***CURRICULUM VITAE***

**PAUL R. MEERS, Ph.D.**

29 Berrien Ave.

Princeton Jct., NJ

609-897-1308

prm.phd@verizon.net

# SUMMARY

* Assistant Professor/Director/Principal Scientist with broad experience in academia and the pharmaceutical industry – ranging from formulation chemistry and physics to membrane and protein biochemistry and cell/molecular/preclinical biology.
* Research/teaching interests – Nanotechnology/biotechnology – specific areas – biomolecule drug delivery for gene silencing or transfection, mechanism(s) of vesicular nucleic acid delivery, membrane fusion, protein-lipid interactions, biology and biophysical chemistry of cellular membranes; spectroscopic methods *in vivo* and *in vitro*; biofilm growth and structure.
* Experience in design of research projects, running laboratories, obtaining grant funding, managing budgets, teaching courses, presenting research, generating publications, producing intellectual property, and providing leadership, creativity, ideas and new approaches to solving research problems.

**PROFESSIONAL EXPERIENCE**

**Rutgers University Feb. 2011 – present**

***Instructor, School of Environmental and Biological Sciences (Sept. 2011- )***

***Dept. of Plant Biology and Pathology***

* Director, Undergraduate Biotechnology Program in Biotechnology
* Co-Director, Master of Business and Science in Biotechnology & Genomics
* Member: Center for Lipid Research

**Innovative Biopharmaceutical Delivery June 2009 – present**

***Consultant -*** *e.g. Vertex, Inc., Cardigant Inc., Caliber Therapeutics, Inc.*

**Monmouth University Jan 2010 – Aug. 2011**

***Adjunct Faculty, Dept. Chemistry, Medical Technology and Physics***

* Taught Chemistry courses, lecture and laboratory

**Scicore Academy Sept. 2010 – Aug. 2011**

***Faculty member – secondary science education***

* Taught several classes in Biology and Chemistry, lecture and laboratory
* Led student research projects

**Transave, Inc. 2003- 2009**

***Consultant (April - May 2009)***

***Senior Principal Scientist, Drug Delivery Research (March 2008 - March 2009)***

***Director of Drug Delivery Research (May 2006 - March 2008)***

***Director of Biological/Preclinical Research and Development (Jan. 2004 - May 2006)***

***Consultant (May -Dec. 2003)***

*Responsibilities:*

* Led a group of several Ph.D. scientists and technicians in formulation, biological testing and aerosol characterization for inhaled delivery of liposomes containing antibiotics, cancer chemotherapeutics or nucleic acid therapeutics, including Transave’s lead product ArikaceTM - Established a key mechanism of action of ArikaceTM - wrote signature peer-reviewed scientific publication introducing ArikaceTM and investigating biofilm penetration and drug release.
* Led internal Transave inhaled siRNA delivery project – produced unique proprietary non-cationic liposomal delivery systems for delivery of siRNA to the lung.
* Presented Transave data for potential outside collaborators.
* Established and led collaborative siRNA lung delivery research projects with 2 major RNAi companies. Research also led to a later project with a major pharmaceutical company.
* Participated in evaluation of technology licensing opportunities for liposomal formulations.
* Participated in intellectual property development, filing of patents.
* Supervised preclinical efficacy models, biodistribution and pharmacokinetic studies at Transave – inhalation delivery formulations for cystic fibrosis and lung cancer.
* Participated in oversight and evaluation of outsourced GLP preclinical toxicology
* Participated in review of IND documents and Investigators Brochure.
* Prepared and submitted grant proposals for drug development in the area of liposome-based inhalation therapeutics**.**
* Supervised bioanalytical work for samples from clinical trials.
* Ran company IACUC

**Elan Corporation/The Liposome Company, Princeton, NJ**

***Consultant* *(March 2003) (Elan)***

***Director, Membrane Research* (*1998 – 2002) (The Liposome Co./Elan)***

***Assistant Director, Membrane Research* (*1994 – 1998) (The Liposome Company)***

*Responsibilities:*

* Directed research group of Ph.D. scientists in development of fusogenic liposomes for gene/drug delivery; from formulation through *in vitro* and small scale *in vivo* experiments.
* Designed and patented novel anionic lipid-based gene delivery system – work published in Gene Therapy.
* Designed and patented novel liposome targeting system.
* Designed and patented enzyme-activated liposomes for drug site specific delivery.
* Participated in patent portfolio maintenance.
* Led two joint venture (JV) projects; established timelines, milestones and research design –Elan-Ribozyme JV, Elan-Targeted Genetics JV.
* Made presentations to potential joint venture partners, presented summary of research stage intellectual property to parties interested in acquisition.
* Participated in evaluation of technology licensing opportunities.

**Drexel University. Philadelphia, PA**

***Guest lecturer, Department of Biology***

* BIO 615 course – Proteins – content included discussion of protein-lipid interactions, biological roles of peripheral membrane proteins, physical parameters that govern interactions at the surface of phospholipid bilayers

**Boston University School of Medicine, Boston, MA**

## **Assistant Professor of Pathology and Biophysics**

* Faculty member- supervised and provided grant-funding for research laboratory - protein-lipid interactions, membrane fusion, neutrophil biochemistry; taught primarily graduate level courses

EDUCATION

* Ph.D., Biochemistry, Cornell University, Ithaca, NY - Dr. Gerald Feigenson, advisor
* B.A., Chemistry *summa cum laude*, Illinois Wesleyan University, Bloomington, IL

### AWARDS AND GRANTS

* Charles and Johanna Busch Grant for Biomedical Research, Rutgers University, 2013
* Cystic Fibrosis Foundation Grant, approximately $3.4 million total, matching grant (i.e. $1.7 million from CFF) – Transave, Inc.
* National Institutes of Health R29 Grant Award, $350,000 direct, approx. $550,00 total - Boston University School of Medicine
* Arthritis Foundation Investigator Award - Boston University School of Medicine
* American Cancer Society Grant-in-Aid - Boston University School of Medicine
* Arthritis Foundation Fellowship - University of California, San Francisco
* American Cancer Society postdoctoral fellowship - University of California, San Francisco,
* National Institutes of Health National Research Service Award for graduate training at Cornell University
* American Institute of Chemists' Chemistry Award - Illinois Wesleyan University

#### MEMBERSHIPS

* The International Society for Aerosols in Medicine
* The International Liposome Society
* Biophysical Society
* American Chemical Society
* Phi Kappa Phi Academic Honor Society,
* Beta Beta Beta Biological Society (at Illinois Wesleyan University)

###### PEER REVIEW

* Member of Editorial Board of Journal of Liposome Research
* Review manuscripts for scientific journals: e.g. Biochemistry, Biophysical Journal, Biochimica Biophysica Acta, Journal of Membrane Biology, Science, Journal of Lipid Research, Journal of Liposome Research, etc.
* Served as grant reviewer for National Institutes of Health, National Science Foundation, American Heart Association; member of NIH special study section.

**Publications**

> 45 peer-reviewed publications and patents (available on request)

**INVITED PRESENTATIONS**

1. December 4, 2015 – *Entropic Careers,* Stony Brook University, Department of Biochemistry

2.May 16th, 2014 - *Vesicular Delivery Vehicles for Lung Diseases*, Division of Pulmonary and Critical Care Conference at Robert Wood Johnson Hospital, New Brunswick, NJ

3*.* October 13, 2012 - *Liposomal Degradation*, AAPS Workshop on Predicting and Monitoring Impurities in API and Drug Products: Product Development and Regulatory Issues, at the American Association of Pharmaceutical Scientists National Meeting, Chicago, IL

4. May 23, 2006 - *Application of SLITTM Technology to The Delivery of Inhaled Antibiotics In CF Patients* in Mini-Symposium: Novel Approaches to the Assessment and Treatment of CF Lung Disease. Annual Meeting of the American Thoracic Society, San Diego, CA

5. October 20, 2005 – *SLITTM Amikacin Drug Release Mediated by Pseudomonas aeruginosa Infection.* 19th Annual North American Cystic Fibrosis Conference 2005. Baltimore, MD.