

Boaz Mizrahi  
Faculty of Biotechnology and Food Engineering  
Technion–Israel Institute of Technology  
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### **Current Position:**

#### **Assistant Professor**

Faculty of Biotechnology and Food Engineering  
Technion–Israel Institute of Technology

### **Education**

#### **Postdoctoral Fellow** 2009 to May 2013

Langer Lab, The David H. Koch Institute for Integrative Cancer Research  
at Massachusetts Institute of Technology, Cambridge, Massachusetts, US  
&  
Laboratory of Daniel S. Kohane, Division of Critical Care, Children's  
Hospital Boston, Harvard Medical School, Boston, Massachusetts, US

#### **MSc, PhD** (combined program) 2003 to 2008, *summa cum laude*

Abraham J. Domb Lab, Department of Medicinal Chemistry,  
School of Pharmacy, The Hebrew University, Jerusalem, Israel

#### **Internship in Pharmacy** 2002 to 2003

Pharmacy Department, Hadassah Medical Center, Ein Karem, Jerusalem, Israel

#### **B. Pharm (Pharmacy)** 1998 to 2002

School of Pharmacy, Hebrew University, Jerusalem, Israel

### **Teaching Experience**

- 2005-2008 Teaching Assistant:** Polymers for medical uses. School of Pharmacy, The Hebrew University, Jerusalem, Israel
- 2006-2008 Lecturer:** Polymers-synthesis and mechanical properties. The College of Engineering, Jerusalem, Israel
- 2005-2008 Lab Instructor.** Analysis of Pharmaceutical compounds. School of Pharmacy, The Hebrew University, Israel

### **Fellowships and awards**

- 2011 Harvard Catalyst fellowship
- 2009 DuPont fellowship
- 2008 Hebrew University Medical school faculty prize for excellence in PhD thesis
- 2008 PhD awarded *summa cum laude*
- 2008 Super-Pharm Award for excellence in PhD thesis

2008	Excellence in Teaching award, The Hebrew University
2007	Grass Foundation fellowship
2007	Hebrew University Travel Fellowship award
2007	“Pharmaline” magazine award for young writers

### **Book Chapters**

1. *Active Implants and Scaffolds for Tissue Regeneration*. **Boaz Mizrahi** and Daniel Kohane. Springer, 2011.
2. *Lipospheres in Drug Targets and Delivery: Approaches, Methods, and Applications*. Abraham J. Domb, Aviva Ezra and **Boaz Mizrahi**. Taylor & Francis, CRC Press, 2005.

### **List of Publications (past three years)**

1. Doron Aframian, **Boaz Mizrahi**, Igal Granot and Abraham Domb. Evaluation of lipid-based bioerodable tablet compared with Biotene mouthwash for dry mouth. *Quintessence International*, 41, March 2010.
2. **Boaz Mizrahi**, Cristina F. Stefanescu, Celine Yang, Michael W. Lawlor, Dennis Ko, Robert S. Langer and Daniel S. Kohane. Elasticity and Safety of Alkoxyethyl Cyanoacrylate Tissue Adhesives. *Acta Biomaterialia*, 7, **2011**, 3150–3157.
3. **Boaz Mizrahi**, Silvia Irusta, Marshall McKenna, Cristina Stefanescu, Liron Yedidsion, MyatNoeZin Myint, Robert Langer, and Daniel S. Kohane. Microgels for Efficient Protein Purification. *Advanced Materials*, 23, 36, **2011**.
4. Avraham Avramof, **Boaz Mizrahi** and Abraham Domb. Preparation and characterization of a novel once-daily formulation of Diltiazem using Arabinogalactan as a channeling agent. *Journal of Applied Polymer Science*, 126, **2012**.
5. Ming Tao, Peng Yu, Binh T. Nguyen, **Boaz Mizrahi**, Naphtali Savion, Galina Sukhova, Frank D. Kolodgie, Renu Virmani, C. Keith Ozaki and Jacob Schneiderman. Locally Applied Leptin Induces Regional Aortic Wall Degeneration Preceding Aneurysm Formation in Apolipoprotein E–Deficient Mice *ATVB* 33, 2, **2013**.
6. **Boaz Mizrahi**, Kathryn A. Whitehead, Brian P. Timko, Mike Lawlor, Robert Langer, Daniel G. Anderson and Daniel S. Kohane. A Stiff Injectable Biodegradable Elastomer, *Advanced Functional Materials*, 23, 12, **2013**.
7. **Boaz Mizrahi**, Xiaojuan Khoo, Homer Chang, Katalina Sher, Jung-Jae Lee, Silvia Irusta and Daniel S. Kohane. Long-lasting Antifouling Coating from Multi-Armed Polymer. *Langmuir*, 29, 32, **2013**.
8. **Mizrahi B**, Golenser J, Wolnerman JS, Domb AJ. Adhesive tablet effective for treating canker sores in humans. *Journal of pharmaceutical sciences*. 2004, Dec;93(12):2927-35. Wolnerman JS, Bergman Z, Zini A, **Mizrahi B**, Vered Y, Domb AJ, Mann J. A new gel for topical use in treating severe periodontal disease—clinical observation. Refu'at ha-peh v'eha-shinayim. 2004 Apr;21(2):72-7, 99.

9. **Mizrahi B**, Shapira L, Domb AJ, Hour-Haddad Y. Citrus oil and MgCl<sub>2</sub> as antibacterial and anti-inflammatory agents. *Journal of periodontology*. 2006 Jun;77(6):963-8
10. **Mizrahi B**, Domb AJ. Mucoadhesive tablet releasing iodine for treating oral infections. *Journal of pharmaceutical sciences*. 2007 Nov;96(11):3144-50.
11. Davidi MP, Hadad A, Weiss EI, Domb A, **Mizrahi B**, Sterer N. The effect of a mild increase in temperature on tooth bleaching. *Quintessence international* (Berlin, Germany : 1985). 2008 Oct;39(9):771-5.
12. Brin YS, Golenser J, **Mizrahi B**, Maoz G, Domb AJ, Peddada S, Tuvia S, Nyska A, Nyska M. Treatment of osteomyelitis in rats by injection of degradable polymer releasing gentamicin. *Journal of controlled release*: 2008 Oct 21;131(2):121-7.
13. **Mizrahi B**, Shavit R, Domb A. Synthesis and characterization of polymeric implant for kyphoplasty. *Journal of biomedical materials research. Part B, Applied biomaterials*. 2008 Aug;86B(2):466-73.
14. Sterer N, Nuas S, **Mizrahi B**, Goldenberg C, Weiss EI, Domb A, Davidi MP. Oral malodor reduction by a palatal mucoadhesive tablet containing herbal formulation. *Journal of dentistry*. 2008 Jul;36(7):535-9.
15. **Boaz Mizrahi**, Abraham J. Domb. Mucoadhesive polymers for delivery of drugs to the oral cavity-A Review. *Recent Patents on Drug Delivery & Formulation*, June 2008. Shemer A, Amichai B, Trau H, Nathansohn N, **Mizrahi B**, Domb AJ. Efficacy of a mucoadhesive patch compared with an oral solution for treatment of aphthous stomatitis. *Drugs in R&D*. 2008; 9(1):29-35.
16. Brin YS, Nyska A, Domb AJ, Golenser J, **Mizrahi B**, Nyska M. Biocompatibility of a polymeric implant for the treatment of osteomyelitis. *Journal of biomaterials science. Polymer edition*. 2009;20(7-8):1081-90.

### **Patents:**

1. Particles and other substrates useful in protein purification and other applications. B Mizrahi, DS Kohane. WO Patent 2,012,116,001.
2. Particles and other substrates useful in protein purification and other applications. DS Kohane, B Mizrahi. WO Patent App. PCT/US2012/026,008.
2. Adhesive composition for the treatment of xerostomia. US11/959,997, 2010.
3. Adhesive composition. US757,508/12 , 2010.
4. Microgel particles for protein purification. WO/2012/116001.
5. Tissue adhesive with minimal toxicity. US Pending, 2012.
6. Anti appetite adhesive composition. US Patent App. 12/835,591.
7. Bioactive extracorporeal circuit for blood modification. US Pending, 2013.

## **Research Projects**

**2002-2008**

- Designing mucoadhesive polymers (synthesis and characterization).  
Preclinical and clinical evaluation planned with Prof. Jonathan Mann, Dean of the Faculty of Dentistry, Hebrew University).
- Polymeric implant for the treatment of osteomyelitis.
- Synthesis and characterization of polymeric implant for kyphoplasty (with Dr. Motti Beyar, NMB, LTD).
- Bio conjugate: Anhydride prodrug of ibuprofen and acrylic polymers

**2009-2013**

- Synthesis and in-vivo evaluation of new cyanoacrylate (super glue) tissue adhesives (Collaboration with DuPont).
- Protein purification with microgel systems.
- Local Application of leptin to induce regional aortic wall degradation (with Prof. C. Keith Ozaki, Harvard Medical School)
- Vaccine delivery (with Prof. Anne Moscona, Cornell University).
- Injectable biomaterials that harden *in situ* and release various drugs, locally.
- Polymeric systems for preventing biofouling on medical implants.

## **Review**

Regular reviewer for the following: Polymers for Advanced Technology; American Association of Pharmaceutical Scientists; Journal of Pharmaceutical Sciences; and Expert Opinion on Drug Delivery. Also review for Advanced Materials; Biomacromolecules; and NanoLetters.

## **Work Experience**

2002 to 2003 Hadassah Medical Center, Jerusalem, Israel, Pharmacist

2004 to 2008 Hebrew University of Jerusalem, Jerusalem, Israel, Lecture and Teaching Assistant

2006 to 2009 AxioMedic Inc., Zurich, Switzerland, Science advisory board ([www.axiomedic.com](http://www.axiomedic.com))

2008 to 2012 Quantum Health, Eugene, Oregon, Consultant ([www.quantumhealth.com](http://www.quantumhealth.com))