

Innovations in Pulmonology



*Rady Children's - A comprehensive system
focused solely on children.*



PEOPLE

Welcome Dr. Bhattacharjee, sleep medicine director



Rakesh Bhattacharjee, M.D., a pediatric respiratory and sleep specialist, has joined the Division of Respiratory Medicine at Rady Children's Hospital-San Diego as the director of pediatric sleep medicine.

Dr. Bhattacharjee comes to Rady Children's from the University of Chicago Medicine Comer Children's Hospital, where he was an assistant professor. His clinical interests are in developing strategies to treat obstructive sleep apnea in children. His research interests include studying complications associated with sleep-disordered breathing in children, particularly cardiovascular issues.

At Rady Children's, Dr. Bhattacharjee seeks to make the Sleep Center a place of innovation, one which actively participates in research to better understand the role of sleep. Educating patients, parents and the public on the importance of sleep will be another component, with the goals of identifying and treating sleep disorders in a timely matter and preventing these disorders from occurring.

Dr. Bhattacharjee earned his medical degree from McMaster University in Hamilton, Ontario, and trained in pediatrics and respiratory medicine at the Hospital for Sick Children in Toronto. He received his sleep medicine training at the University of Louisville.

[Learn about the Sleep Center.](#)



PROGRAMS

Specialized program treats complex sleep apnea

The Complex Sleep Apnea Program cares for children with complex health issues who have persistent sleep issues despite traditional management for obstructive sleep apnea (OSA).



Although tonsillectomy remains the first-line therapy for pediatric OSA, a significant number of children continue to suffer from sleep-related breathing disorders (SRBD) after having this procedure. Children with genetic and craniofacial syndromes, neuromuscular disease, anatomic airway problems, cerebral palsy and obesity are especially at risk for SRBD. To help these children, the Complex Sleep Apnea Program uses the latest diagnostic tools and therapies, along with a coordinated care approach by sleep specialists from both respiratory medicine and otolaryngology.



[Daniel Lesser, M.D.](#), (Respiratory Medicine) and [Javan Nation, M.D.](#), (Otolaryngology) collaborate to create a management plan that considers the unique features of each child's sleep disorder. Dr. Lesser assesses the child's polysomnography, evaluates candidacy for positive airway pressure therapy and identifies the need to further evaluate the child or treat comorbidities. Dr. Nation provides expertise in anatomic assessment of the upper airway using in-office laryngoscopy; drug-induced sleep endoscopy; and referrals for cine airway MRI. He has special expertise in cutting-edge surgical procedures that improve SRBD, which he has successfully performed on patients in the program.

Currently, the Complex Sleep Apnea Program primarily sees children referred by otolaryngologists and pulmonologists from within Rady Children's Hospital-San Diego; the program aims to expand and accept referrals from throughout the Southern California region.

[Learn more about the Complex Sleep Apnea Program.](#)



RECOGNITION

Fellows are next generation of leading physician-scientists

The Division is proud to recognize its fellows, who are paving the way in improving care for future generations of children with pulmonary and respiratory disease.

innovation
belongs in every moment



RESEARCH

Innovative project seeks to map development of lung alveoli

[James Hagood, M.D.](#), chief of the Division of Respiratory Medicine at Rady Children's, is a research center investigator for Alveolar DevMap, a collaborative project among UC San Diego, the University of Alabama-Birmingham, Yale University and Carnegie Mellon University.

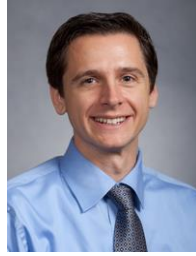
The project, part of the National Heart, Lung, and Blood Institute-funded [LungMAP](#), seeks to map the development of the alveoli at a cellular and molecular level. These structures develop abnormally in many premature infants, resulting in bronchopulmonary dysplasia, a condition associated with chronic oxygen dependence, repeated hospitalization and a high likelihood of lifelong respiratory complications.



Dr. Hagood and the members of his [Lung Repair Lab](#) will focus on studying epigenetic mechanisms such as DNA methylation, which programs changes in gene expression during alveolar development. This is the only project funded by LungMAP to assess epigenetic alterations. Three of the fellows from the respiratory medicine division -- Marilyn Chan, M.D., Elizabeth Duong, M.D., and Divya Chhabra, M.D., -- are participating in this project or ones that are closely related.

LungMAP includes three additional research centers, a data core and a tissue core. This highly innovative consortium, which includes some of the brightest minds in lung biology, will help elucidate how the lung develops and provide an unprecedented level of detail; the data generated will be posted to an interactive and searchable website to accelerate discovery by other labs.

Our current fellows are taking lead roles in clinical, translational and basic research projects. These projects include the assessment of continuous glucose monitoring in cystic fibrosis patients, bioinformatics of normal and abnormal lung development, and epigenomics of lung alveolar development (see story above).



Dr. Lesser

All of the graduating fellows have embarked on successful academic careers: [Kathryn Akong, M.D., Ph.D.](#), and [Matejka Cernelc-Kohan, M.D.](#), have joined our faculty, and Mindy Ross, M.D., has joined the pediatric pulmonology faculty at UCLA. Two of our current fellows, Elizabeth Duong, M.D., and Marilyn Chan, M.D., have been accepted into the prestigious and highly competitive Pediatric Scientist Development Program, a national research training program that accepts only 12 to 14 candidates each year.

Founded in 2009, the fellowship program is directed by [Daniel Lesser, M.D.](#) Research training is provided under the guidance of renowned physician-scientists.

[Read about the fellowship program.](#)



Learn more at RCHSD.org