HILARY A. TINDLE, M.D., MPH

ASSOCIATE PROFESSOR OF MEDICINE

DIRECTOR OF TOBACCO RESEARCH AND TREATMENT

Dr. Hilary Tindle is a physician scientist and Founding Director of a new center at Vanderbilt focusing on comparative effectiveness research for tobacco control and disease risk reduction. Key aims of the center include using personalized approaches to guide choice of cessation therapy, investigating mechanisms of lapse and relapse in real time, and effectively controlling tobacco disease-related burden in clinical populations.

A nationally-recognized expert in smoking cessation, Dr. Tindle recently joined the faculty of Vanderbilt after 9 years as a clinical investigator at the University of Pittsburgh, from 2005-2014. During this time she served as the PI of two NIH-sponsored comparative effectiveness RCTs for smoking cessation, and as the site PI for a 3rd NIH-sponsored multi-center RCT. Dr. Tindle is a contributing author to the 2014 50th Anniversary Surgeon General's Report and currently serves on the NCCN Smoking Cessation Guidelines Panel. Throughout her career, she has been captivated by the role of psychological processes--from expectations that individuals hold of their own future to overt mental illness-- in influencing smoking and other behaviors, and has documented the impact of these processes on smoking, chronic disease, and death. In 2013, Penguin published her book Up: How Positive Outlook Can Transform Our Health and Aging. Up was featured in the NYT twice and was selected by the Wall Street Journal's year-end review as one of the five best books on healthy aging in 2013. Dr. Tindle has been nominated for a Chancellor's Chair in Medicine to support her continued work in smoking cessation and the prevention of cancer, cardiovascular disease, and other behaviorally-driven disease burden.

THE Flexner DISCOVERY LECTURE SERIES

VANDERBILT CUTTING-EDGE DISCOVERY

GENE ENVIRONMENT INTERACTIONS IN CANCER ETIOLOGY AND PREVENTION

DAVID CORTEZ, PH.D.
ROBERT J. COFFEY, M.D.
HILARY A. TINDLE, M.D., MPH

MAY 21, 2015
4:00 P.M.
208 LIGHT HALL

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VANDERBILT UNIVERSITY
MEDICAL CENTER

DAVID CORTEZ, PH.D.

PROFESSOR OF BIOCHEMISTRY

INGRAM PROFESSOR OF CANCER RESEARCH

Dr. Cortez joined the Vanderbilt faculty in 2002 and is an Ingram Professor of Cancer Research. He served as Director of Graduate Studies for the Biochemistry Graduate Program from 2006-2014, and became co-leader of the Genome Maintenance Program in the Vanderbilt-Ingram Cancer Center upon its inception in 2007. Dr. Cortez is a member of the Editorial Boards of the journals Cell Reports, Molecular and Cellular Biology and Journal of Biochemistry, is a member of the Faculty of 1000, and a member of the Molecular Genetics A study section for the NIH. Dr. Cortez's research focuses on the mechanisms that maintain genome integrity. As a post-doctoral fellow he discovered a link between the BRCA1 tumor suppressor and cell cycle checkpoints, and identified a key regulator of the ATR checkpoint kinase. Since joining Vanderbilt, his lab has continued to discover new DNA damage response proteins including the DNA translocase SMARCAL1, and has defined how these proteins work to prevent genome instability and disease. He has invented new methods to study DNA metabolism including iPOND, which has been used by investigators to study everything from virus life cycles to mitochondria function. Dr. Cortez's research is published in journals including Science, Genes and Development, Cell Reports, MCB, JBC, PNAS, Cancer Research, and Molecular Cell. Dr. Cortez has received several awards recognizing his scientific achievements including High Impact and Highly Cited Articles awards from the Vanderbilt-Ingram Cancer Center and Vanderbilt Institute of Chemical Biology, the Howard Temin Award from the National Cancer Institute, the Wilson S. Stone Memorial Award, and a Pew Scholar Award from the Pew Charitable Trusts.

ROBERT J. COFFEY, M.D.

PROFESSOR OF MEDICINE

PROFESSOR OF CELL AND DEVELOPMENTAL BIOLOGY

Bob Coffey joined the Vanderbilt faculty in 1986. A major research focus has been the trafficking of EGFR ligands in polarized epithelial cells. Highlights include identification of Naked2 (NKD2) as a critical regulator of basolateral trafficking of TGF-α. NKD2 recognizes basolateral sorting determinants in the cytoplasmic tail of TGF-α; it coats TGF-α-containing exocytic vesicles and directs them to the basolateral corner of polarized epithelial cells, where they dock and fuse in a NKD2 myristoylation-dependent manner. NKD2 antagonizes Wnt-β-catenin signaling, providing a point of convergence between EGFR and Wnt signaling. This work has led to the development of FAVS (fluorescence-activated vesicle sorting) as a flow cytometry-based strategy to isolate and characterize cellular organelles and the discovery of a new mode of EGFR ligand signaling via exosomes. The lab recently found that mistrafficking of epiregulin from the basolateral to the apical surface is a highly transforming event. A recent advance is that Lrig1, an EGFR negative regulator, marks a distinct population of largely quiescent intestinal stem cells and functions as a tumor suppressor. A highly tractable, inducible mouse model of colonic neoplasia has been developed using Lrig1-CreERT2; Apcflox/+ mice. Work from his lab has implicated overproduction of TGF-α and heightened EGFR activity in the pathogenesis of Ménétrier's disease, a rare but debilitating premalignant gastropathy. He and his colleagues have identified cetuximab, an EGFR neutralizing monoclonal antibody, as the first effective medical treatment for this disorder. He is a member of the American Society of Clinical Investigation, American Association of Physicians, American Clinical and Climatological Association and American Association for the Advancement of Science and remains clinically active.