

CURRICULUM VITAE

DAVID HERSEL ALPERS

004-34-7301

Date: Aug 13, 2013

PERSONAL INFORMATION

Sex: Male
Date of Birth: May 9, 1935
Place of Birth: Philadelphia, Pennsylvania

CITIZENSHIP: USA

ADDRESS:

OFFICE: Washington University School of Medicine
Division of Gastroenterology
Campus Box 8031
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PRESENT POSITIONS: William B. Kountz Professor of Medicine in Geriatrics
Associate Director, Center for Human Nutrition, Washington Univ School of
Medicine

EDUCATION:

Undergraduate:

1956 B.A., Harvard College, Cambridge, Massachusetts

Graduate:

1960 M.D., Harvard Medical School

Postgraduate Training:

1960-61 Intern in Medicine, Massachusetts General Hospital
Boston, Massachusetts

1961-62 Assistant Resident in Medicine, Massachusetts General Hospital
Boston, Massachusetts

1962-64 Research Associate, Section on Molecular Biology,
National Institutes of Arthritis and Metabolic Diseases
National Institutes of Health, Bethesda, Maryland

1964-65 Clinical and Research Fellow in Medicine,
Massachusetts General Hospital, Boston, Massachusetts

ACADEMIC AND STAFF APPOINTMENTS:

1965-67 Instructor in Medicine
 Harvard Medical School

1967-68 Associate in Medicine
 Harvard Medical School

1968-69 Assistant Professor of Medicine
 Harvard Medical School

1969-72 Assistant Professor of Medicine
 Washington University School of Medicine, St. Louis, Missouri

1972-73 Associate Professor of Medicine
 Washington University School of Medicine, St. Louis, Missouri

1973- Professor of Medicine
 Washington University School of Medicine, St. Louis, Missouri

1969-96 Chief, Division of Gastroenterology, WUMS

1997-present William B. Kountz Professor of Medicine in Geriatrics

1969-73 Assistant Physician, Barnes Hospital, St. Louis Missouri

1973-75 Associate Physician, Barnes Hospital, St. Louis Missouri

1975- Physician, Barnes Hospital, St. Louis, Missouri

1969- Consultant, Jewish Hospital of St. Louis

1969-2003 Consultant, John Cochran VA Hospital

1969-2007 Consultant, Children's Hospital of St. Louis

1999- Associate Director, Clinical Nutrition Research Unit, Washington University

UNIVERSITY AND HOSPITAL APPOINTMENTS AND COMMITTEES:

1975-92 Medical Advisory Committee, Barnes Hospital

1980- MSTP Committee, WUMS

1984-93 Promotions Committee, Dept of Medicine

1994-97 Standing Subcommittee on Fellowships, WUMS

STUDY/ADVISORY SECTIONS OF NATIONAL/INTERNATIONAL ORGANIZATIONS:

- 1976-78 National Foundation for Ileitis and Colitis, Research Committee
- 1978-83 NIH General Medicine A, Study Section
- 1983-86 NIH General Medicine C, Study Section
- 1984- External Review Committee, Center for Ulcer Research and Education, UCLA
- 1986-95 External Review Committee, Center of Excellence in Gastroenterology, Stanford University
- 1995-1999 Scientific Advisory Committee, Massachusetts General Hospital, Boston, MA
Chair, 1998-99
- 1997-98 International Assessment Committee, Netherlands Academy of Arts and Sciences, Amsterdam
- 2010- External Advisory Committee, Alimentary Pharmabiotic Centre, University of Cork, Ireland
- 2010- Chair, External Advisory Committee, Wingate Institute of Neurogastroenterology, Queen Mary Medical School, London
- 2011 Co-chair, NIH conference on acute diarrhea, Sept 25-27
- 2012 Co-chair, Vitamin B12, an international conference at U of Nancy, Nancy, France, Sept 15-17.
- 2012 International Symposium on ‘The Experience of Illness: Learning from the Arts’, Organizing Committee and Lecturer, University College Cork, Ireland, Nov 30-Dec 1.
- 2012- Scientific Advisory Committee, Development of new strategies to improve zinc status in children with environmental enteropathy (EE) at risk of diarrhea. A project funded by the Bill and Melinda Gates Foundation. PI Young GP
- 2013- Canadian Foundation for Innovation (CFI): ‘Human Research Laboratory for the Study of Digestive Disease’, Queen’s University, Kingston, Ontario, CA. PIs: Stephen Vanner, Daren Heyland. Member, External Scientific Advisory Committee.

PHARMACEUTICAL COMPANY EXPERIENCE:

- 1999-2001 Senior Medical Consultant, Research & Development, SmithKlineBeecham
Major roles: Protocol Review Committee, Development of GI Program
- 2001-2010 Senior Medical Consultant, Research & Development, GlaxoSmithKline
Major roles: Protocol Review Committee, Global Safety Board, Hepatotoxicity Safety Board, Advisory Board for Neurology-GI Center of Excellence for Drug Development.

- 2008- Medical Consultant, Signature Therapeutics, Inc, San Carlos, California
Major role: Development of program for opiate prodrug
- 2010- Medical Consultant, Research & Development, GlaxoSmithKline
Major roles: Hepatotoxicity Safety Board, development of various assets (phase I and II),
- 2011- Medical Consultant, Research & Development, Otsuka Pharmaceuticals, North America
Major role: Protocol review and drug safety, phase II-IV
- 2010- Medical Consultant for drug absorption and bioavailability
Kala Pharmaceuticals, Phase IV strategy for GSK Nutrition DPU
- 2012- Pfizer Pharmaceuticals, Resident Professors Program, Biotherapeutics Leadership Team,
and Consultant, Orphan and Rare Diseases Division
- 2013- Takeda Pharmaceutical Company: Member, Safety Board; Member, Probability Expert
Team
- 2013- Topivert-Imperial Innovations: External Scientific Advisory Board for inflammatory bowel
disease

MEDICAL LICENSURE AND BOARD CERTIFICATION:

- 1960-69 License, State of Massachusetts
- 1961, July 1 National Board of Medical Examiners, #59939
- 1967, Apr 27 American Board of Internal Medicine #26289
- 1969- License, State of Missouri R3661

HONORS AND AWARDS:

- 1956 Phi Beta Kappa, Harvard University, graduate Magna Cum Laude
- 1956 Latin Oration, Commencement Exercises
Harvard University
- 1956 Louis Curtis Prize for Proficiency in Latin
Harvard University
- 1959 Alpha Omega Alpha
Harvard Medical School
- 1960 Henry Asbury Christian Award for Excellence in Studies
Harvard Medical School
- 1978-79 Outstanding Clinical Teacher Award, Dept. of Medicine
Washington University School of Medicine
- 1980-81 Outstanding Clinical Teacher Award, Dept. of Medicine
Washington University School of Medicine

- 1997 Julius Friedenwald Medal, American Gastroenterological Association, “in recognition of lifetime service to gastroenterology”
- 1998 Abbott Laboratories Distinguished Research Award in Gastrointestinal Physiology, American Physiological Society, GI Section
- 1999 David H. Alpers Annual Lectureship established, Washington University School of Medicine
- 1999 David H. Alpers conference room dedicated, Washington University School of Medicine
- 1999 Honorary Member, British Society of Gastroenterology
- 2003 Fellow, The American Society for Nutritional Sciences, “in honor of a distinguished career in the science of nutrition”

EDITORIAL RESPONSIBILITIES:

- 1977-82 Associate Editor, Journal of Clinical Investigation
- 1982-88 Editorial Board, Gastroenterology
- 1982-1998 Director, Undergraduate Teaching Project, American Gastroenterological Association
- 1985-91 Editorial Board, American Journal of Physiology (GI and Liver Section)
- 1985-92 Editorial Board, Stress Medicine
- 1982-88 Subsection Editor, 3rd and 4th edition of Sleisenger & Fordtran, Gastrointestinal Diseases, Saunders, 1984, 1988.
- 1983- Manual of Nutritional Therapeutics. Alpers DH, Clouse RE, & Stenson WF, Little Brown, 1st-2nd editions, 1983, 1988. Alpers DH, Stenson WF, Bier DM, Lippincott Williams & Wilkins 3rd-5th editions, 1995, 2001, 2008, 6th edition in preparation, estimated publication date Dec 2014.
- 1989-2009 Associate Editor, Textbook of Gastroenterology, Ed. T. Yamada, Lippincott 1991, 1995, 1999, 2002. Blackwell Publishing 2009
 Atlas of Gastroenterology, Ed. T. Yamada, Lippincott 1991, 1999, 2002, Blackwell Publishing 2008.
 Textbook of Gastroenterology, Self-Assessment Review, Ed. T. Yamada, 2nd
 Atlas of Gastroenterology, Self-Assessment Guide, Ed. T. Yamada, Lippincott- Raven, 1997.
 Gastroenterology: Electronic reference and review, Ed. T. Yamada, Lippincott- Raven, 1997.
 Handbook of Gastroenterology, Ed. T. Yamada, Lippincott-Raven, 1998.
- 1990-2012 Section Editor, Small Intestine, Current Opinion in Gastroenterology (D. Podolsky, editor), Current Science.
- 1995-2012 Section Editor, Nutrition, Current Opinion in Gastroenterology (D. Podolsky, editor), Current Science.

- 1991-1995 Editorial Board, Ann Rev Nutrition
- 1991-1997 Editor, American Journal of Physiology (Gastrointestinal & Liver Physiology)
- 1991-1995 Associate Editor, Physiology of the Gastrointestinal Tract, 3rd ed., Raven Press, 1994.
- 1998-2003 Editorial Board, Journal of Biological Chemistry
- 1998-2011 Gastroenterology Update, Editor, WPI Communications
- 2001-2010 Editorial Advisory Board, Arbor Clinical Nutrition Update
- 2002-2003 Associate Editor, Encyclopedia of Gastroenterology, Leonard R Johnson, editor-in-chief, Elsevier Academic Press, 2003
- 2007- Editorial Advisory Board, American Journal of Gastroenterology
- 2008- Associate Editor, American Journal of Clinical Nutrition
- 2006-2014 Editorial Board, Faculty of 1000-Disorders of Neurogastroenterology & Motility

PROFESSIONAL SOCIETIES AND ORGANIZATIONS:

- 1959 Alpha Omega Alpha
- 1967- American Federation for Clinical Research
- 1969- American Gastroenterology Association
- 1970-2000 Central Society for Clinical Research
(Counselor, Midwest Section, 1972)
- 1972- American Society for Clinical Investigation (emeritus status currently)
- 1974- American Society of Biochemistry and Molecular Biology
- 1976- Association of American Physicians
- 1979- American Institute of Nutrition (now American Society of Nutrition)
- 1986-1995 American Society of Cell Biology
- 1991- American Physiological Society
- 1974-1978 Chairman, Training and Education Committee,
American Gastroenterological Association.
- 1974-1999 Undergraduate Teaching Project, American Gastroenterological Association
Director, 1984-1999.
- 1999-2002 Gastroenterology Teaching Project, AGA, Co-director, 1999-2002
- 1988-1989 Vice President, American Gastroenterological Association

- 1989-1990 President-elect, American Gastroenterological Association
- 1990-1991 President, American Gastroenterological Association (AGA)
- 1991-1997 Member, GI Section Steering Committee, American Physiological Society
- 1993 Co-chairperson, FASEB Conference, Intestinal Tract V: Cell and Molecular Biology
- 1993-1997 Chairperson, Research Subcommittee, Public Policy Committee, AGA
- 1994-1997 Chairperson, Centennial Committee, AGA
- 1996-1997 Chairperson, Gastrointestinal Diseases, Joint NIH/ASPEN/ASCN Conference on Nutrition Support
- 1997-1998 Co-chair, Basic Science Section, International Functional Bowel Disease Study Group
- 1999-2001 Member, Publications Committee, American Physiological Society

MAJOR INVITED PROFESSORSHIPS AND LECTURESHIPS:

- 1981 Edwin Poland Memorial Lecture, Graduate Hospital, Philadelphia
- 1984 Rouse Lecturer in Gastrointestinal Diseases and Nutrition
Baylor University Medical Center, Dallas
- 1992 Bushell Lecturer, Australian Society of Gastroenterology
- 1993 Harriston J. Shull Visiting Professorship in Gastroenterology
Vanderbilt University Medical School, Nashville
- 1995 Louis Zetzel Visiting Professor, Beth Israel Hospital, Boston
- 2002 Visiting Professor, University of Nancy, France, Dept of Medicinal Chemistry
- 2010 Visiting Professor, Syracuse University, Dept of Chemistry

RESEARCH SUPPORT:

Inactive:

NIDDK RO1 "Intestinal Protein Metabolism and Function
Principal Investigator, 1969-2001

NIDDK PO1 "Gastrointestinal Proteins: Cellular and Molecular Regulation
Principal Investigator, 1986-1999, project 1 1986-2001

NIDDK T32 "Clinical/Laboratory Training for Academic Gastroenterologists"
Principal Investigator, 1969-1999

NIDDK DK 98-013 "Washington University Clinical Nutrition Research Unit/Nutrition Obesity Research Center", Associate Director, 1999-

Active:

P30 DK56341 Klein (PI) 04/01/2006 - 03/31/2016
NIH/NIDDK \$730,175
Nutrition Obesity Research Center
The major goal is to provide core laboratories and pilot/feasibility funding to enhance nutrition-related research.
Role: Research Director, Chair P & F program

2012-2013 Klein (PI) 09/01/2008 - 10/31/2014
Longer Life Foundation Total budget for 2012-13: \$226,960
Longer Life Center (administration) Allocation for 1012-13: \$75,470

The Foundation supports basic, clinical, and applied research related to the study of longevity and education of health professionals.
Role: Associate Director, and Chair P & F program

CLINICAL TITLE AND RESPONSIBILITIES:

William B. Kountz Professor of Medicine
Division of Gastroenterology
Co-Director, Center for Human Nutrition
Physician, Barnes Hospital

BIBLIOGRAPHY – Articles (220 Peer reviewed and 142 invited publications)

1. **Alpers DH**, Engleman K, and Foley FD: Addison's disease secondary to carcinoma of the breast. *Ann Int Med*, 1962; 57:464-467.
2. **Alpers DH**, Appel SH, and Tomkins GM: A spectro-photometric assay for thiogalactoside transacetylase. *J Biol Chem*, 1965; 240:10-13.
3. Appel SH, **Alpers DH**, and Tomkins GM: Multiple molecular forms of *B*-galactosidase. *J Mol Biol*, 1965; 11:12-22.
4. **Alpers DH** and Tomkins GM: The order of induction and deinduction of the lactose operon in *E. coli*. *Proc Natl Acad Sci*, 1965; 53:797-803.
5. **Alpers DH** and Tomkins GM: Sequential transcription of the genes of the lactose operon and its regulation by protein synthesis. *J Biol Chem*, 1966; 241:4434-4443.
6. **Alpers DH** and Isselbacher KJ: The effect of carbon tetrachloride on rat liver lysosomes. *Biochim Biophys Acta*, 1967; 137:33-42.
7. **Alpers DH** and Isselbacher KJ: Protein synthesis by rat intestinal mucosa: The role of ribonuclease. *J. Biol Chem*, 1967; 242:5617-5622.
8. **Alpers DH**, Steers E, Shifrin S, and Tomkins GM: Isoenzymes of the lactose operon of *E. coli*. *Annals NY Acad Sci*, 1968; 151:545-555.

9. **Alpers DH** and Isselbacher KJ: Biochemical effects of CCL₄ on rat intestinal mucosa. *Biochim Biophys Acta*, 1968; 158:414-424.
10. **Alpers DH**, Solin M, and Isselbacher KJ: The role of lipid peroxidation in the pathogenesis of CCL₄ induced liver injury. *Molecular Pharmacology*, 1968; 4:566-573.
11. Thier SO and **Alpers DH**: Disorders of intestinal transport of amino acids. *Am J Dis in Children*, 1969; 117:13-23.
12. **Alpers DH**: Separation and isolation of rat and human intestinal *B*-galactosidases. *J Biol Chem*, 1969; 244:1238-1246.
13. Glickman RM, **Alpers DH**, Drummey GD, and Isselbacher KJ: Increased lymph alkaline phosphatase after fat feeding: Effects of medium chain triglycerides and inhibition of protein synthesis. *Biochim Biophys Acta*, 1970; 201:226-235.
14. **Alpers DH** and Glickman RM: A method for the determination of specific activity of proteins in poly-acrylamide gels. *Anal Biochem*, 1970; 35:314-320.
15. **Alpers DH** and Solin M: The Characterization of rat intestinal amylase. *Gastroenterology*, 1970; 58:833-842.
16. James WPT, **Alpers DH**, Gerber JE, and Isselbacher KJ: The turnover of disaccharidases and brush border proteins in rat intestine. *Biochim Biophys Acta*, 1971; 230:194-203.
17. **Alpers DH** and Gerber JE: Monosaccharide inhibition of human intestinal lactase. *J Lab and Clin Med*, 1971; 78:265-274.
18. **Alpers DH** and Cote MN: Inhibition of lactose hydrolysis of dietary sugars. *Amer J Physiol*, 1971; 221:865-868.
19. Shih VE, Bixby EM, **Alpers DH**, Bartosocas CS, and Thier SO: Studies of intestinal transport defect in Hartnup disease. *Gastroenterology*, 1971; 61:445-453.
20. **Alpers DH**, Avioli LV, and Lee SW: Identification of two calcium-binding proteins in the human small intestine. *Gastroenterology*, 1972; 62:559-564.
21. **Alpers DH** and Thier SO: Role of the free amino acid pool of the intestine in protein synthesis. *Biochim Biophys Acta*, 1972; 262:535-545.
22. **Alpers DH**: Protein synthesis in intestinal mucosa: The effect of route of administration of precursor amino acids. *J. Clin Invest*, 1972; 51:167-173.
23. **Alpers DH**: The relation of size to the relative rates of degradation of intestinal brush border proteins. *J Clin Invest*, 1972; 51:2621-2630.
24. Liss J, **Alpers DH**, and Woodruff RA: The "Irritable Colon" syndrome and psychiatric illness. *Dis of the Nervous System*, 1973; 34:151-157.
25. Birge SJ and **Alpers DH**: Stimulation of intestinal mucosal proliferation by vitamin D. *Gastroenterology*, 1973; 64:977-982.

26. Permutt MA, Kelly JJ, Bernstein R, **Alpers DH**, et al: Alimentary hypoglycemia in the absence of gastro-intestinal surgery. *New Engl J Med*, 1973; 288:1206-1210.
27. Kinzie JL, Ferrendelli JA, and **Alpers DH**: Cyclic AMP mediated transport of neutral and dibasic amino acids in jejunal mucosa. *J Biol Chem*, 1973; 248:7018-7024.
28. Kelly JJ and **Alpers DH**: Properties of human intestinal glucoamylase. *Biochim et Biophys Acta*, 1973; 315:113-120.
29. Kelly JJ and **Alpers DH**: Blood group antigenicity of purified human intestinal disaccharidases. *J Biol Chem*, 1973; 248:8216-8221.
30. Hooper DC, **Alpers DH**, Mehlman CS, and Allen RHA: Characterization of ileal vitamin B₁₂ binding using homogeneous human and hog intrinsic factors. *J Clin Invest*, 1973; 52:3074-3083.
31. Birkenmeier E and **Alpers DH**: Enzymatic properties of rat lactase phlorizin hydrolase. *Biochim Biophys Acta*, 1974; 350:100-112.
32. Binnington HB, Sumner H, Lesker P, **Alpers DH**, and Ternberg JL: Functional characteristics of surgically induced jejunal neomucosa. *Surgery*, 1974; 75:805-810.
33. Tedesco FJ, Stanley RJ, and **Alpers DH**: Diagnostic features of clindamycin-associated pseudomembranous colitis. *New Engl J Med*, 1974; 290:841-843.
34. Tedesco FJ, Barton RW, and **Alpers DH**: Clindamycin associated colitis: a prospective study. *Ann Int Med*, 1974; 81:429-433.
35. **Alpers DH** and Tedesco FJ: The possible role of pancreatic proteases in the turnover of intestinal brush border proteins. *Biochim Biophys Acta*, 1975; 401:28-40.
36. Philpott GW and **Alpers DH**: Control of DNA synthesis in normal rabbit colonic mucosa. *Gastroenterology*, 1975; 69:951-959.
37. Young SJ, Norland CG, Woodruff RA Jr, and **Alpers DH**: Psychiatric illness and the irritable bowel syndrome: Practical implications for the primary physician. *Gastroenterology*, 1976; 70:162-166.
38. Seetharam B, Grimme N, Goodwin CL, and **Alpers DH**: Differential sensitivity of intestinal brush border enzymes to pancreatic proteases. *Life Sciences*, 1976; 18:89-96.
39. Kinzie JL, Grimme N, and **Alpers DH**: Cyclic AMP-dependent amino acid uptake in intestine: The importance of adrenergic agonists. *Biochem Pharm*, 1976; 25:2727-2731.
40. Morton WJ, Tedesco FJ, Harter H, and **Alpers DH**: Serum amylase determinations and amylase/creatinine clearance ratios in patients with chronic renal insufficiency. *Gastroenterology*, 1976; 71:594-598.
41. Tahmoush AJ, **Alpers DH**, Feigin RD, Armbrustmacher V, and Prenskey AL: Hartnup Disease. Clinical, pathological and biochemical observations. *Archives of Neurology*, 1976; 33:797-807.
42. **Alpers DH**: Protein turnover in intestinal mucosal villus and crypt brush border membranes. *Biochem Biophys Res Comm*, 1977; 75:130-135.

43. Hagedorn CH and **Alpers DH**: The distribution of intrinsic factor-vitamin B₁₂ receptors in human intestine. *Gastroenterology*, 1977; 73:1019-1022.
44. Seetharam B, Yeh KY, Moog F, and **Alpers DH**: Development of intestinal brush border membrane proteins in the rat. *Biochim. Biophys. Acta*, 1977; 470:424-436.
45. Condon SC, Janes NJ, Wise L, and **Alpers DH**: Role of caloric intake in the weight loss after jejunioleal bypass for obesity. *Gastroenterology* 74:34-37, 1978.
46. Allen RH, Seetharam B, Podell E, and **Alpers DH**: Effect of proteolytic enzymes in the binding of cobalamin to R protein and intrinsic factor. *J Clin Invest* 61:47-54, 1978.
47. Allen RH, Seetharam B, Allen NC, Podell E, and **Alpers DH**: Correction of cobalamin malabsorption in pancreatic insufficiency with a cobalamin analogue that binds with high affinity to a protein but not to intrinsic factor. *J Clin Invest.* 61:1628-1634, 1978.
48. Kwong WKL, Seetharam B, and **Alpers DH**: Effect of exocrine pancreatic insufficiency on small intestine in the mouse. *Gastroenterology* 74:1277-1282, 1978.
49. **Alpers DH** and Grimme N: Effect of broad spectrum antibiotics on colonic DNA synthesis. *J Infect Dis* 137:756-763, 1978.
50. Schonfeld G, Bell E, and **Alpers DH**: Intestinal apoproteins during fat absorption. *J Clin Invest* 61:1539-1550, 1978.
51. Shields HM, Yedlin ST, Bair FA, Goodwin CL, and **Alpers DH**: Successful maintenance of suckling rat ileum in organ culture. *Am J Anat* 155:375-389, 1979.
52. Goldstein PD, **Alpers DH**, and Keating JH: Sulfapyridine metabolites in children with inflammatory bowel disease receiving sulfasalazine. *J of Pediatr* 95:638-640, 1979.
53. Gleason WA, Grimme NL, Avioli LV, and **Alpers DH**: Intestinal calcium binding protein in uremia. *Calcif Tiss Intl* 27:205-210, 1979.
54. Halverson JD, Scheff RJ, Gentry K, and **Alpers DH**: Jejunioleal bypass: Late metabolic sequelae and weight gain. *Am J Surg* 140:347-350, 1980.
55. **Alpers DH**, Philpott G, Grimme NL, and Margolis DM: Control of thymidine incorporation in mucosal explants from patients with chronic ulcerative colitis. *Gastroenterology* 78:470-478, 1980.
56. **Alpers DH**, Grimme N, Smith R, and Avioli LV: Dog intestinal mucosa contains two vitamin D stimulated calcium binding proteins. *Gastroenterology* 79:259-264, 1980.
57. Seetharam B, Perrillo RP, and **Alpers DH**: The effect of pancreatic proteases on intestinal lactase activity in man. *Gastroenterology* 79:827-832, 1980.
58. Schonfeld G, Grimme N, and **Alpers DH**: Detection of apolipoprotein C in human and rat enterocytes. *J Cell Biol* 86:562-567, 1980.
59. Riepe SP, Goldstein J, and **Alpers DH**: Effect of Bacteroides proteases on human intestinal brush border hydrolases. *J Clin Invest* 66:314-322, 1980.

60. Seetharam B, Yeh KY, and **Alpers DH**: Turnover of intestinal brush border proteins during postnatal development in the rat. *Am J Physiol* 239 (Gastrointest. & Liver Physiol. 2):G524-G531, 1980.
61. Shedlofsky S, Koehler RE, **Alpers DH**: Noncirrhotic nodular transformation of the liver with portal hypertension. Clinical, angiographic and pathologic correlation. *Gastroenterology* 79:938-943, 1980.
62. Young GP and **Alpers DH**: Labelling of intestinal brush border membrane proteins in vivo using diazotised [¹²⁵I] iodosulfanilic acid. *Biochim Biophys. Acta.* 640:131-141, 1981.
63. Schwarz KB, Karl IE, and **Alpers DH**: Effect of intra-luminal cation-exchange resin on excretion of ammonia in rat ileum. *Pediatric Research* 15:1473-1477, 1981.
64. Yedlin ST, Young GP, Seetharam B, Seetharam S, and **Alpers DH**: Characterization and comparison of soluble and membranous forms of intestinal alkaline phosphatase from the suckling rat. *J Biol Chem* 256:5620-5626, 1981.
65. Helzer JE, Stillings WA, Chammas S, Norland CC, and **Alpers DH**: A controlled study of the association between ulcerative colitis and psychiatric diagnosis. *Dig Dis Sci* 27:513-518:1982.
66. Seetharam B, **Alpers DH**, and Allen RH: Isolation and characterization of the ileal receptor for intrinsic factor-cobalamin. *J Biol Chem* 256:3785-3790, 1981.
67. Young GP, Yedlin ST, and **Alpers DH**: Distribution of soluble and membranous forms of alkaline phosphatase in the small intestine of the rat. *Biochim Biophys Acta* 676:257-265, 1981.
68. Seetharam B, Bagur SS, and **Alpers DH**: Interaction of receptor for intrinsic factor--cobalamin complex with synthetic and brush border lipids. *J Biol Chem* 256:9813-9815, 1981.
69. Seetharam B, Bagur SS, and **Alpers DH**: Isolation and characterization of proteolytically derived ileal receptor for intrinsic factor-cobalamin. *J Biol Chem* 257:183-189, 1982.
70. Young GP, Friedman S, Yedlin ST, and **Alpers DH**: Effect of fat-feeding on intestinal alkaline phosphatase activity in tissue and serum. *Am J Physiol* 241 (Gastrointest. Liver Physiol. 4) G461-G468, 1981.
71. Young GP, Yedlin ST and **Alpers DH**: Independent biosynthesis of soluble and membranous alkaline phosphatases in the suckling rat ileum. *Biochem J* 200:645-654, 1981.
72. Gordon JI, Smith DP, Andy R, **Alpers DH**, Schonfeld G and Strauss AW: The primary translation product of rat intestinal apolipoprotein AI mRNA is an unusual preproprotein. *J Biol Chem* 257:971-978, 1982.
73. Rosenblum JL, Raab BK and **Alpers DH**: Hepatobiliary and pancreatic clearance of circulating pancreatic amylase. *Amer J Physiol* 243 (Gastrointest. & Liver Physiol. 6):G21-G27, 1982.
74. Shields HM, Bair FA, Bates ML, Yedlin ST, **Alpers DH**: Localization of immunoreactive alkaline phosphatase in the rat small intestine at the light microscopic level by immunocytochemistry. *Gastroenterology* 82:39-45, 1982.

75. Gordon JI, Smith DP, **Alpers DH**, Strauss AW: Proteolytic processing of the primary translation product of rat intestinal apolipoprotein AIV: Comparison with preproapolipoprotein AI. *J Biol Chem*, 257:8418-8423, 1982.
76. **Alpers DH**, Lancaster N, Schonfeld G: The effect of fat feeding on apolipoprotein AI secretion from rat small intestinal epithelium. *Metabolism* 31:784-790, 1982.
77. Gordon JI, Smith DP, **Alpers DH**, Strauss AW: Cloning of a complementary deoxyribonucleic acid encoding a portion of rat intestinal preapolipoprotein AIV messenger ribonucleic acid. *Biochemistry* 21:5424-5431, 1982.
78. Seetharam B, Jimenez M, **Alpers DH**: Effect of bile and bile acids on the binding of intrinsic factor to cobalamin and intrinsic factor-cobalamin complex to ileal receptor. *Am J Physiol* 245 (Gastrointest. & Liver Physiol. 8):G72-G77, 1983.
79. Paquette TL, Shulman DF, **Alpers DH** and Jaffe BM: Postnatal development of intestinal secretion in rats and guinea pigs. *Am J Physiol* 243 (Gastrointest. & Liver Physiol. 6):G511-G517, 1982.
80. Rosenblum JL, Niesen T, Raab BK and **Alpers DH**: Fate of circulating isoamylases in the rabbit. *Am J Phys* 244 (Gastrointest. & Liver Physiol. 7):G254-G259, 1983.
81. Gordon JI, **Alpers DH**, Ockner RK and Strauss AW: The nucleotide sequence of rat liver fatty acid binding protein mRNA. *J Biol Chem* 258:3356-3363, 1983.
82. Seetharam B, Bakke JE and **Alpers DH**: Binding of intrinsic factor to ileal brush border membrane in the rat. *Biochem Biophys Res Commun* 115:238-244, 1983.
83. **Alpers DH**, Strauss AW, Ockner RK, Bass NM and Gordon JI: Cloning of a cDNA encoding rat intestinal fatty acid binding protein. *Proc Natl Acad Sci USA* 81:313-317, 1984.
84. Helzer JE, Chammas S, Norland CC, Stillings WA and **Alpers DH**: A study of the association between Crohn's disease and psychiatric illness, *Gastroenterology* 86:324-330, 1984.
85. Niesen TE, **Alpers DH**, and Rosenblum JL: Metabolism of glycosylated human salivary amylase: In Vivo plasma clearance by rat hepatic endothelial cells and in vitro receptor mediated pinocytosis of glycosylated human salivary amylase by macrophages. *J Leukocyte Biol*, 36:307-320, 1984.
86. Levine JS, Allen RH, **Alpers DH**, and Seetharam B Immunocytochemical localization of the intrinsic factor-cobalamin receptor in canine ileum: distribution of intracellular receptor during cell maturation. *J Cell Biol*, 98:1111-1118, 1984.
87. Leonard WJ, Strauss AW, Go MF, **Alpers DH**, and Gordon JI: Biosynthesis and compartmentalization of rat intestinal vitamin D-dependent calcium binding proteins. *Eur J Biochem*, 139:561-571, 1984.
88. Komoda T, Kimegawa M, Yajima T, Tamura G, and **Alpers DH**: Induction of rat hepatic and intestinal alkaline phosphatase activity by bile duct ligation, *Am J Physiol*, 246 (Gastrointest. & Liver Physiol. 9):G393-G400, 1984.
89. Blaufuss M, Gordon JI, Schonfeld G, Strauss AW, and **Alpers DH**: Biosynthesis of apoprotein C-III in rat liver and small intestinal mucosa. *J Biol Chem*, 259:2452-2456, 1984.

90. **Alpers DH**, Goodwin CL, and Young GP: Quantification of human intestinal and liver/bone alkaline phosphatase in serum by rocket electroimmunoassay. *Anal Biochem*, 140:129-137, 1984.
91. Rosenblum JL, Niesen TE, and **Alpers DH**: Metabolism of human isoamylase in the rabbit, *Am J Physiol* 247 (Gastrointest. & Liver Physiol. 10):G273-G278, 1984.
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SLIDE UNITS

1. Nutrition: Energy and Protein. Undergraduate Teaching Project, Gastroenterology Association, 1978, Milner-Fenwick, Inc. Baltimore, MD.
2. Nutrition: Vitamin and Minerals. Undergraduate Teaching Project, Gastroenterology Association, 1979, Milner-Fenwick, Inc. Baltimore, MD.