Ta-Chun Lin, Ph.D.

Education Summary

- Oct. 1997, Ph.D. in Environmental Health Sciences, The Johns Hopkins University, School of Hygiene & Public Health, Baltimore, Maryland. Dissertation Title: Deposition of Inertial Size Particles in the Replicate Models of Human Extrathoracic Airways Simulating Inhalation of Therapeutic Aerosols.
- May 1991, Master of Science in Environmental Engineering, Carnegie Mellon University, Pittsburgh, Pennsylvania.
- June 1985, Bachelor of Science in Environmental Engineering, June 1985, National Cheng-Kung University, Tainan, Taiwan

Employment Summary

- May 2000 - present, Inhale Therapeutic Systems.
- Dec. 2000 - May 2001, Research Lab Supervisor, Department of Pharmaceutical Sciences, University of Maryland School of Pharmacy, Baltimore, Maryland. Responsible for supervising the day-to-day operations of the Aerosol Laboratory and providing administrative and technical support to research activities. Designed research protocols and experiments involving pulmonary drug administration. Carried out protocols initially, then training of other lab personnel. Responsible for report writing / contact with supervisors and advising graduate students on projects.
- Feb. 1998 – Dec. 2001, Postdoctoral Fellow, Department of Pharmaceutical Sciences, University of Maryland, School of Pharmacy, and Department of Pediatrics, The Johns Hopkins University, School of Medicine, Baltimore, Maryland (Joint Appointment). Develop, conduct and manage research on the deposition of therapeutic aerosols in the human respiratory tracts utilizing various aerosol delivery systems. Techniques include; gamma scintigraphy, inertial particle size testing and total dose evaluation. Experience with HPLC and spectrophotometric analysis. Also responsible for data management and analysis.
- Jan. 1993 – Oct. 1997, Department of Environmental Health Sciences, Division of Environmental Health Engineering, The Johns Hopkins University, School of Hygiene & Public Health, Baltimore, Maryland. Established and operated an experimental system, and analyzed data from studies of aerosol deposition in the human respiratory tract. Performed aerosol sampling of airborne pollutantants to assess exposure encountered at various work places and home environments. Tested and analyzed the delivery efficiency of various systems for delivering therapeutic aerosols. Example work included; "Aerosol Size Distribution Measurement of the Marsam 2000 Nebulizer with Three Therapeutic Drug Agents" and "Measuring the Output Characteristics of a Therapeutic Aerosol Holding Chamber" (developed by Dr. Beth L. Laube at Johns Hopkins University School of Hygiene and Public Health).
- June 1990 - May 1991, Department of Civil Engineering, Program in Environmental Engineering, Carnegie Mellon University, Pittsburgh, Pennsylvania. Conducted snow sampling on the ice sheet in central Greenland from July to September, 1990. Analyzed snow samples by using Ion Chromatography to acquire information on the airborne transport of air pollutants on a global scale. The project was funded by National Science Foundation.
- Jan. - March 1995, 1996 and 1997, Teaching Assistant, Department of Environmental Health Sciences, Division of Environmental Health Engineering, The Johns Hopkins University, School of Hygiene & Public Health, Baltimore, Maryland. Industrial Hygiene Laboratory - Responsible for

establishing and instructing students in the operation of various aerosol sampling techniques for air pollutant exposure determination.

Publications

- J. Suman, B. Laube, **T. Lin**, G. Brouet, and R. Dalby. Are in vitro tests of nasal solutions predictive of in vivo deposition. Proceedings of Respiratory Drug Delivery VII: 137-144, Serentec Press, Inc., Raleigh, North Carolina, 2000.
- **T. Lin**, P. Breysse, B. Laube, and D. Swift. Mouthpiece diameter affects deposition efficiency in cast models of the human oral airways. Accepted by J. Aerosol Medicine (2001)
- B. Laube, **T. Lin**, A. Valleteau, R. Dalby, F. Diemer, and A. Togias. Complete protection against the acute bronchoconstrictor response to allergen challenge with nedocromil sodium aerosol in patients with asthma. Submitted to J. Aerosol Medicine (2001).

Presentations

- A Review of Comparison of Bronchodilator Responses and Deposition Patterns of Salbutamol Inhaled from a Pressurized Metered Dose Inhaler, as a Dry Powder, and as a Nebulized Solution. Presented at the Environmental Health Sciences Seminar Series, The Johns Hopkins University, Baltimore, MD., October, 1993.

Poster Abstracts

- B. Laube, **T. Lin**, R. Dalby, A. Valleteau, F.B. Diemer, and A. Togias. Nedocromil sodium provides complete acute protection against allergen challenge in patients with asthma when delivered at two inspiratory flow rates from a large volume holding chamber. Am J Respir Crit Care Med 159 (Suppl): A858 (1999).
- **T. Lin**, R. Dalby, and B. Laube. Comparison of emitted dose and particle size of three aerosolized drugs using the Pari LC Plus nebulizer with and without a positive expiratory pressure (PEP) device. AAPS PharmSci 1 (Suppl 4): S-269 (1999).
- J. Suman, B. Laube, **T. Lin**, G. Brouet, R. Dalby. In vitro performance measurements of aqueous nasal spray pumps may not predict in vivo deposition pattern. AAPS PharmSci 1 (Suppl 4): S-272 (1999).
- **T. Lin**, P. Breysse, B. Laube, and D. Swift. Effect of mouthpiece diameter on aerosol deposition efficiency in the human oropharynx. Proceedings of Respiratory Drug Delivery VII: 429-432, Serentec Press, Inc., Raleigh, North Carolina (2000).
- B. Laube, **T. Lin**, D. Geller, R. Dalby, and P. Zeitlin. Positive expiratory pressure alters aerosol distribution in CF. Pediatric Pulmonology (Suppl 20): 247 (2000).
- **T. Lin**, R. Dalby, J. Visich, and P. Challoner. Aerosol output and particle size characteristics of tobramycin solution for inhalation administered to a ventilator circuit via three different jet nebulizers. Chest 118(4) (Suppl): 237S (2000).

Honors and Awards

- Graduate Student Scholarship (1993 - 1997), The Johns Hopkins University, Baltimore, Maryland.

Organizations

- Full Member, American Conference of Governmental Industrial Hygienists (ACGIH), 1995 - present.
- Full Member, American Industrial Hygiene Association (AIHA), 1997 - present.
- Associate Member, International Industrial Hygiene Association (IIHA), 1997 - present.

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