BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME	POSITION TITLE
James R. Goldenring, MD, PhD	Professor and Vice Chairman of Surgery
eRA COMMONS USER NAME (credential, e.g., agency login) goldenjr	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	MM/YY	FIELD OF STUDY
Harvard University, Cambridge, MA	A.B.	1980	Biochemical Sciences
Yale University, New Haven, CT	Ph.D.	1984	Molecular Biophysics Biochemistry
Yale University School of Medicine, New Haven, CT	M.D.	1986	
Yale-New Haven Hospital, New Haven CT		1986-1988	Resident in General Surgery
Yale University School of Medicine, New Haven, CT		1988-1990	Postdoctoral Fellow

A. Personal Statement

Dr. Goldenring is a leader in the study of vesicle trafficking regulated by Rab small GTPases. Dr. Goldenring first discovered Rab25, an epithelial specific Rab protein in 1992 and subsequently identified many of the key regulators of membrane recycling interacting with Rab11 family members, including the Rab11-FIPs and Myosin Vb. Dr. Goldenring's laboratory has been responsible for the characterization of the interaction of multiple Rab proteins with class V myosin motors. Recently Dr. Goldenring has reported evidence that Rab25 is a tumor suppressor for colon cancer in humans and mice. Dr. Goldenring also recently demonstrated that loss of Rab25 in CaCo-2 human colon cancer cells leads to loss in polarity and increased invasive capacity. Dr. Goldenring is a member of the Governing Board for the International Society for Gastrointestinal Carcinogenesis and was Chairman of the Hormones and Receptors Section of the American Gastroenterological Association from 20111-2013. He was the recipient of the 2011 recipient of the Takeda Award for Distinguished Research from the GI section of the American Physiological Society. Dr. Goldenring was elected into the Association of American Physicians in 2013. Dr. Goldenring was also the organizer of the 2012 AGA/Freston Conference on Gastrointestinal Stem Cells.

B. Positions and Honors

Positions and Employment

1989-1993	West Haven, VAMC	Dir., GI Surgical Research Laboratories
1990-1993	Yale University School of Medicine	Assistant Professor of Surgery
1993	Yale University School of Medicine	Assistant Professor of Molec. Cellular Physiology
1993-1998	Medical College of Georgia	Associate Professor of Medicine and Cellular Biology
1993-2002	Augusta, VAMC	Dir., Molecular Gastroenterology Laboratory
1998-2002	Medical College of Georgia	Professor of Medicine, Surgery and Cellular Biology
1998-2002	MCG Institute of Molec. Medicine	Chief, Program in Cell Signaling
2002-Present	Vanderbilt Univ. Sch. Medicine	Paul W. Sanger Professor of Surgery and Cell Biology
2002-Present	Nashville VAMC	Staff Physician
2009-Present	Vanderbilt Univ. Sch. Medicine	Co-Director, Epithelial Biology Center

Honors and Awards

Association of American Physicians, 2013
Takeda Distinguished Research Award of the APS Gastrointestinal & Liver Physiology Section, 2011
Chairman, Hormones and Receptors Section, AGA Council, 2011-2013.
Fellow, American Gastroenterological Association, 2006
American Society for Clinical Investigation, 2004
AGA Funderburg Research Scholar in Gastric Biology Related to Cancer, 2004
AGA/Abbott Industry Scholar Award, 1990-1993
American College of Surgeons Scholarship, 1988-1990
NIH NRSA Postdoctoral Fellowship, 1988-1990
Sigma Xi, 1988
Alpha Omega Alpha, 1986
Medical Scientist Training Program Fellowship, 1980-1986
NIDDK AD HOC Review Committee SRC-7, 1996,Ad Hoc GMA-2, 1999,2000, 2002,2003; Ad Hoc GMB, 2001. Ad Hoc, SBE, 2004, Ad Hoc DDK-C, 2006, GCMB, Ad Hoc 2006, Permanent 2007-2009; CIMG, Permanent, 2009-2011. VA Gastroenterology Board, 2011-present.

C. Selected Peer-reviewed Publications (Selected from total of 196 peer-reviewed publications)

1. Ducharme, N.A., Hales, C.M., Lapierre, L.A., Ham, A.L., Oztan, A., Apodaca, G. and GOLDENRING, J.R. (2006) MARK2 phosphorylation of RAB11-FIP2 modulates the establishment of polarity in MDCK cells. Molec. Biol. Cell. 17:3625-3637. PMC1525241
2. Roland, J.T., Kenworthy, A.K., Peranen, J., Caplan, S. and GOLDENRING, J.R. (2007) Myosin Vb interacts with Rab8a on a tubular network containing EHD1 and EHD3. Molec. Biol. Cell. 18:2828-37. PMC1949367
3. Ducharme, N., Williams, J.A., Oztan, A., Apodaca, G. and GOLDENRING, J.R. (2007) Rab11-FIP2 regulates differentiable steps in transcytosis. Amer. J. Physiol.-Cell Physiol. 293:C1059-72. PMID17626244
4. Utley TJ, Ducharme NA, Varthakavi V, Shepherd BE, Santangelo PJ, Lindquist ME, GOLDENRING JR, Crowe JE Jr. (2008) Respiratory syncytial virus uses a Vps4-independent budding mechanism controlled by Rab11-FIP2. Proc Natl Acad Sci U S A. 105:10209-14. PMC2481327
5. Roland, J.T., Lapierre, L.A. and GOLDENRING J.R. (2009) Alternative splicing in class V myosins determines association with RAB10. J. Biol. Chem. 284:1213-1223. PMC2613619
6. Tzaban, S., Massol, R.H., Yen, E., Hamman, W., Frank, S.R., Lapierre, L.A., Hansen, S.H., GOLDENRING, J.R., Blumberg, R.S., Lencer, W.I. (2009) The recycling and transcytotic pathways for IgG transport by FcRn are distinct and display an inherent polarity. J. Cell Biol. 185:673-84. PMC2711563
7. Lee, H, Nam, K.T., Park, H.S., LaFleur, B.J., Aburatani, H., Kim, W.H., Yang, H. and GOLDENRING, J.R. (2010) Gene expression profiling of metaplastic lineages identifies CDH17 as a prognostic marker in early stage gastric cancer. Gastroenterology. 138:2207-10. PMC2917327
8. Nam, K.T., Lee, H, Smith, J.J. Lapierre, L.A., Kamath, V.P., Chen, X., Aronow, B.J., Yeatman, T.J., Bhartur, S.G., Calhoun, B.C., Condie, B., Manley, N.R., Beauchamp, R.D., Coffey, R.J. and GOLDENRING, J.R. (2010) Loss of Rab25 promotes the development of intestinal neoplasia in mice and is associated with human colorectal adenocarcinoma. J. Clin. Invest. 120:840-9. PMC2827957
9. Roland, J.T.E., Bryant, D.M., Datta, A., Itzen, A., Mostov, K.E. and GOLDENRING, J.R. Rab GTPase-Myo5B complexes control membrane recycling and epithelial polarization. (2011) Proc. Natl. Acad. Sci., USA. 108:2789-94. PMC3041130

10. Lapierre, L.A., Ducharme, N.A., Drake, K.R., GOLDENRING, J.R. and Kenworthy, A.K. (2011) Coordinated regulation of caveolin-1 and Rab11a in apical recycling compartments of polarized epithelial cells. Exp. Cell Res. 318:103-13. PMC3230713

11. Ducharme, N.A., Ham, A.L. Lapierre, L.A. and GOLDENRING, J.R. (2011) Rab11-FIP2 Influences multiple components of the endosomal system in polarized MDCK cells. Cellular Logistics. 1:57-68. PMC3116584

12. Lapierre, L.A., Avant, K.M., Caldwell, C.M., Oztan, A Apodaca, G., Ducharme, N.A. and GOLDENRING, J.R. (2012) Phosphorylation of Rab11-FIP2 regulates polarity in MDCK cells. Molec. Biol. Cell. 23:2302-18. PMC3374749.

13. Baetz, N.W. and GOLDENRING, J.R. (2013) Rab11-Family Interacting Proteins define spatially and temporally distinct regions within the dynamic Rab11a-dependent recycling system. Molec. Biol. Cell. 24:643-658. PMC3583667

14. Krishnan, M., Lapierre, L.A., Knowles, B.C. and GOLDENRING, J.R. (2013) Rab25 regulates integrin expression and trafficking in polarized colonic epithelial cells. Molec. Biol. Cell. 24:818-83. PMC3596252

15. GOLDENRING, J.R. (2013) A central role for vesicle trafficking in epithelial neoplasia: Intracellular highways to carcinogenesis. Nature Rev. Cancer. In Press.

C. Research Support.

Active Support:

Small GTP-binding proteins in gastrointestinal mucosa
Principal Investigator – James R. Goldenring, M.D., Ph.D.
Agency: NIH Type: R01 DK 48370 Period: 08/1/2013 – 07/30/2017
Specific aims of this proposal seek to 1) characterize the effects of MARK2 phosphorylation of Rab11-FIP1B/C and Rab11-FIP2 on the establishment and maintenance of polarity in intestinal epithelial cells and 2) evaluate the mechanisms responsible for loss of polarity with Rab25 loss in colonic epithelial cells.

Oxyntic atrophy and novel gastric lineages
Principal Investigator: James R. Goldenring, M.D., Ph.D.
Agency: Veterans Administration Merit Review Period: 05/01/2011 – 04/31/2015
The aims of this project are to 1) characterize the origin of spasmolytic polypeptide expressing metaplasia (SPEM) from chief cells in mice from Lgr5-expressing cells or other long lived stem cells, 2) to determine how Mist1 regulates chief cell differentiation in novel conditionally immortalized mouse chief cell lines, 3) to examine the emergence of SPEM in Mist1 deficient mice.

Surgical Oncology Training Grant
Principal Investigator: James R. Goldenring, M.D., Ph.D.
Agency: NIH Type: T32 CA106183 Period: 07/1/2010 – 06/30/2015
This program provides substantive support for the continuing endeavors at Vanderbilt to provide young clinician investigators with the training requisite for the continued pursuit of research in academic surgical oncology across the entire spectrum of basic and clinical investigation.

Molecular characteristics of the apical recycling system.
Principal Investigator – James R. Goldenring, M.D., Ph.D.
Agency: NIH Type: R01 DK070856 Period: 09/1/2011 – 08/31/2015
The aim of this investigation is to determine the mechanisms that underlie deficits in intestinal epithelial cell polarity and apical trafficking in Microvillus Inclusion Disease. The studies seek to characterize the effects of

Myo5B knockdown and rescue in polarized CaCo2 cells and the phenotype in a novel Myo5B knockout mouse.

Molecular and Cellular Basis for the Efficacy of Bariatric Surgery
Principal Investigator: Roger Cone, PhD (Co-PI: Goldenring)
Agency: NIH Type: R24 DK093421 Period: 09/16/2013 - 08/31/2015
This grant provides limited support for investigations focused on the role of luminal sensing in the stomach in obesity and after gastric obesity surgery.

Completed in past 3 years:
Molecular characteristics of the apical recycling system: ARRA Administrative Supplement
Principal Investigator – James R. Goldenring, M.D., Ph.D.
Agency: NIH Type: R01 DK 070856-03S1 Period: 08/20/2009 – 07/31/2010
The primary goal of these funds was to initate studies of the structural analysis of interactions of myosin Vb with Rab8a.

Mechanisms of Gastric Mucous Cell Metaplasia: ARRA Competing Supplement
Principal Investigator – James R. Goldenring, M.D., Ph.D.
Agency: NIH Type: R01 DK 071590-02S1 Period: 09/30/2009 – 08/31/2011
The primary goal of this grant was to examine the mRNA, microRNA and protein expression patterns in metaplasias microdissected from human stomachs.

Cyclic AMP Mediation of Epithelial Cell Function
Principal Investigator – James R. Goldenring, M.D., Ph.D.
Agency: NIH Type: R01 DK 43405 Period: 01/01/2009 – 12/31/2012
The aims of this project are to study the role of AKAP350 and its associated proteins in regulating epithelial cell trafficking through the Golgi apparatus and mRNA trafficking.

Mechanisms of gastric mucous cell metaplasia
Principal Investigator – James R. Goldenring, M.D., Ph.D.
Agency: NIH Type: R01 DK 071590 Period: 04/04/2008 – 01/31/2013
The aims of these investigations are to evaluate the role of Spasmolytic Polypeptide Expressing Metaplasia in the evolution of gastric metaplasia and cancer in mice. The studies will evaluate the origin of SPEM by lineage tracing and will evaluate the role of amphiregulin in the evolution of metaplasia induced by *Helicobacter felis* infection. In addition, we propose to identify differences between SPEM elicited by DMP777 and *H. felis* by comparative gene microarray.

Gastrointestinal Stem Cell Meeting
Principal Investigator – James R. Goldenring, MD, PhD
Agency: NIH Type: R13 DK096906 Period: 7/1/2012-6/30/2013
This funding supported travel awards for students, trainees, and junior faculty to participate in the 2012 AGA/Freston Conference on GI Stem Cell Biology held in Chicago in August 2012.

Mapping the cell lineages of the normal and obese human stomach.
Principal Investigator – James R. Goldenring, M.D., Ph.D.
Vanderbilt DDRC Translational Research Pilot Grant
Agency: NIH Type: P30 DK058404 (Peek:PI) Period: 6/1/2011-6/1/2013
This Digestive Disease center pilot weeks to map the distribution of mucosal and enteroendocrine lineages in the normal human stomach from organ donors and compare them to the distribution of lineages in greater curvature resections from obese patients.