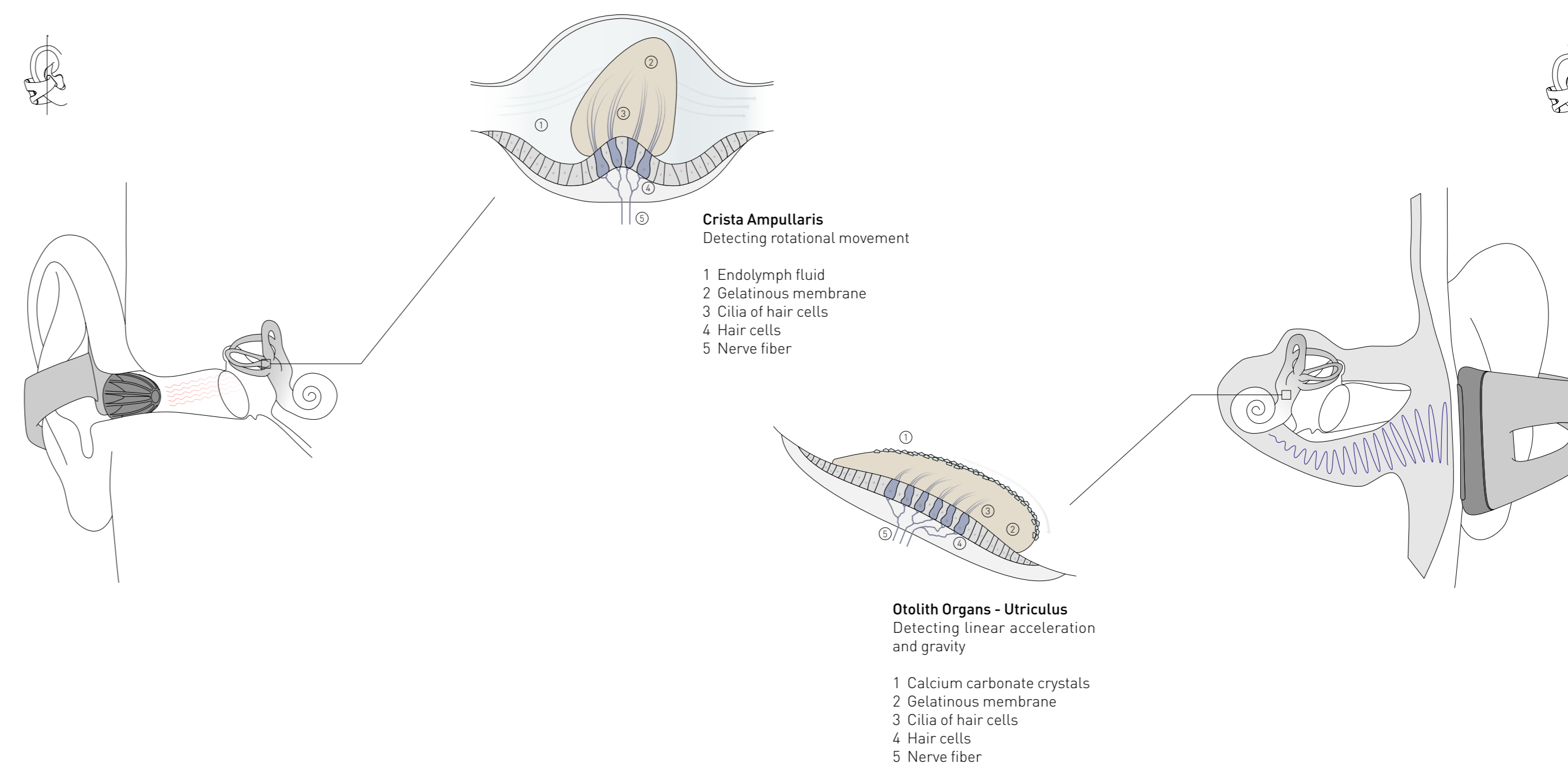




# MOD

## Anti-Seasickness Wearable

MOD is an anti-seasickness wearable designed for maritime use. Seasickness remains one of the most common and limiting problems at sea, affecting comfort, performance, and safety for both recreational and professional sailors. MOD addresses this by subtly stimulating the vestibular system through synchronized micro-vibration and localized thermal modulation, helping to reduce sensory mismatch without demanding active attention. The device integrates ergonomically around the dominant ear and operates passively in the background, positioning it as a calm, human-centered tool for stability and comfort in dynamic maritime environments.



MOD is based on the operating principles of the vestibular system in the inner ear, consisting of the otolith organs that detect linear acceleration and gravity, and the semicircular canals that sense rotational motion. The otolith organs respond to inertial mass displacement, while the semicircular canals rely on endolymph movement to stimulate vestibular hair cells in the ampulla. The wearable engages this system through two synchronized stimuli. Low-level bone-conducted micro-vibration (around 100 Hz), supported by medical studies on vestibular stimulation, targets the otolith organs. Localized thermal modulation near the ear canal induces subtle endolymph movement in the semicircular canals. Together, these passive cues help stabilize balance perception and reduce sensory mismatch during motion.