

## Early career investigator highlight—December

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I grew up in Hudson, Ohio, a suburb of Cleveland, and attended Miami University for my undergraduate studies. I received my medical degree from The Ohio State University and completed my residency at St Louis Children's Hospital. Following residency, I concluded my clinical training with a fellowship in Neonatal-Perinatal Medicine at Washington University in St Louis and subsequently joined the Faculty there.

While still a resident, I became fascinated with the physiology of preterm infants as they rapidly adapt to the outside world. However, it became quickly apparent that much of this adaptation remains a mystery, and key concepts such as the acceptable range of blood pressures and the appropriate way to augment blood pressure, while minimizing the risk for brain injury, remain largely undefined. Adding to my burgeoning interest was the observation that the vast sums of data (blood pressure, heart rate, oxygen saturation) that are measured in each infant admitted to the Neonatal Intensive Care Unit are examined fleetingly for decisions in the moment, but then discarded and lost forever.

Upon starting fellowship, I began to develop new strategies for the storage and, more importantly, analysis of these data in order to find meaningful patterns that can explain the origins of postnatal maladaptation and brain injury. A particular focus of my research has been on the structure and function of the cerebrovascular autoregulatory system, a complex mechanism that should provide even and consistent blood flow to the brain. As highlighted in our manuscript published in this issue of *Pediatric Research*, the impact of prematurity on this system is profound, with unexpected effects, ultimately culminating in the increased risk of intracranial hemorrhage.

I have had the good fortune of many excellent mentors along my journey, including Terrie Inder, MD, who first ignited my interest in the field; Joe Culver, PhD, and Amit Mathur, MD, who have pushed me to find deeper connections and to share them with the broader scientific community; and Jane Garbutt, MBChB, and F. Sessions Cole, MD, who have been steadfast supporters of my academic career and sounding boards for my questions.

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