

BLAKE S. WILSON RECEIVES AWARD FOR COCHLEAR IMPLANT RESEARCH AND DEVELOPMENT

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At a recent luncheon meeting on September 20 in New York, Blake S. Wilson, a long-term member of the Acoustical Society, was a co-recipient of the 2013 Lasker-DeBaakey Clinical Medical Research Award.

Wilson shared the award with Graeme M. Clark and Ingeborg Hochmair. The award citation was

“For the development of the modern cochlear implant — a device that bestows

hearing to individuals with profound deafness.”

The award description included the statement

The 2013 Lasker-DeBaakey Clinical Medical Research Award honors three scientists who developed the modern cochlear implant, a device that restores hearing to individuals with profound deafness. Through their vision, persistence, and innovation, Graeme M. Clark (Emeritus, University of Melbourne), Ingeborg Hochmair (MED-EL, Innsbruck), and Blake S. Wilson (Duke University) created an apparatus that has transformed the lives of hundreds of thousands of people.

The award is one of several awards given annually by the Albert and Mary Lasker Foundation. The Lasker Awards are among the most respected science prizes in the world. Since 1945, the Awards Program has recognized the contributions of scientists, physicians, and public servants who have made major advances in the understanding, diagnosis, treatment, cure, and prevention of human disease. Lasker Awards often presage future recognition by the Nobel committee, so they have become popularly known as “America's Nobels.” Eighty-three Lasker laureates have received the Nobel Prize, including 31 in the last two decades. The Lasker-DeBaakey Clinical Medical Research Award honors investigators whose contributions have improved the clinical treatment of patients.

The remarks made by Blake Wilson during his acceptance of the award on September 20 are reproduced below:

“Development of the modern cochlear implant was a worldwide effort involving many scientists, engineers, physician-scientists, and research subjects. The success of this effort is an outstanding example of the power of collaborations between the public and private sectors and also the informed support by the NIH of applied as well as

basic research.”

“I am proud to stand before you today as a representative of the worldwide effort, and I am especially proud to stand with Graeme Clark and Ingeborg Hochmair who are two of my heroes and the foremost living pioneers in our field.”

“Although the present cochlear implants are truly wonderful, room still exists for improvements. A variability in outcomes remains, and even the top-performing patients experience difficulties in understanding speech in adverse acoustic environments such as noisy restaurants or workplaces. In addition, reception of sounds more complex than speech — such as music — is less than satisfying for most patients. Research is underway to narrow or even eliminate these gaps between prosthetic and fully functional hearing, and to narrow the range of outcomes such that all patients will achieve high levels of performance. Many promising possibilities are being pursued by extraordinarily talented investigators, and I am completely confident that further improvements will be made.”

“An even more important challenge — in my mind — is to make the highly effective technology we have today available to all persons who could benefit from it. Thus far, about



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320 thousand persons have received a cochlear implant in one or both ears. But various estimates indicate that as many as 25 million persons worldwide could benefit from a cochlear implant. That means that only about 1 or 2 percent of the population who could benefit actually have received a cochlear implant.”

“The cochlear implant is a transformative technology that allows children to be mainstreamed into regular schools, adults to have a wide range of job opportunities, and for all recipients to connect in new and important ways with their families, friends, and society at large. The resulting human and economic benefits are immense. “

“In many parts of the world, cost is a barrier to widespread applications of the technology, even though the benefits ultimately far outweigh the cost. The principal expenses are in providing the appropriate medical infrastructure and care. The cost of the device also plays a role, but that cost is coming down and is not the dominant factor for most countries. Several of us in this room are working to reduce or remove the cost barrier, and to improve hearing health care worldwide, which includes prevention, screening, and treatments in addition to cochlear implants.”

“This magnificent award will greatly increase awareness of how cochlear implants can enable severely and profoundly deaf persons to realize their full potential in life, and that awareness will in turn facilitate further dissemination and development of this marvelous technology. Thank you for welcoming Graeme, Ingeborg, and me into the Lasker family, and thank you for the highly favorable tailwind you have

given us and our colleagues to do more! “

Blake Wilson is co-Director of the Hearing Research Center at Duke University. He is also an adjunct professor in three departments at Duke: surgery, biomedical engineering, and electrical and computer engineering. Wilson helped establish the Duke Cochlear Implant Program in 1984, and he received the Distinguished Alumnus Award from Duke’s Pratt School of Engineering in 2007. Prior to his employment at Duke, he worked fulltime from 1994 to 2007 at the Research Triangle Institute (now RTI International),.

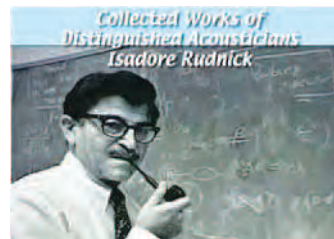
Starting in the late 1960s, Clark and Hochmair demonstrated that tiny electrodes could be placed at different locations in the cochlea, or inner ear, and that different pitches could be produced through stimulation of the different electrodes. However, few patients using the early devices could understand speech without accompanying visual cues.

Then, in the late 1980s (while at RTI International), Wilson provided the next breakthrough by showing how the devices could yield more useful information from ever-changing auditory signals cascading across frequencies. His “continuous interleaved sampling” system made it possible for cochlear implant recipients to understand words and sentences with much greater clarity. It provided the basis for sound processing strategies that are now used widely, launching a rapid expansion in the number of deaf and nearly deaf persons who have received a cochlear implant in one or both ears. Today, the large majority of cochlear implant users can talk on their cell phones and follow conversations in relatively quiet environments.

Collected Works of Isadore Rudnick

The Acoustical Society is pleased to make a special offering of a three disc set of the collected works of Isadore Rudnick (May 8, 1917 – August 22, 1997), one of the Society’s most eminent members. This is the first of a projected series, *Collected Works of Distinguished Acousticians*, that is being developed by the ASA’s Committee on Archives and History. Future titles in development include the works of Harvey Fletcher and of Leo Beranek.

There are three discs in the Rudnick set. The first disc contains reprints of Rudnick’s papers from scientific journals. The second disc includes a montage of photographs of Rudnick with colleagues and family, Rudnick’s prize-winning film “The Unusual Properties of Liquid Helium,” and a video of the Plenary session at the ASA’s 100th meeting. The third disc is a video recording of the Memorial Session held at the 135th meeting of the ASA.



Orders can be placed directly with the Acoustical Society of America [Suite 1N01, 2 Huntington Quadrangle, Melville, NY 11747-4502, Tel: 516-576-2377; Fax: 516-576 -2377; Email asa@aip.org]. Price is \$50 each for members and \$6000 for nonmembers. An additional \$5 for shipping and handling is required.