

Dr. John Peter Geibel

Department of Surgery and Cellular and Molecular Physiology
Yale University School of Medicine

Education:

M.A.(priv) 2003 Yale University, New Haven CT
Univ. Doz. Med. 1992 University of Innsbruck, Austria
M.D. 1986 University of Innsbruck, Innsbruck Austria
D.Sc. 1983 University of Innsbruck, Innsbruck Austria
M.Sc. 1981 University of New Brunswick, Fredericton N.B. Canada
B.Sc. 1977 St. Francis College(University of New England)Maine

Positions/ Appointments:

2002-Present	Professor (Tenured) Dept. of Surgery (G.I. Section)Yale University
2002-Present	Professor (Tenured) Dept. of Cellular and Molecular Physiology Yale University
2001-Present	Director of Surgical Research Dept. of Surgery
1999- 2002	Associate Professor (Tenured) Dept. of Surgery (G.I. Section)Yale University
1999- 2002	Associate Professor (Tenured) Dept. of Cellular and Molecular Physiology Yale University
1995- 1999	Associate Professor Dept. of Surgery (G.I. Section)Yale University
1995- 1999	Associate Professor Dept. of Cellular and Molecular Physiology
1991- 1995	Assistant Professor Dept. of Surgery (G.I. Section)Yale University
1993- 1995	Assistant Professor Dept. of Cellular and Molecular Physiology
1988-1991	Associate Research Scientist Dept. of Physiology Yale University
1985-1987	Post-Doctoral Fellow Dept. of Physiology Yale University
1983-1985	University Assistant (Asst.Prof.) Dept. of Physiology University of Innsbruck
1981-1983	Post Doctoral Fellow Dept. of Physiology University of Innsbruck

Selected Honors and Awards:

(2003) Invited Guest Speaker World Congress on Nephrology, Berlin Germany
(2002) Invited Guest Speaker International Nephrology Society “ABC Cassette Binding Proteins”
Switzerland
(2002) Invited Guest Speaker International Biophysics Society Satellite Meeting Rio de Janerio Brazil
(2001) Invited Guest Speaker Dept. of Physiology University of Zurich
(2001) Invited Guest Speaker Dept. of Physiology and Biophysics University of Alabama
(2001) Invited Guest Speaker Dept. of Pharmacology Cornell Medical School
(2001) Ad Hoc Reviewer Surgery and Biomedical Engineering Study Section NIH
(2001) Organizing Committee American Society of Nephrology
(2001) Organizing Committee International Society of Nephrology

(2001) Organizing Committee Forefronts in Nephrology Program International Society of Nephrology Zurich Switzerland

(2001) NIH RO-1 Grant CO-P.I. *Colonic Crypt Bicarbonate Transport*

(2001) American Physiological Society Translational Research Committee

(2000) VA Merit Grant Reviewer

(2000) State of Louisiana Grant Reviewer

(2000) Invited Guest Speaker University of Innsbruck

(2000) Invited Guest Speaker Astra Zenaca (Corporate Development)

(2000) NIH RO-1 Grant P.I. *A Microsurgical Investigation of Acid Secretion (Renewal 5 years)*

(1999) Invited Guest Speaker International Congress of Nephrology (Argentina, Satellite in Brazil)

(1998) Invited Guest Professor (Eberhard Karl) University of Tübingen Dept. Physiology

(1997) Invited Speaker American Society of Cell Biology Washington D.C.

(1997) Invited Guest Speaker Brazilian Government (University of Sao Paulo)

(1997) Organizer of International Renal Electrolyte Symposia (Vienna Austria)

(1997) Who's Who in Medicine and Healthcare

(1996-1997) Dean's Committee on Imaging and Optical needs for the Medical School (Chair C. Slayman and P. DeCamilli)

(1996) NIH RO-1 Grant *A Microsurgical Investigation of Acid Secretion*

(1996) Invited Guest Professor Italian Government (University of Naples)

(1996) Invited Guest Professor Brazilian Government (University of Rio)

(1996) Invited Participant Astra-Merck Clinical Consultants Symposia

(1996) Astra Merck Foundation Research Grant

(1995) NIH RO-1 Grant CO-P.I. *Colonic Crypt Transport and Function*

(1995) Who's Who In America

(1995) Who's Who In the East

(1995) Who's Who In Science and Engineering

(1995) Invited Guest Professor Italian Government (University of Naples)

(1995) Invited Speaker 2nd Boreli Congress of Nephrology (Capri Italy)

(1995) Invited Speaker Whitaker Foundation Technology Symposia

(1995) CTAN foundation Grant

(1994) Invited Speaker Connecticut Center for Neuroscience Training

(1993) Whitaker Foundation Grant

(1993) Organizing committee American Society of Nephrology Annual Meeting

(1993) Invited International Speaker Brazilian Society for Experimental Physiology

(1992) Dozent der Medizin Universität Innsbruck

(1990) Connecticut C. F. Goodyear Grant

(1989-) Nikon Corporation *Partners in Research* Program

(1987) Young Investigator International Society of Nephrology travel fellowship

(1985-1988) National Research Service Award: NIH Post-Doctoral fellowship,

Editorial Board:

EMedicine.com **Editor in Chief** Textbook of Surgery and Medicine (1999-)
American Journal of Physiology Cell (1998-)
Renal Physiology and Biochemistry (1993-
Kidney and Blood Pressure Research (1996-

Guest Editor:

Wiener Klinisch Wochenschrift 1997 vol 12-13
Microscopy Research and Techniques 1999 vol 44 issue 5

Ad Hoc Reviewer:

Pflugers Archiv (European J. Physiol) 1983-
Kidney International 1989-
Canadian Journal of Pharmacology and Physiology 1990-
American Journal Physiology (Renal) 1991-
American Journal Physiology (Gastrointestinal and Liver)1991-
American Journal Physiology (Endocrinology & Metab.)1992-
American Journal Physiology (Cell) 1993-
Cell Physiology & Biochemistry 1992-
Diabetes 1994-
P.N.A.S. 1993-
Biophysical Journal 1996-
American Journal of Physiology (Regulatory, Integrative and Comparative Physiology) 1996-
Hypertension 1997-
Nature 1998-
Journal of Membrane Biology 1998-
Gastroenterology 1998-
Digestion 2001-
Endocrinology 2001
Nature Medicine 2001-
Journal of Physiology 2001-
Journal of Cell Science 2001-

Guest Lectures:

Tulane University (Dept. of Physiology)
Cornell Medical School (Dept. of Physiology)
Cornell Medical School (Dept. of Pharmacology)
New York Medical College (Dept. of Pharmacology)
University of Naples (Dept. Physiology)
Second University of Naples (Dept. Medicine)
Ciba-Geigy (Pharmacology)
Weyth (Pharmacology)
Astra-Merck (Medical Products)
Glaxo-Smith Kline
AstraZeneca

University of Innsbruck (Dept. Physiology)
University of Vienna (Dept. of Pathology)
University of Munich (Dept. Physiology)
University of Tübingen (Dept. Physiology)
University of São Paulo (Dept. Physiology & Biophysics)
University of Rio de Janeiro (Dept. Physiology)
University of Texas Galveston (Depts. Surgery and Biophysics)
University of Zurich (Dept. of Physiology)
Astra-Zeneca (Corporate Development)

Academic Societies

American Society of Nephrology
American Gastroenterological Association
American Physiological Association
International Society of Nephrology
Society of General Physiologists
Society of Surgeons of the Alimentary Tract
American Association of Academic Surgeons
American Association for the Advancement of Science
New York Academy of Science
Salt and Water Club of New England

Publications:

Papers:

- 1.Lang F, Gstrein E, **Geibel J**, Rehwald W, Volkl H, Oberleithner H,(1983) Redox microelectrodes for the continuous recording of organic substances in renal tubular fluid, *Bioelectricity and Bioenergetics* 11:365-377
- 2.**Geibel J**, Volkl H, Lang F (1984) A microelectrode for continuous recording of volume fluxes in isolated perfused tubule segments. *Pflugers Archiv* 400:388-392
- 3.Rehwald W, **Geibel J**, Gstrein E, Oberleithner H (1984) A microelectrode for continuous monitoring of glucose concentration in isolated perfused tubule segments. *Pflugers Archiv* 400:393-397
- 4.Volkl H, **Geibel J**, Rehwald W, Lang F (1984) A microelectrode for continuous monitoring of redox activity in isolated perfused tubule segments. *Pflugers Archiv* 400:398-402
- 5.Volkl H, **Geibel J**, Greger R, Lang F (1986) Effects of ouabain and temperature on cell membrane potentials in isolated perfused straight proximal tubules of the mouse kidney. *Pflugers Archiv*. 407:252-257
- 6.Volkl H, **Geibel J**, Greger R, Lang F (1987) Effect of temperature on peritubular cell membrane potential and potassium conductance in isolated perfused proximal tubules of the mouse. *Bioelectrochemistry and Bioenergetics*. 17:419-427
- 7.Wang W, Henderson R, **Geibel J**, White S, Giebisch G (1989) Mechanism of aldosterone-induced increase of K⁺ conductance in early distal renal tubule cells of frogs. *J. Memb.Biol.* 111:277-289
- 8.**Geibel J**, , Giebisch G, Boron W F (1989) Effects of Acetate on luminal acidification processes in the S3 segment of the rabbit proximal tubule. *Am.J.Physiol.*257:F586-594.
- 9.**Geibel J**, Giebisch G, Boron W F (1989) Basolateral Sodium coupled acid-base extrusion mechanisms of the rabbit proximal tubule. *Am.J. Physiol.*26:F790-797.
- 10.Wang W, White S, **Geibel J**, Giebisch G (1990) A potassium channel in the thick ascending limb of Henle's loop of rabbit kidney. *Am.J. Physiol.*27:F244-253.
- 11.**Geibel J**, Giebisch G, Boron W F (1990) Angiotensin II stimulates both Na-H exchange and Na/HCO₃ cotransport in the S1 segment of the rabbit proximal tubule. *P.N.A.S.*87:7917-7920
12. **Geibel, J.**, A. Zweifach, S. White, W. H. Wang, and G. Giebisch.(1990) K⁺ channels of the mammalian collecting duct. *Ren Physiol Biochem*. 13: 59-69, .
- 13.**Geibel J.** (1993) Apical H⁺ ATPase activity in the rabbit proximal tubule. *Cellular Physiology and Biochemistry* 3:34-41
- 14.Wang W, **Geibel, J.**, Giebisch G. (1993) Mechanism of apical K⁺-channel modulation in principal renal tubule cells: Effect of Inhibition of basolateral Na⁺-K⁺-ATPase. *Journ. Gen. Physiol.*101:673-694

15. Korbmayer C., Boulpaep E., Giebisch G., **Geibel J.** (1993) Endothelin increases intracellular calcium concentration in M-1 mouse cortical collecting duct cells by a dual mechanism. *Am J. Physiol. (Cell)* 265:C-349-C357.
16. Schwab A, **Geibel J.**, Wang W, Oberleithner H, Giebisch G (1993) Activation of a K⁺ channel in fused MDCK-cells by Minoxidil Sulfate and Protein Kinase C. *Jour. Memb. Biol.* 132:125-136
17. **Geibel J.** (1993) Modern advances in microscopy: From animal to atom. *Brazilian Journal of Medical and Biological Research* 26:1133-1139.
18. Oberleithner H, Giebisch G, **Geibel J.** (1993) Imaging the lamellipodium of migrating epithelial cells in vivo by atomic force microscopy. *Pflugers Archiv* 425:506-510
19. Waisbren S, **Geibel J.**, Boron W, Modlin I. (1994) Acid permeability of apical and basolateral membranes in isolated perfused gastric glands. *Am. J. Physiol Cell* 266:C1013-C1027
20. Waisbren S, **Geibel J.**, Modlin I., Boron W.F. (1994) Apical surfaces of parietal and chief cells in perfused gastric glands are impermeable to NH₃ and CO₂. *Nature* 368:332-335
- Boron, W. F., S. J. Waisbren, I. M. Modlin, and J. P. Geibel. Unique permeability barrier of the apical surface of parietal and chief cells in isolated perfused gastric glands. *J. Exp. Biol.* 196: 347-360, 1994.
21. Modlin IM. Lawton GP. Tang LH. **Geibel J.** Abraham R. Darr U. (1994) The mastomys gastric carcinoid: aspects of enterochromaffin-like cell function. [Journal Article] *Digestion.* 55 Suppl 3:31-7.
22. Modlin I, **Geibel J.**, Tang L, Goldnering J. (1994) Characterization of Parietal Cell Function with Confocal Microscopy. In *Molecular and Cellular Mechanism of H⁺-Transport.* (Ed. B. Hurst. NATO ASI Series H: Cell Biology Vol 89:329-340 Springer Verlag.
23. Oberleithner, H., A. Schwab, W. Wang, G. Giebisch, F. Hume, and **J. Geibel.** (1994) Living renal epithelial cells imaged by atomic force microscopy. *Nephron* 66: 8-13.
24. Modlin, I. M., G. P. Lawton, L. H. Tang, **J. Geibel.**, R. Abraham, and U. Darr (1994). The mastomys gastric carcinoid: aspects of enterochromaffin-like cell function. *Digestion* 55 Suppl 3: 31-37.
25. **Geibel J.**, Abraham R, Sachs G (1995) Gastrin stimulation of changes in intracellular Ca⁺² in parietal cells depends on levels of cAMP. *Gastroenterology* 109(4):1060-1067
26. Rajendran VM, **Geibel J.**, Binder H. (1995) Chloride -dependent Na-H Exchange. *Journal of Biological Chemistry* 270:11051-11054
27. Darr U, Abraham R, **Geibel J.** (1995) The anti-ischemic role for Na-H exchange inhibition in isolated small bowel villi. *Annals of the American College of Surgeons* 156:191-193
28. Singh S K, Binder H J, Boron W F, **Geibel J.** (1995) Fluid absorption in isolated perfused colonic crypt. *Journ. Clin. Invest.* 96:2373-2379
29. **Geibel J.** (1995) Translocational Events. Acid -Base and Electrolyte Balance. Ed. DeSanto N. , Capasso G. Italian Institute of Physiology. I:63-71.
30. Singh S. , **Geibel J.**, Binder H, Boron W (1995) An apical permeability barrier to NH₃ in isolated perfused colonic crypts. *P.N.A.S.* 92:11573-11577
31. Oberleithner, H., E. Brinckmann, G. Giebisch, and **J. Geibel.** (1995) Visualizing life on biomembranes by atomic force microscopy. *Kidney Int.* 48: 923-929.

- 32.Chandler W.Knox, Schen D., **Geibel J**, Pape P. (1996) Calcium release and its voltage dependence in frog cut muscle fibers equilibrated with 20 mM EGTA. *J. Gen. Physiol.* 106(2) 259-336
- 33.Yano Y, **Geibel J**, Sumpio B. (1996) Tyrosine phosphorylation and reorganization of pp125^{FAK} and paxillin induced by mechanical strain. *Amer. Journ. Physiol. Cell* 271:C635-C649
- 34..Jong, D. S., P. C. Pape, **J. Geibel**, and W. K. Chandler. (1996)Sarcoplasmic reticulum calcium release in frog cut muscle fibers in the presence of a large concentration of EGTA. *Soc.Gen.Physiol Ser.* 51: 255-268.
- 35.Schneider S, Sritharan KC,**Geibel J**, Oberleithner H, Jena B. (1997) Surface dynamics in living cells imaged by atomic force microscopy: identification of plasma membrane structure involved in exocytosis. *P.N.A.S.* 94(1):316-321
- 36.Yano Y, **Geibel J**, Sumpio B. (1997) Cyclic Strain induces reorganization of integrin $\alpha 5\beta 1$ and $\alpha 2\beta 1$ in human umbilical vein endothelial cells . *Journal of Cellular Biochemistry.* 64:505-513
- 37.Smith P, Bradford AL, Schneider S, Benos D, **Geibel J**.(1997) Localization of amiloride sensitive sodium channels in A6 cells by atomic force microscopy. *Amer. Journ. Physiol. Cell* 272:C1295-1298
- 38.Oberleithner H, **Geibel J**, Guggino W, Henderson RM, Hunter M, Schneider SW, Schwab A, Wang W. (1997) Life on biomembranes viewed with the atomic force microscope. *Wiener Klinische Wochenschrift* 109/12-13:419-423.
- 39.Feifel E, Krall M, **Geibel J**, Pfaller W.(1997) Evidence for K⁺ dependent H⁺ extrusion in MDCK Cells. *Amer. Journ. Physiol.* F499-506
- 40.Jena BP, Webster PW, **Geibel J P**, Van den Pol A. N, Sritharan KC (1997) Localization of SH-PTP1 to synaptic vesicles: A possible role in neurotransmission. *Cell Biol. Int.* 21: 469-476
- 41.Jena BP, Schneider S W, **Geibel J P**, Webster PW, , Oberleithner H, Sritharan KC (1997)Gi Regulation of secretory vesicle swelling examined by atomic force microscopy. *Proc. Natl. Acad. Sci.USA*:13317-13322
- 42.Courtois-Coutry N, Roush D, Rajendran V, **Geibel J**, Kashgarian M, Caplan MJ. (1997) Requirement for a tyrosine-based signal in the cessation of gastric acid secretion. *CELL* :90:501-510
- 43.Dunbar LA. Roush DL. Courtois-Coutry N. Muth TR. Gottardi CJ. Rajendran V. **Geibel J**. Kashgarian M. Caplan MJ.(1997) Sorting of ion pumps in polarized epithelial cells. *Annals of the New York Academy of Sciences.* 834:514-23
- 44.Merot J, Giebisch G, **Geibel J**. (1997) Intracellular acidification induces Cl/HCO₃ exchanger in the basolateral membrane of beta intercalated cells of the rabbit cortical collecting duct. *Journ Memb. Biol.* 159:253-262
- 45.Binder H,Singh S, **Geibel J**, Rajendran V. (1997) Novel Transport Properties of Colonic Crypt Cells: Fluid Absorption and Cl-Dependent Na-H Exchange. *Comp. Biochem. Physiol.* 118: 265-269.
- 46.Rajendran V M, Singh SK, **Geibel J**, Binder HJ (1998) Colonic H⁺K-ATPase isoforms are differentially localized in surface and crypt cells. *Amer. Journ. Physiol.* (in press)
- 47.**Geibel, J.** (1997) An Atomic Force Microscopic Investigation of Apical Membrane Dynamics of the Mammalian Gastric Gland. *Cell Biol. Int.* 21:11:727-736

48. McNanara B, Winter DC, Cuff J, O'Sullivan GC, **Geibel J**, Harvey B. (1977) Real-Time Imaging of the Rapid Nongenomic Estrogen Effects On Cellular Ion Transport. *Surgical Forum* 18:522-524
49. Winter DC, O'Sullivan GC, Harvey BJ, **Geibel J** (1977) The temporal sequence of a rapid aldosterone action on cytoplasmic pH in isolated colonic crypts. *Surgical Forum* 18:204-206
50. Wagner C, Giebisch G, Lang F, **Geibel J** (1998) Angiotensin II stimulates vesicular H⁺-ATPase in rat proximal tubular cells. *PNAS* 95:9665-9668
51. Darr U. , **Geibel J** (1998) Intestinal Ischemia: Molecular Basis of Detection and Prevention. *Surg. Tech. Int* 7:199-202
52. Schneider S., Yano Y., Sumpio BE, Jena BP, **Geibel J**, Oberleithner (1998) H: "Rapid aldosterone-induced cell volume increase of endothelial cells measured by the atomic force microscope" *Cell Biol. Int* 21:759-768
53. Schneider, S. W., P. Pagel, J. Storck, Y. Yano, B. E. Sumpio, **J. P. Geibel**, and H. Oberleithner. (1998) Atomic force microscopy on living cells: aldosterone-induced localized cell swelling. *Kidney Blood Press Res.* 21: 256-258,
54. Slezak LA, Nathan JD, Zdankiewicz PD, Spector SA, Wang JP, Jena BP, **Geibel JP**, Seymour NE, Andersen DK. (1998). Impaired hepatocyte insulin receptor internalization in chronic pancreatitis. *Surg Forum* 49: 152-153.
55. Dunbar LA. Courtois-Coutry N Roush DL.. Muth TR. Gottardi CJ. Rajendran V. **Geibel J**. Kashgarian M. Caplan MJ. (1998) Sorting of P-type in polarized epithelial cells. *Acta Physiol Scand.* 643:289-295
56. Ikuma M, Binder H., **Geibel J**. (1998) Role of Apical H-K exchange and Basolateral K Channel in the Regulation of Intracellular pH in Rat Distal Colon . *J. Memb. Biol.* 166:205-212
57. Ikuma M, **Geibel J**, Binder H, Rajendran V. (1998) Characterization of Cl⁻ anion Exchange in basolateral membrane of rat colon. *Gastroenterology* 166:205-212
58. Rajendran, V. M., S. K. Singh, **J. Geibel**, and H. J. Binder. (1998) Differential localization of colonic H(+)-K(+)-ATPase isoforms in surface and crypt cells. *Am.J.Physiol* 274: G424-G429
59. Rajendran, V. M., S. K. Singh, **J. Geibel**, and H. J. Binder. (1999) Differential localization of colonic H(+)-K(+)-ATPase isoforms in surface and crypt cells. *Am.J.Physiol* 274: G424-G429, 199
60. Rajendran V., **Geibel J**, Binder H, (1999) Role of Cl channels in Cl⁻ dependent Na-H exchange. *Am. J. Physiol.* 276: G73-G78
61. Cheng I, Qureshi I, Chattopadhyay N, Qureshi A, Butters R, Hall A, Cima R, Rodgers K, Hebert S, Geibel J, Brown E, Soybel D. (1999) Expression of an extracellular calcium-sensing receptor in rat stomach. *Gastroenterology* 116:118-126.
62. Schneider S, Egan M, Jena B, Guggino WB, Oberleithner H., **Geibel J**. (1999) Continuous Extracellular ATP Measurement On Living Cells Using Atomic Force Microscopy. *PNAS* 96: 12180-12185,
63. van Why, S. K., S. Kim, **J. Geibel**, F. A. Seebach, M. Kashgarian, and N. J. Siegel. (1999) Thresholds for cellular disruption and activation of the stress response in renal epithelia *Am.J.Physiol* 277:F227-F234.
64. Winter, D. C., M. F. Schneider, G. C. O'Sullivan, B. J. Harvey, and **J. P. Geibel**. (1999) Rapid effects of aldosterone on sodium-hydrogen exchange in isolated colonic crypts. *J.Membr.Biol.* 170: 17-26.

65. Winter D. , O'Sullivan G. , Harvey B, **Geibel J.** (1999) Direct Effects of Dopamine on Colonic Mucosa pH: Implications for Tonometry. *Journ. Surgical Res.* 83: 62-68
66. Rajendran, V. M., **J. Geibel**, and H. J. Binder. Role of Cl channels in Cl-dependent Na/H exchange. *Am.J.Physiol* 276: G73-G78, 1999.
67. de Souza, P. R. and **J. Geibel.**(1999) Direct observation of oxidative stress on the cell wall of *Saccharomyces cerevisiae* strains with atomic force microscopy. *Mol.Cell Biochem.* 201: 17-24
68. Bustamante, J. O., E. R. Michelette, **J. P. Geibel**, D. A. Dean, J. A. Hanover, and T. J. McDonnell. Calcium, ATP and nuclear pore channel gating. *Pflugers Archiv - European Journal of Physiology* 439: 433-444, 2000.
69. Bustamante, J. O., E. R. Michelette, **J. P. Geibel**, J. A. Hanover, T. J. McDonnell, and D. A. Dean. Dendrimer-assisted patch-clamp sizing of nuclear pores. *Pflugers Archiv - European Journal of Physiology* 439: 829-837, 2000.
70. **Geibel, J. P.**, S. Singh, V. M. Rajendran, and H. J. Binder. HCO₃(-) secretion in the rat colonic crypt is closely linked to Cl(-) secretion. *Gastroenterology* 118: 101-107, 2000.
71. Rajendran, V. M., P. Sangan, **J. Geibel**, and H. J. Binder. Ouabain-sensitive H,K-ATPase functions as Na,K-ATPase in apical membranes of rat distal colon. *Journal of Biological Chemistry* 275: 13035-13040, 2000.
73. **Geibel J** , Rajendran V., Singh S., Binder H. (2000) HCO₃ Secretion in the rat colonic crypt is closely linked to chloride secretion. *Gastroenterology* (in press)
74. Binder, H. J., V. M. Rajendran, and **J. P. Geibel.**(2000) Cl-dependent Na-H exchange. A novel colonic crypt transport mechanism. *Ann.N.Y.Acad.Sci.* 915: 43-53.
75. Malnic G, **Geibel J.**, (2000) Cell pH and H⁺ secretion by S3 Segment of Mammalian Kidney: Role of H⁺-ATPase and Cl. *J. Memb. Biol.* 178:115-125
76. Rajendran, V. M., P. Sangan, **J. Geibel**, and H. J. Binder.(2000) Ouabain-sensitive H,K-ATPase functions as Na,K-ATPase in apical membranes of rat distal colon. *J.Biol.Chem.* 275: 13035-13040.
77. Rajendran, V. M., **J. Geibel**, and H. J. Binder.(2001) Characterization of apical membrane Cl-dependent Na/H exchange in crypt cells of rat distal colon. *Am.J.Physiol Gastrointest.Liver Physiol* 280: G400-G405
78. Nathan, J. D., P. D. Zdankiewicz, J. Wang, S. A. Spector, G. Aspelund, B. P. Jena, N. E. Seymour, **J. P. Geibel**, and D. K. Andersen.(2001) Impaired hepatocyte glucose transport protein (GLUT2) internalization in chronic pancreatitis. *Pancreas* 22: 172-178.
79. **Geibel, J. P.**, V. M. Rajendran, and H. J. Binder. (2001) Na(+)-dependent fluid absorption in intact perfused rat colonic crypts. *Gastroenterology* 120: 144-150.
80. Wagner, CA, Ott M, Klinger K, Beck S, Melzig J., Friedrich B., Wild, K-N., Broer,S., Moschen,I., Albers,A., Waldegger,S., Tummler,B., Egan,M., **Geibel,J.P.**, Kandolf,R., Lang,F. (2001) Effects of the serine/threonine kinase SGK1 on the epithelial Na⁺ channel (EnaC) and CFTR. *Cell. Physiol.& Biochem.* 11:209-218

81. **Geibel, J.P.**, Wagner, C.A., Caroppa, R., Qureshi, I., Gloeckner, J., Manuelidis, L., Kirchhoff, P., Radebold, K. (2001) The stomach calcium sensing receptor (SCAR) is a modulator of gastric acid secretion. *Journ. of Biol. Chem.* 276:39549-39552
82. Radebold, K., Horakova, E., Gloeckner, J., Ortega, G., Spray, D., Vieweger, H., Siebert, K., Manuelidis, L., **Geibel, J.P.** (2001) Gap junctional channels regulate acid secretion in the mammalian gastric gland. *Journ. Memb. Biol.* 183:147-153
83. Eickelberg, O. **Geibel, J.**, Seebach F., Giebisch G., Kashgarian M. (2001) K⁺ induced HSP-72 expression is mediated via rapid Ca²⁺ influx in renal epithelial cells. *Am. J. Physiol Renal Physiol* 281:F280-287
84. Sangan, P. Rajendren, P., **Geibel J.**, Binder, H., (2002) Cloning and expression of a chloride-dependent Na⁺-H⁺ exchanger. *J Biol Chem.* 277(12):9668-75.
85. Egan, M., Glockner-Pagel, J., Ambrose, C.A., Cahill, P.A., Pappao, L., Balmuth, N., Cho, E., Canny, S., Wagner, C., **Geibel, J.**, Caplan, M. (2002) Calcium pump inhibitors induce functional surface expression of Δ F508-CFTR protein in cystic Fibrosis epithelial cells. *Nature Medicine* 485-492.
86. Wagner, C.A., Finberg KE, Stehberger PA, Lifton RP, Giebisch GH, Aronson, PA, **Geibel, J.P.** (2002) Regulation of the expression of the Cl⁻/anion exchanger pendrin in mouse kidney by acid-base status. *Kidney Int.* **62**, 2109-2117 (2002).
87. Cheng, S.X., Okuda, M., Hall, A.E., **Geibel, J.P.** & Hebert, S.C. (2002) Expression of calcium-sensing receptor in rat colonic epithelium: evidence for modulation of fluid secretion. *Am J Physiol Gastrointest Liver Physiol* **283**, G240-G250.

Reviews:

88. **Geibel J.**, Zweifach A, White S, Wang W, Giebisch G. (1990) K⁺ channels of the mammalian collecting duct. *Renal Physiology and Biochemistry* 13:59-69.
89. Oberleithner H, Schwab A, Wang W, Giebisch G, Hume F, **Geibel J.** (1994) Living renal epithelial cells imaged by atomic force microscopy. *Nephron* 66:8-13
90. Boron W F, Waisbren S J, Modlin I, **Geibel J.** (1994) Unique permeability barrier of the apical surface of parietal and chief cells. *Journal of Experimental Biology* 196:347-360
91. Oberleithner H, Giebisch G, **Geibel J.** (1994) Visualizing Life on Biomembranes by Atomic Force Microscopy. *Kidney International* 109(4):1060-1067
92. Graf J, **Geibel J. (Editors)** (1997) Renal electrolyte metabolism physiology and pathophysiology: A symposium in Honor of Gerhard Giebisch, M.D. . *Wiener Klinische Wochenschrift.* 109/12-13:415-548
93. **Geibel, J.** (2002) Modern Microscope Techniques for Renal Physiology. *Journal of Nephrology* S161-169.

94. Wagner,CA, **Geibel, J.P.** (2002) Acid Base regulation in the collecting duct. *Journal of Nephrology* 112-127.

Invited Reviews:

95. Schneider, S. ,**Geibel J** (2002) Atomic Force Microscopy of Living Cells (*AJP :Cell*) (in preparation)

96. Schneider, S. ,**Geibel J** (2002) Use of Atomic Force Microscopy to measure ATP release in living Cells (*Methods in Molecular Medicine*) (in preparation)

97. Wagner, CA, Brown, D., Breton,S.,Finberg,K., **Geibel J.P** (2002) H⁺ ATPase activity in renal epithelia. *Physiological Reviews* (in preparation)

Text Books:

98. **Geibel J.** (2002) Use of Biosensors to measure ATP release in CFTR .in "Purinergic Receptors and Signaling." *Academic Press* (in press)

99. **Geibel J.** (2002) Biomedical Applications of Atomic Force Microscopy. *Marcel Dekker* (in preparation)