A Long-Deserved Award for the Cochlear Implant

By Robert V. Shannon, PhD, & Fan-Gang Zeng, PhD

We congratulate Graeme Clark, Ingeborg Hochmair, and Blake Wilson on receiving the 2013 Lasker~DeBakey Clinical Medical Research Award for their outstanding contributions to the development of the modern cochlear implant.

While celebrating this long-deserved recognition, of which all in the hearing field should be proud, we take this opportunity to reflect on the achievement of the cochlear implant and its impact.

Since the U.S. Food and Drug Administration approved the first commercial device in 1984, more than 300,000 people have received the cochlear implant to restore partial hearing. Of these recipients, greater than half are children, with many able to develop nearly normal language skills and seamlessly merge into mainstream schools and professions.

The cochlear implant has now been used to treat a range of disorders, from partial hearing loss and single-sided deafness to tinnitus, and has paved the way for research and development of other neural prostheses. By any measure, the cochlear implant has "conferred the greatest benefit to mankind" (**Alfred Nobel's will**).

We have been able to see further by standing on the shoulders of giants. William F. House was such a giant, who, despite his insistence on a single-electrode device and lack of commercial success, more than anybody deserves credit for making the cochlear implant a viable medical product and an acceptable medical practice. He was among the first to realize the need for a strong comprehensive team approach to fitting and rehabilitation.

F. Blair Simmons and Robert L. White of Stanford University developed a multi-electrode device and evaluated its performance—how often do you see an article titled "Auditory Nerve: Electrical Stimulation in Man" these days (***Science* 1965; 148[3666]:104-106**)?

Brian Ach, Getty Images

From left, Blake Wilson, Ingeborg Hochmair, and Graeme Clark were presented with the 2013 Lasker~DeBakey Clinical Medical Research Award.

Robin P. Michelson and Michael M. Merzenich of the University of California, San Francisco, not only developed one of the first multichannel cochlear implants, but also organized the first international conference on cochlear implants, developed animal models, and established the first comprehensive evaluation standards.

Donald K. Eddington of Utah and Claude-Henri Chouard of Paris developed multi-electrode devices that produced open-set speech recognition and were certainly precursors to the modern cochlear implants.

Thanks to these pioneers, deafness is no longer a disability that separates people. They and many other engineers, researchers, and clinicians have greatly enriched and expanded the hearing health field.

As we celebrate the great honor received by Drs. Clark, Hochmair, and Wilson, we cannot rest on our laurels. The contemporary cochlear implant has much room to improve. We also need to reduce the cost and increase access to the cochlear implant.

The spotlight of the Lasker Award will help to raise public awareness. The future looks bright.

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