



## MMI 291 Seminar Series

Current Theme: Interdisciplinary Research

Fall Quarter 2022 – CRN 41473

**Friday Seminar – 12:10-1 p.m.**

*“Effects of maternal inflammation on fetal intestinal development and why that may predispose to intestinal injury in the neonate”*

**Research:** Dr. McElroy has had a long-standing interest in understanding the injury and repair mechanisms of the developing small intestine and specifically how this relates to neonatal necrotizing enterocolitis. His laboratory has made seminal discoveries linking Paneth cells and goblet cells to protection of the immature intestinal tract, has developed a novel model of necrotizing enterocolitis that is shedding light on alternative pathways to develop the disease, and has begun to investigate the link between maternal chorioamnionitis and subsequent intestinal disease of offspring. He has authored over 45 peer-reviewed manuscripts and his laboratory has received funding from the NIH, the Children's Miracle Network, and from industry partners. He has lectured nationally and internationally and sits on the Scientific Advisory Board for the NEC Society. He has served in leadership positions in the Midwest Society for Pediatric Research, the Perinatal Research Society, and as Interim Division Director of Neonatology at the University of Iowa from 2016-2018. He co-founded the Pediatric K-club at the University of Iowa, a bi-weekly meeting to help junior and mid-level physician-scientists with grant writing. During his 8 years of leadership, participants were awarded 7 K-awards, 1 R03, and 7 R01 awards. He is currently the Endowed Division Chief of Neonatology at UC Davis. Dr. McElroy has 49 published manuscripts with 1462 citations and an h-index of 20 via Scopus/Google Scholar (January 2022).

### Publications

Fricke EM, Elgin TG, Gong H, Reese J, Gibson-Corley KN, Weiss RM, Zimmerman K, Bowdler NC, Kalantera KM, Mills DA, Underwood MA, **McElroy SJ**. *Lipopolysaccharide-induced maternal inflammation induces direct placental injury without alteration in placental blood flow and induces a secondary fetal intestinal injury that persists into adulthood*. Am J Reprod Immunol. 2018 May;79(5):e12816. doi: 10.1111/aji.12816. Epub 2018 Jan 25. PMID: 29369434; PMCID: PMC5908742.

Elgin TG, Fricke EM, Gong H, Reese J, Mills DA, Kalantera KM, Underwood MA, **McElroy SJ**. *Fetal exposure to maternal inflammation interrupts murine intestinal development and increases susceptibility to neonatal intestinal injury*. Dis Model Mech. 2019 Oct. 21;12(10):dmm040808. doi: 10.1242/dmm.040808. PMID: 31537532; PMCID: PMC6826024.

Lueschow SR, **McElroy SJ**. *The Paneth Cell: The Curator and Defender of the Immature Small Intestine*. Front Immunol. 2020 Apr. 3;11:587. doi: 10.3389/fimmu.2020.00587. PMID: 32308658; PMCID: PMC7145889.

October  
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**Steven McElroy, M.D.**  
Chief of Neonatology  
Professor of Pediatrics  
University of California, Davis

October 7, 2022  
12:10 – 1 p.m.  
ZOOM Meeting

Medical Microbiology  
& Immunology  
School of Medicine

Seminar Contact:  
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We hope to see you there!