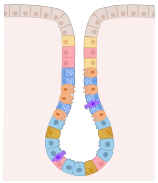
Member: Lori A. Coburn, MD
Rank: Associate Professor
Department: Medicine
VDDRC Status: Full Member
Research Group: HRP





Rationale for VDDRC Membership

I am a Full Member of the VDDRC and will serve as Assistant Director of the Center and Director of the VDDRC Academy of Investigators. My research is focused on inflammatory bowel disease (IBD) and colon cancer pathogenesis and identification of potential biomarkers and/or therapeutic targets for these diseases, and a representative publication is: Raffa GA, Tyree RN, Carson K, Allaman MM, Beaulieu DB, Dalal RL, Pabla BS, Scoville EA, Horst SN, Schwartz DA, Washington MK, Wilson KT, **Coburn LA**. Non-invasive determination of disease activity in Crohn's disease by serum luminex profiling. *Sci Rep*. 2026 Mar 9;16(1):8867. PMCID: PMC12988101.

Digestive Diseases-Related Grants

Grant Number	Title	Project Period	Annual Direct Costs
Veterans Administration, I01CX002662	The role of CCL11 in inflammatory and sporadic colorectal cancer	07/11/2024-06/30/2028	$300,000

Summary of Digestive Disease Research

Our studies, originally supported by a VDDRC Pilot and Feasibility Grant and now by a VA Merit, have shown, by hierarchical clustering in metabolomic profiles, that UC and CD patients were distinctly different from control subjects and from each other. The pathways most significantly altered between the 3 groups involved lipid metabolism and carbohydrate/energy metabolism. Furthermore, we showed that multiple serum cytokines/chemokines and adipokines were altered in UC and CD patients versus controls, as well as between UC and CD patients. Our ongoing work focuses on the chemokine CCL11 in IBD and colon cancer. Collaborations within the VDDRC among Ken Lau, Keith Wilson, and me also led to the acquisition of a Helmsley Trust Grant to generate a single-cell atlas for Crohn’s disease.

VDDRC-Related Training and Activities

New Assistant Director, VDDRC
New Director, Academy of Investigators
New Co-Director, Scientific Catalyst Program
Academy of Investigators, Former Member
Former Pilot & Feasibility Award Recipient
Pilot & Feasibility Project Reviewer
Retreat Speaker
Retreat Poster Judge

VDDRC Collaborations

We collaborate extensively with VDDRC members, including Drs. Choksi, Goettel, Hiremath, Lau, Markham, Piazuelo, Schneider, Scoville, Washington, Williams, K. Wilson, and Zhu, for both our mouse models of colitis and human IBD samples. A collaborative publication is: Li J, Simmons AJ, Hawkins CV, Chiron S, Ramirez-Solano MA, Tasneem N, Kaur H, Xu Y, Revetta F, Vega PN, Bao S, Cui C, Tyree RN, Raber LW, Conner AN, Pilat JM, Jacobse J, McNamara KM, Allaman MM, Raffa GA, Gobert AP, Asim M, **Goettel JA**, **Choksi YA**, Beaulieu DB, Dalal RL, Horst SN, Pabla BS, Huo Y, Landman BA, Roland JT, **Scoville EA**, Schwartz DA, **Washington MK**, Shyr Y, **Wilson KT**, **Coburn LA**, **Lau KS**, Liu Q. Identification and multimodal characterization of a specialized epithelial cell type associated with Crohn's disease. *Nat Commun*. 2024 Aug 22;15(1):7204. PMCID: PMC11339313.

Future VDDRC Core Use

We will continue to use and increase our core usage, specifically the Translational Analysis Core and the Biostatistics Component, as we now have large datasets from metabolomic profiling of patients with IBD. We will also continue to use the Flow Cytometry Core to isolate cells for single-cell RNA-seq. We also plan to use the Tissue Morphology Service in the Translational Analysis Core and the Cell Imaging Core to define the topography of identified biomarkers *in vivo*.