

PhD and Postdoctoral Positions In vivo MRI of Genetically Engineered Exosomes

Are you interested in developing novel tools for molecular imaging of the brain? Full-time PhD and Postdoctoral positions are available in the lab of Prof. Amnon Bar-Shir at the Weizmann Institute of Science.

In an effort to deliver desired (genetic/therapeutic/ imageable) materials across the blood brain barrier (BBB) we genetically engineer extracellular vesicles (EVs) as non-viral nanocarriers. Specifically, we design, develop, and implement genetically-engineered EVs that display tailored peptides at their surfaces in order to facilitate their delivery to the brain across the BBB. Magnetically-labelling of these EVs allow mapping their penetration to the brain parenchyma noninvasively and in real-time using a clinically translatable MRI setup. The ability to load these engineered EVs with genetic or therapeutic materials while monitoring their brain targetability *in vivo* highlights the potential of this approach to be implemented in many fields of biomedical research.

Check our recent publication: <https://pubs.acs.org/doi/full/10.1021/acsnano.2c03119>

Highly motivated and creative applicants who are looking for freedom to develop groundbreaking strategies and innovative ideas in the fields of EVs and molecular imaging are encouraged to apply. Our lab provides the required cutting-edge technologies including the state-of-the-art ultrahighfield 15.2 T MRI scanner for *in vivo* implementation of the developed technologies. Successful applicants will be independent to lead their projects with an option to supervise graduate students as part of their effort to pursue a multi-components project. Prior experience in one or more related fields such as molecular biology, genetic engineering, *in vivo* imaging, neurobiology and MRI is preferred.

If you are interested in joining us, please contact amnon.barshir@weizmann.ac.il with your attached CV and cover letter

