



Published in final edited form as:

Science. 2017 April 28; 356(6336): 386–387. doi:10.1126/science.aan2330.

Community network for deaf scientists

Henry J. Adler^{1,*}, Kelsey L. Anbuhl², Samuel R. Atcherson³, Nathan Barlow⁴, Marc A. Brennan⁵, John V. Brigande⁶, Brad N. Buran⁶, Juergen-Theodor Fraenzer⁷, Jonathan E. Gale⁸, Frederick J. Gallun^{6,9}, Sarah D. Gluck¹⁰, Ray L. Goldsworthy¹¹, Joseph Heng¹², Ariel Edward Hight¹⁰, Julia J. Huyck¹³, Barry D. Jacobson¹⁴, Takatoshi Karasawa¹⁵, Damir Kovač¹⁶, Stacey R. Lim¹⁷, Alexander K. Malone¹⁸, Lisa S. Nolan⁸, Dominic V. Pisano¹⁹, Valluri R. M. Rao²⁰, Robert M. Raphael²¹, J. Tilak Ratnanather²², Lina A. J. Reiss⁶, Chad V. Ruffin²³, Adam T. Schwalje²⁴, Moaz Sinan²⁵, Patricia Stahn²⁶, Peter S. Steyger⁶, Stephen J. Tang²⁷, Viral D. Tejani²⁴, and Victor Wong²⁸

¹Center for Hearing and Deafness, University at Buffalo, Buffalo, NY 14214, USA ²University of Colorado School of Medicine, Aurora, CO 80045, USA ³University of Arkansas at Little Rock, Little Rock, AR 72204, USA ⁴University of Auckland, Auckland 1072, New Zealand ⁵Boys Town National Research Hospital, Boys Town, NE 68010, USA ⁶Oregon Health & Science University, Portland, OR 97239, USA ⁷Max Rubner-Institut, 95326 Kulmbach, Germany ⁸University College London Ear Institute, London, WC1X 8EE, UK ⁹U.S. Department of Veterans Affairs, Portland, OR 97239, USA ¹⁰Harvard University, Cambridge, MA 02138, USA ¹¹University of Southern California, Los Angeles, CA 90007, USA ¹²Johns Hopkins Hospital, Baltimore, MD 21287, USA ¹³Kent State University, Kent, OH 44240, USA ¹⁴Massachusetts Institute of Technology, Cambridge, MA 02139, USA ¹⁵Kyorin Pharmaceutical Co., Ltd., Tochigi 329-0114, Japan ¹⁶University of Split, 21000 Split, Croatia ¹⁷Central Michigan University, Mt. Pleasant, MI 48859, USA ¹⁸University of South Florida, Tampa, FL 33620, USA ¹⁹University of Michigan School of Medicine, Ann Arbor, MI 48103, USA ²⁰Saratoga, CA 95070, USA ²¹Rice University, Houston, TX 77005, USA ²²Johns Hopkins University, Baltimore, MD 21218, USA ²³Indiana University School of Medicine, Indianapolis, IN 46202, USA ²⁴University of Iowa Hospitals and Clinics, Iowa City, IA 52242, USA ²⁵Wayne State University School of Medicine, Detroit, MI 48201, USA ²⁶Saarland University Faculty of Medicine, D-66421 Homburg, Germany ²⁷University of Wisconsin Hospital and Clinics, Madison, WI 53792, USA ²⁸Burke Medical Research Institute, White Plains, NY 10605, USA

We are a community of scientists who have personally experienced the barriers imposed by hearing loss described by G. Buckley *et al.* in their Letter “Building community for deaf scientists” (20 January, p. 255). They propose an institutional hub for deaf and hard-of-hearing (D/HH) trainees to build their scientific careers. We have created an alternative model of distributed academic peer networking that has grown and evolved over the past 25 years. This model has enabled us to overcome personal and professional barriers while promoting the inclusion of numerous D/HH scientists at all levels of biomedical research. The majority of the network is composed of hearing-impaired members of the Association

*Corresponding author. henryadl@buffalo.edu.

for Research in Otolaryngology (HI-ARO). The HI-ARO community originated in 1992 with just three D/HH scientists and has grown globally to more than 60 members, including undergraduates, professors, audiologists, physicians, graduate students, medical residents, postdoctoral fellows, and leaders in health care and industry.

Our experience indicates that the diversity of challenges hearing loss creates is manageable by the deployment of strategies that facilitate effective communication between hearing and D/HH scientists. Speech, cued speech, sign language, and other communication modalities are all valued. This distributed model of integration requires each D/HH member to make a career-long commitment to mentorship of others with hearing loss to propagate successful solutions to individual challenges that are surmountable with inspired and motivated input. Quality mentorship is vital for trainees and junior scientists to achieve career goals (1-3) and is perhaps more critical for D/HH scientists who intrinsically face communication challenges (4).

The unique experiences, skills, and expertise of each D/HH scientist in our community empower the model and have advanced scientific understanding across the wider biomedical community. Most of us meet in person at the annual meeting of the ARO (as well as other professional conferences), where our network has secured equal access to podium and poster sessions through sign language interpreters, hearing-assistive technology, and real-time captioning. The efficacy of our distributed model of peer support, mentorship, and integration with the wider scientific community is validated in part by those members of HI-ARO who have become academic faculty (4-6), secured competitively funded national research awards, and published influential manuscripts in high-impact journals [e.g., (7-10).

Given the demonstrated success of this distributed model of mentorship, we believe that federal and philanthropic efforts to increase diversity should not be limited to a proposed hub model in a single geographic area that focuses primarily on trainees. An alternative approach is to scale up our distributed model of mentoring D/HH pre- and postdoctoral trainees, with a particular focus on junior faculty competing for research awards who will serve as the next generation of mentors. The distributed model will continue to raise awareness of the societal cost of hearing loss and energize the trajectories of D/HH scientists globally. The distributed and hub models are not mutually exclusive and an open dialogue to investigate their synergistic alignment may be highly beneficial.

References

1. Clark SL, Dyar C, Maung N, London B. *CBE-Life Sci Educ*. 2016; 15:ar45. [PubMed: 27562961]
2. Murdaugh CL. *J Cardiovasc Nurs*. 1998; 12:65. [PubMed: 9429116]
3. Valentine HA, Lund PK, Gammie AE. *CBE-Life Sci Educ*. 2016; 15:fe4.
4. Anscombe, N. *Science Careers*. 2007. www.sciencemag.org/careers/2007/03/deaf-needs-hearing-impaired-scientists
5. Yandell K. *The Scientist*. 2015; 29:26.
6. Terry, L. *The Oregonian*. 2016. www.oregonlive.com/health/index.ssf/2016/11/ohsus_deaf_hearing_researchers.html
7. Koo JW, et al. *Sci Transl Med*. 2015; 7:298ra118.
8. Gubbels SP, Woessner DW, Mitchell JC, Ricci AJ, Brigande JV. *Nature*. 2008; 455:537. [PubMed: 18754012]

9. Reiss LA, Eggleston JL, Walker EP, Oh Y. J Assoc Res Otolaryngol. 2016; 17:341. [PubMed: 27220769]
10. Brennan MA, McCreery RW, Jesteadt W. J Acoust Soc Am. 2015; 138:2589. [PubMed: 26520341]

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript