Society for Pediatric Research

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Lemaire, Mathieu

Dr. Mathieu Lemaire finished his medical training at McGill University in 2004 and then moved to Toronto to learn Paediatrics and Nephrology at The Hospital for Sick Children. Then, he went to Yale University (New Haven, CT) to pursue a PhD in Investigative Medicine under the supervision of Dr Richard P. Lifton as a KRESCENT post-doctoral fellow. The focus of his project was on the genetics of rare paediatric kidney diseases, with a particular focus on atypical hemolytic-uremic syndrome (aHUS). Dr. Lemaire returned to the University of Toronto in mid-2014 as Assistant Professor of Paediatrics: he joined the Division of Nephrology at The Hospital for Sick Children as Assistant Professor of Paediatrics, and the Cell Biology Program of the SickKids Research Institute as Scientist-Track Investigator. He is cross-appointed at the University of Toronto with the Institute of Medical Sciences and in the Biochemistry Department.

His main research interest is to do translational research that pertains to rare paediatric kidney diseases using genomic tools for gene discovery followed by careful functional dissection of candidate genes using cutting-edge microscopic, cell biology and biochemical methods. The goal is to not only contribute to a better understanding of disease pathophysiology, but also aim to translate these findings into tangible changes in clinical care.

He played a central role in the identification of the first non-complement gene that causes a recessive form of aHUS, diacylglycerol kinase epsilon. His laboratory continues to work on teasing out the mechanisms by which DGKE deficiency causes thrombosis restricted to small blood vessels of the kidneys. His team continues to do gene discovery on a variety of rare paediatric kidney diseases using whole-exome sequencing: functional work is on the way for yet another novel gene that causes complement-independent aHUS.