



ID SOLUTIONS

SK ANNUAL CONFERENCE

4 November 2021

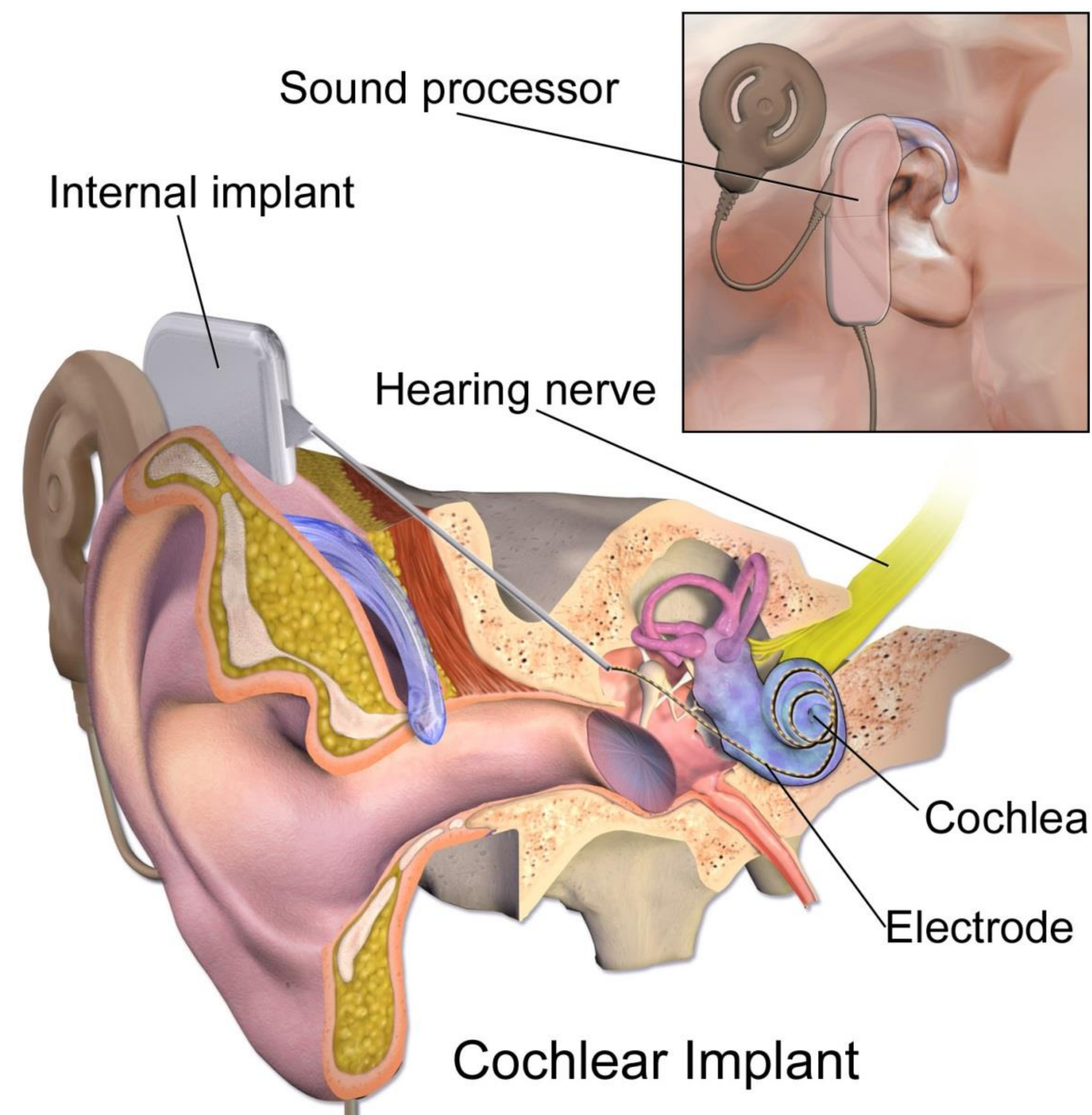


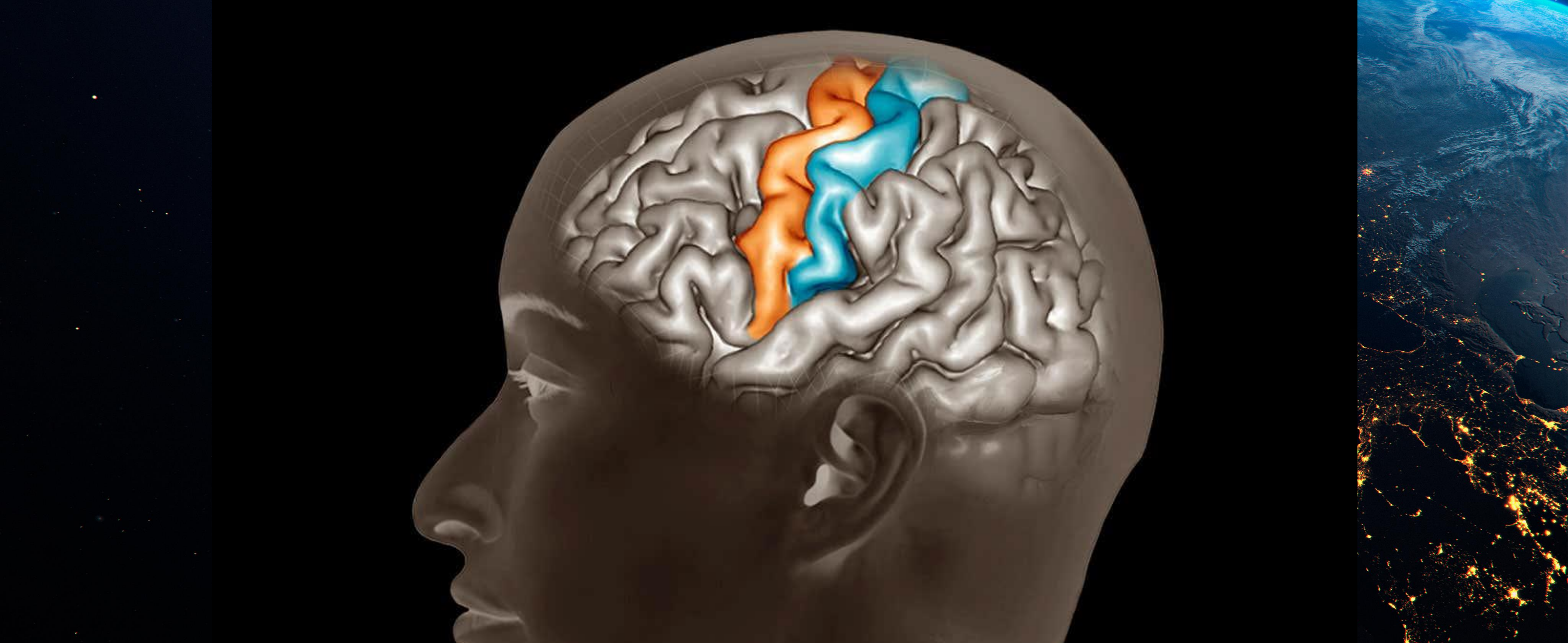
BRAIN-COMPUTER INTERFACE

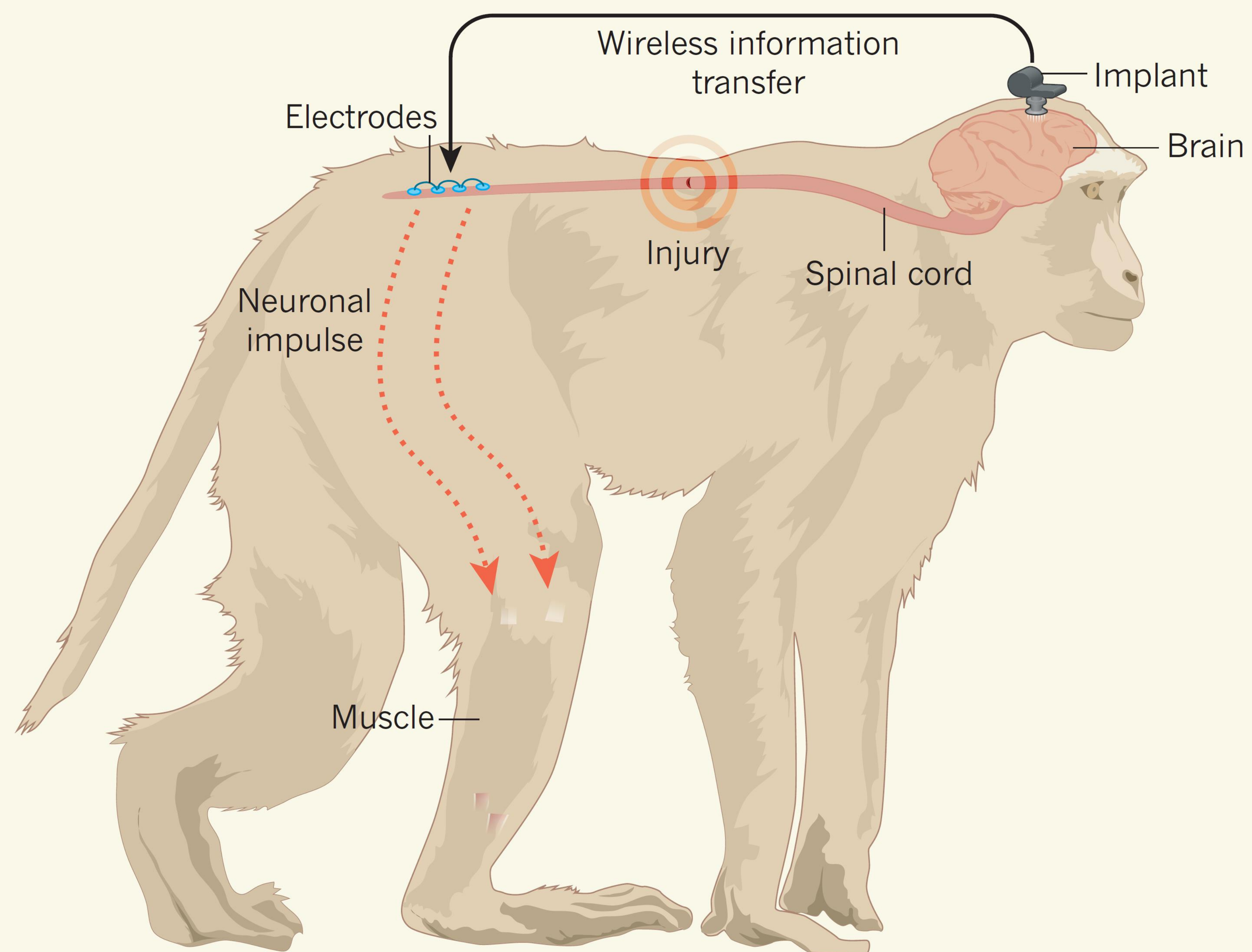
Dr. Urte Neniskyte







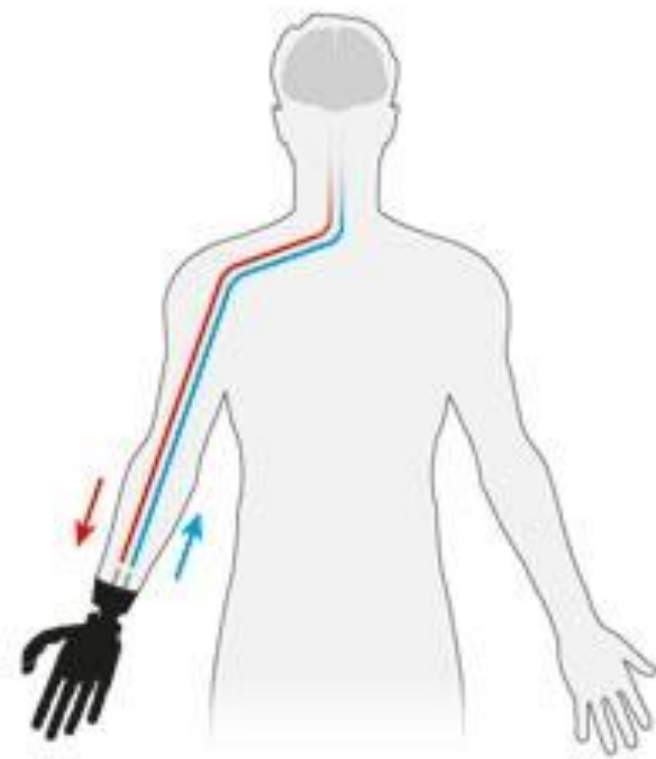






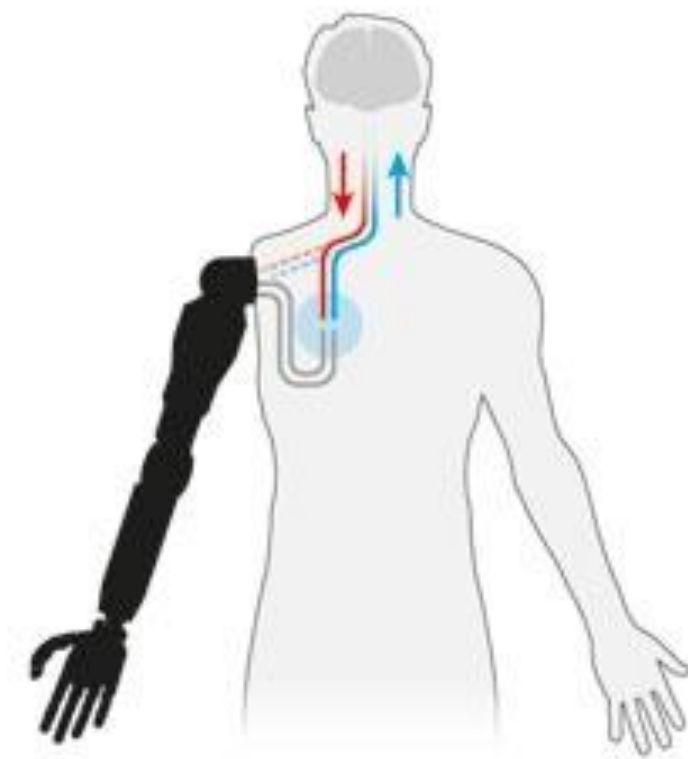
Closing the loop

Prosthetic limbs can be controlled by nerve signals flowing from the brain (→). But fast, fluid motion requires sensory feedback flowing back to the brain (←). Sensor-equipped prosthetics are under development (right), and researchers are exploring several ways to route the output from the sensors into the nervous system (below).



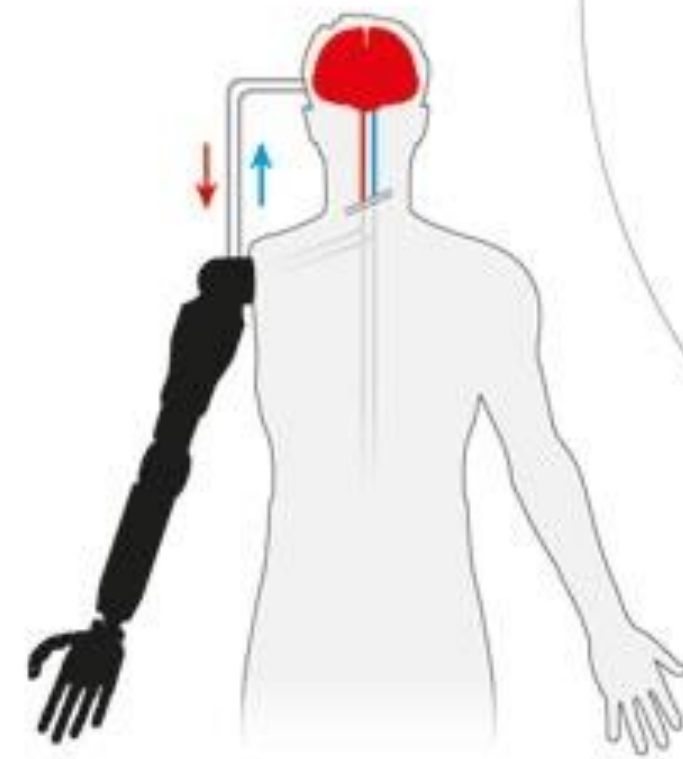
Use the remaining nerves

Electrical leads from the prosthetic's sensors stimulate nerves in the person's stump that once served the real limb.



Move the nerves

Re-routed nerves grow new endings into muscle and skin, where external devices translate signals going to and from the prosthesis.



Stimulate the brain

Sensory signals are routed around a severed spinal cord and into the brain, where they produce sensations by direct stimulation of the cortex.

