

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel in the order listed for Form Page 2.  
Follow the sample format on for each person. (See attached sample). **DO NOT EXCEED FOUR PAGES.**

NAME		POSITION TITLE	
George Sachs		Professor, Medicine and Physiology	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Edinburgh	B.Sc.	1957	Biochemistry
University of Edinburgh	M.B., Ch.B.	1960	Medicine
University of Edinburgh	D.Sc.	1980	Biochemistry

**A. Positions and Honors.****Positions and Employment**

1961 – 1962	Instructor, Albert Einstein College
1962 – 1963	Res. Associate, Columbia University
1963 – 1965	Assistant Prof. Med & Physiology, University of Alabama, Birmingham
1965 – 1970	Associate Prof. Med & Physiology, University of Alabama, Birmingham
1970 – 1982	Prof. Medicine & Physiology, University of Alabama, Birmingham
1974 – 1982	Director, Membrane Biology, University of Alabama, Birmingham
1979 – 1982	Professor, Medicine & Physiology Biophysics, University of Alabama, Birmingham
1982 – 1987	Director, Center for Ulcer Research & Education, UCLA
1982 – Present	Professor, Medicine and Physiology, UCLA
1982 – Present	Wilshire Chair in Medicine, UCLA
1984 – 1999	Senior Medical Investigator, VAGLAHS-West Los Angeles
1987 – Present	Director, Membrane Biology Lab, UCLA
1987 – 2003	Co-Director, Center for Ulcer Research & Education, UCLA
1999 – Present	Staff Physician, VAGLAHS-West Los Angeles

**Other Experience and Professional Memberships**

1979 – 1983	National Board Medical Examiners
1976 – 1978	National Committee Biophysical Society
1977 – 1981	American Physiological Society GI Steering Committee
1983 – 1986	Veterans Administration Review Committee
1982 – Present	UCLA Center for Ulcer Research & Education Executive Committee
1982 – Present	UCLA Center for Ulcer Research & Education Advisory Board
1984 – 1987	VA Merit Review Board
1990 – 1991	Chair, Academic Personnel Committee, UCLA
1992 – 1993	GI/UCLA Search Committee
1993	NIAMS, Board of Scientific Counselors, NIH
	National Committee Biophysical Society
1994	UCLA, Academic Personnel ad hoc Review Committee
1993 – 1995	UCLA Specialty Training and Academic Research Committee (STAR)
1988 – 1992	IBD/Harbor UCLA Advisory Board
1996	VAMC, West Los Angeles R&D, GI and Hepatic Disorder Review Group
1996	VAMC, West Los Angeles Merit Review Committee
1996	VAMC, West Los Angeles Internal Merit Review Committee
2000 – 2001	VAGLAHS-West Los Angeles, Chair, Research Sub-Committee
2000 – Present	NIH Study Section NIDDK Digestive Disease Centers
2002 – Present	NIH Advisory Board

**Honors**

1973 – 1974 Humboldt Award for U.S. Senior Scientists

Principal Investigator/Program Director (Last, First, Middle):

- 1982 Hoffman LaRoche Award  
1985 Beaumont Prize in Gastroenterology, American Gastroenterological Association  
1992 Middleton Award, Veterans Administration  
1992 "Ismar Boas Vorlesung" Medal, German Gastroenterological Association  
1993 Honorary Membership, British Society of Gastroenterology  
1996 Outstanding Scientific and Technical Award, Federal Executive Board of Los Angeles  
1996 Honorary Degree, Doctor of Medicine, Medical Faculty of Goteborg University, Sweden  
1998 Horace W. Davenport Distinguished Lecturer of the APS Gastrointestinal Section  
1998 Janssen Award for Special Achievement in Gastroenterology  
1998 Outstanding Scientific and Technical Award, Federal Executive Board of Los Angeles  
1984 – 1999 Senior Medical Investigatorship, Veterans Administration  
2000 Outstanding Supporter, Upward Bound Internship Program Harvey Mudd College

**B. Selected peer-reviewed publications (in chronological order). Selected peer-reviewed publications from 278.**

1. Munson KB, Lambrecht N, Shin JM, **Sachs G**. Analysis of the membrane domain of the gastric H<sup>+</sup>,K<sup>+</sup>-ATPase. *J Exp Biol* 2000;203:161-170.
2. Lambrecht N, Munson KB, Vagin O, **Sachs G**. Comparison of covalent with reversible inhibitor binding sites of the gastric H,K-ATPase by site directed mutagenesis. *J Biol Chem* 2000;275:4041-4048.
3. Weeks DL, Eskandari S, Scott DR, **Sachs G**. A H<sup>+</sup> gated Urea Channel: The link between *Helicobacter pylori* urease and gastric colonization. *Science* 2000;287:482-485.
4. Hallen JS, **Sachs G**. Inhibition of the human sodium/bile acid cotransporters by site-specific methanethiosulfonate sulfhydryl reagents: Identification of site of inactivation. *Biochemistry* 2000;39:6743-6750.
5. Athmann C, Zeng N, Scott DR, **Sachs G**. Regulation of parietal cell calcium signaling in gastric glands. *Am J Physiol Gastrointest Liver Physiol* 2000;279:G1048-G1058.
6. Rektorschek M, Buhmann A, Weeks DL, Schwan D, Bensch KW, Eskandari S, Scott DR, **Sachs G**, Melchers K. Acid resistance in *Helicobacter pylori* depends on the Urel membrane protein and an inner membrane proton barrier. *Mol Microbiol* 2000;36:141-152.
7. Weeks DL, **Sachs G**. Sites of pH regulation of the Urea Channel of *Helicobacter pylori*. *Mol Microbiol* 2000;40:1249-1259.
8. Vagin O, Munson KB, Lambrecht N, Karlsh SJD, **Sachs G**. Mutational analysis of the K<sup>+</sup>-competitive inhibitor site of gastric H,K-ATPase. *Biochemistry* 2001;40:7480-7490.
9. Wen Y, Ibaraki N, Reddy VN, **Sachs G**. Functional analysis of the promoter and chromosomal localization for human LEP503, a novel lens epithelium gene. *Gene* 2001;269: 61-71.
10. Kraut JA, Helander KG, Helander HF, Iroezi N, **Sachs G**. Detection and localization of H<sup>+</sup>-K<sup>+</sup>-ATPase isoforms in the human kidney. *Am J Physiol Renal Physiol* 2001;281:F763-F768.
11. Shin JM, Goldshleger R, Munson KB, **Sachs G**, Karlsh SJ. Selective Fe<sup>2+</sup>-catalyzed oxidative cleavage of gastric H<sup>+</sup>,K<sup>+</sup>-ATPase. Implications for the energy transduction mechanism of P-type cation pumps. *J Biol Chem* 2001;276:48440-48450.
12. Shin JM, **Sachs G**. Restoration of acid secretion following treatment with proton pump inhibitors. *Gastroenterology* 2002;123:1588-1597.
13. Kim N, Weeks DL, Shin JM, Scott DR, Young MK, **Sachs G**. Proteins released by *Helicobacter pylori* in vitro. *J Bacteriol* 2002;184:6155-6162.
14. Vagin O, Denevich S, Munson KB, **Sachs G**. SCH28080, a K<sup>+</sup>-competitive inhibitor of the gastric H,K-ATPase, binds near the M5-6 luminal loop, preventing K<sup>+</sup> access to the ion binding domain. *Biochemistry* 2002;41:12755-12762.
15. Patchornik G, Munson KB, Goldshleger R, Shainskaya A, **Sachs G**, Karlsh SJ. The ATP-Mg<sup>2+</sup> binding site and cytoplasmic domain interactions of Na<sup>+</sup>,K<sup>+</sup>-ATPase investigated with Fe<sup>2+</sup>-catalyzed oxidative cleavage and molecular modeling. *Biochemistry* 2002;41:11740-11749.
16. Scott DR, Marcus EA, Weeks DL, **Sachs G**. Mechanisms of acid resistance due to the urease system of *Helicobacter pylori*. *Gastroenterology* 2002;123:187-195.
17. Hallen S, Mareninova O, Branden M, **Sachs G**. Organization of the membrane domain of the human liver sodium/bile acid cotransporter. *Biochemistry* 2002;41:7253-7266.
18. Volland P, Weeks DL, Marcus EA, Prinz C, **Sachs G**, Scott DR. Interactions among the seven *Helicobacter pylori* proteins encoded by the urease gene cluster. *Am J Physiol Gastrointest Liver Physiol* 2003;284:G96-G106.

## **C. Research Support**

### **Ongoing Research Support**

R01 DK46917 Sachs (PI) 5/1/94 – 4/30/04

NIH

The Gastric Enterochromaffin-Like Cell in Ulcer Disease

The goal of this project is to identify the genomic profile of different gastric cells.

Role: PI

R01 DK58333 Sachs (PI) 7/1/00 – 6/30/05

NIH

The Gastric Acid Pump as a Target for Ulcer Treatment

The goal of this project is structure-function trafficking of HK ATPase.

Role: PI

R01 DK53642 Sachs (PI) 11/1/02 – 9/30/08

NIH

Gastric Biology of Helicobacter Pylori

The goal of this project is acid adaptation mechanisms of Hp.

Role: PI

W0367 Sachs (PI) 7/01/00 – 6/31/05

VA Merit Review

Structure-Function of the Urea Transporter in Helicobacter pylori

The goal of this project is structure function of UreI

Role: PI

### **Completed Research Support**

None