

# CURRICULUM VITAE

Beate Peter, Ph.D., CCC-SLP

## **Associate Professor**

Speech and Hearing Science  
Arizona State University  
975 S. Myrtle Ave.  
P.O Box 870102  
Tempe, AZ 85287  
[Beate.Peter@asu.edu](mailto:Beate.Peter@asu.edu)

## **Adjunct Faculty**

Dpt. of Communication Sciences and Disorders  
St. Louis University, St. Louis, MS

---

## **Websites:**

<https://iresearch.asu.edu/profile/2432764>,  
<https://sites.google.com/a/asu.edu/peterspeechlanguagegenetics/home>

## **EDUCATION**

### **CLINICAL LINGUISTICS**

#### **Ph.D., Speech and Hearing Sciences**

University of Washington  
Mentor: Carol Stoel-Gammon, Ph.D.  
September 2001 – June 2006

#### **Certificate of Clinical Competence, Speech-Language Pathology**

American Speech-Language-Hearing Association, June 2006

#### **M.S., Speech-Language Pathology**

University of Washington, Seattle, August 2001

#### **B.S., Speech and Hearing Sciences**

University of Washington, Seattle, August 1998

### **MEDICAL GENETICS, NEUROSCIENCE**

#### **Postdoctoral Research Trainee**

University of Washington Div. of Medical Genetics  
Mentor: Wendy Raskind, M.D., Ph.D.  
October 2007 – September 2010

#### **Graduate Certificate in Statistical Genetics**

Dpt. of Biostatistics, University of Washington  
May 2010. Five graduate courses in genome sciences and biostatistics, StatGen seminar, capstone project. Prerequisites in genetics, genomics, biochemistry, and probability. Faculty advisor: Ellen Wijsman, Ph.D.

#### **Training in cortical electrophysiology,**

University of Washington, January 2008 – June 2009, 2016

## **ACADEMIC APPOINTMENTS**

08/2020 – pres.	Associate Professor, College of Health Solutions, Arizona State University
08/2014 – 08/2020	Assistant Professor, Dpt. of Speech & Hearing Science, Arizona State University
09/2014 – pres.	Adjunct Assistant Professor, Dpt. of Communication Sciences and Disorders, Saint Louis University
08/2014 – 06/2016	Affiliate Assistant Professor, Dpt. of Speech & Hearing Sciences, University of Washington
02/2012 – 08/2014	Research Assistant Professor, Dpt. of Speech & Hearing Sciences, University of Washington
04/2011 – 02/2012	Acting Assistant Professor, Dpt. of Speech & Hearing Sciences, University of Washington
10/2007 – 09/2010	Postdoctoral Research Trainee, NIH institutional training grant to the Dpt. of Speech and Hearing Sciences, University of Washington. Placed in the Division of Medical Genetics.
09/2003 – 06/2005	Predoctoral Teaching/Research Associate, Dpt. of Speech and Hearing Sciences, University of Washington.
09/2001 – 09/2003	Predoctoral Research Trainee, NIH institutional training grant, Dpt. of Speech and Hearing Sciences, University of Washington.

## PROFESSIONAL EXPERIENCE

- 10/2010 – 08/2011 Learning specialist, The Learning and Language Clinic, Seattle. Part-time.  
 08/2005 – 06/2009 Speech-language pathologist, Shoreline School District, Shoreline (WA). Academic leave 2007 - 2008; part-time 2008 - 2009. Elementary and high schools.  
 08/2001 – 09/2001 Speech-language pathologist, Seattle Children's. Part-time substitute.

## CERTIFICATES AND LICENSURE

- 2010 Graduate Certificate in Statistical Genetics, Dpt. of Biostatistics, University of Washington  
 2010 – pres. Speech-Language Pathology License, Washington State Dpt. of Health  
 2006 – pres. Certificate of Clinical Competence, American Speech-Language-Hearing Association  
 2005 - 2009 Educational Staff Associate, Washington State Office of the Superintendent of Public Instruction

## RESEARCH INTERESTS

- Identify genetic etiologies of disorders of spoken and written language
- Elucidate brain-based endophenotypes of disorders of spoken and written language
- Discover gene-brain-phenotype pathways
- Translate knowledge of genetics into preventative and personalized intervention approaches (“Precision Medicine”), including earliest interventions in infants at genetic and medical risk (Babble Boot Camp®)
- Behavior genomics

## PUBLICATIONS

### Google Scholar

h-Index 18, i10-Index 30, 1,238 citations

**ORCID Number:** 0000-0002-9083-8522

### Complete List of Published Work in “My Bibliography”:

<https://www.ncbi.nlm.nih.gov/myncbi/beate.peter.1/bibliography/public/>

Note: Publications in genetics of communication disorders are highly specialized. Worldwide, few researchers are engaged in this interdisciplinary field. Publishing such papers is a lengthy process.

**Document key:** J = Peer-reviewed journal article, JR = Peer-reviewed journal article in revision, JS = Peer-reviewed journal article submitted, JP = Peer-reviewed journal article in preparation, PO = Other peer reviewed activity, NPR = Article not peer reviewed, CP = Conference proceeding, CA = Conference abstract, B = Book, BC = Book chapter, IT = Invited Talk, W = Webinar, TW = Talk or workshop, R = Recognition in local and national media, SJR = SCImago Journal Rank indicator (<http://www.scimagojr.com/>) for 2017 unless otherwise noted.

**Author key:** Mentored co-authors are indicated with \* (primary mentee) or ^ (project mentee), 4 symbols = postdoc, 3 = Ph.D. student, 2 = master's student, 1 = undergraduate student, <sup>H</sup> = exceptional high school student. First author = Person who completed the bulk of the experiments and wrote the document draft; + = Lab PI and project mentor who is not first author.

### Peer-Reviewed Articles: Published

- J42 **Peter, B.**, Finestack, L., Thompson, L., Bruce, L., Scherer, N., Stoel-Gammon, C., Davis, J., Potter, N., VanDam, M., Eng, L. & Buckley, S. (in press) Babble Boot Camp for infants with Down syndrome: Piloting a proactive, caregiver-led intervention designed to boost earliest speech and language skills. *American Journal of Speech-Language Pathology*
- J41 <sup>^^^</sup>Sanabria, A., Restrepo, M. A., **Peter, B.**, Valentin, A., & Glenberg, A. (2023, Aug 2). Relationships Among Motor, First, and Second Language Skills Among Bilingual Children With Language Disorders. *J Speech Lang Hear Res*, 1-14.  
[https://doi.org/10.1044/2023\\_JSLHR-23-00043](https://doi.org/10.1044/2023_JSLHR-23-00043)

- J40 Armstrong-Heimsoth, A., <sup>^^^</sup>Monroe, A., <sup>^^^</sup>Cupp, C., Potter, N., VanDam, M., & **+Peter, B.** (2023). Motor milestones: Sensory motor trends of young children with classic galactosemia. *Journal of Occupational Therapy, Schools, and Early Intervention*, 17(2), 216-227. <https://doi.org/10.1080/19411243.2023.2192206>
- J39 Potter, N. L., VanDam, M., Bruce, L., Davis, J., Eng, L., Finestack, L., <sup>^^</sup>Heinlen, V., Scherer, N., <sup>^^</sup>Schrock, C., Seltzer, R., Stoel-Gammon, C., Thompson, L., & **+Peter, B.** (2023, May 26). Virtual Post-Intervention Speech and Language Assessment of Toddler and Preschool Participants in Babble Boot Camp. *J Speech Lang Hear Res*, 1-13. [https://doi.org/10.1044/2023\\_JSLHR-22-00687](https://doi.org/10.1044/2023_JSLHR-22-00687)
- J38 **Peter, B.**, Bruce, L., Finestack, L., Dinu, V., Wilson, M., Klein-Seetharaman, J., Lewis, C. R., Braden, B. B., Tang, Y. Y., Scherer, N., VanDam, M., & Potter, N. (2023, Jul 10). Precision Medicine as a New Frontier in Speech-Language Pathology: How Applying Insights From Behavior Genomics Can Improve Outcomes in Communication Disorders. *Am J Speech Lang Pathol*, 32(4), 1397-1412. [https://doi.org/10.1044/2023\\_AJSLP-22-00205](https://doi.org/10.1044/2023_AJSLP-22-00205)
- J37 **Peter, B.** (2023, Jan). A case with cardiac, skeletal, speech, and motor traits narrows the subtelomeric 19p13.3 microdeletion region to 46 kb. *Am J Med Genet A*, 191(1), 120-129. <https://doi.org/10.1002/ajmg.a.62998>
- J36. Finestack, L. H., Potter, N., VanDam, M., Davis, J., Bruce, L., Scherer, N., Eng, L., & **+Peter, B.** (2022, Oct 14). Feasibility of a Proactive Parent-Implemented Communication Intervention Delivered via Telepractice for Children With Classic Galactosemia. *Am J Speech Lang Pathol*, 1-12. PMID: 36251874 [https://doi.org/10.1044/2022\\_AJSLP-22-00107](https://doi.org/10.1044/2022_AJSLP-22-00107)
- J35. Bruce, L. & **+Peter, B.** (2022). Three children with different de novo BCL11A variants and diverse developmental phenotypes, but shared global motor discoordination and apraxic speech: Evidence for a functional gene network influencing the developing cerebellum and motor and auditory cortices. *American Journal of Medical Genetics Part A*. <https://doi.org/10.1002/ajmg.a.62904>
- J34. **Peter, B.**, Davis, J., Finestack, L., Stoel-Gammon, C., VanDam, M., Bruce, L., <sup>\*\*\*</sup>Kim, Y., Eng, L., <sup>\*\*</sup>Cotter, S., <sup>\*\*</sup>Landis, E., <sup>\*\*\*</sup>Beams, S., Scherer, N., Knerr, I., <sup>^^</sup>Williams, D., <sup>^^</sup>Schrock, C., Potter, N. (2022). Translating principles of precision medicine into speech-language pathology: Clinical trial of a proactive speech and language intervention for infants with classic galactosemia. Invited paper. *Human Genetics and Genomics Advances*, 3(3). <https://doi.org/10.1016/j.xhgg.2022.100119>
- J33. Whisner, C., Brown, J.C., Larson, D.M., Alonso Rodriguez, L., **Peter, B.**, Reifsneider, E., Bever, J., Liu, L., Raczynski, E., Rosales Chavez, J.B., Ojinaka, C., Berkel, C., Bruening, M. (2022). A New American University model for training the future MCH workforce through a translational research team. *Maternal and Child Health Journal* 10. doi: 10.1007/s10995-021-03349-3, PMID: 3506007, PMCID: PMC8775150
- J32. Morton, C. C., Marazita, M. L., Peter, B., Rice, M. L., Kraft, S. J., Barkmeier-Kraemer, J., Balaban, C., Phillips, M., Schoden, J., Maiese, D., Hendershot, T., & Hamilton, C. M. (2022, Jan). Tools for standardized data collection: Speech, Language, and Hearing measurement protocols in the PhenX Toolkit. *Ann Hum Genet*, 86(1), 45-51. <https://doi.org/10.1111/ahg.12447>
- J31. **Peter, B.**, Davis, J., <sup>\*</sup>Cotter, S., <sup>\*</sup>Belter, A., <sup>\*\*</sup>Williams, E., <sup>\*</sup>Stumpf, M., Bruce, L., <sup>\*</sup>Eng, L., Kim, Y., Finestack, L., Stoel-Gammon, C., <sup>^</sup>Williams, D., Scherer, N., VanDam, M., & Potter, N. (2021) Toward Preventing Speech and Language Disorders of Known Genetic Origin: First Post-Intervention Results of Babble Boot Camp in Children With Classic Galactosemia. *Am J Speech Lang Pathol*, 30(6), 2616-2634. [https://doi.org/10.1044/2021\\_AJSLP-21-00098](https://doi.org/10.1044/2021_AJSLP-21-00098)
- J30. **Peter, B.**, Scherer, N., Liang, W. S., Pophal, S., <sup>^^^</sup>Nielsen, C., & Grebe, T. A. (2021). A phenotypically diverse family with an atypical 22q11.2 deletion due to an unbalanced 18q23;22q11.2 translocation. *Am J Med Genet A*. <https://doi.org/10.1002/ajmg.a.62121>
- J29. **Peter, B.**, <sup>\*\*\*</sup>Bruce, L., <sup>\*\*\*</sup>Raaz, C., <sup>\*\*</sup>Williams, E., <sup>\*\*</sup>Pfeiffer, A. & Rogalsky, C. (2021). Comparing global motor characteristics in children and adults with childhood apraxia of speech to a cerebellar stroke patient: Evidence for the cerebellar hypothesis in a developmental motor speech disorder *Clin Linguist Phon*, 1-25, DOI: 10.1080/02699206.2020.1861103, <http://dx.doi.org/10.1080/02699206.2020.1861103>.
- J28. **Peter, B.**, Potter, N., Davis, J., <sup>\*</sup>Donenfeld-Peled, I., Finestack, L., Stoel-Gammon, C., <sup>^^^</sup>Lien, K., <sup>\*\*\*</sup>Bruce, L., <sup>\*\*\*</sup>Vose, C., <sup>^</sup>Eng, L., <sup>\*\*</sup>Yokoyama, H., Olds, D., & VanDam, M.

- (2020). Toward a paradigm shift from deficit-based to proactive speech and language treatment: Randomized pilot trial of the Babble Boot Camp in infants with classic galactosemia. *F1000*, 11 March 2019, doi.org/10.12688/f1000research.18062.  
<https://f1000research.com/articles/8-271>
- SJR = 0.93. Tier 1 journal in Medicine (miscellaneous); Pharmacology, Toxicology and Pharmaceutics (miscellaneous); Tier 2 journal in Biochemistry, Genetics and Molecular Biology (miscellaneous); Immunology and Microbiology (miscellaneous).
- J27. **Peter, B.**, \*Albert, A., & Gray, S. (2020). Spelling errors reveal underlying sequential and spatial processing deficits in adults with dyslexia. *Clin Linguist Phon*, 1-30.  
doi:10.1080/02699206.2020.1780322  
SJR (2018) = 0.52, Tier 1 journal in Language and Linguistics, Tier 1 journal in Linguistics and Language.
- J26. **Peter, B.**, \*Albert, A., Panagiotides, H. & Gray, S. (2020). Sequential and spatial letter reversals in adults with dyslexia during a word pair comparison task: Demystifying the “was saw” and “db” myths. *Clinical Linguistics & Phonetics*. 1-28.  
doi:10.1080/02699206.2019.1705916  
SJR (2018) = 0.52, Tier 1 journal in Language and Linguistics, Tier 1 journal in Linguistics and Language.
- J25. **Peter, B.**, ^McCollum, H., Daliri, A., & Panagiotides, H. (2019). Auditory gating in adults with dyslexia: An ERP account of diminished rapid neural adaptation. *Clin Neurophysiol*, 130(11), 2182-2192. doi:10.1016/j.clinph.2019.07.028  
SJR = 1.63. Tier 1 journal in Neurology, Neurology (clinical), Neurology (clinical), Physiology (medical), Sensory Systems.
- J24. **Peter, B.**, \*\*\*Vose, C., \*\*\* Bruce, L., & Ingram, D. (2019). Starting to talk at age 10 years: Lessons about speech sound development in a case with severe but remediated motor disease of genetic etiology. *American Journal of Speech-Language Pathology* 28(3), 1029-1038  
SJR = 0.78. Tier 1 journal in Linguistics and Language.
- J23. **Peter, B.**, Dinu, V., Liu, L., Huentelman, M., Naymik, M., \*\*\*\*Lancaster, H., \*\*\*Vose, C., & +Schrauwen, I. (2019, Apr 4). Exome Sequencing of Two Siblings with Sporadic Autism Spectrum Disorder and Severe Speech Sound Disorder Suggests Pleiotropic and Complex Effects. *Behavior Genetics*. DOI: 10.1007/s10519-019-09957-8, PMID: 30949922 <https://doi.org/10.1007/s10519-019-09957-8>  
SJR = 1.11. Tier 1 journal in Agricultural and Biological Sciences: Ecology, Evolution, Behavior and Systematics.
- J22. **Peter, B.**, Dougherty, M.J., Reed, E.K., Edelman, E. & Hanson, K. (2019). Perceived gaps in genetics training among audiologists and speech-language pathologists: Lessons from a national survey. *American Journal of Speech-Language Pathology* 28(2), 408-423.  
SJR = 0.68. Tier 1 journal in Linguistics and Language.
- J21. \*\*\*Bruce, L., Lynde, S, Weinhold, J. & **Peter, B.** (2018). A team approach to RTI for speech sound errors in the school setting. Invited manuscript, Perspectives, American Speech-Language-Hearing Association, SIG 16, Vol. 3 (Part 3), 110-119.
- J20. Berisha, V., Gilton, D., Baxter, L.C., Corman, S.R., Blais, C., Brewer, G., Ruston, S., Hunter Ball, B., Wingert, K.M., **Peter, B.**, Rogalsky, C. (2018). Structural neural predictors of Farsi-English bilingualism. *Brain & Language*. DOI: 10.1016/j.bandl.2018.04.005.  
SJR = 1.47. Tier 1 journal in Experimental and Cognitive Psychology; Language and Linguistics; Linguistics and Language; Speech and Hearing.
- J19. **Peter, B.**, \*\*\*\*Lancaster, H., \*\*\*Vose, C., Stoel-Gammon, C., and ^Middleton, K. (2017). Sequential processing deficit as a shared persisting biomarker in dyslexia and childhood apraxia of speech. *Clinical Linguistics & Phonetics*.  
DOI:10.1080/02699206.2017.1375560.  
SJR = 0.66. Tier 1 journal in Language and Linguistics; Linguistics and Language.
- J18. **Peter, B.** (2017). The role of short-term memory impairment in nonword repetition, real word repetition, and nonword decoding: A case study. *Clinical Linguistics & Phonetics*.  
DOI:10.1080/02699206.2017.1375561.  
SJR = 0.66. Tier 1 journal in Language and Linguistics; Linguistics and Language.
- J17. **Peter, B.**, \*\*\*\*Lancaster, H., \*\*\*Vose, C., ^^Fares, A., Schrauwen, I., & +Huentelman, M. (2017). Two unrelated children with overlapping 6q25.3 deletions, motor speech disorders, and language delays. *American Journal of Medical Genetics Part A*. 173(10), 2659-2669. <https://doi.org/10.1002/ajmg.a.38385>

- SJR = 1.1, Tier 2 journal in Genetics; Genetics (clinical).
- J16. **Peter, B.**, Wijsman, E., Nato, A., University of Washington Centers for Mendelian Genomics, Matsushita, M., Chapman, K., Stanaway, I., Wolff, J., Oda, K. & +Raskind, W. (2016). Genetic candidate variants in two multigenerational families with childhood apraxia of speech. *PLoS One* 11(4) e0153864, doi:10.1371/journal.pone.0153864, <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0153864>  
SJR = 1.16. Tier 1 journal in Agricultural and Biological Sciences (miscellaneous); Biochemistry, Genetics and Molecular Biology (miscellaneous); Medicine (miscellaneous).
- J15. **Peter B.**, \*Foster B, Haas H, \*Middleton K, \*McKibben K. 2015. Direct and octave-shifted pitch matching during nonword imitations in men, women, and children. *Journal of Voice* 29(2):260 e21-30.  
SJR = 0.73. Tier 1 journal in LPN, LVN, Tier 2 journal in Otorhynolaryngology; Speech and Hearing.
- J14. **Peter, B.**, Matsushita, M., Oda, K., & +Raskind, W.H. (2014). *De novo* microdeletion of *BCL11A* is associated with severe speech sound disorder. *American Journal of Medical Genetics Part A*. wileyonlinelibrary.com, DOI 10.1002/ajmg.a.36599. PMID: 24810580.  
SJR = 1.1, Tier 2 journal in Genetics; Genetics (clinical).
- J13. Raskind, W.H., **Peter, B.**, Richards, T., Eckert, M., & Berninger, V. (2013). The genetics of reading disability: From phenotypes to candidate genes. *Frontiers in Psychology*, Article 601. doi: 10.3389/fpsyg.2012.00601. PMID: 23308072. Also published as an e-book, L. Kalbfleisch (Ed.), Educational neuroscience, constructivist learning, and the mediation of learning and creativity in the 21<sup>st</sup> century. *Frontiers Research Topics*, June 2015, pp. 96-116.  
SJR = 1.04. Tier 1 journal in Psychology (miscellaneous).
- J12. **Peter, B.**, \*Button, L.A., Chapman, K., Stoel-Gammon, C., & Raskind, W.H. (2013). Deficits in sequential processing manifest in motor and linguistic tasks in a multigenerational family with childhood apraxia of speech. *Clinical Linguistics & Phonetics*, 22(5), 226-234. DOI: 10.3109/02699206.2012.736011. PMID: 23339324 PMC3875160  
SJR = 0.66. Tier 1 journal in Language and Linguistics; Linguistics and Language.
- J11. \*Button, L.A., **Peter, B.**, Stoel-Gammon, C., & +Raskind, W.H. (2013). Associations among measures of sequential processing in motor and linguistics tasks in adults with and without a family history of childhood apraxia of speech: a replication study. *Clinical Linguistics & Phonetics* 27(3):192-212. doi: 10.3109/02699206.2012.744097. PubMed PMID: 23339292; PubMed Central PMCID: PMC3875157.  
SJR = 0.66. Tier 1 journal in Language and Linguistics, Linguistics and Language.
- J10. **Peter, B.**, Matsushita, M., & +Raskind, W.H. (2012). Motor sequencing deficit as an endophenotype of speech sound disorder: A genome-wide linkage analysis in a multigenerational family. *Psychiatric Genetics* 22(5), 226-234. PMID: 22517379.  
SJR = 0.83. Tier 2 journal in Psychiatry and Mental Health.
- J9. **Peter, B.** (2012). Oral and hand movement speeds are associated with language ability in children with speech sound disorder. *Journal of Psycholinguistic Research*, 41(6), 455-474. DOI: 10.1007/s10936-012-9199-1. PMID: 22411590. SJR = 0.39. Tier 1 journal in Language and Linguistics; Linguistics and Language.
- J8. **Peter, B.**, & +Raskind, W.H. (2011). Evidence for a familial speech sound disorder subtype in a multigenerational family study of oral and hand motor sequencing ability. *Topics in Language Disorders*, 31(2), 145-167. PMID: 21909176.  
SJR = 0.44. Tier 1 journal in Language and Linguistics; Linguistics and Language.
- J7. **Peter, B.**, Matsushita, M., & Raskind, W.H. (2011). Global processing speed in children with low reading ability and in children and adults with typical reading ability: exploratory factor analytic models. *Journal of Speech, Language, and Hearing Research*, 54(3), 885-899. PMID: 21081672, PMCID: PMC3874392. DOI: 10.1044/1092-4388(2010/10-0135)  
SJR = 1. Tier 1 journal in Language and Linguistics; Linguistics and Language; Medicine (miscellaneous); Speech and Hearing.
- J6. **Peter B.**, Raskind WH, Matsushita M, Lisowski M, Vu T, Berninger VW, Wijsman EM, +Brkanac Z. (2011). Replication of *CNTNAP2* association with nonword repetition and support for *FOXP2* association with timed reading and motor activities in a dyslexia family sample. *Journal of Neurodevelopmental Disorders*, 3(1):39-49. PMID: 21484596. PMCID: PMC3163991. DOI: 10.1007/s11689-010-9065-0  
SJR = 1.71. Tier 1 journal in Neurology (clinical); Pathology and Forensic Medicine; Pediatrics, Perinatology and Child Health; Tier 2 journal in Cognitive Neuroscience.

- J5. **Peter, B.**, \*Larkin, T. & Stoel-Gammon, C. (2009). Octave-shifted pitch matching: The effects of lexical stress and speech sound disorder. *Journal of the Acoustical Society of America*, 126(4):1663-1666. PMID: 19813781.  
SJR = 0.7. Tier 1 journal in Acoustics and Ultrasonics; Tier 2 journal in Arts and Humanities (miscellaneous).
- J4. Raskind WH, Matsushita M, **Peter B**, Biberston J, Wolff J, Lipe H, Burbank R, Bird TD. 2008. Familial dyskinesia and facial myokymia (FDFM): Follow-up of a large family and linkage to chromosome 3p21-3q21. *American Journal of Medical Genetics Part B*. 150B(4):570-574. PMID:18980218. PMCID: PMC3116722.  
SJR = 1.43. Tier 1 journal in Psychiatry and Mental Health; Tier 2 journal in Cellular and Molecular Neuroscience; Genetics (clinical).
- J3. **Peter, B.**, & +Stoel-Gammon, C. (2008). Central timing deficits in children with primary speech disorders. *Clinical Linguistics & Phonetics*, 22(3), 171-198. PMID: 18307084.  
SJR = 0.66. Tier 1 journal in Language and Linguistics, Linguistics and Language.
- J2. **Peter, B.**, & +Stoel-Gammon, C. (2005). Timing errors in two children with suspected childhood apraxia of speech (sCAS) during speech and music-related tasks. *Clinical Linguistics & Phonetics*, 19(2), 67-87. PMID: 15704499.  
SJR = 0.66. Tier 1 journal in Language and Linguistics, Linguistics and Language.
- J1. **Peter, B.**, & +Stoel-Gammon, C. (2004). Subsyllabic component durations in three children with suspected childhood apraxia of speech, two children with typical development, one child with phonologic delay, and one adult. *Speechpathology.com*, 25 October 2004, [http://speechpathology.com/articles/arc\\_disp.asp?id=238](http://speechpathology.com/articles/arc_disp.asp?id=238)

#### **Peer-Reviewed Articles: In Revision**

- JR1. Higgins, C.M., Vishwanath, S.H., McCarthy, F.M., Gordon, M.L., Peter, B. & Miller, J.E. Normative aging results in degradation of gene networks in a zebra finch basal ganglia nucleus dedicated to vocal behavior. *Neurobiology of Aging*

#### **Peer-Reviewed Articles: Submitted**

- S1. Raaz, C., Bruce, L., Ganapathiraju, M., Klein-Seetharaman, J., Liu, I., Dinu, V. & **Peter, B.** Exome sequencing and functional gene analysis in three *de novo* cases with childhood apraxia of speech: Genetic heterogeneity converging on functional gene networks implicated in autism spectrum disorder and the early developing cerebellum

#### **Other Peer-Reviewed Activities**

- JO1 Guest editor of special issue: Research Symposium "Genetics." Facilitator and speaker. *Journal of Speech, Language, and Hearing Research*. 2025
- JO2 Guest editor of special issue: The role of sex on neurodevelopment. *Behavior Genetics*.
- JO3 Guest editor of special issue: Sequential processing in spoken and written language. *Clinical Linguistics & Phonetics*, 2019-2021.

#### **Publications Not Peer-Reviewed**

- NPR6 **Peter, B.** (2024). Friday research symposium to spotlight genetics in CSD. American Speech-Language-Hearing Association (Rockville, Maryland) Sep/Oct2024; v.29 n.5, 58-59.
- NPR5 ^Nandakumar, R., Dinu, V., Shi, X., Gu, H., \*\*\*Kim, Y., Raskind, W., **Peter, B.** First joint exome and metabolome analysis in dyslexia implicates immune system deficits and dysregulated sensory perception (2024). *BioRxiv* <https://doi.org/10.1101/2024.06.27.600448> , <https://www.biorxiv.org/content/10.1101/2024.06.27.600448v1>
- NPR4 ^Carrion, J.T., ^Nandakumar, R., Shi, X., Gu, H., \*\*\*Kim, Y., Raskind, W/. **Peter, B.** & Dinu, V. (2023). A data-fusion approach to identifying developmental dyslexia from multi-omic datasets. *bioRxiv*. <https://doi.org/10.1101/2023.02.27.530280>

- NPR3. **Peter, B.** (2021). Introduction to the Special Issue, Sequential Processing in Spoken and Written Language. *Clin Linguist Phon*, 35(4), 293-295.  
<https://doi.org/10.1080/02699206.2020.1861482>
- NPR2. **Peter, B.** (2012). The future of genetics at our doorstep. *ASHA Leader*, 18 September 2012 (Invited review).
- NPR1. **Peter, B.** (2009). Golden Apple: Carol Stoel-Gammon. *ASHA Leader*, 3 March 2009, Vol. 14 Issue 3, p47.

### **Books**

- B1. **B. Peter & A. MacLeod** (Eds) (2013). *Comprehensive perspectives on speech sound development and disorders: Pathways from linguistic theory to clinical practice*. New York: Nova Science Publishers.

### **Book Chapters**

- BC9 Buckley, S., Finestack, L., Keren-Portnoy, T., Loveall, S., **Peter, B.**, Stojanovik, V. & Thompson, L. (2024). The case for early, time-sensitive speech, language, and communication interventions for young children with Down syndrome and other intellectual and developmental disabilities. (Note: Authors are listed alphabetically, with all authors contributing equally.) In: *International Review of Research in Developmental Disabilities (IRRDD)*, Vol 67, Elsevier.
- BC8. **Peter, B.** (2023). Complex disorder traits in a three-year-old boy with a severe speech-sound disorder. In: S. Chabon & E. Cohn (Eds), *Communication disorders: A case-based approach, 2<sup>nd</sup> Ed.* Delaware: Pearson.
- BC7. **Peter, B.** (2013). Biological substrates of speech: A brief synopsis of the developing neuromuscular system. In: **B. Peter & A. MacLeod** (Eds). *Comprehensive perspectives on speech sound development and disorders: Pathways from linguistic theory to clinical practice*. New York: Nova Science Publishers.
- BC6. **Peter, B.** (2013). Subtypes of primary speech sound disorders: Theories and case studies. In: **B. Peter & A. MacLeod** (Eds). *Comprehensive perspectives on speech sound development and disorders: Pathways from linguistic theory to clinical practice*. New York: Nova Science Publishers.
- BC5. **Peter, B.** (2013). Interactions between speech sound disorder and dyslexia. In: **B. Peter & A. MacLeod** (Eds). *Comprehensive perspectives on speech sound development and disorders: Pathways from linguistic theory to clinical practice*. New York: Nova Science Publishers.
- BC4. **Peter, B.** (2013). Appendix 3: Statistical properties of standardized tests. In: **B. Peter & A. MacLeod** (Eds). *Comprehensive perspectives on speech sound development and disorders: Pathways from linguistic theory to clinical practice*. New York: Nova Science Publishers.
- BC3. **Peter, B.** (2010). New frontiers in understanding speech sound disorder: Unraveling the mysteries of genetic causes. In: A. E. Harrison (Ed), *Speech disorders: Causes, treatment and social effects*, pp. 119-137. New York: Nova Publishers. ISBN: 978-1-60876-213-2
- BC2. **Peter, B.** (2010). Complex disorder traits in a three-year-old boy with a severe speech-sound disorder. In: S. Chabon & E. Cohn (Eds), *Communication disorders: A case-based approach*, pp. 156-163. Delaware: Pearson.
- BC1. Stoel-Gammon, C., & **Peter, B.** (2008). Syllables, segments, and sequences: Phonological patterns in the words of young children acquiring American English. In: B. Davis & K. Zajdó (Eds.) *Syllable development: The Frame/Content Theory and Beyond*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

### **Conference Proceedings**

- CP1. **Peter, B.**, Stoel-Gammon, C., & Kim, D. (2008). Octave equivalence as a measure of stimulus-response similarity during nonword and sentence imitations in young children. In: *Fourth Conference on Speech Prosody - Proceedings*, S. Maduerira, C. Reis & P. Barbosa (Eds). São Paulo and Campinas: Luso-Brazilian Association of Speech Sciences, pp. 731-734.

**Selected Conference Abstracts (Presented and Accepted Posters and Talks)**

- CA76 **Peter, B.** Translating the power of precision medicine into the world of communication disorders. Research symposium seminar. American Speech-Language-Hearing Association Annual Convention, Seattle, December 5-7, 2024
- CA75 Fisher, S. & **Peter, B.** Using Genetics to Uncover the Biological Substrates of Spoken and Written Language. Research symposium seminar. American Speech-Language-Hearing Association Annual Convention, Seattle, December 5-7, 2024
- CA74 Grigorenko, E. & **Peter, B.** Can Genetics Help Identify Specific Reading Disabilities? Research symposium seminar. American Speech-Language-Hearing Association Annual Convention, Seattle, December 5-7, 2024
- CA73 Below, J., Kraft, SJ & **Peter, B.** Molecular and Neuronal Pathways Implicated by Stuttering Genetics and Their Broader Clinical Consequences. Research symposium seminar. American Speech-Language-Hearing Association Annual Convention, Seattle, December 5-7, 2024
- CA72 Lewis, B., Iyengar, S. & **Peter, B.** Update on Phenotypes and Genotypes for Studies of Speech Sound Disorders. Research symposium seminar. American Speech-Language-Hearing Association Annual Convention, Seattle, December 5-7, 2024
- CA71 \*\*\*Kim, Y., Banta, C. & **+Peter, B.** Genetic Variants and Neural Phenotypes: Exploring Shared Variants of Interest Among Neural Subgroups of Dyslexia. Poster. American Speech-Language-Hearing Association Annual Convention, Seattle, December 5-7, 2024
- CA70 ^^Wombacher, N., Scherer, N., **Peter, B.**, Baylis, A. Effects of Early Intervention on Speech and Language Outcomes in Children with 22q Deletion Syndrome. Technical session. American Speech-Language-Hearing Association Annual Convention, Seattle, December 5-7, 2024
- CA69 **Peter, B.** Leveraging Newborn Screening Toward Proactive Interventions: Babble Boot Camp. Invited Talk. The Evolution of Newborn Screening: From Conventional to Whole Genome Sequencing. ASU College of Health Solutions, Phoenix, November 8, 2024.
- CA68 Schrock, C., VanDam, M., Potter, N.L., Finestack, L., Stoel-Gammon, C., Thompson, L., Scherer, N., Loveall-Hague, S., Buckley, S., Davis, J., & **Peter, B.** (2024, August). Babble Boot Camp, a prospective language therapy for children at risk for expressive language delay. Poster presented at the *2024 Convention of the American Psychological Association*, Seattle, WA.
- CA67 **Peter, B.**, Davis, J., Buckley, S., Scherer, N., Eng, L. & Bruce, L. The importance of early intervention: What parents can do at home. National Down Syndrome Congress 52<sup>nd</sup> Annual Convention, Phoenix, AZ, July 25-28, 2024.
- CA66 Phung, T., **Peter, B.** & Wilson, M. Investigating the genetics underlying sex differences in speech and language disorders. Highlights in the Languages Conference, Radboud University, Nijmegen, Netherlands, July 8-11, 2024.
- CA65 Schrock, C., VanDam, M., Potter, N.L., Finestack, L., Stoel-Gammon, C., Thompson, L., Scherer, N., Loveall-Hague, S., Buckley, S., Davis, J., & **Peter, B.** Babble Boot Camp, a prospective language therapy for children at risk for expressive language delay. Poster presented at the *2024 Convention of the American Psychological Association*, Seattle, WA, August 8-10, 2024.
- CA64 **Peter, B.**, Davis, J., Bruce, L., Eng, L., Potter, N., VanDam, M., Thompson, L., Finestack, L., Loveall, S. & Buckley, S. Babble Boot Camp: A new proactive strategy for infants at predictable risk for speech and language challenges. Down Syndrome Research Forum, April 25-26, 2023, Down Syndrome Research Forum, Down Syndrome Education International
- CA63 **Peter, B.**, Potter, N., VanDam, M., Thompson, L., Finestack, L., Loveall, S., Davis, J., Scherer, N., Bruce, L., Eng, L. Stoel-Gammon, C. & Buckley, S. A proactive speech and language intervention: Babble Boot Camp for infants with Down syndrome. Symposium contribution. 56<sup>th</sup> Gatlinburg Conference, Kansas City, MO, April 17-19, 2024.
- CA62 **Peter, B.**, Raaz, C., Bruce, L. & \*\*\*Kim, Y. Genes implicated in disorders of spoken and written language are co-expressed in the early developing cerebellum. American Society of Human Genetics Annual Meeting, Los Angeles, October 25-29, 2023. Abstract accepted but withdrawn for personal reasons.



- CA61 Potter, N.L., ^Heinlen, V., ^Schrock, C., Eng, L., VanDam, M., Davis, J., **Peter, B.** Babble Boot Camp: Proactive Speech-Language Therapy for Babies and Toddlers. Apraxia Kids General Conference. July 9, 2022
- CA60 Potter, N.L., ^Schrock, C., ^Heinlen, V., Eng, L., VanDam, M., Davis, J., **Peter, B.** Babble Boot Camp: Virtual Proactive Speech-Language Therapy for Babies and Toddlers. Apraxia Kids Research Conference. July 5, 2022
- CA59 Elmquist, M., Finestack, L. & **Peter, B.** Improving Child Language Outcomes Through Caregiver-Mediated Communication Focused Interventions: Who, Why, and How. Seminar, Annual Convention of the American Speech-Language-Hearing Association Convention, New Orleans, November 17-19, 2022.
- CA58 \*\*Ellis, P., Scherer, N., Lien, K. & **Peter, B.** A Telepractice Parent Training Study for Facilitating Language Development in Preschool Children With Cleft Palate. Digital poster, Annual Convention of the American Speech-Language-Hearing Association Convention, New Orleans, November 17-19, 2022
- CA57 Bruce, L. & **Peter, B.** Speech and language disorders: What's genetics got to do with it? SLP Summit, online, July 25-August 15, 2022.
- CA56 Potter, N., ^Schrock, C., Eng, L., **Peter, B.**, VanDam, M., ^Heinlen, V., & Davis, J. Babble Boot Camp: Proactive speech-language intervention for babies and toddlers. Apraxia Kids National Conference, Las Vegas, NV, July 7-9, 2022.
- CA56 Armstrong-Heimsoth, A., ^^Monroe, A., ^^Cupp, C., Potter, N. VanDam, M., & **Peter, B.** Motor Milestones: An Innovative Approach to the Treatment of Classic Galactosemia. American Occupational Therapy Association Inspire 2022 Conference, San Antonio, TX, March 31, 2022.
- CA55 **Peter, B.**, Davis, J., VanDam, M., Potter, N., \*\*\*Kim, Y., Eng, L., Scherer, N., ^Williams, D., ^Schrock, C., Finestack, L., Stoel-Gammon, C., Armstrong-Heimsoth, A., ^^Monroe, A. & ^^Cupp, C. Babble Boot Camp©: Clinical trial of a proactive intervention for infants at genetic risk for speech and language disorders. Maternal Child Health Conference, College of Health Solutions, Arizona State University, April 8, 2022.
- CA54 \*Nandakumar, R., Dinu, V., Shi, X., Gu, H., \*\*\*Kim, Y., Raskind, W. & **Peter, B.** First joint exome and metabolome analysis in dyslexia implicates immune system deficits and dysregulated sensory perception. American Society of Human Genetics Virtual Meeting, October 18-22, 2021.
- CA53. **Peter, B.**, Davis, J., Finestack, L., Stoel-Gammon, C., VanDam, M., Williams, D., Scherer, N. & Potter, N. Translating precision medicine into the world of speech-language pathology: First follow-up results of the proactive Babble Boot Camp© intervention in infants with classic galactosemia. American Society of Human Genetics Virtual Meeting, October 18-22, 2021.
- CA52. **Peter, B.**, Davis, J., \*\*\*Bruce, L., Potter, N., VanDam, M., Williams, D., Finestack, L., & Stoel-Gammon, C. Babble Boot Camp for babies at risk for motor speech disorders. Proposal accepted at the Annual Convention of the American Speech-Language-Hearing Association Convention, San Diego, CA, November 19-21, 2020 (Abstract accepted but convention canceled)
- CA51. \*\*\*Raaz, C., \*Pfeiffer, A., & **Peter, B.** Measures of sequential processing across behavioral domains in children with childhood apraxia of speech. Proposal accepted at the Annual Convention of the American Speech-Language-Hearing Association Convention, San Diego, CA, November 19-21, 2020 (Abstract accepted but convention canceled). Resubmitted and re-accepted for the Annual Convention of the American Speech-Language-Hearing Association Convention, Washington DC, November 18-20, 2021.
- CA50. \*\*\*Raaz, C. & **Peter, B.** Incidental lessons about Childhood Apraxia of Speech in older children: /r/ and EEG artifacts. Proposal accepted at the Annual Convention of the American Speech-Language-Hearing Association Convention, San Diego, CA, November 19-21, 2020 (Abstract accepted but convention canceled)
- CA49. **Peter, B.** A case with a 184 kb 19p13.3 microdeletion and cardiac, skeletal, and dyspraxic speech and global motor dyspraxia narrows the genotype-phenotype association in this region. American Society of Human Genetics Meeting, San Diego, Oct. 27-31, 2020.
- CA48. Potter, N.L., Davis, J., Williams, D., \*\*\*Bruce, L., \*Eng, L., Stoel-Gammon, C., \*\*\*Lien, K., VanDam, M., \*\*\*Vose, C., & **Peter, B.** (2020). Babble Boot Camp: Can Early Intervention Prevent or Minimize Speech Disorders in Classic Galactosemia? Galactosemia Foundation Convention, Online, July 17-20, 2020.

- CA47. \*\*\*Bruce, L., Eng, L., \*Cotter, S., \*\*Yokoyama, H., \*Schur, J., \*Donenfeld-Peled, I., Potter, N., VanDam, M., Davis, J., & + **Peter, B.** Turning knowledge of a genetic cause into preventive behavioral interventions: Proactive speech and language therapy for infants with classic galactosemia continues to show signs of effectiveness. Behavior Genetics Association Annual Meeting, Online, June 25-27, 2020.
- CA46. Phillips, M., Morton, C., **Peter, B.**, Rice, M., Marazita, M., Konkle, B., Pipe, S., Bosquet Enlow, M., Entwisle, B., Fernandez, A., Schoden, J., Cox, L., Beverly, J., Huggins, W., Gridley, L., Hendershot, T., Meiese, D., Riley, A., Pan, H., Krzyzanowski, M., Hwang, S., Pino, N., Ramos, E. & Hamilton, C. New content and tools in the PhenX Toolkit. American Society of Human Genetics Meeting, Houston, Oct. 15-19, 2019.
- CA45. \*\*\*Bruce, L. & +**Peter, B.** Phenotypic similarities in one case with a microdeletion and two cases with single nucleotide variants in *BCL11A*: Cerebellar expressions of motor speech disorders. American Society of Human Genetics Meeting, Houston, Oct. 15-19, 2019.
- CA44. \*Donenfeld-Peled, I., +**Peter, B.**, Potter, N., Finestack, L., Stoel-Gammon, C., ^^Lien, K., \*\*\*Bruce, L., \*\*\*Vose, C., \*Eng, L., \*\*Yokoyama, H., VanDam, M. & Olds, D. Preventing Speech & Language Disorders: Piloting the Babble Boot Camp in Infants With Classic Galactosemia. American Speech-Language-Hearing Association Convention, Orlando, FL, November 21-23, 2019.
- CA43. \*\*\*Bruce, L. & +**Peter, B.** Expanding the *BCL11A* story: Two cases of genetic mutation impacting speech and language. American Speech-Language-Hearing Association Convention, Orlando, FL, November 21-23, 2019.
- CA42. ^^Adams, A., ^Valentin, A., Restrepo, M.A., Glenberg, A., & **Peter, B.** The role of oral and manual fine motor skill in predicting language and reading performance among dual language learners. Poster, Society for the Scientific Study of Reading, Toronto, July 17-20, 2019.
- CA41. \*Donenfeld-Peled, I., ^Levanovic, L., ^Bonkrud, E., & +**Peter, B.** (2019). Speech outcomes in babies with classic galactosemia: Pilot research findings. Poster, Arizona Speech-Language-Hearing Association, Phoenix, April 5-6, 2019.
- CA40. **Peter, B.**, Hogan, T., Alt, M., Green, S., Cowan, N., Schrauwen, I., Naymik, M., ^^Sacchetta, M., \*\*\*Vose, C., ^Deshpande, K., ^Guido, J., & +Gray, S. (2018). Dense microarray genotypes validate genes of interest for disorders of spoken and written language. American Speech-Language-Hearing Convention, Boston, November 15-17, 2018.
- CA39. **Peter, B.**, Hogan, T., Alt, M., Green, S., Cowan, N., Schrauwen, I., Naymik, M., ^^Sacchetta, M., \*\*\*Vose, C., ^Deshpande, K., ^Guido, J., & +Gray, S. (2018). Copy-number variations in children with disorders of spoken and written language point to genes with prenatal cerebellar expression. American Society of Human Genetics Meeting, San Diego, Oct. 16-20, 2018.
- CA38. **Peter, B.**, Potter, N., VanDam, M., & Davis, J. (2018). Translating knowledge of genetic risk into prevention of speech and language disorders: A pilot study in infants with classic galactosemia. Behavior Genetics Association Annual Meeting, Boston, June 20-23, 2018.
- CA37. \*\*\*Vose, C. & +**Peter, B.** (2018). Rare *LAMA5* variant is the likely cause of a severe speech and reading disorder in a *de novo* case. Behavior Genetics Association Annual Meeting, Boston, June 20-23, 2018.
- CA36. **Peter, B.**, Potter, N., VanDam, M., & Davis, J. (2018). Babble Boot Camp: Preventing speech and language disorders in infants at genetic risk. American Scientific Affiliation Annual Meeting, Gordon College, July 27-30, 2018.
- CA35. **Peter, B.**, Potter, N., VanDam, M., Davis, J., Stoel-Gammon, C., ^^Lien, K., \*\*\*Bruce, L., \*\*\*Vose, C., & \*Eng, L. (2018). Preventing speech and language disorders in infants with classic galactosemia: Babble Boot Camp first year's results. Poster, Art and Science of Health Promotion Conference, San Diego, March 26-30, 2018.
- CA34. **Peter, B.**, \*\*\*Vose, C., Stats-Caldwell, D., & Ingram, D. (2017). Extremely late onset of speech due to genetic mutation: Wed wabbits at age 15. Poster, ASUA Cognitive Affiliates Conclave, December 2, 2017.
- CA33. **Peter, B.** & Dougherty, M. (2017). Genetics for SLPs and audiologists: How to spot red flags and make the right referrals. Seminar, American Speech-Language-Hearing Convention, November 9-11, Los Angeles.

- CA32. \*\*\*Bruce, L., **Peter, B.**, & +Weinhold, J. (2017). Evaluating an RTI model for late-8 speech sound disorders. Poster, American Speech-Language-Hearing Convention, November 9-11, Los Angeles. Meritorious Poster Award.
- CA31. \*\*\*Vose, C., +**Peter, B.**, Stats-Caldwell, D., & Ingram, D. (2017). Two rare cases of extremely delayed speech and language development: Comparisons against typical trajectories. Poster, American Speech-Language-Hearing Convention, November 9-11, Los Angeles.
- CA30. **Peter, B.** (2016). Chromosomal deletions in three children with motor speech disorders: Novel candidate genes and interprofessional implications. Technical Talk. American Speech-Language-Hearing Association Convention, Philadelphia, November 17-19, 2016.
- CA29. **Peter, B.**, Wijsman, E., Nato, A., Matsushita, M., Chapman, K., Stanaway, I., Wolff, J., Oda, K., +Raskind, W., University of Washington Center for Mendelian Genomics (2016). *CDH18* and *C4orf21 (ZGRF1)* variants segregate separately in two multigenerational families with overlapping phenotypic presentations of childhood apraxia of speech. Poster. American Society of Human Genetics Meeting, Vancouver, B.C., October 18-22, 2016.
- CA28. \*\*\*\*Lancaster, H. & +**Peter, B.** (2016). Sequence errors during real word and nonword imitations in adults with dyslexia. Poster, International Dyslexia Association 76<sup>th</sup> Annual Conference, Orlando, October 26-29, 2016.
- CA27. ^Fares, A., \*\*\*Vose, C., \*\*\*\* Lancaster, H. & +**Peter, B.** (2016). Comparing two children with speech deficits and overlapping chromosomal deletions. Technical talk, Arizona Speech-Language-Hearing Association Convention, Tucson, April 29-30, 2016.
- CA26. **Peter, B.** and Reed, K. (2015). Genetics Bootcamp: DNA, communication disorders, and professional teamwork. Short Course. American Speech-Language-Hearing Association Convention, Denver, November 11-14, 2015.
- CA25. **Peter, B.**, & Raskind, W.H. (2015). Speech sound disorders of genetic etiology: New findings in a sporadic case and two multigenerational families. Poster and flash talk, International Society for Evolution, Medicine, and Public Health, Tempe, March 19-21, 2015.
- CA24. **Peter, B.** Introduction to genetics: Molecules, Markers, Management. Short Course. American Speech-Language-Hearing Convention, Orlando, November 20-22, 2014.
- CA23. \*Huang, A., **Peter, B.**, UW Center for Mendelian Genomics, Brkanac, Z., Stocco, A., Matsushita, M., Wolff, J., & +Raskind, W. A rare case of speech sound disorder with a heterozygous *BCL11A* deletion. Poster. 64th American Society of Human Genetics Annual Meeting, San Diego, October 18-22, 2014.
- CA22. **Peter, B.** Speech sound disorders of genetic origin in multigenerational families. International Child Phonology Conference, Missoula, June 15-18, 2014.
- CA21. ^^Hutchison, E., Spencer, K., Leverenz, J., **Peter, B.**, Edwards, K., Zabetian, C., Hall, T., & Snappin, K. Nature and laterality of motor symptoms in Parkinson's Disease and relationship to cognitive-linguistic profile. Poster. 42nd Annual Meeting of the International Neuropsychological Society in Seattle, Washington, February 12-15, 2014.
- CA20. **Peter, B.** Molecular genetics for speech-language pathologists and audiologists. Short Course. American Speech-Language-Hearing Convention, Chicago, November 13-16, 2013.
- CA19. **Peter, B.** Sequential processing deficit in speech and reading disorders as a potential endophenotype of genetic origin. Poster. American Speech-Language-Hearing Convention, November 13 – 16, 2013.
- CA18. **Peter, B.**, & +Raskind, W.H. Heterogeneity in speech sound disorders: New findings in multigenerational families. International Conference on Functional and Comparative Genomics and Pharmacogenomics. Chicago, Nov. 12-14, 2013.
- CA17. **Peter, B.**, Wijsman, E., Matsushita, M., Oda, K., Chapman, K., UW Center for Mendelian Genomics, Stanaway, I., & +Raskind, W. Poster. Genetic etiologies of speech sound disorders. 63rd American Society of Human Genetics Annual Meeting, Boston, October 22-26, 2013
- CA16. **Peter, B.** Childhood apraxia of speech in families: Genes and generations. Workshop. National Childhood Apraxia of Speech Conference, Denver, July 11-13, 2013.
- CA15. **Peter, B.**, Chapman, K., & +Raskind, W. (2012). Sequential processing deficit as a cognitive endophenotype in a multigenerational family with a severe speech sound

- disorder. Poster. 62<sup>nd</sup> Annual Meeting of the American Society of Human Genetics, San Francisco, Nov. 6-10, 2012.
- CA14. **Peter, B.**, Matsushita, M., ^Sun, E., & +Raskind, W.H. Suggestive evidence of myelin gene linkage in familial speech disorders. Talk. American Speech-Language-Hearing Association Convention, San Diego, Nov. 17 – 19, 2011.
- CA13. **Peter, B.**, Matsushita, M., Oda, K., & +Raskind, W.H. Replication of a *FOXP2* association with motor speed during an oral task in families with familial speech sound disorder. Poster. 12<sup>th</sup> International Congress of Human Genetics and 61<sup>st</sup> Annual Meeting of the American Society of Human Genetics, Montreal, Oct. 10 – 15, 2011.
- CA12. **Peter, B.** & +Raskind, W.H. (2010). Genetics of speech sound disorder: Testing three novel hypotheses. Talk. American Speech-Language-Hearing Convention, Philadelphia, Nov. 18-20.
- CA 11. **Peter, B.**, Matsushita, M. & +Raskind, W.H. (2010). Limits in processing speed as a possible endophenotype in dyslexia. Poster. 60<sup>th</sup> Annual Meeting of the American Society of Human Genetics, Washington, DC, Nov. 3-6, 2010.
- CA10. **Peter, B.**, Brkanac, Z., Matsushita, M., ^Lisowski, M., ^Vu T., Berninger, V.W., Wijsman E.M. & +Raskind, W.H. (2009). *FOXP2* and *CNTNAP2* influence phonology, motor praxis, and reading in individuals with dyslexia. Poster. 59<sup>th</sup> Annual Meeting of the American Society of Human Genetics, Honolulu, Oct. 20 – 24, 2009.
- CA9. **Peter, B.** & +Stoel-Gammon, C. (2009). Speed limits in the central nervous system: An endophenotype in children with speech sound disorder? Talk. Child Phonology Conference, Austin, June 8-9, 2009.
- CA8. **Peter, B.** & +Stoel-Gammon, C. (2008). Octave-shifted pitch matching in the nonword and sentence imitations of children with speech sound disorders. Poster, Child Phonology Conference, Purdue University, June 2-3, 2008.
- CA7. **Peter, B.** & +Stoel-Gammon, C. (2007). Childhood apraxia of speech: Discrete clinical entity, spectrum disorder, or just a fancy term for the most severe cases of primary speech disorders? Talk. Child Phonology Conference, University of Washington, Seattle, June 22 – 23, 2007.
- CA6. **Peter, B.** & Stoel-Gammon, C. (2006). Acoustic correlates of primary motor speech disorders in children during oral and hand tasks. Poster. 4th Joint Meeting of the Acoustical Society of America and the Acoustical Society of Japan, Honolulu, Nov 28 – Dec 2, 2006.
- CA5. **Peter, B.** & +Stoel-Gammon, C. (2006). Typology of primary speech disorders based on multivariate classification. Talk. American Speech-Language-Hearing Association Convention, Miami, Nov 15-18, 2006.
- CA4. **Peter, B.** & +Stoel-Gammon, C. (2006). Timing accuracy in oral and limb tasks as associated characteristic of primary speech disorders in children. Talk. Rhythm, Time and Temporal Organisation, 2-4 June, 2006, Institute for Music in Human and Social Development, University of Edinburgh.
- CA3. Stoel-Gammon, C., Kim, M-J., **Peter, B.** & +Dawson, G. (2005). Linguistic vocalizations of children with autism: Phonetic and phonological patterns. Poster. CPEA/STAART, Bethesda, Maryland, Nov 7-9, 2005.
- CA2. **Peter, B.** & +Stoel-Gammon, C. (2005). Acoustic correlates of motor speech impairment in children. Poster. American Speech-Language-Hearing Association Convention, San Diego, Nov 17-20, 2005.
- CA1. **Peter, B.** & +Stoel-Gammon, C. (2005). A data-based classification of child speech disorders of unknown origin. Poster. X. International Congress for the Study of Child Language. Berlin, Germany, July 25 – 29, 2005.

### **Invited Talks and Panel Discussions**

- IT25. Genetics for clinicians: Picking up red flags for a genetic condition and making the right referrals. Building Expertise with Early Childhood Professionals workshop series, August 23, 2021.
- IT24. Toward a paradigm shift in treating CAS: Leveraging predictable risk for speech disorders in a clinical trial of the Babble Boot Camp©, Apraxia Kids National Conference, July 8-10, 2021
- IT23. Panelist, “Apraxia and Genetics,” SLP Mommy of Apraxia, <https://slpmommyofapraxia.com/> June 3, 2020

- IT22. Clinical trial leverages newborn diagnoses of classic galactosemia toward preventing severe speech and language disorders in infancy. TRANSCEND Graduate Student Training seminar, College of Health Solutions, Arizona State University, Phoenix, September 5, 2019.
- IT21. Genes, Brains and Apraxia: DNA Boot Camp and Practical Applications for Parents and SLPs. Invited workshop speaker, Apraxia Kids National Conference, Pittsburgh, July 11-13, 2019.
- IT20. From gene to brain to word: The biology of Childhood Apraxia of Speech. Invited colloquium speaker, Dpt. of Speech, Language & Hearing Science, University of Arizona, March 20, 2017
- IT19. Systemic genetic effects on communication abilities and motor functions: Emerging knowledge and clinical translations. Invited keynote address, ASUA Cognitive Affiliates Conclave, December 10, 2016
- IT18. Case-based introduction to genetics: What we can learn from children with motor disorders affecting speech, fine motor, and gross motor performance. Workshop for SLPs, Audiologists, PTs, and OTs. Sponsored by Therapy Rehabilitation Services. Gateway Community College, Phoenix, February 23, 2016.
- IT17. Genetic etiologies of language impairment in children birth to five. Invited 2-hour seminar. American Speech-Language-Hearing Association Convention, Denver, November 11-14, 2015.
- IT16. Making sense of sequences: DNA, speech sounds, letters, and beyond. Capstone Experience Series, Seattle Pacific University, April 14, 2014.
- IT15. The sparsely populated intersect of clinical linguistics and molecular genetics: Building a cohort of dual experts. BIO 3898 Women in Science, Seattle Pacific University, April 30, 2014.
- IT14. Making sense of sequences: DNA, sounds, letters, and beyond. University of Nebraska, February 20, 2014.
- IT13. Making sense of sequences: DNA, sounds, letters, and beyond. Vanderbilt University, February 16, 2014.
- IT12. Making sense of sequences: DNA, sounds, letters, and beyond. Arizona State University, February 11, 2014.
- IT11. Making sense of sequences: DNA, sounds, letters, and beyond. Purdue University, January 16, 2014.
- IT10. Making sense of sequences: DNA, sounds, letters, and beyond. University of Colorado, January 13, 2014.
- IT9. Genetics of speech and reading disorders in multigenerational families. Institute for Systems Biology, Seattle, May 8, 2013.
- IT8. Speech and reading disorders in multigenerational families: The quest for causal genes. BIO 3898 Women in Science, Seattle Pacific University, April 19, 2013.
- IT7. 2013 Childhood Apraxia of Speech Research Symposium. Invited panelist responding to "Current State of the Art in Genomic Research," a presentation by Simon E. Fisher. Atlanta, Feb. 21-22, 2013.
- IT6. From genes to words: Biological bases of speech and reading disorders. Arizona State University, Feb.19, 2013.
- IT5. From genes to waves: Biological bases of communication disorders. University of Washington, Jan. 31, 2013.
- IT4. From genes to waves: Biological bases of communication disorders. Pennsylvania State University, February 6, 2012.
- IT3. Women in Science. Invited panelist, Capstone Experience Series, Seattle Pacific University, February 2010.
- IT2. Molecular genetics of speech and language disorders. Capstone Experience Series, Seattle Pacific University, February 2008.
- IT1. Behavioral and molecular typology of primary speech sound disorders. University of Oregon, February 2007.

**Webinars**

- W4. Children with motor disorders of genetic etiology.  
<https://www.medbridgeeducation.com/course-catalog/details/children-with-motor-disorders-of-genetic-etiology-beate-peter-speech-language-pathology-pediatrics/>

- Medbridge 2017.
- W3. Case-based introduction to pediatric genetic analysis.  
<https://www.medbridgeeducation.com/course-catalog/details/case-based-introduction-to-pediatric-genetic-analysis-for-slps-beate-peter-speech-language-pathology-pediatrics/>
- Medbridge 2017.
- W2. Genetic causes of childhood apraxia of speech: Case-based introduction to DNA, inheritance, and clinical management. Webinar, CASANA, September 29, 2015.
- W1. Genetics of speech, language, and reading disorders. Webinar, CASANA, March 6 and 7, 2013

### **Selected Talks and Workshops**

- TW12. Stuttering: Cells, chromosomes, genes, mutations. Communication disorders of genetic origin: Case studies and what they can teach us about DNA, inheritance, and clinical management. Tenth Annual James Case Memorial Workshop, Arizona State University, October 24, 2015.
- TW11. Epigenetics: The “other” genetic change. Communication disorders of genetic origin: Case studies and what they can teach us about DNA, inheritance, and clinical management. Tenth Annual James Case Memorial Workshop, Arizona State University, October 24, 2015.
- TW10. Hearing impairment: Modes of inheritance, connexin genes. Communication disorders of genetic origin: Case studies and what they can teach us about DNA, inheritance, and clinical management. Tenth Annual James Case Memorial Workshop, Arizona State University, October 24, 2015.
- TW9. Genetics of speech, language, and reading disorders. Communication disorders of genetic origin: Case studies and what they can teach us about DNA, inheritance, and clinical management. Tenth Annual James Case Memorial Workshop, Arizona State University, October 24, 2015.
- TW8. Brave New World: Designer genomes, policy issues, privacy. Communication disorders of genetic origin: Case studies and what they can teach us about DNA, inheritance, and clinical management. Tenth Annual James Case Memorial Workshop, Arizona State University, October 24, 2015.
- TW7. db pq: The myth of the myth of reversal errors in dyslexia. Dpt. of Speech & Hearing Science, Arizona State University, Sept. 5, 2014.
- TW6. Making sense of sequences: DNA, speech sounds, letters, and beyond. Institute for Learning and Brain Sciences, April 24, 2014.
- TW5. The genetics of speech, language, and reading disorders. Guest lecture, Doctoral seminar in language science, University of Washington, May 9, 2013.
- TW4. Speech sound disorders in multigenerational families and the quest for causal genes. Neurodevelopmental Disorders Research Consortium, University of Washington, January 11, 2013.
- TW3. Articulatory phonetics of Modern Greek: A speech scientist’s approach to learning a foreign language. Guest lecture, Jackson School of International Studies C211 (2<sup>nd</sup> Year Modern Greek), University of Washington, Oct. 25, 2012.
- TW2. Phenotypic subtypes and genetic associations in multigenerational families with speech sound disorder. Seminars in Hearing and Communication Sciences, University of Washington, January 2011.
- TW1. Genetics of communication disorders: The role of *FOXP2* and *CNTNAP2* in measures of phonemic awareness, reading, and motor praxis. Seminars in Hearing and Communication Sciences, University of Washington, March 2010.

### **Registered Products**

- RP2. ClinicalTrials.gov NCT03838016, Preventing Speech and Language Disorders in Children with Classic Galactosemia. February 12, 2019
- RP1. Arizona State University Invention Disclosure, Technology ID M19-1861 “Babble Boot Camp: Preventing speech and language disorders in infants at genetic risk.” The invention of the Babble Boot Camp was attributed to Beate Peter on February 15, 2019.

### **Recognition in Local and National Media**

- R9. Kulbatski, I. (2022). Nurturing early language skills prevents the behavioral expression of a genetic trait: A new precision medicine approach is making life sweeter for infants unable to metabolize milk sugar. <https://www.the-scientist.com/sponsored-article/nurturing-early-language-skills-prevents-the-behavioral-expression-of-a-genetic-trait-70211> Audio link: <https://www.the-scientist.com/podcasts/science-philosophy-in-a-flash-a-scientific-figure-of-speech-70212>
- R8. Q & A with Dr. Beate Peter: Researching early language intervention for children with classic galactosemia. Language Environment Analysis, February 4, 2020. <https://www.lena.org/peter-q-a/>
- R7. Study aims to prevent children’s speech and language disorders before they start. Kelly Krause, ASU Now: Access, Excellence, Impact, May 14, 2019. <https://asunow.asu.edu/20190514-study-aims-prevent-children-speech-and-language-disorders>
- R6. The Informed SLP (2019). Babble Boot Camp: Yes, it’s a thing. (Review of **Peter, B.**, Potter, N., Davis, J., Donenfeld-Peled, I., Finestack, L., Stoel-Gammon, C., <sup>^^</sup>Lien, K., <sup>\*\*\*</sup>Bruce, L., <sup>\*\*\*</sup>Vose, C., <sup>^</sup>Eng, L., <sup>\*\*</sup>Yokoyama, H., Olds, D., & VanDam, M. (submitted). Toward a paradigm shift from deficit-based to proactive speech and language treatment: Randomized pilot trial of the Babble Boot Camp in infants with classic galactosemia. *F1000*, 11 March 2019, open review, doi.org/10.12688/f1000research.18062) <https://www.theinformedslpmembers.com/ei-reviews/babble-boot-camp-yes-its-a-thing>
- R5. Malenke, K. (2016). Improving speech before baby speaks. Researcher discovers variations in genes that may cause childhood apraxia of speech, which could speed identification and treatment. Advance Healthcare Network for Speech and Hearing, June 27, 2016. <https://www.elitecme.com/resource-center/rehabilitation-therapy/improving-speech-before-baby-speaks/> retrieved 04/19/2019.
- R4. One step closer to solving speech disorder. ASU News April 27, 2016. <https://chs.asu.edu/news/1-step-closer-solving-speech-disorder> retrieved 04/19/2019.
- R3. OZY (08/05/2015). New treatments that could transform speech therapy. <http://www.ozy.com/fast-forward/the-new-treatments-that-could-transform-speech-therapy/61275> retrieved 01/01/2016.
- R2. A Way with Words. International Innovations, Issue 177 (2015), <http://www.internationalinnovation.com/a-way-with-words/> retrieved 07/02/2015.
- R1. Spotlight on our Awardees: Beate Peter. A Pioneering Spirit. American Speech-Language-Hearing Foundation (2013), <http://www.ashfoundation.org/recipients/spotlight/beate-peter/> retrieved 07/02/2015.

## GRANTS AND AWARDS

### Ongoing Grants

**Avocado Nutrition Science Advisory**, TDC 321,767. PI: Corrie Whisner, 2024-2027  
Role: Co-I

**ASU Women and Philanthropy**, TDC 49,980, 5/1/2024-4/30/2025.  
Title: Proactive play intervention for infants with Down syndrome  
Role: PI

**American Speech-Language-Hearing Foundation**, TDC \$50,000, 12/1/2023-11/30/2024  
Title: Babble Boot Camp for infants with Down syndrome: Improving speech and language outcomes via a proactive, parent-led intervention  
Role: Co-PI

## Completed Grants and Awards

**R01, NICHD, 5 R01 HD098253-04**, TDC \$998,395 funded at 85%, 04/17/2019 – 03/30/2024.  
Title: Preventing speech and language disorders in infants with classic galactosemia. Role: PI.

**NSF Standard Grant Award # 2122600**, TDC \$210,188, 09/02/2021 – 08/31/2023  
Title: Corporate science communication and its effect on scientific knowledge and attitude.  
Role: Consultant. PI: Nicole Lee.

**Institute for Social Science Research Seed Grant Program, Arizona State University**,  
Total direct cost (TDC) \$7,951 Title: Investigating gene-environment-disorder associations and  
broad health profiles in severe speech sound disorders: Feasibility study of biome analysis.  
11/2019-11/2021, work was disrupted by COVID-19 and is still ongoing. Role: PI

**Arizona Alzheimer's Disease Core Center Pilot Grant**, \$30,000, 04/2020-04/2021. Title:  
Neurogenetics of aging vocalizations. Role: Consultant. PI: Julie Miller, University of Arizona

**University of Washington Center for Mendelian Genomics (Director: Deborah Nickerson, Ph.D)**, ~\$8,800, 10/2018 – 3/2020. Exome sequencing and raw data analysis for approximately 40 samples from individuals and families with severe speech sound disorder. Role: PI.

**University of Arizona Accelerate for Success**, \$100,000, 07/2018 – 06/2019. Title:  
Identifying Targets for Progressive Speech Deficits in Parkinson's Disease, Role: Consultant.  
PI: Julie Miller, University of Arizona. Gene

**Arizona State University 2019 Neuroscience Scholars Program**. Summer semester 2019.  
Title: Metabolomics in dyslexia. \$1,000. Role: Co-Mentor.

**Arizona State University College of Health Solutions JumpStart**, \$15,066, 06/2018-  
05/2019. Title: Genetic variants associated with cerebellar dysfunction in dyslexia. Role: PI.

**F32, NICHD**, \$186,222, 8/2017 – 7/2019. Title: Genotype-phenotype associations in reading  
disorders. Resubmission. PI: Hope Lancaster, Ph.D. Role: Co-sponsor.

**American Speech-Language-Hearing Foundation New Centuries Doctoral Scholarship**,  
\$10,000. 11/2017-11/2018. PI: Caitlin Vose. Role: Mentor.

**Arizona State University New Faculty Startup Funding**, \$275,000, 08/2014 – 06/2018

**ASU Institute for Social Science Research Seed Grant, Total direct cost (TDC) \$6,800**,  
Earliest speech interventions in infants with galactosemia, 01/2017 – 01/2018. Role: PI.

**University of Washington Mendelian Data Analysis Workshop**, August 2017. Week-long  
intense training in approaches, methods, and tools for genotype and sequence analysis.

**Small Grant Program (R03), NIDCD, PAR-10-055, 1R03DC010886-01A1**, TDC \$468,000,  
04/2011 – 03/2015. Title: Genetics of Speech Sound Disorders. Role: PI.

**University of Washington Magnetic Resonance Research Laboratory Pilot Grant**. 02/2012  
– 2/2015. Ten scanner hours (\$6,000) for pilot study "Multidisciplinary study of processing  
speeds and modes as endophenotypes of dyslexia." Extension 8 scanner hours (\$4,800), June  
2014. Role: PI.

**University of Washington Royalty Research Fund, TDC \$35,530**. Electrophysiologic  
measures of processing speed in dyslexia. 01/2013 - 07/2014. Role: PI

**University of Washington Centers for Mendelian Genomics (Director: Deborah Nickerson, Ph.D)** 04/2014. Dense SNP chips for 14 DNA samples). Project goal is to identify  
causal genes in a multigenerational family with severe speech sound disorder. Role: PI.



**University of Washington Centers for Mendelian Genomics (Director: Deborah Nickerson, Ph.D)** 12/2014. Whole exome sequences for 5 samples (\$5,000). Project goal is to identify causal genes in a multigenerational family with severe speech sound disorder. Role: PI.

**American Speech-Language-Hearing Association's Research Mentoring-Pair Travel Award (RMPTA)**. Given in conjunction with the 23rd Annual Research Symposium at ASHA Convention: The Genetic Basis of Speech, Language, Reading, Learning, and Memory. Chicago, November 16, 2013. Role: Mentor.

**University of Washington Mendelian Data Analysis Workshop**, August 2013. Week-long intense training in approaches, methods, and tools for genotype and sequence analysis.

**University of Washington Centers for Mendelian Genomics (Director: Deborah Nickerson, Ph.D)** 08/2012 – 11/2012. Dense SNP chips for 17 DNA samples and whole exome sequences for 2 DNA samples (\$5,700). Project goal is to identify causal genes in a multigenerational family with severe speech sound disorder. Role: PI.

**Lessons for Success Research Conference, NIDCD, ASHA, and ASHFoundation**, Rockville, MD, 04/27 – 04/29, 2011.

**2011 ASHA Research Conference Travel Grant, American Speech-Language-Hearing Foundation**, 4/2011. Travel expenses to attend the Lessons for Success Research Conference in Rockville, MD.

**New Century Scholars Research Grant, American Speech-Language-Hearing Foundation, TDC \$10,000**, 11/16/2009. Title: Genetic substrates of speech sound disorder: Testing three novel hypotheses. Role: PI.

**05 T32 DC00033-17 Postdoctoral institutional NIH grant**. 10/2007 – 09/2010, Dpt. of Speech and Hearing Sciences, University of Washington.

**2<sup>nd</sup> Annual Short Course on Statistical Genetics and Statistical Genomics**, NSF-funded, organized by the Section on Statistical Genetics, The University of Alabama at Birmingham. July 13 – 17, 2009, Honolulu. Complex traits with quantitative variation.

**05 T32 DC00033-10 Predoctoral institutional NIH grant**. 09/01 – 09/03. Dpt. of Speech and Hearing Sciences, University of Washington.

**Student Tech Fee Grant, University of Washington. \$103,000**, 2004, expansion of the Student Research Lab, Dept. of Speech and Hearing Sciences, University of Washington. Role: Collaborator.

## TEACHING

### Arizona State University

#### **SHS 483 Professional Issues and Ethical Consideration for the SLPA**

Spring 2022

#### **SHS 484 Internships**

Spring 2021

#### **SHS 465 Speech and Language Acquisition, online version**

Fall 2020 (2X), Fall 2022 (2X), Fall 2023 (2X)

#### **SHS 544/494 Introduction to genetics: Implications for health, disease, and society**

Also taught under various other titles, Spring

**SHS 585 Speech Sound Disorders**

Fall 2014, Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2020

**SHS 598/568 Special Populations**

Spring 2015, Spring 2016, Spring 2017, Spring 2018, Spring 2019, Spring 2020, Spring 2023

**SHS 598 Fundamentals of Cortical Electrophysiology I**

Fall 2016, Fall 2018

**SHS 598 Introduction to Genetics: From Molecules to Clinic (formerly: Molecules Markers Management: Introduction to Genetics)**

Fall 2015, Fall 2017, Spring 2021

**SHS 790 Writing Group**

Spring 2017, Spring 2019

**SHS 701 Scientific Writing and Presentation**

Spring 2019, Spring 2020, Spring 2021

**Program Development in Speech and Hearing Science**

***Ph.D. Concentration in Speech and Hearing Science “Translational Genetics of Communication Abilities (TGCA).”***

Created this concentration in 2016 and serves as its director. The first student graduated with this concentration in 2018. The following brief overview can be found at <https://chs.asu.edu/programs/speech-hearing-science-translational-genetics-communication-abilities-phd>: “The translational genetics of communication abilities concentration within the PhD program in speech and hearing science provides doctoral students with training in an innovative approach to the clinical sciences (pioneered at ASU) where the concepts of precision medicine are applied to all disciplines within communication sciences and disorders. Training in molecular genetics and bioinformatics equips students to investigate the interactions among genetic, brain-based and behavioral traits. Prior training in genetics is not required. Knowledge of genotype-phenotype associations provides the foundation for the translational components of this program: early identification and intervention, individualized management and interprofessional approaches. Students have the option of focusing primarily on basic sciences aspects, on clinical translations, or on both.”

***MS in Auditory and Language Neuroscience***

Together with colleagues Drs. Berisha, Daliri, Luo, Rogalsky, and Zhou, created this new program in 2018. Dr. Rogalsky and served as the initial program leads. Forges collaborations with industry, e.g., MagStim, Philips, and Advanced Bionics, to ensure a good fit of the program with the needs in industry. The first cohort of students started in Fall 2019. A brief overview of the program can be found at <https://chs.asu.edu/programs/auditory-and-language-neuroscience-ms>: “The MS degree program in auditory and language neuroscience trains scholars in basic and applied research in the fields of auditory and language neuroscience to prepare them for doctoral-level graduate studies as well as for positions in science, health care and industry. In addition to cutting-edge coursework in neuroscience, this program also includes hands-on training in instrumentation such as neuroimaging, neurophysiology and clinical research applications. Students develop a strong foundation to conduct impactful neuroscience research related to auditory and language processing and human communication.”

**Saint Louis University**

**CSDI 5890**

Summer 2012, 2014, 2016, 2018, 2020

**University of Washington**

SPHSC 559 (Special Topics in Speech-Language Pathology) Genetics for health care professionals: Basic science to clinical management. 2 Quarter Credits (Q Cr). New course, approved for Summer 2014, developed for a context of interprofessional education.

SPHSC 539 (Assessment and Treatment of Childhood Speech and Phonological Disorders). 4 Q Cr. SPR 2004 (mentored instructor supervised by Dr. Stoel-Gammon); AU 2011 (instructor assisted by Derek Isetti, M.S., CCC-SLP, as TA; Course text was the prepublication version of B. Peter and A. MacLeod,

Eds. (2012) *Comprehensive perspectives on speech sound development and disorders: Pathways from linguistic theory to clinical practice*. New York: Nova Science Publishers)

SPHSC 449 (Neuroanatomy and Neurogenic Disorders Across the Lifespan) 4 Q Cr. SU 2007; SU 2008; SU 2009. Covered history of neuroscience, neural cell activities, CNS and PNS structures, special senses, and a wide variety of neurogenic disorders, with an emphasis on communicative behaviors. Lab component with human CNS tissues.

SPHSC 499 (Honors Research) Variable Q Cr. Five undergraduate honors projects during multiple quarters 2011 to 2014.

SPHSC 499 (Undergraduate Research). Variable Q Cr. Multiple quarters 2005 to 2014. Mentored several teams of undergraduate students in analysis and interpretation of behavioral and acoustic data,

SPHSC 599 (Graduate Research). Variable Q Cr. Multiple quarters 2010. Mentored a graduate student in analysis and interpretation of speech testing.

SPHSC 499 (Undergraduate Research) Variable Q Cr. SPR 2007. Mentored a University of Washington undergraduate student at the school site for a job-shadow experience, twice weekly, for the duration of one university quarter ("Pipeline to Schools").

SPHSC 303 (Language Science). 3 Q Cr. AU 2004. Developed a course plan that links each linguistic domain to specific disorders. Designed lecture format rich in video and audio presentations. Drew crossbars to the perspectives of other disciplines (e.g., computational linguistics, developmental psychology, neuroscience).

SPHSC 111 (American English Speech Sounds). 2 Q Cr. AU 2001, WI 2004, SPR 2004. Developed a course plan built on principles of speech-language pathology. Students, all non-native speakers of English, participated in labs designed with hierarchical practice opportunities, culminating in group presentations of newscast-style reports on selected topics

## RESEARCH MENTORING

### Arizona State University, 2014 - Present

#### Postdoctoral Training

- Hope Lancaster, Ph.D., 08/2015 – 08/2016. Current position: Scientist II and lab director, Boys Town, University of Nebraska

#### Ph.D. Program

##### **Ph.D. Committee Chair**

##### **Currently Active**

- Yookyung Kim, M.S., expected graduation 2025, enrolled in the Ph.D. concentration "Translational Genetics of Communication Abilities (TGCA)."

##### **Graduated**

- Laurel Bruce, Ph.D., CCC-SLP, graduated 2020 with the Ph.D. concentration "Translational Genetics of Communication Abilities (TGCA)." Clinical Assistant Professor, College of Health Solutions, Arizona State University.
- Caitlin Vose Raaz, Ph.D., CCC-SLP, graduated 2018 with the Ph.D. concentration "Translational Genetics of Communication Abilities (TGCA)." Current position: Assistant Professor, University of Northern Colorado.

##### **Ph.D. Committee Member**

##### **Currently Active**

- Natalie Wombach, M.S., expected graduation 2024, dually enrolled in the Ph.D. concentration "Translational Genetics of Communication Abilities (TGCA)" and "Preparing Researchers in Early Intervention for Children with Disabilities from Multicultural Environments (PRIDE)"

##### **Graduated**

- DeAnne Hunter, M.S., graduated 2024, enrolled in the Ph.D. concentrations Research Interventions for Dual Language Learners with Language Learning Disabilities (RIDLLs)
- Ashley Adams, M.S., graduated 2017. Current position: Assistant Professor, San Diego State University.

#### Master's Program

**Committee Chair**

- Nataly Beacham, 2024-2025, Cortisol levels in bilingual children during language brokering. Co-chair with Dr. Wagley.
- Augustin Bennett, 2022-2023. ERP study of anticipation in actual and omitted sound signals.
- Gabrielle Stanley, 2021-2022. ERP and MRI traits in adults with dyslexia

**Committee Member**

- Emilee de Graaf, 2021-2022. Quiet EEG in adolescents with hearing impairment. Chair: Dr. Andrea Pittman.
- Paige Ellis, 2020-2022. Telehealth speech/language interventions via parent training for young children with repaired cleft lip and/or palate. Chair: Dr. Nancy Scherer
- Anweysa Bhomik, 2019-2020, Biomedical Informatics. Co-mentor. Whole exome analysis in individuals and families with dyslexia. Chair: Dr. Valentin Dinu
- Tres Jolie Benton, 2019-2020, Biomedical Informatics. Co-mentor. Metabolomic profiles in individuals with dyslexia. Chair: Dr. Valentin Dinu
- Chloe Houlihan, 2017-2018. Co-mentor. MRI and fMRI measures of apraxia of speech and dyslexia. Chair: Dr. Corianne Rogalsky

***EEG Lab Rotation Host, Auditor and Language Neuroscience MS***

- Nataly Beacham, 2024
- Augustin Bennett, 2022
- Emily Rohn, 2022
- Cole Williams, 2021
- Chloe Johnson, 2021
- Gabrielle Stanley, 2020
- Jordan Doyle, 2020
- Kimiya Kasraen, 2020

**Barrett The Honors College**

**Primary Mentor**

- Claire Banta, 2023/2024. Novel genes in dyslexia
- Owen Bienz, 2023/2024. Lateralized ERP gating responses in adults with dyslexia and controls
- Madeline Ovaska, 2023/2024.
- Maya Sarraf, 2023/2024.
- Caitlin Cordovana, 2022/2023. Influence of the COVID-19 pandemic on quality of life in families participating in the Babble Boot Camp clinical trial. Joint thesis project with Andrea Nazareno.
- Andrea Nazareno, 2022/2023. Influence of the COVID-19 pandemic on quality of life in families participating in the Babble Boot Camp clinical trial. Joint thesis project with Caitlin Cordovana.
- Avani Tamhankar, 2022. Biological predictors and quality of life in families with classic galactosemia.
- Jacklyn Schur, 2019-2020. Quality of life in parents of infants with classic galactosemia
- Isaac Duran, 2019-2020. Electrophysiologic measures of gating and implicit learning in dyslexia.
- Emma Williams, 2019-2020. Sequential processing deficit in childhood apraxia of speech: Focusing on gross, fine, and oral motor skills.
- Inbal Donenfeld-Peled, 2018-2019. Phonetic development in infants with classic galactosemia undergoing a preventive speech/language program.
- Andria Albert, 2017-2018. Evidence of sequential processing deficit during word reading task: A reaction time analysis.
- Gopi Konduri, 2015 – 2016. Effect of various attentional conditions on P300 and MMN ERP waveforms.

**Committee Member**

- Rohit Nandakumar, 2020-2021. Integration of Multi-Omics Data to Elucidate Disease Correlated Biomarkers in Dyslexia. Chair: Dr. Valentin Dinu
- Paige Ellis, 2019-2020. Effects of parent training on speech and language outcomes. Chair: Dr. Nancy Scherer.
- Karina Navarrete, 2018-2019. Auditory perception learning rate. Chair: Dr. Ayoub Daliri
- Ryan Neill, 2018-2019. Multitasking: An EEG experiment. Chair: Dr. Gene Brewer
- Jennifer Philp, 2017-2018. Genotype-phenotype association in a family with an atypical case of 22q11 deletion syndrome. Chair: Dr. Nancy Scherer

- Julia Weiss, 2017-2018. The role of fine motor skills in an embedded reading comprehension program. Chair: Dr. Arthur Glenberg
- Nicole Blumenstein, 2016 – 2017. Cortical electroencephalography of music perception. Chair: Dr. Corianne Rogalsky
- Chloe Houlihan, 2016 – 2017. MRI and fMRI measures of dyslexia. Chair: Dr. Corianne Rogalsky

### **Advanced Research Experience Seminar (ARES) in Speech and Hearing Science**

#### **Primary Mentor**

- Varsha Samudrala, 2023/2024. Language development and response to intervention in boys vs. girls
- Madeline Ovaska, 2022/2023. Genotype-phenotype associations in children with classic galactosemia
- Alicia Belter, 2020-2021. Does babble therapy improve speech and language outcomes in infants at risk who receive proactive interventions?
- Melissa Stumpf, 2020-2021. Quality of life and cognitive predictors in infants receiving proactive speech and language interventions.
- Caitlin Miner, 2018-2019. Supraglottal motor components as a correlate of gross motor development in infants with classic galactosemia who are undergoing a preventive speech/language program
- Allie Werner (Pfeiffer), 2017-2018. Motor and linguistic traits in children and adolescents with childhood apraxia of speech.

### **Maternal and Child Health Translational Team Research Interns**

- John Carpenter, Fall 2023
- Angelina Lopez, Spring 2023
- Breana Huls, Spring 2023

### **Other Lab Collaborators and Volunteers**

- Shreya Guggilla, Basis high school student completing a lab internship Spring Semester 2024
- Andrea Richards, Basis high school student completing a lab internship Spring Semester 2023

## **University of Washington, 2011-2014**

### **Master's Program**

- Erika Hutchison, 2011 – 2012: Role: Committee member

### **Undergraduate Honors Thesis**

#### **Primary Mentor**

- Angela Huang, 2013 – 2014. Genetics. This project was awarded a 2013 ASHA Research Mentoring Pair Travel Award and a University of Washington Mary Gates Research Scholarship.
- Tiffany Waddington, 2013 – 2014. Neuroscience.
- Bronsyn Springer Foster, 2011 – 2012. Voice.
- Heather Haas, 2011 - 2012. Voice.
- Le Button, 2011 – 2012. Motor control and cognition.

## **SERVICE**

### **National/International**

- 2021 – pres. **Core Member, Scientific Advisory Board**, Jaguar Gene Therapy.
- 2020 – pres. **Consultant**, Applied Therapeutics, Inc. Pharmaceutical intervention for classic galactosemia. Expert consultant on speech and language development in children at genetic risk for disorders.
- 2014 – pres. **Grant reviewer**  
National Institutes of Health ad-hoc reviewer (appr. 6 proposals/year)  
Arizona State University Institute for Social Science Research (appr. 3 proposals/year)

- 2019 – 2025 **Coordinator, Research Symposium on Genetics**, American Speech-Language-Hearing Association, 2024 Convention. Includes designing the symposium, inviting speakers, writing a paper on own presentation, and guest-editing a special issue in the *Journal of Speech, Language, and Hearing Research*.
- 2006 – pres. **Scientific peer reviewer** for scientific journal publications (2 – 10 papers per year)  
*Clinical Linguistics & Phonetics*  
*Communications Biology*  
*Developmental Cognitive Neuroscience*  
*Experimental Brain Research*  
*Frontiers*  
*Genes, Brain and Behavior*  
*Genetics in Medicine*  
*Human Genetics and Genomics Advances*  
*Human Molecular Genetics*  
*Journal of Child Language*  
*Journal of Communication Disorders*  
*Journal of Speech, Language, and Hearing Research*  
*Life Sciences*  
*Molecular Genetics & Genomic Medicine*
- 2015 – pres. **Invitations to serve as editorial board member or guest editor for special editions**  
*American Journal of Human Genetics* (paid editorship, declined)  
*Clinical Linguistics & Phonetics* (guest editor of special issue, “Sequential processing in spoken and written language,” accepted)  
*Computational and Mathematical Methods in Medicine* (board member; declined)  
*International Journal of Clinical & Experimental Otolaryngology* (board member; declined)  
*International Journal of Genomics* (guest editor; two invitations; declined both)  
*Journal of Medical Genomics and Biomarkers* (board member; declined)  
*Journal of Otolaryngology and Reconstructive Surgery* (board member; declined)
- 2020 **External Dissertation Examiner**, Western University, London, Ontario, Canada. Genetic causes of otosclerosis in multigenerational families.
- 2018 – 2019 **Expert consultant** for speech, language, and hearing, PhenX Toolkit, an NIH-funded phenotyping resource for genetics researchers.
- 2017 – 2020 **Board member**, American Speech-Language-Hearing Association Scientific and Professional Board, contributing expertise on genetics education for speech-language pathologists and audiologists.
- 2012 – 2018 **Collaborative approach to genetics education for health professionals**. Initiated and managed a collaboration toward formalizing genetics education in the clinical professions. Team members until 2018 included Michael Dougherty, Ph.D., Director of Education, American Society of Human Genetics (ASHG); and Kate Reed, M.S., Director of Clinical and Continuing Education, The Jackson Laboratory (JAX). Milestones: Interprofessional Short Course (2015) and Seminar (2017) at the American Speech-Language-Hearing Association Conventions; survey of over 500 SLPs and audiologists 2017 (see J22).
- 2015 – 2019 **ASHFoundation Ambassador**, representing the foundation on the Arizona State University campus.
- 2017 **Consultant in Legal Matters**  
 Paid consultant, court hearing, Parents of special education student v. Mabton (WA) School District
- 2013 Expert witness, *pro bono*, court hearing, Parents of special education student v. Northshore (WA) School District

**Arizona State University**

- 2021 – pres. Affiliate, ASU Institute for Social Science Research

2018 – 2019 Initiator and leader of teamLA 2018/2019 “Behavior Genomics” to build an ASU-led, national initiative focusing on genetic and environmental interactions on brain structures and functions with downstream effects on behavioral disorders. Initiated a seedling project in 2016, an interdisciplinary initiative spanning behavioral sciences and biosciences, for a large number of ASU departments including the School of Life Sciences, the Biodesign Institute, as well as other entities such as the Translational Genomics Research Institute.

Oct. 2017 Panelist, School of Life Sciences seminar on personalized medicine

**College of Health Solutions, Arizona State University**

2021 – pres. Member, Advisory Board, ASU Genetic Counseling MS Program

2021 – pres. Member, Executive Visioning Team

2021 – pres. Member, Community Cohort Team

2020 – pres. Member, Grant Review Committee

2020 – pres. Leadership team member, Translational Team, Maternal and Child Health. Role: Research coordination.

2020 – pres. Member, Translational Team, Improving outcomes in children with clefts. Collaboration with Dr. Nancy Scherer and physicians at Phoenix Children’s Hospital.

2019 – pres. Member, Research in Clinic Committee

2019 – 2020 Committee member, faculty search committee, Integrated Behavioral Health

2019 – pres. Committee member, Grand Challenges. Proposed a Grand Challenge topic that was adopted by the college.

2019 – pres. Initiated, designed, and co-developed a Certificate in Clinical Genetics for Health Professionals in the ASU College of Health Solution for production as a national/international online certificate. Scheduled launch 1/2021. (~160 hours involvement)

2019 – pres. Committee member, Affinity Network Participant Registry and Database

2019 – pres. Member of faculty group applying for an Affinity Network for craniofacial disorders

2018 – pres. Committee member, Center for Clinical and Translational Science, College of Health Solutions

2018 Charter committee member, Affinity Networks, College of Health Solutions

2017 Created a genetics module for the Speech and Hearing Science certificate program in feeding disorders (~45 hours involvement).

**Speech and Hearing Science, Arizona State University**

2017 – pres. Co-chair and committee member, designed and administers a new M.S. degree “Auditory and Language Neuroscience.” Liaison to industry, facilitator of the inaugural 2019 ASU/Philips Neuro EEG workshop

2017 Co-organized an art show/auction “Expressions by Shelby” during the James Case Workshop for a youngster whose severe motor disease was successfully treated following whole-genome sequencing at TGen

2015 – 2019 Member, M.S. selection committee, ~300-450 applications per year

2015 – pres. Academic and career advising, letters of recommendation for 7 to 10 students per year

2015 Member, organizing committee for the James Case Workshop, October 2015. Invited guest speakers, facilitated a panel discussion, and gave six of the lectures.

- 2014 – pres. Member, curriculum committee
- 2014 – pres. Regular guest lecturer in SHS 205, twice per year. Created two online modules to support the guest lectures.
- 2014 – 2018 Member, Coffee and Cognition (CoCo) seminar leadership group

**Community Involvement**

- 2015 Genetics and the SLP. Workshop for the speech-language pathology department in the Tempe (AZ) School District. March 20, 2015.
- 2015 Genetics for speech-language pathologists. Workshop for the speech-language pathology department in the Scottsdale (AZ) Unified School District. January 14, 2015.

**PROFESSIONAL MEMBERSHIPS, DEVELOPMENT, AND AFFILIATIONS**

**Professional Memberships**

- 2017 – pres. Behavior Genetics Association (BGA)
- 2016 – pres. Arizona State University and University of Arizona Cognitive Affiliates (ASUofA)
- 2015 – 2016 Arizona Speech-Language-Hearing Association (ArSHA)
- 2009 – pres. American Society of Human Genetics (ASHG)
- 2005 – pres. American Speech-Language-Hearing Association (ASHA)

**Sabbatical Leave**

- Fall 2021 Focusing on driving forward the Behavior Genomics Initiative at ASU,

**Professional Development**

- 2021 For the first time in my career, I was asked to supervise SLP students in clinic in Spring 2021. To qualify for that role, I completed a two-hour professional training sponsored by the American Speech-Language-Hearing Association.
- 2021 As the lead in several projects and realizing that know-how from the world of business can be an asset in academia, I took an online course in project management (PRJFDN 110A) at the University of Washington in August/September 2021. I passed it at 99.45% but, more importantly, acquired relevant knowledge and skills in the area of teambuilding, roles, processes, quality control, and outcome optimization.
- 2017 – pres. The Arizona Wellness Commons is an annual conference that brings together researchers and clinicians around the theme of improving healthcare in Arizona. I have attended all of these conferences and made many transformative networking connections there.
- 2015 – pres. Teaching genetics to learners in other fields such as speech-language pathology and audiology can be a great challenge because typically, these learners, while highly knowledgeable in their own fields, do not have the same undergraduate background in biology as graduate students in genetics would have. To better equip myself to meet this challenge, I attended the American Society of Human Genetics day-long workshops for genetics instructors in 2015, 2016, 2017, 2018, and 2021.

**Affiliations and Honors**

- 2020 Nominated for the Faculty Women’s Association Outstanding Faculty Mentor Award
- 2019 Nominated for the 2019-2020 Outstanding Faculty Mentor Awards in the category of Outstanding Doctoral Mentor at Arizona State University
- 2019 Service Award, College of Health Solutions, ASU
- 2015 – pres. Research collaboration, Translational Genomics Research Institute
- 2015 – pres. Member GenLang, a research consortium for geneticists founded by Dr. Simon Fisher
- 2013 – pres. Research collaboration, Institute for Systems Biology, Seattle
- 2013 – pres. Member, ASHA Research Mentoring (ARM) Network Community
- 2012 ASHA 1<sup>st</sup> Award for Continuing Education
- 2011 – 2014 Affiliation, University of Washington Center on Human Development and Disability



2007 – 2011  
2001

Affiliate Instructor, Dpt. of Speech and Hearing Sciences, University of Washington.  
Carrell-Miner Award for Clinical Achievement in Speech-Language Pathology, Dept. of Speech and Hearing Sciences, University of Washington, given to one speech-language pathology M.S. graduate per year for outstanding clinical performance.