Ellie Rahbar

Ellie Rahbar, PhD, performs -omic based biomarker discovery research for traumatic injuries including hemorrhagic shock, traumatic brain injury, concussions, and sepsis. She has a particular interest in personalized/precision medicine and studying the dynamic response to injuries by characterizing the inflammation, coagulation and metabolic pathways in each patient, thereby tailoring treatments to each person’s unique genetic framework. She collaborates with clinical and industry partners to identify novel biomarkers for the improved management and treatment of critically injured patients. She also works on developing diagnostic tools, microfluidic devices and statistical algorithms for direct translation to the clinic.

Specialties

Ellie Rahbar, PhD, assistant professor of biomedical engineering at Wake Forest School of Medicine, specializes in:

- Hemorrhagic shock and resuscitation
- Blood transfusions
- Traumatic brain injury and concussions
- Pediatric injuries
- Trauma-induced coagulation and inflammation
- Dietary & Metabolic responses to injury
- Microvascular fluid flow (including lymphatics)
- Multi-scale statistical modeling
- Precision based medicine (-omic biomarkers for trauma)

Dr. Rahbar is currently seeking masters and doctoral level graduate students to join her lab for the 2018-2019 academic year. Students will have the opportunity to work in the area of fatty acid metabolism, traumatic injuries and inflammation. There are two projects aimed at investigating the role of omega-3 fatty acids in acute lung injury and traumatic brain injury. One of the main questions her lab focuses on answering is “How does docosahexaenoic acid (DHA) metabolize and affect inflammation and coagulation after trauma?” Additionally, there is a project available on the study of concussions and post-concussions symptoms. Students will have access to a unique biobank of blood and DNA samples collected over time from such critically injured patients. For more information, please email Dr. Rahbar at erahbar@wakehealth.edu.