Danny Baranes, Biomed Res, Volume 30
ISSN: 0976-1683

Coralline biomaterials for repair of brain damage

Danny Baranes
Ariel University, Israel

Biomaterials can provide supportive microenvironment for cell growth and exciting opportunities for tissue regeneration. We found that biomaterials derived from the calcium carbonate skeleton of corals in the crystalline form of aragonite are protective and nurturing scaffolds for nervous tissue growth and survival *in vitro*. Moreover, implantation of coral skeleton into brain wounds generated following traumatic brain injury in mice causes tissue restoration and functional recovery. Implanted mice showed elevated level of glial fibrillary acidic protein and nestin, markers of nervous tissue generation, as well as reduced anxiety, elevated learning capacity and improved recovery from motor impairment, compared to injured but not implanted mice. These results place coralline scaffolds as a potential new mean to repair damage in the central nervous system.

Speaker Biography

Danny Baranes has established his experience in neuroscience in the lab of the Nobel laureate Dr. Eric Kandel at Columbia University, New York, in the field of learning and memory. He was the first to use coral skeletons scaffolds for brain tissue engineering. He publishes his research in leading international scientific journals and conferences. He is an associate professor and head of the department of molecular biology at Ariel University, Israel.

e: dannyb@ariel.com

Notes: