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BIOGRAPHICAL SKETCH

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NAME: **Roof, Michal Bental**

eRA COMMONS USER NAME (agency login): ROOFMICHAL

POSITION TITLE: Academic and Research Program Officer (Academic Program Professional)

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date	FIELD OF STUDY
The Hebrew University of Jerusalem, Jerusalem, Israel	BSc	1980	Chemistry
Feinberg Graduate School of the Weizmann Institute of Science, Rehovot, Israel	MSc	1983	Life Sciences
Feinberg Graduate School at the Weizmann Institute of Science, Rehovot, Israel	PhD	1990	Life Sciences
University of Pennsylvania School of Medicine, Philadelphia, PA	Postdoctoral Fellow	1996	Physiology
The Wharton School, University of Pennsylvania, Philadelphia, PA	Other training	2000	Certificate in Business Administration

A. Personal Statement

I bring to this program my diverse background in interdisciplinary science, organizational skills, problem-solving ability, and commitment to excellence. As a coordinator of the Administrative Core of the Program Project Grant, I work closely with Dr. Rabinovitch to coordinate the operations of the three projects and the Biomarker Core, including program meetings, preparation of IRB and APLAC protocols, and act as a liaison between the NHLBI, the FDA, the Stanford Research Management Group and the Core and Project PIs. I am the point person for all interactions between the Stanford group and the sites of performance of the Phase I and Phase II Clinical Trials.

I joined the Cardiopulmonary Research Program of Drs. Rabinovitch and Bland at Stanford University in 2002, as the Academic and Research Program Officer. I organize the educational activities of the lab, and assist the faculty and fellows with the preparation of grant proposals, IRB, APLAC and Biosafety protocols, manuscripts, and presentations. I serve as the Site Coordinator for the Stanford Transplant Procurement Center of the Pulmonary Hypertension Breakthrough Initiative (PHBI), headed by Dr. Rabinovitch, and in this capacity, I oversee patient recruitment, data collection and reporting, and ensure compliance with university and federal guidelines. I coordinated and prepared the application for an Investigational New Drug (IND) and the pre-IND meeting that preceded that, for Elafin as a therapy for pulmonary arterial hypertension (PAH) to the FDA in August 2017, that was approved without comments.

From 2005-2015, I served as the Administrative Coordinator of the Cardiovascular and Pulmonary Science Scholarly Concentration for medical students at Stanford University School of Medicine. This includes facilitating communication of the four co-Directors with the School of Medicine Administration, the medical students, and the faculty mentors. An important component of this role is the coordination of the MED223 course, a medical school course where faculty and fellows present new developments in cardiovascular science in the form of a journal club. From 2013-2018, I was the coordinator for the NIH-NHLBI T32 “Mechanisms and Innovation in Vascular Disease” (PI: RL Dalman), and from 2013 to date for NIH-NHLBI K12

HL120001 “Stanford Career Development Program in ‘Omics’ of Lung Disease”. (PIs: M Rabinovitch, MR Nicolls and MP Snyder). This included recruitment of candidates, oversight of training activities, ensuring compliance with NIH and Stanford policies, and acting as a liaison between the trainees and the Directors to facilitate effective communication.

Prior to joining Stanford, I was Associate Director (Scientific Development Administrator) at the Institute for Medicine and Engineering, directed by Dr. Peter Davies at the University of Pennsylvania. In this role, I was the liaison with federal funding agencies and organized multi-investigator program projects and training grants.

B. Positions and Honors

Positions

1984 - 1985	Fellow, Netherlands-Israel Foreign Ministry Student Exchange Program, University of Groningen, Groningen, The Netherlands
1988 - 1990	Teaching Assistant, Hebrew University of Jerusalem, The Faculty of Agriculture, Rehovot, Israel
1996 - 2002	Associate Director - Scientific Development Administrator, Institute for Medicine and Engineering (IME), University of Pennsylvania, Philadelphia, PA
2002 -	Academic and Research Program Officer (Academic Program Professional), Stanford University School of Medicine, Stanford, CA
2005 - 2015	Coordinator, Cardiovascular and Pulmonary Science Scholarly Concentration, Stanford University School of Medicine, Stanford, CA
2006 -	Site Coordinator, Stanford Transplant Procurement Center of the Pulmonary Hypertension Breakthrough Initiative (PHBI), (PI: Dr. Rabinovitch), Stanford, CA

Other Experience and Professional Memberships

2005 - 2008	Member, Board of Directors, Cipriani After School Care, Belmont, CA
2008 - 2009	Member, Peninsula Temple Beth El Religious School, San Mateo, CA
2010 -	Member, Board of Directors, Sequoia High School Education Foundation, Redwood City, CA

Honors

1983	Feinberg Graduate School special distinction award for MSc students, The Weizmann Institute of Science
1987	Wolf Foundation Scholarship for Ph.D. students, Wolf Foundation
1990	Chaim Weizmann Fellowship for postdoctoral studies, The Weizmann Institute of Science
1990	Feinberg Graduate School Distinction Award for PhD students, The Weizmann Institute of Science

C. Contribution to Science

1. **T Lymphocyte activation and pH regulation studied by magnetic resonance spectroscopy**.

   Implemented and characterized the agarose bead preparation and perfusion system we developed for unicellular alga to be used for studies of proliferating T-lymphocyte ex-vivo, under physiological conditions. Trained investigators from other laboratories in using this setup for other cell types (myocytes; β-cells).

   a. **Bental M**, Deutsch C. Metabolic changes in activated T cells: an NMR study of human peripheral blood lymphocytes. Magn Reson Med. 1993 Mar;29(3):317-26. PubMed PMID: 8450740.

   b. **Bental M**, Deutsch C. 19F-NMR study of primary human T lymphocyte activation: effects of mitogen on intracellular pH. Am J Physiol. 1994 Feb;266(2 Pt 1):C541-51. PubMed PMID: 8141269.

   c. **Bental M**, Deutsch C. On-line studies of activation events in primary human T lymphocytes. Immunomethods. 1994 Apr;4(2):148-62. PubMed PMID: 8069534.

2. **Osmoregulation in the unicellular, halotolerant alga Dunaliella, studied by in-vivo magnetic resonance spectroscopy.**

   Developed a system for spectroscopic studies of viable, anchorage-independent cells under physiological conditions, at the very high cell densities required for the NMR experiment. We achieved that by trapping the cells inside agarose beads, and perfusing them with fresh media. Based on these findings, we formulated a schema that defined a central role of inorganic phosphate in osmoregulation in Dunaliella salina.

   a. **Bental M**, Oren-Shamir M, Avron M, Degani H. P and C-NMR Studies of the Phosphorus and Carbon Metabolites in the Halotolerant Alga, Dunaliella salina. Plant Physiol. 1988 Jun;87(2):320-4. PubMed PMID: 16666141; PubMed Central PMCID: PMC1054751.
   b. **Bental M**, Degani H, Avron M. Na-NMR Studies of the Intracellular Sodium Ion Concentration in the Halotolerant Alga Dunaliella salina. Plant Physiol. 1988 Aug;87(4):813-7. PubMed PMID: 16666230; PubMed Central PMCID: PMC1054851.
   c. **Bental M,** Pick U, Avron M, Degani H. The role of intracellular orthophosphate in triggering osmoregulation in the alga Dunaliella salina. Eur J Biochem. 1990 Feb 22;188(1):117-22. PubMed PMID: 2318197.
   d. **Bental M**, Pick U, Avron M, Degani H. Polyphosphate metabolism in the alga Dunaliella salina studied by 31P-NMR. Biochim Biophys Acta. 1991 Mar 19;1092(1):21-8. PubMed PMID: 2009308.

3. **The interaction of chromaffin granules with natural and model membranes, and studies of liposome fusion**

   Adapted an assay of membrane lipid mixing for monitoring the fusion of chromatin granules and liposomes. Studied liposome-liposome interaction using membrane- and content-mixing assays of liposome fusion.

   a. **Bental M,** Lelkes PI, Scholma J, Hoekstra D, Wilschut J. Ca2+-independent, protein-mediated fusion of chromaffin granule ghosts with liposomes. Biochim Biophys Acta. 1984 Jul 25;774(2):296-300. PubMed PMID: 6331508.
   b. Gad AE, **Bental M**, Elyashiv G, Weinberg H, Nir S. Promotion and inhibition of vesicle fusion by polylysine. Biochemistry. 1985 Oct 22;24(22):6277-82. PubMed PMID: 4084519.
   c. Wilschut J, Scholma J, **Bental M**, Hoekstra D, Nir S. Ca2+-induced fusion of phosphatidylserine vesicles: mass action kinetic analysis of membrane lipid mixing and aqueous contents mixing. Biochim Biophys Acta. 1985 Nov 21;821(1):45-55. PubMed PMID: 4063361.
   d. **Bental M**, Wilschut J, Scholma J, Nir S. Ca2+-induced fusion of large unilamellar phosphatidylserine/cholesterol vesicles. Biochim Biophys Acta. 1987 Apr 9;898(2):239-47. PubMed PMID: 3828344.

Complete List of Published Work in My Bibliography:

http://www.ncbi.nlm.nih.gov/sites/myncbi/michal.roof.1/bibliograpahy/40448237/public/?sort=date&direction=ascending

D. Research Support

None; my current position is an administrative one.