

EDUCATION

M.S. & Ph.D. in Biomedical Engineering

1998-2004

"Ben-Gurion University of the Negev", Beer-Sheva, Israel (Prof. Smadar Cohen, academic/thesis supervisor): "Enhancing the Vascularization of 3D Porous Alginate Scaffolds Intended for Tissue Engineering, by Incorporating Controlled Release Angiogenic Factors (VEGF, bFGF)".

B.S. in Life Science - Biology

1990-1993

"The Hebrew University" Jerusalem, Israel

SUMMARY OF QUALIFICATIONS

Strong background in life science and material science. Working experience with animal cell culture, biology, microscopy, micro/nanofabrication, controlled delivery systems, protein purification and stabilization, and protein arrays. Team player with strong work ethics.

PROFESSIONAL SKILLS

- Life Science: animal cell culture, cryostat and routine histology, protein and RNA extraction, western-blot, 2D and IEF gels, ELISA, protein stability, *in vivo* implantation (rat, mouse), etc.
- Biomaterials: collagen, fibronectin, gelatin, PLGA, Matrigel, Alginate.
- Biotechnology: electrospinning, lyophilization; critical point drying, Microspheres preparation, Proteomics.
- Microscopy: scanning electron microscopy (SEM), Fourier transform infrared Spectroscopy - (FTIR), confocal microscopy, conventional fluorescence microscopy, Protein array Scanner.
- Statistics: experimental design and data analysis using Excel and SAS.
- Other instrumentations: mechanical property testing machine; surface profiler; UV-visible spectrophotometer; fluorescence spectrometer, Homogenizer, Ultrasound probe, Gel Permeation Chromatography (GPC), rotating wall vessel (RWV) bioreactor .

PROFESSIONAL ACTIVITIES

Postdoctoral Associate

September 2004 to present

Drexel University, Philadelphia, Pennsylvania

- Designed and developed 3D Scaffolds (nanofibrous scaffolds and Pores scaffolds) for neuron formation guiding survival and regeneration of PC12 and neuronal stem cells.
- Proteomic Analysis of Protein Phosphorylation and Signaling in PC12 Cell Exposed to Modeled Microgravity
- Tissue engineering.
- Investigated the mechanical properties of engineering scaffolds.
- Evaluated the morphology and proliferation of PC12 cells and neuronal stem cells on porous and fibrous three-dimensional scaffolds.
- Implanted tumor cells into mice and extracted extracellular matrix matrigel from the murine Engelbreth-Holm-Swarm (EHS) sarcoma.

Visiting scientist

October 2001

Visiting scientist at Prof Boris Rubinsky's lab, Department of Mechanical Engineering, "University of California Berkeley", U.S.A. Experimenting the effect of freezing on the pore architecture in 3-D alginate scaffolds during fabrication.



AWARDS

- A travel grant to make an oral presentation at the 25th international symposium on controlled release of bioactive materials in Las Vegas, Nevada, U.S.A, June, 1998.
- First prize to outstanding oral presentation from the Israeli chapter of the Controlled Release Society (ICRS) in The 3rd Annual Meeting of The Israel Society for Controlled Delivery of Bioactive Materials. Karmiel, Israel, September 1998.
- First prize to outstanding poster in the annual meeting of the Israel Society for Medical and Biomedical Engineering, Tel-Aviv, Israel, January, 2001.