Curriculum Vitae

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www.derm.rutgers.edu

EDUCATION

Bachelor of Science (Pharmacy) with Honors, School of Pharmacy, DeMontfort University, Leicester, England, 1977.

Doctor of Philosophy (Pharmacology), School of Pharmacy, De Montfort University, Leicester, England, 1980. Title: "An Investigation of the Mechanism by which Aluminium and Other Polyvalent Cations inhibit Eccrine Sweating". Advisor: Prof. Basil Northover, Ph.D.

Internships and Residencies

Royal Pharmaceutical Society of Great Britain, Internship for Pharmaceutical License, 1980-1981 (M.R. Pharm. S. awarded in 1981).

Postdoctoral experience

1981-1983 University of Florida, Gainesville, FL College of Pharmacy, Postdoctoral Fellow with Professor Nicholas Bodor (Medicinal Chemistry).

1983-1986 University of Bradford, Bradford, England, Postgraduate School of Studies in Pharmacy, Senior Postdoctoral Fellow with Professor Brian W. Barry (Pharmaceutics and Drug Delivery).

Licensure

Member of the Royal Pharmaceutical Society of Great Britain. License #73637. February 1981-present.

APPOINTMENTS

Ernest Mario School of Pharmacy, Rutgers-The State University of New Jersey, Busch Campus, Professor with Tenure in Pharmaceutics, 7/09-present.

Founder & Director, Center for Dermal Research (CDR)- NJCBM, Rutgers-The State University of New Jersey, 2/11-present.

Ernest Mario School of Pharmacy, Rutgers-The State University of New Jersey, Busch Campus, Associate Professor with Tenure in Pharmaceutics, 7/05-7/09.



University of Medicine and Dentistry of New Jersey-NJ Medical School, Associate Professor, Dept. of Physiology and Pharmacology, Newark, NJ, 9/00-7/05.

College of Pharmacy, University of South Carolina, Columbia, SC, Full Professor with tenure in Dept. of Basic Pharmaceutical Sciences-Pharmaceutics, 9/98-9/00.

College of Pharmacy, University of South Carolina, Columbia, SC, Associate Professor with tenure in Dept. of Basic Pharmaceutical Sciences- Pharmaceutics, 9/93-8/98.

College of Pharmacy, University of South Carolina, Columbia, Assistant Professor in Dept. of Basic Pharmaceutical Sciences-Pharmaceutics (tenure-track), 9/87-8/93.

Director, Laboratory for Drug Delivery, New Jersey Center for Biomaterials, Rutgers University, 9/00-present.

Director, Industrial Membership Program, New Jersey Center for Biomaterials, Rutgers University, 5/02-2/11

Engineering Research Center (ERC) for Structured Organic Particulate Systems (SOPS), Member of Leadership Committee, FDA Liaison, Project 2.6 and C5 Leader, 9/06-9/16.

UMDNJ-NJ Medical School, Newark, Dept. of Pharmacology & Physiology, Adjunct Associate Professor, 7/05-7/08.

College of Pharmacy, Rutgers-The State University of New Jersey, Busch campus, Adjunct Associate Professor, 9/00-6/05.

The Graduate School, Rutgers-The State University of New Jersey, Newark Campus, Adjunct Associate Professor, 9/00-6/05.

Department of Biomedical Engineering, New Jersey Institute of Technology, Newark, NJ, Adjunct Associate Professor, 9/00-6/05.

College of Engineering and Science, Clemson University, Clemson, SC, Adjunct Professor in Bioengineering, 9/98-9/00.

College of Engineering and Science, Clemson University, Clemson, SC, Adjunct Associate Professor in Bioengineering, 9/93-8/98.

College of Engineering and Science, Clemson University, Clemson, SC. Adjunct Assistant Professor, 5/92-8/93.

Medical University of South Carolina, Charleston, SC, Adjunct Professor at College of Pharmacy, Graduate Faculty Member, 9/98-9/00.

Medical University of South Carolina, Charleston, SC, Adjunct Associate Professor at College of Pharmacy, Member of Graduate Faculty at MUSC, 9/93-9/98.

Medical University of South Carolina, Charleston, SC, Adjunct Assistant Professor at College of Pharmacy, Member of Graduate Faculty at MUSC, 9/88-8/93.



Other Professional Positions and Major Visiting Appointments

College of Pharmacy, University of South Carolina, Columbia SC, Visiting Assistant Professor in Basic Pharmaceutical Sciences, 2/86-9/87.

Graduate Programs at Rutgers University

Member, Graduate Program in Pharmaceutical Science, 2000-present.

Member, Graduate Program in Biomedical Engineering, 2004-present.

Member, Graduate Program RWJ Graduate School of Biomedical Sciences, 2006-present.

Member, Graduate Program in Chemical and Biochemical Engineering, 2007- present.

Member, Graduate Program in Chemistry and Chemical Biology, 2014-present.

Member (active) of Collaborative Interdisciplinary Programs at Rutgers

New Jersey Center for Biomaterials-NJCBM

Cancer Institute of New Jersey (CINJ)

NIH T32 Postdoctoral Training in Tissue Engineering and Biomaterials Science

RESEARCH INTERESTS AND EXPERIENCE

Optimization of topical, transdermal and transmucosal drug delivery; development of novel permeation models and computational modeling.

- Design and evaluation of novel dermal penetration enhancers and retardants & their structure-activity relationships.
- Design and testing of novel formulations for topical and transdermal drug delivery including creams, emulsions, gels and micro-and nano-carrier systems.
- Physical approaches to enhancing dermal drug delivery: iontophoresis, microneedles as well as formulation optimization.
- Visualization of drug transport pathways in skin using Raman, Fourier Transform Infra-Red spectroscopy, electron and confocal microscopy.
- Investigation of permeability and formulations for drug delivery into nails.
- Development of novel human tissue cultured skin equivalents for permeability testing.
- Computational approaches to predicting skin transport of drugs.
- Drug delivery into the oral cavity: optimization of oral transmucosal (buccal), transgingival and sublingual drug delivery.
- Pharmacokinetics and ADME studies.
- Biorelevant drug release/dissolution testing of pharmaceutical dosage forms.
- Design & development of oral edible as well as transdermal drug-containing polymer films.



AWARDS AND HONORS

Michniak -Kohn Awards:

Elected to The Kosciuszko Foundation Collegium of Eminent Scientists as a Distinguished Fellow of the Collegium for Outstanding Achievements and Contributions to the Polish Scientific Community, February, 2015.

Rutgers University Student Employment Office 2012 Supervisor of the Year Award.

Rutgers University Aresty Research Center for Undergraduates Faculty Research Mentor of the Year Award, April 2011.

Awarded Fellow status of the American Association of Pharmaceutical Scientists, July 2008. Awards ceremony at the AAPS annual meeting, Nov. 16th, 2008 in Atlanta, GA.

Awarded the 2007 Meggers Award from the Society for Applied Spectroscopy for paper entitled "Infrared Kinetic/Structural Studies of Barrier Reformation in Intact Stratum Corneum Following Thermal Perturbation" *Applied Spectroscopy*, 2007, 60 (12), 1399-1404. Co-authors: Pensack, Moore and Mendelsohn.

The Controlled Release Society New Jersey Student Chapter Annual Innovated Controlled Delivery Concept Award has been named after Dr. Bozena B. Michniak-Kohn (awarded for first time in 2008).

Awarded New South Wales (Australia) Cancer Institute's Premier Award for Outstanding Cancer Research 2007 for five year grant submitted by Khachigian, L. *et al.* entitled "Novel Gene-Targeted Therapies for Basal Cell Carcinoma". Listed as Associate Investigator I on study.

Received Most Cited Paper Award 2005 in European Journal of Pharmaceutics and Biopharmaceutics for Wang, Y., Thakur, R., Fan, Q., Michniak, B. Transdermal iontophoresis: combination strategies to improve transdermal iontophoretic drug delivery, Vol. 60, Issue 2 (2005), 179-191.

Awarded the Lady Davis Fellowship at the Hebrew University, Jerusalem, Israel, 2000-2001.

Recipient of Researcher of the Year Award 1998, College of Pharmacy, University of SC.

The 1981 Best Publication Prize in the Int. J. Cosm. Sci. for the paper "Studies on the mechanism of topical anhidrosis due to polyvalent cations" 3(1), 29-36. First Author: B. Michniak.

Participant in Pharmaceutical Manufacturers' Association (P.M.A.) Coordinated Industry Program for Pharmacy Faculty (Burroughs Wellcome, Research Triangle Park, NC) August 1989.

Elected for membership of Sigma Xi, The Scientific Research Society (May, 1993).

Honorary member of Golden Key Honor Society.

Michniak-Kohn Lab. Member Awards since 2011:

Michniak-Kohn Pharm.D/Ph.D student Rose Soskind received the third prize in the Poster Competition at the 71st Annual Society for Cosmetic Chemists Scientific Meeting and Technology Showcase, December 11-12, 2017, The Westin New York at Times Square.



Michniak-Kohn Pharm.D/Ph.D student Rose Soskind received the Samuel Bergen, Jr., MD Medal of Excellence Award, May, 2017.

Michniak-Kohn Ph.D. student Anika Haq Alam was elected President of the Rutgers University AAPS Student Chapter, 2017.

Michniak-Kohn Ph.D. student Anika Haq Alam received the Teaching Assistant/Graduate Assistant Professional Development Fund Award 2015-2016; The Rutgers Graduate School of Arts & Sciences Fellowship Foundation Award, 2016-2017 and the Rutgers University Pre-dissertation Award, 2016-2017.

Michniak-Kohn Ph.D. student Dina Ameen received the Teaching Assistant/Graduate Assistant Professional Development Fund Award in 2016 and in 2017.

Michniak-Kohn Ph.D. graduate student Dina Ameen received the 2016 AAPS Graduate Student Travel Award. Covered registration and travel to AAPS annual meeting Denver, CO Nov. 14-17, 2016.

Michniak-Kohn Ph.D. graduate student Tannaz Ramezanli received the 2015 IPEC Foundation Graduate Student Scholarship Award. Covered registration and travel to AAPS annual meeting in Orlando, FL, Oct. 25-29, 2015.

Michniak-Kohn Ph.D. graduate student Mania Dorrani received the AAPS & Catalent Applied Drug Delivery Institute's 4th Annual Global Academic Competition for Life Science Leaders of Tomorrow Award, with her review "Topical SiRNA Delivery: Challenges and Prospects" May 28, 2015.

Michniak-Kohn Pharm.D./ Ph.D. student Rose Soskind received an American Foundation for Pharmaceutical Education AFPE Gateway Scholarship for Doctorate Studies, June 2015-2016.

Michniak-Kohn Ph.D. graduate student Mania Dorrani received the American Society of Iranian Pharmaceutical Scientists (ASIPS) Graduate Student Award, November 2015.

Controlled Release Society CRS 2014 Outstanding Student Chapter of the Year Award for the NJ/NY/PA CRS Student Chapter (I am Faculty Advisor) presented at CRS annual meeting July13-15, 2014 in Chicago.

Michniak-Kohn Ph.D. graduate student Tannaz Ramezanli was awarded the SCC Third Best Poster Award at the 69th Society of Cosmetic Chemists SCC Annual Meeting, Hilton Hotel, New York City, Dec. 11-12, 2014.

Michniak-Kohn Ph.D. graduate student Pei-Chin Tsai was awarded the AAPS Graduate Student Research in Biotechnology Award in 2014. Presented at the AAPS annual meeting in San Diego, CA, November 2-6, 2014.

Michniak-Kohn Ph.D. graduate student Tannaz Ramezanli received the AAPS & Catalent Applied Drug Delivery Institute's 3rd Annual Global Academic Competition for Life Science Leaders of Tomorrow Award, with her review of "Stem Cells as Novel Carriers for Cancer Therapy" June 11, 2014.

Michniak-Kohn Ph.D. graduate student Pei-Chin Tsai was awarded the NYSCC Third Best Poster Award at the NYSCC 2014 Sun Exposure Symposium October 15th 2014, The Pines Manor, Edison NJ.



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