

**Suggested Topics for Consideration by Students. No Mentor Defined.**

For assistance finding a mentor, please contact:

Director of Student Research or the Associate Dean of Research and Innovation

Specialty Area	Topic	Chart review or Literature Review
Infectious Disease	Review the implementation of antibiotic stewardship program at Carle and the effect on antibiotic resistance.	Chart review
OB/GYN	Review the outcomes of pregnancies in women with pre-existing medical conditions.	Chart review
Cardiology	Investigate the factors contributing to disparities in cardiovascular care and outcomes.	Chart Review
Genetics	Explore the latest developments in CRISPR and other gene editing tools	Literature review
Cancer	Provide an overview of the various immunotherapy approaches (checkpoint inhibitors, CAR-T cell therapy) in cancer treatment.	Literature review
Cardiology	Review the role of genetic testing and personalized treatment approaches in managing cardiovascular conditions.	Literature review
Neurology	Provide an overview of the latest diagnostic tools and biomarkers for neurodegenerative diseases.	Literature review
Infectious Disease	Review the epidemiology, diagnostics, and management of recent infectious disease outbreaks (e.g., Zika, Ebola, COVID-19).	Literature review

Infectious Disease	Review global preparedness and response strategies	Literature review
Healthcare Ethics	Discuss ethical considerations in the use of AI, gene editing, and other advanced medical technologies.	Literature review
Pain management	Evaluate pain relief, functional outcomes, and the incidence of opioid-related adverse events in patients receiving different opioid analgesics for chronic pain.	Chart review
Endocrinology	Evaluate and compare weight loss outcomes and glycemic control in patients with type 2 diabetes treated with different GLP-1 receptor agonists.	Chart review and/or literature review
Immunology	Review the current understanding of the role of the gut microbiome in autoimmune diseases, exploring potential therapeutic interventions that target the microbiome.	Literature review
Obesity Management	Compare the effectiveness of various exercise modalities (aerobic, resistance training, high-intensity interval training) in promoting weight loss and improving metabolic health in individuals with obesity.	Chart review
Health System Sciences	Investigate how socioeconomic factors, such as income, education, and access to healthcare, influence maternal and child health outcomes, including birth outcomes and child development.	Chart review
Medical Education	Evaluate the effectiveness of simulation-based training in enhancing clinical skills among medical students and residents.	Literature review

Medical Education	Investigate the long-term effects of interprofessional education on collaborative practice and patient outcomes among healthcare professionals.	Literature review
Medical Education	Compare the reliability and validity of different assessment methods, such as multiple-choice exams, OSCEs (Objective Structured Clinical Examinations), and workplace-based assessments.	Literature review
Critical Care	Early initiation of propranolol in the isolated traumatic brain injury patient. Does this decrease ICU and overall length of stay?	Chart review
Critical Care	Early supplemental parenteral nutrition in patient with NUTRIC score greater than 5 on admission. Does this improve overall outcomes—duration of stay, morbidity, infectious complications?	Chart review