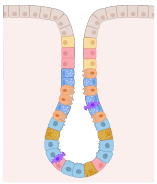
Member: Keith T. Wilson, MD
Rank: Professor
Department: Medicine, Pathology, Microbiology and Immunology, and Cancer Biology
VDDRC Status: Full Member
Research Group: HRP





Rationale for VDDRC Membership

I am an Associate Director of the VDDRC and Director of the Pilot and Feasibility Program. I have investigated GI immunology, inflammation, and associated carcinogenesis for 30 years. A representative publication is: Gobert AP, Smith TM, Latour YL, Asim M, Barry DP, Allaman MM, Williams KJ, McNamara KM, Delgado AG, Short SP, Mirmira RG, Rose KL, Schey KL, Zagol-Ikapitte I, Coleman JS, Boutaud O, Zhao S, Piazuelo MB, Washington MK, Coburn LA, **Wilson KT**. Hypusination maintains intestinal homeostasis and prevents colitis and carcinogenesis by enhancing aldehyde detoxification. *Gastroenterology*. 2023;165(3):656-669. PMCID: PMC10527201.

Digestive Diseases-Related Grants

Grant Number	Title	Project Period	Annual Direct Costs
I01CX002171	Dysregulated polyamine metabolism in *H. pylori*-associated gastric inflammation and disease progression	04/01/2025-03/31/2029	$300,000
I01CX002473	BCCMA: Targeting gut-microbiome in Veterans deployment related gastrointestinal and liver diseases: Dysbiosis, PTSD, and epithelial and immune biology in inflammatory bowel disease in Veterans	07/01/2023-06/30/2027	$299,417
R21AI196953	Inhibitors of the reverse transsulfuration pathway as a new treatment for *Helicobacter pylori* infection	04/01/2026-03/31/2028	$275,000
P01CA116087	Polyamines and electrophiles in gastric cancer	01/01/2009-02/28/2029	Listed under Contact PI

Summary of Digestive Disease Research

My laboratory has expertise in assessing inflammatory processes and oxidative stress-induced DNA damage, including molecular events in the inflammation-to-cancer sequence. We have focused extensively on gastric and colorectal carcinogenesis using a variety of innovative models with human validation.

VDDRC-Related Training and Activities

Associate Director, VDDRC
Director, VDDRC Pilot & Feasibility Program
Retreat Speaker and Retreat Poster Judge

VDDRC Collaborations

I have collaborated extensively with many members of the VDDRC, including Drs. Acra, Algood, Byndloss, Cassat, Choksi, Coburn, Cover, Flynn, Goettel, Lau, Markham, Markle, Olivares-Villagomez, Peek, Piazuelo, Schneider, Scoville, Washington, Williams, Yan, and Zhu. A recent collaborative publication is Latour YL, Allaman MM, Barry DP, Smith TM, Williams KJ, McNamara KM, Jacobse J, **Goettel JA**, Delgado AG, **Piazuelo MB**, Zhao S, Gobert AP, **Wilson KT**. Epithelial talin-1 protects mice from *Citrobacter rodentium*-induced colitis by restricting bacterial crypt intrusion and enhancing T cell immunity. *Gut Microbes*. 2023;15(1):2192623. PMCID: PMC10038039.

Future VDDRC Core Use

We will continue to use the MS/Omics Core to conduct metabolomics and iTRAQ experiments on *H. pylori*-infected tissues; the Cell Imaging Core for *H. pylori* imaging, for assessing the interaction of *C. rodentium* with colonic epithelial cells and for multi-color analysis of macrophage markers; the Flow Cytometry Core for isolation of single cells; and the Tissue Morphology Service within the Translational Analysis Core for our mouse colitis models.