

Leila Kheirandish-Gozal, MD, MSc, is a tenured professor of pediatrics and Director of the Child Health Research Institute (CHRI) at the University of Missouri, Columbia. She is one of the most celebrated pediatric sleep medicine experts in the world, ranking No. 4 among specialists in 2018.

Dr. Kheirandish-Gozal's research focus is both on mechanisms and biomarkers which may mediate the strong correlation between obstructive sleep apnea (OSA) and vascular dysfunction. She was instrumental in the development of non-invasive techniques that enable today's assessments of endothelial function as a marker of cardiovascular risk in children. Furthermore, she described the presence of divergent phenotypes of vascular dysfunction in children with similar OSA severity, and she provided conceptual framework that attempted to assign a role to "endothelial repair processes" as being involved in such divergent phenotype.

In her breakthrough work in the OSA field, she revealed that differences in the recruitment and mobilization of endothelial progenitor cells and the chemokines that promote such mobilization accounted for a substantial proportion of the variance in endothelial function in children with OSA.

Dr. Kheirandish-Gozal was one of the major investigators who developed in vitro techniques to assess adenoid and tonsil tissue proliferation. Increased proliferation of these tissues serves a major pathophysiologic cause of sleep apnea in children. Using the techniques she developed with others, she went on to explore and demonstrate the potential value of corticosteroids in reducing the proliferative rates of these tissues, and her research resulted in changes in clinical practice guidelines by the American Academy of Pediatrics.

Dr. Kheirandish-Gozal was the first person to ever propose and subsequently show that the prevalence of OSA was exceedingly high in moderate to severe asthmatics who manifest substantial morbidity and highly recurring admissions to the hospital for acute asthmatic exacerbations. She was able to show that treatment of OSA in this high-risk asthmatic population was accompanied by improvements in their underlying asthma severity as evidenced by reductions in hospital admissions and use of emergency asthma medication. This work has now been followed by others, and a large-scale analysis of healthcare insurance databases has further confirmed the uniquely important aspect of this scholarly contribution.

Dr. Kheirandish-Gozal systematically identified both genetic and epigenetic modifications in the eNOS gene that affect the interaction between OSA and the vascular endothelium. These recent important findings may explain the divergence of endothelial dysfunction phenotype in children affected by the same degree of OSA severity, and they show that OSA can induce epigenetic modifications in specific target genes in children.

In her more recent efforts, Dr. Kheirandish-Gozal has pioneered MRI studies in children with OSA aiming to define structural-functional associations accounting for the cognitive deficits and the role of exosomes as effector of cognitive morbidity through disruption of the blood brain barrier. These studies are currently funded by federal grant support from the NIH.

She has more than 177 peer-reviewed publications and co-edited the reference book of sleep disordered breathing in children. She is Associate Editor of *Frontiers in Neurology Chronobiology* and the *Journal of Child Science*, and she serves on the editorial board of prestigious journals including *American Journal of Respiratory and Critical Care Medicine*, *Sleep*, *Sleep Medicine*, *Journal of Clinical Sleep Medicine*, *International Journal of Epidemiological Research (IJER)*, *Frontiers in Pediatrics*, and *Journal of Sleep Science (JSS)*.

Dr. Kheirandish-Gozal is a renowned lecturer around the world and received an Order of Extraordinary Merit from the Peruvian Medical Association for her major contributions toward studying the effects of biomass pollution on lung and sleep health in underserved Inca populations living at high altitude. She was elected as an Inaugural Fellow of the American Thoracic Society, where she currently serves as Chair of the Sleep and Respiratory Neurobiology Program Committee. She was named “Professional Woman of the Year” by the National Association of Professional Women in 2011, honored as one of Chicago’s top five successful professionals under 40 and recognized with a biographical record in the 66th edition of “Marquis Who’s Who”. In 2017, Dr. Kheirandish-Gozal received the Presidential Commendation from the American Thoracic Society for her valuable contributions to this premier professional society.

Associate Editor:

- 2009-Present Frontiers in Neurology Chronobiology and Sleep Medicine.
- 2016-Present Journal of Child Science (formerly Journal of Pediatric Biochemistry)

Editorial Board Member:

- 2008-Present Journal of Clinical Sleep Medicine (JCSM)
- 2009-Present Sleep Medicine
- 2011-2016 The Scientific World Journal
- 2011-Present American Journal of Respiratory and Critical Care Medicine (AJRCCM)
- 2013-Present Frontiers in Pediatrics
- 2014-Present International Journal of Epidemiologic Research (IJER)
- 2015-Present Sleep
- 2015-Present Journal of Sleep Sciences (JSS)
- 2015-Present Journal Mental Health International