: Professor in the Department of Speech and Hearing Science at The Ohio State
University

Courses:

SPHHRNG 4440: Introduction to Hearing Science

SPHHRNG 4540: Introduction to Audiology

SPHHRNG 6708: Auditory Assessment IV Electrophysiology

SPHHRNG 6775: Anatomy and Physiology of the Auditory System **

SPHHRNG 8934: Hearing Conservation

SPHHRNG 5760: Neurology of the Speech and Hearing Mechanism**

**Currently teaching

Clinical

2009-Present: Licensed for practice of audiology in the state of Ohio

2006-Present: Certificate of Clinical Competence in Audiology from the American Speech-
Language-Hearing Association (ASHA).

2003-2009: Audiologist with the Delaware Audiology Group in Buffalo, NY.

Awards

2025-2026: Ohio State Big Ten Academic Alliance Academic Leadership Program Fellow

2024: President and Provost's Award for Distinguished Faculty Service

2022: Ohio State designee for the EAB Rising Higher Education Leaders Fellowship

2018: Honorary Inductee into The Ohio State University's chapter of the Mortar Board National
College Senior Honor Society

2017-2018: Member of President and Provost's Leadership Initiative

2013: Research Award from the Ohio Academy of Audiology

2009: New Investigator Research Award from the American Academy of Audiology

2005: Ear and Hearing Editors Award: Best Paper for Henderson, Bielefeld, Harris, Hu

1999-2002: SUNY at Buffalo Presidential Fellowship for Graduate Education

1997: SUNY at Buffalo Highest Honors for Undergraduate research in Psychology

Professional Service

2022-Present: Peer reviewer for the Higher Learning Commission

Journal Peer Reviews and Editorships

2020-Present: Section editor, Ear and Hearing

2022: Guest Forum issue editor, Antioxidants and Redox Signaling

2018: Reviewing editor, Antioxidants and Redox Signaling

2013: Top Peer Reviewer, The Laryngoscope

Professional Committees and Boards

2023-Present: Member of the Scientific Advisory Board at the Richard J. Bellucci
Translational Hearing Center, Creighton University

2016-2022: Member of Dangerous Decibels Faculty

2013-2014: Member of committee for the topic of Hearing Science for the 2014 ASHA
Convention

2012-2015: Member of Membership committee for the Association for Research in
Otolaryngology (ARO)

2011-2012: Member of American Academy of Audiology Research Podium Sub-committee
for AudiologyNow! 2012 convention

2011-2012: Member of American Academy of Audiology Student Research Poster Sub-
committee for AudiologyNow! 2012 convention

Grant reviews

2024: Scientist Reviewer for the FY26 Military Operational Medicine Research Program for
the US Army Medical Research and Development Command.

2022: External peer reviewer for the Health Research Council of New Zealand

2020: Scientific reviewer for Swiss National Science Foundation

2018-2019: Scientific reviewer for Action on Hearing Loss Translational Research Initiative
for Hearing

2018: Scientific peer reviewer for Department of Defense Congressionally-Directed Medical
Research Program

2015: Scientific peer reviewer for Department of Defense Congressionally-Directed Medical Research Program

Public Service

Educational journal articles

Bielefeld, E. (2024). The 21st Century Has Taught Us a Lot About Noise-Induced Hearing Loss. Canadian Audiologist, 11(5). (Invited, editorial review only).

Bielefeld, E., Meinke, D. (2015). Unraveling the mystery of hair cell death from noise. Canadian Audiologist, 2(4). (Invited, editorial review only).

Bielefeld, E.C. (2013). Development of Early Detection of Noise-Induced Hearing Loss with Forward Masking of the Auditory Brainstem Response. Canadian Hearing Report, 8(1), 32-33. (Invited, editorial review only).

Bielefeld, E.C. (2008). Teaching the hearing impaired: a guide to understanding hearing and hearing loss for educators. Long Island Education Review, 7(2), 18-23.

Media Interviews/Coverage

2021: *Ohio State Arts and Science Voices of Excellence* podcast (topic: research interests and topics related to hearing and audiology). Podcast published Aug 11, 2021.

2014: *Columbus Dispatch* (topic: legislation to allow sound suppressors used on weapons for hunting in the state of Ohio). Article published on Feb 4, 2014. I was interviewed for, and quoted in, the article.

2014: NBC4 news, Columbus, OH. (topic: legislation to allow sound suppressors used on weapons for hunting in the state of Ohio). Story presented on Feb 3, 2014. I was interviewed for, and quoted in, the news piece.

2012: Nature Medicine ("Sound Medicine" by Elie Dolgin) on the topic of pharmaceutical protection from noise-induced hearing loss. I was interviewed for, and quoted in, the article.

University Service

University-level service

2026-Present: Member of Faculty Committee on Admissions

2025-Present: Member of the university's Health Plan Oversight Committee

2025-Present: Member of university committee for Ohio State's re-accreditation by the Higher Learning Commission

2024-Present: Faculty non-trustee member of the Board of Trustees Academic Affairs, Research, and Student Life committee

2019-2023: Member of General Education Support Team
2019-2020: Co-chair of the Regional Campuses subcommittee
2019-2020: Member of the Policies and Procedures subcommittee
2019-2020: Member of the Open Themes subcommittee
2019-2021: Member of university committee for re-affirmation of Ohio State's
accreditation by the Higher Learning Commission
2016-2023: Member of the Council on Academic Affairs
2019-2020: Co-chair of the Council on Academic Affairs
2018-2019: Chair of the Council on Academic Affairs
2016-2019: Member of the University Senate
2016-2019: Member of the Faculty Council
2016-2017: Member of the Faculty and Staff Culture Survey Steering Committee

College of Arts and Sciences service

2024-2025: Chair of the Search Committee for the department chair of Sociology
2015-2019: Member of the Arts and Sciences Faculty Senate
2015-2019: Member of the Steering Committee

Speech and Hearing Science Department service

2010-2023: Member of the Audiology Oversight committee
2021-2023: Chair
2022-2023: Member of the Faculty Search committee
2021-2023: Curriculum Coordinator
2013-2019: Member of the Undergraduate Studies committee
2017-2019: Chair
2015-2016: Member of the Faculty Search committee
2011-2017: Member of the Facilities committee
2012-2017: Chair
2012-2013: Member of the Faculty Search committee

Publications (in reverse chronological order)

51. Duhon, B.H., Fisher, M., Nguyen, H.T.N., Rocco, M., **Bielefeld, E.C.**, Ren, Y. (2026). An Orthotopic Vestibular Schwannoma Mouse Model to Study Tumor-Host Interactions and Mechanism of Sensorineural Hearing Loss. Journal of Neuroscience Methods, 430: 110709. DOI: <https://doi.org/10.1016/j.jneumeth.2026.110709>
50. 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. (2025). Axonal transport of AAV vectors from the superior olivary complex yields high efficiency cochlea transduction in adult rodents. Molecular Therapy, 33: P4290-P4302. DOI: [10.1016/j.ymthe.2025.05.022](https://doi.org/10.1016/j.ymthe.2025.05.022)
49. 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. DOI: <https://doi.org/10.3389/fauot.2024.1423853>
48. Reynolds, A., **Bielefeld, E.C.** (2023). Music as a unique source of noise-induced hearing loss. Hearing Research, 430: 108706. DOI: [10.1016/j.heares.2023.108706](https://doi.org/10.1016/j.heares.2023.108706)
47. DeBacker, J.R., Hu, B.H., **Bielefeld, E.C.** (2023). Mild hearing loss in C57BL/6/J mice after exposure to antiretroviral compounds during gestation and nursing. International Journal of Audiology, 62: 675-681. DOI: [10.1080/14992027.2022.2067081](https://doi.org/10.1080/14992027.2022.2067081)
46. 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. DOI: [10.3389/fnmol.2022.920528](https://doi.org/10.3389/fnmol.2022.920528)
45. 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. DOI: [10.1089/ars.2021.0055](https://doi.org/10.1089/ars.2021.0055)
44. **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. DOI: [10.1016/j.heares.2021.108204](https://doi.org/10.1016/j.heares.2021.108204)
43. 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. DOI: [10.1007/s10162-020-00782-z](https://doi.org/10.1007/s10162-020-00782-z)
42. 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. DOI: [10.1016/j.heares.2019.107878](https://doi.org/10.1016/j.heares.2019.107878)
41. Harrison, R.T., **Bielefeld, E.C.** (2019). Assessing hidden hearing loss after impulse noise in a mouse model. Noise and Health, 21: 35-40. DOI: [10.4103/nah.NAH_38_18](https://doi.org/10.4103/nah.NAH_38_18)

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. DOI: [10.3389/fncel.2019.00285](https://doi.org/10.3389/fncel.2019.00285)
39. **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. <https://doi.org/10.3389/fncel.2019.00285>
38. **Bielefeld, E.C.**, Markle, A., DeBacker, J.R., Harrison, R.T. (2018). Chronotolerance for cisplatin ototoxicity in the rat. Hearing Research, 370, 16-21. DOI: [10.1016/j.heares.2018.09.004](https://doi.org/10.1016/j.heares.2018.09.004)
37. 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. DOI: [10.1007/s10162-018-00690-3](https://doi.org/10.1007/s10162-018-00690-3)
36. 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. DOI: [10.1016/j.neulet.2018.07.028](https://doi.org/10.1016/j.neulet.2018.07.028)
35. 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. (2017) Systemic gene delivery transduces the enteric nervous system of guinea pigs and cynomolgus macaques. Gene Therapy, 24(10), 640-648. <https://doi.org/10.1038/gt.2017.72>
34. 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. DOI: [10.1097/AUD.0000000000000391](https://doi.org/10.1097/AUD.0000000000000391)
33. 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. DOI: [10.1097/CAD.0000000000000395](https://doi.org/10.1097/CAD.0000000000000395)
32. **Bielefeld, E.C.** (2015) Src inhibitors to prevent noise-induced hearing loss. Drug Discovery Today, 20, 760-765. DOI: [10.1016/j.drudis.2015.01.010](https://doi.org/10.1016/j.drudis.2015.01.010)
31. 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. DOI: [10.3109/14992027.2014.979374](https://doi.org/10.3109/14992027.2014.979374)
30. 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. DOI: [10.1002/lary.24948](https://doi.org/10.1002/lary.24948)

29. 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. DOI: [10.1016/j.neures.2014.01.006](https://doi.org/10.1016/j.neures.2014.01.006)
28. **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. DOI: [10.3109/14992027.2013.858280](https://doi.org/10.3109/14992027.2013.858280)
27. **Bielefeld, E.C.** (2013). Age-related hearing loss patterns in Fischer 344/NHsd rats with cisplatin-induced hearing loss. Hearing Research, 306, 46-53. DOI: [10.1016/j.heares.2013.09.003](https://doi.org/10.1016/j.heares.2013.09.003)
26. **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. DOI: [10.3766/jaaa.24.6.3](https://doi.org/10.3766/jaaa.24.6.3)
25. **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. DOI: [10.1097/CAD.0b013e32835739fd](https://doi.org/10.1097/CAD.0b013e32835739fd)
24. **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. DOI: [10.1016/j.heares.2012.10.007](https://doi.org/10.1016/j.heares.2012.10.007)
23. **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. DOI: [10.1016/j.neures.2011.07.1836](https://doi.org/10.1016/j.neures.2011.07.1836)
22. **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. DOI: [10.4103/1463-1741.82962](https://doi.org/10.4103/1463-1741.82962)
21. 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.
20. **Bielefeld, E.C.** (2011). Re-thinking noise-induced and age-related hearing losses. Aging Clinical and Experimental Research, 23, 1-2. DOI: [10.1007/BF03324946](https://doi.org/10.1007/BF03324946)
19. **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). <https://pubs.asha.org/doi/10.1044/hhd15.1.3>
18. 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. DOI: [10.1016/j.heares.2010.02.010](https://doi.org/10.1016/j.heares.2010.02.010)
17. **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. DOI: [10.1016/j.heares.2009.09.001](https://doi.org/10.1016/j.heares.2009.09.001)
 16. 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. DOI: [10.1080/00016480802566261](https://doi.org/10.1080/00016480802566261)
 15. 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. DOI: [10.1002/lary.20244](https://doi.org/10.1002/lary.20244)
 14. 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. DOI: [10.1016/j.heares.2008.12.010](https://doi.org/10.1016/j.heares.2008.12.010)
 13. 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. DOI: [10.1016/j.heares.2008.11.010](https://doi.org/10.1016/j.heares.2008.11.010)
 12. 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. DOI: [10.1016/j.heares.2008.08.006](https://doi.org/10.1016/j.heares.2008.08.006)
 11. **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. DOI: [10.1186/1477-5751-7-4](https://doi.org/10.1186/1477-5751-7-4)
 10. **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. DOI: [10.1016/j.heares.2008.04.006](https://doi.org/10.1016/j.heares.2008.04.006)
 9. **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. DOI: [10.1080/00016480601110188](https://doi.org/10.1080/00016480601110188)
 8. 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. DOI: [10.1016/j.heares.2006.10.008](https://doi.org/10.1016/j.heares.2006.10.008)

7. **Bielefeld, E.C.**, Henderson D. (2007). Influence of sympathetic fibers on noise-induced hearing loss in the chinchilla. Hearing Research, 223, 11-19. DOI: [10.1016/j.heares.2006.09.010](https://doi.org/10.1016/j.heares.2006.09.010)
6. 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. DOI: [10.1016/j.heares.2005.11.012](https://doi.org/10.1016/j.heares.2005.11.012)
5. 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. DOI: [10.1097/01.aud.0000191942.36672.f3](https://doi.org/10.1097/01.aud.0000191942.36672.f3)
4. **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. DOI: [10.4103/1463-1741.31875](https://doi.org/10.4103/1463-1741.31875)
3. **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. DOI: [10.1016/j.heares.2005.03.025](https://doi.org/10.1016/j.heares.2005.03.025)
2. 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. <https://doi.org/10.1080/00016480410023038>
1. 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, 16, 173-182. <https://doi.org/10.1177/074873001129001755>

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.

Presentations (in reverse chronological order)

Invited

Bielefeld, E.C. (2025). Ongoing re-examination of ototoxicity: legacy ototoxic compounds and assessing ototoxicity of new compounds. Invited seminar at the Dr. Richard J. Bellucci Translational Hearing Center at Creighton University, Omaha NE.

Bielefeld, E.C. (2024). Facilitating recovery of the afferent synapses after a noise injury. World Congress of Audiology, Paris, France.

Bielefeld, E.C. (2023). Ototoxicity: re-examining legacy ototoxic compounds and assessing ototoxicity of new compounds. University of California Irvine, Center for Hearing Research Seminar. Online presentation

Bielefeld, E.C. (2022). How noise-induced hearing loss and drug ototoxicity can influence presbycusis. Creighton University Bellucci Symposium. Online presentation.

Bielefeld, E.C. (2021). Expanding our view of ototoxicity as we expand our definition of hearing loss. NCRAR Seminar Series. Online presentation.

Bielefeld, E.C., Andridge, R. (2021). Assessment plans in the curricular review process. Invited breakout presentation for The Ohio State University Office of Academic Affairs Annual Assessment Conference. Columbus, OH.

Bielefeld, E.C. (2020). Using auditory electrophysiology testing to define the high frequencies across non-human mammal species. Invited presentation for special session, 'Reintroducing the high-frequency region to speech perception research' at the 179th Meeting of the Acoustical Society of America. Online meeting.

Bielefeld, E.C. (2019). New perspectives on ototoxic drugs and interactions with anti-retroviral compounds. Invited presentation at NIDCD 2018-2019 Seminar Series. Bethesda, MD.

Bielefeld, E.C. (2018). Noise-induced hearing loss inside the cochlea. Presentation at the 28th Mayo Clinic Audiology Conference, Rochester, MN.

Bielefeld, E. (2016). It's a Noisy World Mini-Series: Scientific Bases of Noise-Induced Hearing Loss. Presentation at the 2016 American Speech-Language-Hearing Association Convention, Philadelphia, PA.

Bielefeld, E. (2014). The search for pharmaceutical treatments for noise-induced hearing loss. Presentation at the Dangerous Decibels Workshop in Columbus, OH.

Bielefeld, E.C. (2014). Pathology in the cochlea from noise, cisplatin, and aging. Presentation at the 2014 Kentucky Speech-Language-Hearing Association Convention, Covington, KY

Bielefeld, E.C. (2012) Methods for early detection of noise-induced hearing loss. Canadian Academy of Audiology 2012 Conference and Exhibition, Ottawa, ON, CA.

Bielefeld, E. (2011). Similarities and differences between acquired cochlear pathologies. 2011 Sounds+ Conference, Halifax, Nova Scotia.

Bielefeld, E. (2011). Intersections between noise-induced, drug-induced, and age-related sensorineural hearing losses. The Ohio Audiology Conference, Columbus, OH.

Peer-reviewed

Harrold, L., Salter, C.G., Rawlins, L.E., **Bielefeld, E.**, Driver, E., Leslie, J.S., Ubeyratna, N., Copeland, H., Pagnamenta, A.T., Nguyen, T., Vontell, A., Jagers, R.M., Kelley, M., Leal, S.M., Schrauwen, I., Steel, K.P., Crosby, A.H., Stottmann, R.W., Baple, E.L. (2026). Biallelic *FRY* variants cause syndromic sensorineural hearing loss in humans and mice. Podium presentation at the European Human Genetics Conference, Gothenburg, Sweden.

Naidoo, J., **Bielefeld, E.**, Ren, Y., Kuo, H-C., Avenarius, M., McFarland, N., Clark, A., Rocco, M., Thakar, M., Frank, G., Van Laar, V., Bankiewicz, K. (2024). Targeted Brainstem Delivery of Adeno-Associated Viral Vectors Significantly Improves Gene Delivery to Spiral Ganglion Neurons in Adult Rats. Poster presentation at the 2024 Midwinter Meeting of the Association for Research in Otolaryngology, Anaheim, CA.

Langenek, B., **Bielefeld, E.C.** (2023). Exploring the Pathology of Sensorineural Hearing Loss from Methadone Treatment in Mice. Poster presentation at the American Academy of Audiology convention, Seattle WA.

DeBacker, J.R., Langenek, B., **Bielefeld, E.C.** (2022). Hearing AIDS: Auditory Effects of Antiretroviral Therapy. Learning Module podium presentation at the American Academy of Audiology convention, St. Louis, MO.

- DeBacker, J.R., Langenek, B., **Bielefeld, E.C.** (2022). Auditory Effects of Antiretroviral Exposure During Pregnancy and Breastfeeding. Poster presentation at the 2022 Midwinter Meeting of the Association for Research in Otolaryngology, San Jose, CA.
- Baird, M.C., Bey, K., Pineda, R.J., Schwartz, M.K., Likhite, S.B., Lindsay, R.M., DiStefano, P.S., Xie, J., Colle, M-A., **Bielefeld, E.**, Bianchi, L., Meyer, K. (2020). AAV Gene Therapy for noise induced hearing loss using cerebrospinal fluid as route of delivery. Poster presentation at the 1st International Electronic Conference on Brain Sciences.
- Bielefeld, E.**, DeBacker, J.R. (2019). Modeling the influence of anti-retroviral drugs on auditory development and kanamycin ototoxicity. Presentation at the 2019 American Speech-Language-Hearing Association Convention, Orlando, FL.
- Bielefeld, E.**, Bean, A., Harnish, S., Chapman, B. (2019). Navigating a path to and through an academic career. Presentation at the 2019 American Speech-Language-Hearing Association Convention, Orlando, FL.
- DeBacker, J.R., Harrison, R.T., **Bielefeld, E.C.** (2018). Interactions of kanamycin, zidovudine, and noise in the C57 mouse. Poster presentation at the World Congress of Audiology, Vancouver, BC, CA.
- Bielefeld, E.C.** (2017). Exploring new approaches to reduce cisplatin ototoxicity. Podium presentation at the Inner Ear Biology Workshop, Hannover, Germany.
- Harrison, R.T., Klyn, N.M., **Bielefeld, E.C.** (2017). Schroeder-phase complex masking effects on the auditory brainstem response of chinchillas. Poster presentation at the fortieth annual midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.
- Ellawadi, A.B., Walker, E., **Bielefeld, E.**, Stiles, D. (2016). Time Management Strategies for Students, Speech-Language Pathologists & Audiologists. Presentation at the 2016 American Speech-Language-Hearing Association Convention, Philadelphia, PA.
- Bielefeld, E.C.** (2016). Endoplasmic reticulum stress as a contributor to acquired sensorineural hearing losses. Podium presentation at the World Congress of Audiology, Vancouver, BC, CA.
- Bielefeld, E.C.**, Harrison, R.T., DeBacker, J.R., Jamsek, I. (2016). Hearing sensitivity and susceptibility to hearing loss in CHOP knockout mice. Poster presentation at the thirty-ninth annual midwinter meeting of the Association for Research in Otolaryngology, San Diego, CA.
- Bielefeld, E.**, Meinke, D. (2015). Unraveling the mystery of cell death from hazardous noise. Workshop at the National Hearing Conservation Association annual conference in New Orleans, LA.

Bielefeld, E. (2014). Src protein tyrosine kinase inhibitors: from cancer to the cochlea. Learning Module lecture presentation at the twenty-sixth annual convention and expo of the American Academy of Audiology, Orlando, FL. Abstract number LM164.

- Presentation was also recorded for use as an online eAudiology on demand CEU seminar offered by AAA.

Bielefeld, E.C., Roup C.M. (2013). Supra-threshold measures of the auditory system for the geriatric patient population. Learning Module lecture presentation at the twenty-fifth annual convention and expo of the American Academy of Audiology, Anaheim, CA. Abstract number LM116.

Kobel, M.J., **Bielefeld, E.C.** (2013). Noise-induced changes in electrocochleography in the Fischer 344/NHsd rat. Poster presentation at the twenty-fifth annual convention and expo of the American Academy of Audiology, Anaheim, CA.

Bielefeld, E.C. (2013). Cisplatin-induced influences on age-related changes in auditory physiology in the Fischer 344/NHsd rat. Podium presentation at the thirty-sixth annual midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.

Bielefeld, E.C., Hoglund, E.M., Feth, L.L. (2012). Changes In Forward Masking Of The ABR Induced By Noise Exposure. Poster presentation at the 2012 Audiology Research Conference, Boston MA.

Bielefeld, E.C., Hoglund, E.M., Feth, L.L. (2012). Noise-induced changes forward masking growth functions of the rat auditory brainstem response (ABR). Poster presentation at the thirty-fifth annual midwinter meeting of the Association for Research in Otolaryngology, San Diego, CA.

Bielefeld, E. (2011). The influence of noise exposure on age-related hearing loss. Learning Module lecture presentation at the twenty-third annual convention and expo of the American Academy of Audiology, Chicago, IL. Abstract number LM164.

Bielefeld, E.C. (2010). Prevention of noise-induced hearing loss with an inhibitor of NADPH oxidase. Poster presentation at the thirty-third annual midwinter meeting of the Association for Research in Otolaryngology, Anaheim, CA.

Bielefeld, E., Chen, G.D., Li, M., Tanaka, C., Coling, D., and Henderson, D. (2008). Intervention strategies for arresting and treating age-related hearing loss (ARHL) in the Fischer 344/NHsd rat. Podium presentation at the 45th Inner Ear Biology Workshop, Ferrara, Italy.

Bielefeld, E., and Henderson, D. (2008). Using Animal Models to Better Understand Human Presbycusis. Learning Module lecture presentation at the twentieth annual convention and expo of the American Academy of Audiology, Charlotte, NC. Abstract number LM303.

- Bielefeld, E.C.**, Coling, D., Chen, G.D., Li, M.N., Tanaka, C., and Henderson, D. (2008). Age-related changes in the auditory physiology of the Fischer 344 rat. Poster presentation at the thirty-first annual midwinter meeting of the Association for Research in Otolaryngology, Phoenix, AZ.
- Fetoni, A.R., Chen, G.D., **Bielefeld, E.C.**, and Henderson, D. (2008). A Src inhibitor prevents cisplatin-induced hearing loss. Poster presentation at the thirty-first annual midwinter meeting of the Association for Research in Otolaryngology, Phoenix, AZ.
- Li, M.N., Chen, G.D., Tanaka, C., **Bielefeld, E.C.**, and Henderson, D. (2008). Ototoxic effects of styrene exposure during gestation and lactation in rats. Poster presentation at the thirty-first annual midwinter meeting of the Association for Research in Otolaryngology, Phoenix, AZ.
- Chen, G.D., Li, M.N., Tanaka, C., **Bielefeld, E.C.**, Hu, B.H., Kermany, M., Salvi, R.J., and Henderson, D. (2008). Reduction of OHC motor protein (prestin) in aged rats. Poster presentation at the thirty-first annual midwinter meeting of the Association for Research in Otolaryngology, Phoenix, AZ.
- Bielefeld, E.**, Coling, D., Gambino, A., Hu, B.H., & Henderson, D. (2006). Oxidative stress and age-related hearing loss. Poster presentation at the twenty-ninth annual midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.
- Bielefeld, E.**, & Henderson, D. (2005). Superior cervical ganglion ablation influences recovery of cochlear function after noise exposure. Poster presentation at the twenty-eighth annual midwinter meeting of the Association for Research in Otolaryngology, New Orleans, LA.
- Bielefeld, E.**, and Henderson D. (2004). Changes in chinchilla ABR and sensitivity to noise after unilateral ablation of the superior cervical ganglion. Poster presentation at the twenty-seventh annual midwinter meeting of the Association for Research in Otolaryngology, Daytona Beach, FL. Abstract number 606.
- Bielefeld, E.**, Hu, B., Zheng, X.Y., Carney, K., Nicotera, T., and Henderson, D., (2003). Threshold shift induced by paraquat-generated superoxide radicals. Poster presentation at the twenty-sixth annual midwinter meeting of the Association for Research in Otolaryngology, Daytona Beach, FL. Abstract number 995.
- Henderson, D., Carney, K., and **Bielefeld, E.** (2002). New Perspectives on Noise-induced Hearing Loss. Instructional Course lecture presentation at the fourteenth annual convention and expo of the American Academy of Audiology, Philadelphia, PA. Abstract number IC601.
- Bielefeld, E.**, Zheng, X., and Henderson, D. (2002). Increased resistance to noise after unilateral ablation of the superior cervical ganglion. Poster presentation at the twenty-fifth annual

midwinter meeting of the Association for Research in Otolaryngology, St. Petersburg, FL. Abstract number 865.

Research Funding

Completed Funding

The Ohio State University President's Research Excellence Accelerator award
Novel gene therapy to prevent or reverse inner ear damage from noise and ototoxic chemotherapy

Role: PI

Co-PIs: Jerusha Naidoo and Yin Ren

Total direct costs: 47,238

The Ohio State University Addiction Innovation Initiative seed grant

Exploring the Pathology of Sensorineural Hearing Loss from Methadone Treatment in Mice

Role: PI

Total direct costs: 49,102

Duration: 9/21-8/23

STTR from NIDCD

Developing a Nutraceutical Product against Ototoxicity

Role: Site PI

PI: Jianxin Bao, Gateway Biotechnology

Dates: 12/2018-11/2020

Total direct costs: 28,770

Total indirect costs: 16,111

Duration: 12 months

ASH Foundation New Century Scholars Research grant

Identifying an interaction between kanamycin, anti-retroviral medications, and noise exposure on hearing loss

Role: PI

Dates: 11/2017-6/2019

Direct Costs: 25,000

STTR from NIDCD

Flunarizine to prevent cisplatin ototoxicity

Role: Site PI

PI: Jianxin Bao, Gateway Biotechnology

Total direct costs: 43,490

Total indirect costs: 23,920

Duration: 6 months

Fully funded contract with Gateway Biotechnology, Inc.

Pre-clinical testing of drugs for cisplatin-induced hearing loss

Role: PI
Total direct costs: 7,900
Total indirect costs: 1,580
Duration: 4 months

Seed grant from the American Cancer Society Institutional Research Grant to Ohio State University Comprehensive Cancer Center
Endoplasmic reticulum stress and the unfolded protein response in cisplatin ototoxicity
Role: PI
Total direct costs: 24,228
Duration 1 year

Sub-contract with Dr. Jianxin Bao and Northeast Ohio Medical University
R33DC010489 NIDCD 12/01/2009-6/31/2015
Development of a drug therapy to ameliorate permanent hearing loss
Role: Site PI
Total direct costs: 11,369
Total indirect costs: 1,478
Duration: 5/2014/12/2014

Capita Foundation Auditory Research Grant
Cochlear Hair Cell Regeneration using Adipose Stem Cells in NIHL
Role: Collaborator
PI: Jason Beyea, OSU department of Otolaryngology
Percent effort: 5%
Total costs: 8,400
Duration: 1/2015-12/2105

Fully funded contract with AstraZeneca Pharmaceuticals, LP
Src inhibition by AZD0530 for cisplatin-induced ototoxicity
Role: PI
Total direct costs: 28,400
Total indirect costs: 15,194
Duration: 11/2013-9/2014

Office of Naval Research
Spectrotemporal Integration and NIHL: Development of a rapid assessment tool
Role: Co-I
PI: Feth, L.L.
Duration: 6/2009-5/2012

American Academy of Audiology
Prevention of noise-induced hearing with blockade of NADPH oxidase
New Investigator Research Award
Role: PI
Duration: 5/1/09-4/30/10

Grant consulting positions

R41 AT008922

NIH/NCCIH

Preclinical testing of tetrandrine against noise-induced hearing loss

The goal of this project is to repurpose tetrandrine against noise-induced hearing loss.

Duration: 5/2016-4/2017