

## **Multifocal ultrasound and its effect on biological membranes (Technion)**

**code:** MED-1227

Ultrasound has been extensively used for imaging for 60 years, and is now being studied towards clinical therapeutic application. Understanding the basic mechanism of its function is critical. Technion Researchers propose a hypothesis whereby ultrasound induces bubble formation in the intra-membrane space in cells, between the two lipid leaflets. Those bubbles accumulate, creating pockets of gas. As the pockets grow, surrounding structures are being pushed. A possible therapeutic application of this discovery is in the field of neurophysiology, where the use of multifocal ultrasound on neural tissues is likely to become essential to future treatment for people who have a major deficiency in their sensory systems, such as blindness or deafness.

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