On February 24–26, NEI held its Audacious Goals Development meeting. In welcoming the more than 200 attendees, NEI Director Dr. Paul Sieving described this historic event as a “do-it-yourself meeting” with a theme of inclusiveness. “By engaging representatives from every sector of the vision community, including clinicians, researchers, private funding foundations and patient advocates, as well as government scientists and regulators from various disciplines and even entrepreneurs, this meeting will help shape the NEI research agenda to preserve and restore vision well beyond its five-year strategic plan,” he said.

NIH Director Dr. Francis Collins also spoke, urging attendees to “have a bold vision for vision” by describing NEI’s long tradition of leading in the biomediical research arena, including: working with the National Human Genome Research Institute (NHGRI) to identify more than 500 genes associated with vision loss, which is one-quarter of all genes discovered to date; the successful human gene therapy trial for patients with Leber Congenital Amaurosis; and using embryonic stem cells that self-organize into a mouse eye cup as the genesis of an eye.

Discussion topics were built around the ten winning submissions from a pool of 476 entries that were selected through the NEI Challenge to Identify Audacious Goals in Vision Research and Blindness Rehabilitation, a unique effort conducted under the America COMPETES Reauthorization Act of 2010 that sought new and compelling scientific ideas to advance vision research from a wide and diverse audience of researchers, engineers, and “citizen scientists.” During the judging process, more than 80 experts in the vision community narrowed the field to 81 final candidate ideas, while a federal panel of 13 government clinicians and scientists chaired by Story Landis, Ph.D. (Director, National Institute of Neurological Disorders and Stroke, NINDS) made the final selection of ten winners, each of which received a $3,000 prize.

The attendees participated in a series of six breakout sessions that addressed the following topics: aging and mechanisms of disease development and progression; molecular therapy at the gene level; systems approaches to disease analysis; molecular and functional analysis and imaging of ocular tissues in vitro and in vivo; regenerative therapies for ocular disease; and vision restoration by optogenetics, small molecules, and prosthetics. For each, a working group identified goals and their feasibility and implementation, which they presented to the attendees for discussion.

Five NAEVR Board members participated in the event, in addition to Executive Director James Jorkasky:
- President Peter McDonnell, M.D. (Wilmer Eye Institute/Johns Hopkins)
- Sally Atherton, Ph.D. (ARVO)
- Craig Crosson, Ph.D. (Medical College of South Carolina)
- John Dowling, Ph.D. (Harvard University)
- Sabri Markabi, M.D. (Alcon Laboratories/Novartis)

Audacious Goals Challenge winners include (left to right): Russell Van Gelder, M.D., Ph.D. (University of Washington School of Medicine); Dr. Sieving; Jeffrey Stern, M.D., Ph.D. (Regenerative Medicine Foundation); Yingbin Fu, Ph.D. (University of Utah); Robert Duvvuri, Ph.D. (Oregon Health & Science University); Janey Wiggs, M.D., Ph.D. (Massachusetts Eye and Ear Infirmary, Harvard Medical School); Julia Richards, Ph.D. (University of Michigan); Tonia Rex, Ph.D. (Vanderbilt University); Steven Pitter, Ph.D. (University of Alabama at Birmingham); Dennis Clegg, Ph.D. (University of California at Santa Barbara); and Rajesh Rao, M.D. (Washington University School of Medicine).

Left to right: Sanford Greenberg, Ph.D. and NAEVR President Peter McDonnell, M.D., both from the Wilmer Eye Institute/Johns Hopkins University School of Medicine

Left to right: Malvina Eydelman, M.D. (Director of the Division of Ophthalmic and Ear, Nose, and Throat Devices within the Center for Devices and Radiological Health at the Food and Drug Administration, FDA) and Earl Smith III, O.D., Ph.D. (University of Houston College of Optometry)

Left to right: Wiley Chambers, M.D. (Deputy Director of the Division of Transplant and Ophthalmology Products within the Center for Drug Evaluation and Research at the FDA) and Jean Miller, M.D. (Massachusetts Eye and Ear Infirmary/Harvard Medical School)

Left to right: Martine Jager, M.D., Ph.D. (Leiden University Medical Center, The Netherlands) and Craig Crosson, Ph.D. (Medical University of South Carolina), a NAEVR Board member

Left to right: Calvin Roberts, M.D. (Bausch+Lomb), Brian Hoffland, Ph.D. (Research to Prevent Blindness) and Colonel Donald Gagliano, M.D. (Joint DOD/VA Vision Center of Excellence). Colonel Gagliano served on the federal panel that determined the winning submissions.