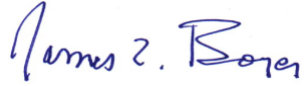


CURRICULUM VITAE

PERSONAL:

Name: James Lorenzen Boyer  1/16/24

Office Address: Digestive Disease Section and Liver Center, Department of Medicine, Yale University School of Medicine, 300 Cedar Street, Suite South-241C
New Haven, CT 06510

Office Telephone: (203) 785-5279 or
Office Fax: (203) 785-7273

Home Address: 65 Laurel Road, Hamden, CT 06517

Home Telephone: (203) 624-7014

Cell: (203) 464-1418

Born: New York, New York, August 28, 1936

Married: Phoebe Bennet Boyer, February 23, 1963

Children: Phoebe Christine, 1/18/67.
Anna Birch, 6/20/68

EDUCATION:

The Johns Hopkins University, School of Medicine	1958-1962
Haverford College, Haverford, Pennsylvania	1954-1958
The Sidwell Friends School, Washington, D.C.	1947-1954

POSTDOCTORAL TRAINING:

Division Clinical Pharmacology, Dept. Medicine	
University Zurich - Sabbatical Leave	1990-1991
Lab Cell Biology, HBLI, NIH - Sabbatical Leave	1976-1977
Postdoctoral Fellow, Liver Study Unit,	
Department of Medicine, Yale-New-Haven Hospital	1967-1969
3rd year resident, Yale New Haven Hospital	1966-1967
2nd Year Assistant Resident, Medicine, New	
York Hospital	1963-1964
Intern in Medicine, New York Hospital	1962-1963

MILITARY SERVICE:

USPHS, National Institutes of Health Office of International Research Assigned to the Johns Hopkins University International Center for Medical Research and Training, Calcutta, India	1964-1966
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APPOINTMENTS:

Chair, Board of Directors, American Liver Foundation	2004-2008
Vice Chair, Scientific Affairs, American Liver Foundation	2002-2004
Chair-elect, Board of Directors, American Liver Foundation	2003-2004
Chairman, Mount Desert Island Biological Laboratory, Board of Trustees	1995- 2003; 2011-2013
Director NIEHS MFBS Center for Membrane Toxicity Studies (MDIBL)	1992-2010
Founder and Director, Yale Liver Research Center (NIH)	1984-2009
Chief, Division of Digestive Diseases, Yale University School of Medicine	1982-1996
Professor of Medicine, Yale University School of Medicine	1978-
Director, Liver Study Unit, Yale University School of Medicine	1978- 1982
Professor of Medicine, University of Chicago and Pritzker School of Medicine	1976-1978
Director, Liver Study Unit, University of Chicago and Pritzker School of Medicine	1972-1978
Associate Professor of Medicine, University of Chicago and Pritzker School of Medicine	1972-1976
Attending Physician, Yale-New Haven Hospital and West Haven VA Hospital	1969-1972;1978-
Assistant Professor of Medicine, Yale University School of Medicine	1969-1972
Head, Liver Research Laboratory, Johns Hopkins University International Center for Medical Research and Training, Calcutta, India	1964-1966

HONORS AND AWARDS:

Smith, Kline and French Foreign Fellowship Award	1961
Recipient - NIH Career Development Award in Digestive Diseases	1974-1979
American Society for Clinical Investigation	1975
Josiah Macy Faculty Scholar Award	1976-1977
Association of American Physicians	1980
Adolf-Windaus Prize	1988
Distinguished Achievement Award - American Gastroenterology Assoc	1989
NIH MERIT Award	1990-1998
Ismar-Boas Medal - German Society of Gastroenterology and Metabolism	1996
Ensign Professorship, Yale University	1996-
Distinguished Achievement Award – American Association for the Study Liver Diseases, annual meeting, Chicago	1998
Distinguished Scientific Achievement Award, American Liver Foundation	1999

Best Doctors in America	2009-2021
NIH MERIT Award	2008-2018
Spinoza Chair – 2009; University of Amsterdam, the Netherlands	2009
Honorary Board Member–Connecticut Division, American Liver Fnd.	2009-
Honorary Board Member – Mt. Desert Island Biological Laboratory	2014-
Johns Hopkins Society of Scholars	2016
Sidwell Friends School – Distinguished Alumni Award	2019
Fellow of the American Physiological Society	2019
European Association for the Study of the Liver’s International Recognition Award	2020
American Liver Foundation’s Founder Award. 45 th Anniversary Gala	2021
H.G. Desai Oration	2021

SOCIETIES:

The American Federation for Clinical Research
 The American Association for the Study of Liver Diseases
 Diplomate -American Board of Internal Medicine
 Eastern Gut Club: Midwest Gut Club
 Fellow, American College of Physicians
 American Gastroenterological Association
 Central Society for Clinical Research
 International Association for the Study of Liver Diseases
 American Society for Clinical Investigation
 Association of American Physicians
 Interurban Club
 American Clinical and Climatological Association

NATIONAL COMMITTEES AND EDITORIAL BOARDS:

Editorial Board - Gastroenterology (1975-1980; 2004-2014)
 Editorial Board - Viewpoints on Digestive Diseases (1974-1979)
 Editorial Board - Clinical Research (1975-1980)
 Steering Committee - Midwestern Gut Club (1973-1976)
 Steering Committee - Gastroenterology Research Group (1974-1979)
 Councilor - American Association for the Study of Liver Diseases (1975-1977)
 Vice President - American Association for the Study of Liver Diseases (1978-1979)
 President - American Association for the Study of Liver Diseases (1979-1980)
 Secretary/Treasurer - American Liver Foundation (1977-1980)
 Nominating Committee - American Gastroenterology Association (1977 and 1986)
 Research Committee - American Gastroenterology Association (1978-1981)
 Advisory Committee - Veterans Administration Hepatitis in Dentists Survey (1978-1981)
 Advisory Committee - National Gallstone Study (1978-1981)
 Editorial Committee - Annals of Internal Medicine (1979-1982)
 Associate Editor - Hepatology (1980-1985)
 Senior Associate Editor – Hepatology (2011- 2016)
 Board Member - American Liver Foundation (1977-1985; 2002- 2008)
 Chair, Board of Directors, American Liver Foundtion (2004-2008)
 Chairman, Nominating Committee - American Association for the Study of Liver Diseases (1981)

Advisory Board Liver Research Center, University of California, at San Francisco
 (1981-2000); Chairman (1985-2000)
 Editorial Board Member - Journal of Clinical Investigation (1981-1986)
 Deputy Chairman - National Digestive Diseases Advisory Board (1981-1984)
 Board Member - Mount Desert Island Biological Laboratory (1982-1992; 1994-2013)
 Chair, Board of Directors, Mt Desert Island Biological Laboratory (1995-2003)
 Vice President - International Association for the Study of the Liver (1982-1984);
 President-elect (1986-1988); President (1988-1990)
 Councilor - American Gastroenterology Association (1983-1986)
 Vice Chairman - Policy Committee, NIH Liver Transplantation Data Base (1985-1989).
 NIADDK Advisory Council, Member, (1985 - 1989).
 Member - Research Advisory Committee, Mount Desert Island Biological Laboratory,
 Salsbury Cove, Maine (1986-1990)
 Member - Nominations Committee, AASLD (1986-1987)
 Editorial Board, American Journal of Physiology: Gastrointestinal and Liver Physi-
 ology - GI Section (1986-1994; 2003-2009)
 Member - American Gastroenterology Association Industry Scholar Awards Committee
 (1984-1988; and Chairman 1986-1990)
 Member - Beaumont Prize Committee (1987 and 1993)
 Member - Hans Popper Prize Award Committee (1988 - 2008)
 Advisory Board - Gastro. International (1989 - 1993)
 Advisory Board - Gastroenterologia Japonica (1989-1993)
 Chairman - Search Committee for Director of Mt. Desert Island Biological
 Laboratory (1991-1992)
 Co-Editor (with Dr. Robert Ockner) - Progress in Liver Disease (1991-1997)
 Associate Editor - The Liver; Biology and Pathobiology (1992-)
 Editorial Board - Current Opinion in Gastroenterology (1991-)
 Editorial Board - J Gastroenterology (Japan) (1994 -1997)
 Editorial Board - Hepatology (1994-2001)
 Associate Editor - Journal of Hepatology (1994 - 1999)
 Founding Editor for "Hepatology Highlights" – Hepatology (1999-2001)
 Chairperson, NIH Consensus Development Panel on Management of Hepatitis C (2002)
 Member, Center for Scientific Review Advisory Committee (2002)
 Ad Hoc Member, Hepatobiliary Pathophysiology Study Section (2003-2005)
 Editorial Board - Gastroenterology (2004-2014)
 Editorial Board - BMC Physiology - (2005-)
 Editorial Board – Hepatobiliary & Pancreatic Diseases International (2006-)
 Co-Chair (with Edward Benz) – Search Committee for Scientific Director, MDIBL (2007-2008)
 Chair, Nominating Committee, Mt Desert Island Biological Laboratory, (2007-2011)
 Member, Board of Managers, Haverford College (2009-)
 Editorial Board – *Liver Health Today* (2010-)
 Senior Associate Editor, Hepatology (2011- 2016)
 Chair, Board of Directors, Mt Desert Island Biological Laboratory (2011-2013)
 Member, SAVE JON Scientific, Clinical, and Engineering Advisory Panel.(2014)

DEPARTMENTAL COMMITTEES:

(University of Chicago):

1. Executive Committee (1974-1978)

2. Intern Selection Committee (1972-1978)
3. Department of Medicine Internal Review Committee (1976)
4. Neurology Section Review Committee (1973)
5. Clinical Research Center Advisory Committee (1978)

(Yale University):

1. Executive Committee, Department of Medicine (1979-1985; 1986 - 1989)
2. Provost's Committee on Fringe Benefits (1979-1980)
3. Research Facilities Committee - Yale-New Haven Hospital (1981)
4. Search Committee Chief of Staff - Yale-New Haven Hospital (1982)
5. Medical School Appointment and Promotion Committee (1981 - 1984)
6. Part-time faculty Appointment and Promotion Committee (1981-2000)
7. Department of Medicine Appointment and Promotion Committee (1981 -1990)
8. Search Committee for Chairman, Department of Surgery (1984 - 1985)
9. Oncology Section Review Committee - Chairman (1986-1987)
10. Faculty Retirement Committee (1986-1987)
11. Department of Medicine Space Committee (1987)
12. Task Force on Tenured Women Faculty - Chairman (1988)
13. Biological Sciences Advisory Committee (1991-1992)
14. Deans Committee to review department Cellular and Molecular Physiology - Chairman (1992)
15. Dept. of Medicine - Budget Committee (1993-1994)
16. Search Committee, Chair for Department of Cellular & Molecular Physiology (1993-1994)
17. Department of Medicine – Committee to evaluate the Department of Medicine's Clinical Practice (1994)
18. Department of Medicine - Clinical Education Committee (1993-1994)
19. Medical School Council (1994-1996)
20. Dean's Committee to Assess the Boyer Center (1994-1995)
21. Biological Sciences Advisory Committee (1995-1996)
22. Yale Medical School Senior Appointments and Promotion Committee (2009-2012)

VISITING PROFESSORSHIPS & INVITED LECTURESHIPS:

1. University of California, San Francisco, March 18-20, 1976
2. Cornell Medical Center, New York Hospital, March 30, 1977
3. UCLA, Wadsworth, Los Angeles, March 13-15, 1978
4. University of Connecticut, April 3-5, 1978
5. Duke University, April 6-7, 1978
6. University of Kentucky, Lexington, Kentucky, November 16-17, 1978
7. Harvard University, Peter Bent Brigham Hospital, Beth Israel Hospital, Children's Hospital, April 4-6, 1979
8. Mayo Clinic, Rochester, Minnesota, April 18-20, 1979
9. University of Toronto, December 9-10, 1979
10. SUNY, Buffalo, Departments of Physiology and Medicine, February 12-13, 1981
11. University of Minnesota, Department of Medicine, April 16-17, 1981
12. University of Cincinnati, 2nd Annual E. Schiff Lecturer, May 12-14, 1982
13. University of Pittsburgh, Montefiore Hospital, June 2-3, 1982
14. University of Colorado, September 22-24, 1982
15. University of Vienna, December 9-10, 1983
16. University of Seattle, Wade Volwiler Visiting Professor, October 3-6, 1984
17. Commonwealth University, Richmond, Virginia, December 6-7, 1984

18. University of Illinois, 1st Annual Steven Winter Memorial Lecturer, February 20-21, 1985
19. SUNY, Downstate Medical Center, Arlene Goldwitz Memorial Lecturer in Digestive Diseases, September 5, 1985
20. Queen Elizabeth Postgraduate Medical Center, Birmingham, England, Special Guest Lecturer, September 14, 1985
21. University of Michigan, September 26-27, 1985
22. University of Iowa, Dedication Ceremony for New Digestive Disease Center, November 1985
23. New Jersey Medical School, January 10, 1986
24. College of Physicians and Surgeons, Columbia University January 27 & 26, 1986
25. Jefferson University School of Medicine, February 26, 1986
26. University of Kansas School of Medicine, March 11-12, 1986
27. Boston University School of Medicine, February 26, 1986
28. Brown University, Tenth Annual Alden Blackman Memorial Lecturer, February 17, 1987
29. University of Chicago, Department of Medicine and GI Division, September 29-30, 1987
30. Northwestern University, GI Division, December 9-10, 1987
31. University of Texas, Houston, April 11-12, 1988
32. Vanderbilt University, GI Division and Department of Medicine, Harrison Shull Visiting Professor, December 1-2, 1988
33. Cornell University School of Medicine, Department of Medicine, Pat Ardon Visiting Professorship, December 21-22, 1988
34. Albert Einstein School of Medicine, GI Division and Liver Center, February 8, 1989
35. University of Maryland School of Medicine, March 28, 29, 1989
36. Bushell Lecturer, Australian Gastroenterology Association, April 28, 1989, Perth, Australia (14 additional lectures in 5 cities, April 24-May 12)
37. AGA - Distinguished Achievement Award Lecture, Washington, D.C., "What makes bile flow", May 15, 1989
38. Symposium to honor J.B. Kirsner, "Vanishing bile duct syndrome: future directions", October 7, 1989
39. UCLA - Division of Gastroenterology, "Pathophysiology of cholestasis", January 5, 1990; "Bile duct epithelial cells isolation and pH regulation", January 6, 1990
40. Emory University School of Medicine - Department of Physiology, "Bile duct epithelial cells - isolation and pH regulation", April 26, 1990
41. Harvard University – MGH, Gastroenterology Division - "Pathophysiology of Cholestasis", May 29, 1990
42. University of Munich, "Current concepts of the pathophysiology of cholestasis", November 22, 1990
43. University of Padova, Institute of Internal Medicine, Grand rounds, "Pathophysiology and treatment of cholestatic disorders", January 31, 1991
44. University of Padova, "Physiology of bile secretion", February 1, 1991
45. Department of Clinical Pharmacology, University of Berne, "Transcytotic vesicular pathway in hepatocytes", March 1, 1991
46. University of Erlangen-Nuremberg, Germany, "Pathophysiology of cholestasis", March 11, 1991
47. Department of Clinical Pharmacology, University of Berne, "Bile duct epithelial cell function: A new frontier in biliary physiology", April 5, 1991
48. Hospital Clinic of the Province of Barcelona, "Pathophysiology of chronic cholestatic liver disease", April 25, 1991
49. University of Leuven, Belgium, "Etiology and pathogenesis of cholestasis", May 20, 1991
50. University of Ancona, Italy, "The role of transcytotic vesicle pathway and bile secretion", May 30, 1991

51. University of Ancona, Italy, "Diagnosis and treatment of chronic cholestatic liver disease", May 31, 1991
52. Washington University, St. Louis, "Cellular and molecular mechanisms of bile acid transport", 1992
53. Washington University, St. Louis, GI Grand Rounds, "Primary biliary cirrhosis", 1992
54. University of Connecticut, "Cholestatic liver disease", April 22, 1992
55. University of Rome, "Primary biliary cirrhosis - a chronic cholestatic paradigm", June 1, 1992
56. University of Puerto Rico, Sifre Memorial Lecture, "Cholestatic liver disease-An update on diagnosis and management", December 5, 1992
57. University of Puerto Rico, Medical Grand Rounds, University Hospital "Primary biliary cirrhosis - A paradigm of chronic cholestatic liver disease", December 6, 1992
58. University of Puerto Rico, Medical Grand Rounds, Veterans Administration Hospital – “Unusual forms of portal hypertension”, December 7, 1992
59. Loyola University-Stritz School of Medicine, "Cellular and molecular aspects of bile acid transport", and "Diagnosis and management of cholestasis", January 27, 1993
60. Texas A&M University Health Science Center, Ninth J. Arnold Barger Visiting Professorship, "Overview of the mechanisms of bile secretion", also "Hepatocyte couplets" also Medical Grand Rounds "Non-cirrhotic portal hypertension", February 12, 1993
61. University of Michigan Medical Center, "Cellular and molecular mechanisms of hepatic bile acid transport", April 1, 1993
62. Medical College of Virginia, "Molecular aspects of bile acid transport", April 19, 1993
63. IASL Hans Popper Memorial Lecture, Cancun, Mexico, "Vesicle Transport, What the Traffic will Bear", May 23, 1994
64. Harvard University, Beth Israel Hospital, Louis Zetzel Visiting Professor, Grand Rounds, "Primary Biliary Cirrhosis - A cholestatic paradigm"; Research Seminar, "Cellular and Molecular Mechanisms of Bile Acid Transport"; Clinical Lecture, "Chronic Active Hepatitis", October 19-20, 1994
65. Mayo Clinic, Dept. Physiology, "Cellular & Molecular Biology of Bile Acid Transport", January 16, 1995
66. Boston University, 1996 Philip Kramer Lecturer; Grand Rounds, "Chronic Cholestatic Liver Disease"; Research Presentation "Bile Duct Epithelium - The Frontier of Bile Secretory Physiology", March 14, 1996
67. 51st Annual Meeting of the German Society of Gastroenterology and Metabolism (Ismar-Boas Medal Lecture), Aachen, Germany, "Molecular Mechanisms of Cholestasis", September 20, 1996
68. University Hospital Groningen, The Netherlands, “Regulation of canalicular transport by vesicular targeting”, September 23, 1996
69. International Congress on Hepatocytes - Applications in Cell Biology, Toxicology and Medicine, Tubingen, Germany, "Isolated Hepatocyte Couplets and Bile Duct Units - models for the study of bile secretory function", September 26, 1996
70. Guy’s Hospital/St Thomas Hospital, “Molecular mechanisms of cholestasis”, April 8, 1997
71. First International Symposium on Hepatology (Beijing, China), “Pathophysiology of intrahepatic cholestasis”, August 13, 1997
72. XXVIII Congreso Argentino de Gastroenterologia, Rosario, Argentina, “Advances and treatment of chronic cholestasis”, September 22, 1997
73. American Clinical and Climatological Association, Williamsburg, VA., “Fish stories: 100 Years at Mt. Desert Island Biological Laboratory (MDIBL)”, October 20, 1997
74. Johns Hopkins University School of Medicine, Baltimore, MD, “Cellular and molecular pathophysiology of cholestasis”, March 19, 1998

75. National Institutes for Environmental Sciences, Research Triangle Park, North Carolina, "Unique cold water marine models for environmental health research", April 22, 1998
76. Conference on Mechanisms of Transport in Kidney, Liver, Intestine and Blood Brain Barrier, NIEHS, Research Triangle Park, "Cellular and Molecular Biology of Xenobiotic Transport in the Liver", August 24-25, 1998
77. XV International Bile Acid Meeting, Bile Acids and Cholestasis, Titisee, "The effects of cholestasis on the cellular and molecular expression of hepatic bile salt transporters", October 12-13, 1998
78. University of Arkansas Grand Rounds, Little Rock, Arkansas, "Primary biliary cirrhosis", and Dept. of Physiology Conference, "Cellular and molecular mechanisms of cholestasis", October 21, 1998
79. UCLA Division of Digestive Diseases, Axcan-Schwarz Visiting Professor, "Primary Biliary Cirrhosis, a prototypic cholestatic disorder", December 9-11, 1998
80. Allegheny University of Health Sciences, Visiting Professorship, "Advances in the Diagnosis and Management of Chronic Cholestatic Disorders"; "Molecular Pathogenesis of Cholestasis", December 16, 1998
81. Medical Grand Rounds, Lankenau Medical Center, Wynnewood, PA, "Progress and Management of Chronic Cholestasis", February 5, 1999
82. Medical Grand Rounds, Penn State University, "Primary Biliary Cirrhosis - a Prototype Chronic Cholestatic Liver Disease", March 1-3, 1999
83. University of Colorado's "Irwin Vinnik Memorial Lectureship,"
 - 1) Molecular Pathogenesis of Cholestasis, Grand Rounds at University of Colorado
 - 2) Primary Biliary Cirrhosis (Rose Medical Center), March 23, 1999
84. Falk Workshop "Bile Acids in Hepatobiliary Disease", London, The Royal Institution "Role of Bile Acid in Bile Secretion", March 29-30, 1999
85. Norman Tanner Lecture, St. George's Gastroenterology teaching day, London, "Molecular Pathogenesis of Cholestasis", March 31, 1999
86. GI Grand Rounds, Duke University, "Cellular and Molecular Pathophysiology of Cholestasis", April, 1999
87. State of art lecture - AGA. Orlando, FL, "Landmark Events in Hepatology During the 20th Century", May 18, 1999
88. Univ of Massachusetts, Medical Grand Rounds,
 - 1) "Diagnosis and Management of Chronic Cholestasis"
 - 2) GI Club - "Molecular Pathogenesis of Cholestasis", June 2, 1999
89. GI Grand Rounds at New York Hospital Medical Center of Queens, "Cellular and Molecular Pathophysiology of Cholestasis", September 8, 1999
90. Biliary Club (Italian), Sabaudia, Italy, "Adaptive regulation of bile salt transporters and cholangiocytes in kidney", September 10-11, 1999
91. XV Congress of International Federation of Associations of Anatomists, Rome, (Symposium on "Modern opinions on liver morphology and bile secretion as to pathology"), "Structural and functional determinants of bile secretion", September 13, 1999
92. 11th International Congress of Liver Diseases, President, J.L. Boyer, Introduction to Symposium and presentation of Hans Popper prize to Michael Houghton, "Liver cirrhosis and its development", October 21-24, 1999
93. AASLD Postgraduate Course, "Molecular mechanisms of cholestasis", November, 1999
94. Second International Symposium on Hepatology, Beijing, Falk Symposium - Cholestatic liver diseases – pathogenesis to treatment, "Molecular Basis of Intrahepatic Cholestasis", December 7, 1999
95. Parma, Italy, Symposium on cholestasis for molecular biology and liver transplantation,

- “Pathophysiology of cholestasis”, December 9-10, 1999
96. Visiting Professor at Northwestern University School of Medicine, Chicago, Medical Grand Rounds, “The ABCs of cholestatic liver disease”, February 18, 2000
 97. Mid Hudson Gut Club, “Diagnosis and Management of Chronic Cholestasis”, March 8, 2000
 98. Hepatology 2000 (Symposium in honor of Gustav Paumgartner), Munich, “Adaptive responses in bile salt transport proteins and cholangiocytes in kidney in a rat model of obstructive cholestasis”, May 4-6, 2000
 99. University of Graz, Visiting Professor, CPC, “31 year-old woman with abdominal pain, jaundice, and increasing abdominal girth”; Grand Rounds, “Cholestasis: From bedside to bench and back again”; Research presentation, “Evidence for P-glycoprotein structure and function in rat bile duct epithelial cells”, May 8, 2000
 100. Hepatitis C and primary care, Waterbury, CT, “The natural history of HCV”, May 10, 2000
 101. Axcan-Scandipharm Consultant Forum IV, “Mechanism of action of ursodeoxycholic acid”, May 19, 2000
 102. Medical Grand Rounds, Yale University School of Medicine, “Chronic hepatitis C”, June 1, 2000
 103. International Association for the Study of the Liver, Fukuoka, Japan, “Adaptive responses in bile salt transport proteins in cholangiocytes and kidney in a rat model of obstructive cholestasis”, June 6, 2000
 104. Monday Morning Transport Seminar, “Adaptive regulation of ABC Transporters in the Liver and Kidney”, July 10, 2000
 105. Xenobiotic and Drug Transporters in Human Health and Disease Symposium, MDIBL, “Characterization and functional expression of an ancient bile salt export pump in the liver of the marine skate”, July 13, 2000
 106. Den Haag, The Netherlands, Falk Symposium #120, “Bile Acids in Health and Disease, Molecular characterization and functional expression of the primitive bile salt export pump in the the marine elasmobranch”, October 13, 2000
 107. Drug induced liver injury: Mechanism of test systems, NIH, “Drug induced transporter function injury”, October 18, 2000
 108. Early Morning Workshop, “Cholestatic mechanisms”, October 30, 2000
 109. Early Morning Workshop, AASLD, “Molecular defects in cholestasis”, October 31, 2000
 110. Chilean Society of Gastroenterology, Pucon, Chile,
 1. “Molecular biology of cholestasis”
 2. “Diagnosis and management of chronic cholestatic liver disease”
 3. “Diagnosis and treatment of primary biliary cirrhosis”, November 30-December 1, 2000
 111. Physician Associate Program at Yale University, “Physiology of the liver”, January 4, 2001
 112. Aachen, Germany, Falk Workshop, Hepatobiliary Transport: From bench to bedside, “Molecular pathogenesis of cholestasis”, January 26, 2001
 113. Albert Einstein College of Medicine, Liver Center, “Adaptive regulation of transporters in cholestasis”, April 18, 2001
 114. Tufts University School of Medicine, New England Medical Center, “Adaptive regulation of transporters in cholestasis”, May 3, 2001
 115. Axcan Scandipharm Consultants Forum V, “Mechanisms of hepatic fibrosis”, May 18, 2001
 116. CuraGen Corp., “Molecular mechanisms of cholestasis”, May 29, 2001
 117. Montreal XIXth Annual Symposium of the Membrane Transport Research Group-Ion transport in liver and kidney molecular determinants of diseases, “Hepatic organic solute transporters: their role in health and disease”, June 5, 2001
 118. AASLD 2001 Basic Research Single Topic Conference-The pathobiology of biliary epithelia. Arlie House Arlie, VA., “Hormonal regulation of cholangiocyte secretion; studies in isolated rat

- and mouse bile duct units”, June 7, 2001
119. World Congress of Gastroenterology, “Molecular mechanisms of cholestasis” and “Cholestasis in Pregnancy”, February 24 – March 1, 2002
 120. Univ of Alabama, Div. Gastroenterology and Hepatology - Medical Grand Rounds, “Diagnosis and Treatment of Chronic Cholestasis” and GI Grand Rounds “Molecular Basis for Cholestasis”, March 19-21, 2002
 121. Monte Verita 2002:ABC Cassette Proteins in Epithelial Physiology, Zurich, Switzerland, “Molecular regulation of ABC transporters in liver and kidney in cholestasis”, April 22-26, 2002
 122. Falk Symposium – XVII International Bile Acid Meeting and Workshop – Bile Acids: From Genomics to Disease and Therapy, Freiburg, Germany, “The role of nuclear receptors in the regulation of transporters in cholestatic liver injury”, May 28 – June 2, 2002
 123. NIH Consensus Development Conference on Management of Hepatitis C: 2002, Washington, DC, Panel Chairman, June 10-12, 2002
 124. BASL British Association for the Study of the Liver –British Trust Lecture, Newcastle, England, “Notes from a Bile-oligist”, September 9-12, 2002
 125. GI Grand Rounds, Jefferson Medical College, Division of Gastroenterology, Philadelphia, PA, “PBC”, October 2-3, 2002
 126. AASLD Postgraduate Course, “Molecular Mechanisms of Bile Formation and Cholestasis”, November 1, 2002
 127. AASLD meeting, “Summary of NIH HCV Consensus Conference”
 128. University of Southern California, “Molecular Mechanisms of Cholestasis”, November 14, 2002
 129. University of Southern California, Grandrounds, “Hepatitis C and the NIH Consensus Conference”, November 15, 2002
 130. Royal Brisbane Hospital, University of Queensland, Medical Grandrounds, Brisbane Australia “The changing face of houses staff eduction in the United States-Imiplications for Australia”, March 24, 2003
 131. Royal Brisbane Hospital, Symposium on Jaundice for Physician, Surgeon and Obstetricain, Brisbane, Australia, “Postoperative Jaundice” and “Obstretric Cholestasis”, March 24, 2003
 132. Department of Physiology, Mahihdol University, “The ABC’s of Bile Salt Transport”, March 27, 2003
 133. Indian Association for the Study of the Liver, Inagural Address, “Mechanisms and treatment of Cholestasis” and “HCV- uncertainties of treatment”, March 28-30, 2003
 134. 5th International Malpiighi Symposium, Rome, “Cholangiocyte Pathophysiology – An Overview”, September 11-13, 2003
 135. New York University GI grand Rounds “Primary Biliary Cirrhosis” September 23, 2003
 136. Brazilian Liver Association Annual Meeting, Recife, “Current Treatment of Hepatitis C- the NIH Consensus”; and “Primary Biliary Cirrhosis – a prototypical Chronic Cholestatic Vanishiing Bile Duct Disorder”, October 1-18, 2003
 137. Brown University, Rhode Island Hospital, “Adaptive Regulation of Bile Salt Transporters”; and “Cholestasis, Mechanisms and Management”, December 3-4, 2003
 138. International Association for the Study of the Liver. Salvador, Brazil Marach 16-20,2004; “Saftey and Efficacy of long term medical therapy in chronic autoimmune hepatis type 1”
 139. AGA, New Orleans, MAY 17, 2004. Session 929, Nuclear Receptors and Transporters in Cholestasis. “MRP expression – an adaptive response to cholestasis”.
 140. XVIII – International Bile acid Meeting. Bile acid Biology and its therapeutic implications. Stockholm, Sweden, June 18-19, 2004. “Adaptive regulation of bile salt transporters – the role of MRPs”
 141. AASLD single topic conference: Intrahepatic Cholestasis. Atlanta, GA, Sept 9-11, 2004. “Composition and Function of Bile Canaliculus”

142. Gastroenterology Week, Freiburg, Oct 17, 2004 .Falk Sympsia # 144: Gastroenterology Yesterday-Today-Tomorrow: A Review and Preview. "Adaptive response of bile salt transporters in cholestasis".
143. AASLD Focus Study Group; Enzymes (CYPs) and Liver Disease.Boston, MA Nov 1, 2004. "Nuclear Receptors, Biliary Transporters and Cholestatic Disorders".
144. Albert Einstein College of Medicine: Liver Research Center Seminar. Dec 1,2004; "Mechanisms of adaptiave regulation of bile salt transporers in cholestasis"
145. Duke University. Durham, NC Feb 11, 2005. Integrated Toxicology Program Seminar Series. "Hepatic Transporters – from Elasmobranchs to Man"
146. Yale Digestive Disesaes Reunion Weekend and Scientific Symposium. April 2, 2005; "Historical/Perspective Comments".
147. September 9, 2004. "Composition and Function of the Bile Canaliculus", AASLD Single Topic Conference-Intrahepatic Cholestasis, Atlanta, GA.
148. October 17, 2004. "Adaptive Response of Bile Salt Transporters in Cholestasis", Falk Symposium 144, Gastroenterology Yesterday-Today-Tomorrow: A Review and Preview, Freiburg, Germany.
149. November 1, 2004. "Nuclear Receptors, Biliary Transporters and Cholestatic Disorders", AASLD Focused Study Group 2-Cytochrome P450 Enzymes (CYPs) and Liver Disease, Boston, MA.
150. December 1, 2004. "Mechanisms of Adaptive Regulation of Bile Salt Transporters in Cholestasis", Albert Einstein College of Medicine, Bronx, NY.
151. February 11, 2005. "Hepatic Transporters – from Elasmobranchs to Man", Duke University Environmental Health Sciences Research Center, Integrated Toxicology Program Seminar Series, Durham, NC.
152. March 31, 2005. "Primary Biliary Cirrhosis, an Update", Lahey Clinic, Massachusetts.
153. April 2, 2005. "Gerald Klatskin, Historical Comments", Yale Digestive Diseases Reunion Weekend.
154. June 8, 2005. "Mechanisms of Cholestatic Hepatotoxicity", Gordon Research Conference, "Adverse Drug Reactions", Connecticut College, New London, CT.
155. May 26, 2005. "New Insights into Protective Mechanisms in Cholestasis", Brigham and Women's Hospital, Division of Gastroenterology, GI Grand Rounds, Boston, MA.
156. June10, 2005. "Adaptive Responses to Cholestatic Liver Injury", Northwestern University, Hepatology Division, Chicago, IL.
157. July 13, 2005. "Development of hepatic drug transporters"; 12th Annual MDIBL Environmental Health Sciences Symposium, "Molecular evolution of chemical defense mechanisms".
158. Sept. 17, 2005. "Drug induced cholestatic mechanisms". AASLD Single topic conference, "Drug induced liver injury". Atlanta, GA
159. Oct 12-14, 2005. 1) "New insights into protective mechanisms in cholestasis" 2) Medical Grand Rounds: "Primary Biliary Cirrhosis and the Management of Cholestasis - an update". Texas A & M University College of Medicine, Temple, TX.
160. December 12-13, 2005. Annual YAGP Lecturer, Hospital of St. Raphael."Highlights of AASLD meeting: Medical Grand Rounds – "Primary Biliary Cirrhosis and Cholestatic Liver Disase"
161. December 14, 2005. "Adaptive Responses to Cholestatic Liver Injury". Mt. Sinai GI/Liver Seminar Series; NYC.
162. Feb 21-22, 2006. The Alan Hofmann Lectureship, The Johns Hopkins University School of Medicine. 1) "Mechanism of Bile Acid Transport in the Enterohepatic Circulation – from Elasmobranchs to man" 2) GI Grand Rounds: "Primary Biliary Cirrhosis and the Mangement of Chronic Cholestasis – an update"

163. Feb 28, 2006. Stonybrook GI group. "Primary Biliary Cirrhosis and the Mangement of Chronic Cholestasis – an update".
164. July 12, 2006. The ABC's and "D's pf Xenobiotic Transport. Monday Morning Transport Seminar, MDIBL.
165. Oct 18, 2006. "Tales of a peripatetic bile-ologist", Leadership in Biomedicine, lectures series for Students, 2006-2007; Yale University School of Medicine.
166. Oct 24, 2006. "Hepatotoxicity: an overview of the role of transporters".International Society for the Study of Xenobiotics. Rio Grande, Puerto Rico.
167. Nov 9, 2006. "It's all about bile", Medical Grand Rounds, Yale University School of Medicine
168. Dec 4, 2006. "Adaptive Responses to Cholestataic Liver Disease: The role of the organic solute transporter OSTalpha/beta" Physiology Dept. Mahidol University, Bangkok, Thailand.
169. Dec 9, 2006. "Non Cirrhotic Portal Fibrosis: 40 years down the lane" Indian Association for the study of the Liver and Aisan Pacific Association fof study of the Liver – single theme symposium on "Hepatic Fibrosiis-basic science to therapy". Science City, Kolkata, India.
170. Sept 21, 2007. "Efflux Transporters: Imiportant Determinants of Drug-Induced Injury" – Boston Society for Advanced Therapeutics (BSAT) meeting. Boston, Mass.
171. Oct 6, 2007. "Canalicular Bile Formation - Tales from Vienna and Yale". Symposium for Univ Prof. Dr. Jürg Graf, on his retirement. Vienna, Austria
172. Dec 5, 2007. "Progresive Familial Intrahepatic Cholestasis-Progress in Understanding its Pathophysiology" Liver Center Seminar, Albert Einstein College of Medicine
173. Dec 6, 2007. "It's all about bile", Medical Grand Rounds, Albert Einstein College of Medicine and Montifiore Hosptial
174. Jan 15, 2008. "Adaptive Responses to Cholestatic Liver Injury- The role of OSTalpha/beta". University of Pittsburgh School of Pharmacy.
175. March 21, 2008. "Chronic autoimmune Hepatitis – perspectives on long term therapy and the role of stress". Tufts-New England Medical Center. – GI Grand Rounds.
176. April 4-5, 2008. "Adaptive Regulation of Bile Acid and Organic Solute Transporters in Cholestasis (and Other Forms of Liver Injury)". U.S.-Japan Cooperative Medical Science Program – Gene, Environment and Disease Panel. San Francisco, CA
177. April 22, 2008. "Progressive Familial Intrahepatic Cholestasis–Type1(FIC1) It's role in Cholestatic liver injury". The Basics of Cholestatic Liver Diseases – a Symposium to honor James L.Boyer. M.D. Milan Italy.
178. May 22, 2008. "Progresive Familial Intrahepatic Cholestasis-Progress in Understanding its Pathophysiology". NIH, Digestive Disease Branch Research Semiinar
179. June13-14, 2008. "Progressive Familial Intrahepatic Cholestasis–Type1(FIC1) It's role in Cholestatic liver injury". XX International Bile Acid Meeting. Bile acid Biology and Therapeutic Actions. Amsterdam, Netherlands.
180. August 11, 2008. "Functional significance of Osta alpha-Ost beta for organic solute transport in epithelia." "Monday Morning Seminar, MT Desert Island Biological Laboratory.
181. Oct 23, 2008. "The Role of the Organic Solute Transporter alpha and beta (Ost α -Ost β) in the Adaptive Response to Cholestasis. University of Buffalo. GI Division Research Conference
182. Oct 28, 2008. "Changing Concepts in the Mechanisms of Drug Induced Liver Toxciity". Hepatic Toxicity Following Treatment for Pediatric Graves' Disease Meeting, NICHHD, Rockville, MD.
183. Oct 31, 2008. "Bile Transporters in Helath and Disease: An Overview". AASLD/NASPGHAN Pediatric Symposium., San Francisco, CA
184. Nov 2, 2008. "Mechansins of Bile Formation and Impact on Understanding of Cholestasis". IASL State-of-the-Art Lecture. Joint AASLD/IASL Meeting, San Francisco, CA.
185. December 6, 2008. "Mechanisms of Bile Formation and Impact on Understanding of Cholestasis

- and it's Treatment". Ist Professor A.K. Basu Memorial Oration, Liver Foundation, West Bengal, Kolkata, India.
186. April 15 to April 20th, 2009. University of Amsterdam – SPINOZA CHAIR 2009, the Netherlands; April 15, Research Seminar: "The role of Ost α -Ost β in the adaptive response to cholestasis", April 16th: Primary biliary Cirrhosis (house staff presentation); April 16th The Spinoza Lecture: "When bile flows the liver goes"; April 17th: Master class: "From Bed-side to laboratory bench, and back"; April 20th: Research presentations from staff.
 187. July 8, 2009. 16th Annual Mt. Desert Island Biological Laboratory (MDIBL) and NIEHS Center for Comparative Toxicology Environmental Health Sciences Workshop. "The Discovery of Ost alpha-Ost beta from skate liver"
 188. September 25-29, 2009. EMBO Conference on Nuclear Receptors (Cavtat, Croatia). "Retinoic acid represses CYP7A1 expression in human hepatocytes and HepG2 cells via RXR in addition to FXR dependent mechanisms. (Poster).
 189. November 20, 2009. Royal Free and University College Medical School. Centre for Hepatology. "The role of psychological stress in relapse in Type1 Autoimmune Hepatitis"
 190. February 22: 210 Toxicology Scholars Colloquium. University of Connecticut (STORRS). "Adaptive Responses to Cholestasis – The role of Ost alpha/beta : From Elasmobranchs to Man"
 191. April 29, 2010. INBRE lecture: School of Pharmacy, University of Rhode Island. "Looking back to the Future- a 4 decade perspective on hepatic transport function – the role of serendipity and alternative animal models in scientific discovery"
 192. May 15, 2010. "Overview of PSC research". PSC Partners Seeking a Cure 2010 Conference. Hartford, CT
 193. August 2, 2010. Northeast Harbor Library Lecture Series: "Your Liver: Your Life", How to keep it healthy, and how do studies in marine animals at MDIBL help?
 194. August 9, 2010. Monday Morning Seminar (MDIBL). "Sea Lamprey, a Model of Biliary Atresia".
 195. September 16, 2010. The John Doull Toxicology Symposium, Dept. Pharmacology. University of Kansas. "Looking back to the Future- a 4 decade perspective on hepatic transport function – the role of serendipity and alternative animal models in scientific discovery"
 196. November 18, 2010. Adaptive Responses to Cholestatic Liver Disease – looking back to the future.(A 4 decade Odyssey). Chongqing, China. Southwest Hospital, third medical university.
 197. November 20, 2010 Role of nuclear receptors in treatment of cholestatic liver disease – Symposia on Western Medicine and Traditional Chinese Medicine for treating GI diseases. Chongqing, China.
 198. November 25, 2010. Adaptive Responses to Cholestatic Liver Disease – looking back to the future the role of nuclear receptor ligands in drug development). The 3rd International Conference on Traditional Chinese Medicine TCMC Conference, Chengdu, China.
 199. February 9, 2011/ The 25th Klatskin Lecture: "Klatskin, his life and legacy: The natural history and treatment of primary biliary cirrhosis". Yale University School of Medicine.
 200. February 10, 2011. Medical Grand Rounds. "Klatskin, his life and legacy: The natural history of autoimmune hepatitis. Yale University School of Medicine.
 201. April 8, 2011. Special lecture: University of Cape Town (Liver Unit). "The Natural History of Autoimmune Hepatitis--(Adventures in Hepatology)
 202. June 9, 2011.Symposium "cholestatic and metabolic Liver diseases: From Basic Science to Clinical Practice. University of Vienna, Trauner Inaugural Symposia. "Adventures in Cholestatic Liver Disease"
 203. January 5, 2012. All India Institute for Postgraduate Medical Education and Research. Kolkata. "Adventures in Cholestatic Liver Disease"

204. June 8, 2012. NIH Bile acid Workshop. "Adaptive Responses to Cholestasis in liver, kidney and intestine"
205. June 15, 2012. 7th Annual Yale Digestive Disease Week Review: "Primary Sclerosing Cholangitis and Primary Biliary Cirrhosis". Water's Edge, CT.
206. July 9, 2012. Monday Morning Seminar, Mt Desert Island Biological Laboratory. "Effects of All-trans retinoic acid in cholestatic liver injury - from Elasmobranchs to man".
207. September 14, 2012. Falk Symposium 184; XXII International Bile Acid Meeting. "Ned Ballatori - In Memoriam".
208. May 10, 2013. "Autoimmune Liver Disease (PSC and PBC)". Yale Liver Update 2013.
209. June 20-21st, 2013. "Value based medicine in Hepatology: the US clinician's perspective". A.I.S.F. Single Topic Conference (Clinical outcomes and value of care in Hepatology). Milan, Italy
210. August 14, 2013. "Mechanism of regulation of human MDR3/ABCB4 by PPAR α – Implications for treatment of cholestatic liver disease". BioMedical Transporters 2013 St. Moritz, Switzerland.
211. May 16, 2014. Kaplan Grand Rounds Guest Speaker Tufts New England Medical Center. "Autoimmune Liver Disease – the Klatskin-Kaplan Legacy and the role of MIF"
212. May 17, 2014. Yale Liver Update 2014. "Autoimmune Liver Disease"
213. June 24, 2014. IPSCSG Meeting. Amsterdam. "All-trans retinoic acid as therapy for PSC".
214. October 23, 2014. Sixteen Annual David H. Alpers Visiting Professor. "Autoimmune Hepatitis, Stress and MIF, a Klatskin/Kaplan Legacy"
215. June 12, 2015 DDW review-Water's Edge. "Autoimmune Liver Disease".
216. Nov 10, 2015. AASLD Symposia. "Cholestasis: what we know and what we will learn"
217. December 3rd, 2015. Popper Lecture, Medical University of Vienna. "Autoimmune Hepatitis, the Klatskin-Kaplan Legacy and the role of Macrophage Inhibitory Factor"
218. December 4th, 2015. Medical University of Vienna. "Mechanisms of Bile acid induced liver injury- the role of the inflammatory response".
219. December 10, 2015. USC, Los Angeles. Reynolds Visiting Professor. "Mechanisms of Bile acid induced liver injury- the role of the inflammatory response".
220. December 11, 2015. The Reynold's Lecture. Autoimmune Hepatitis, the Klatskin-Kaplan Legacy and the role of Macrophage Inhibitory Factor"
221. June 15, 2016. Bile Acid Falk Symposia, Dusseldorf, Germany. "Mechanisms of bile acid induced liver injury- the role of inflammation"
222. June 24-27, 2016 International Primary Sclerosing Cholangitis Symposia, New Haven; "Interpreting Liver tests"
223. Sept. 19, 2016. University of Padua, Italy. "Mechanisms of Bile acid induced liver injury- the role of the innate immune system".
224. Oct, 25, 2016. University of Cincinnati. "The Balistreri Lecture". "Novel Mechanisms of Bile acid induced liver injury- the role of the innate immune system".
225. Nov 10, 2016. 26th Boston. Annual I.M. Arias, M.D. Symposium. "Novel Mechanisms of Bile Acid-Induced Liver Injury: Role of the innate immune system"
226. December 2, 2016. Yale Liver update 2016. Primary Biliary Cholangitis (PBC).
227. October 7, 2017. Pediatric Autoimmune Liver Disease Symposium and Family Day. Cincinnati Children's Hospital Medical Center. "Cholangiocyte Injury and Bile Acid Toxicity in Primary Sclerosing Cholangitis".
228. Nov 30 - December 1, 2017; 42nd Meeting of the Western Branch of the Japan Society of Hepatology, Fukuoka, Japan, "Mechanisms of Cholestasis-Insights to Novel Targets For Drug Therapy"

229. March 16-17, 2018. AASLD Emerging Trends Conference: “Cholangiopathies: The dawn of curative treatments?” Poster presentation: Bile derived organoids: a novel technique for the study of cholangiopathies; Arlington, VA.
230. June 18-19, 2018; 5th International PSC Study Group Meeting, Paris, France. Working group presentation on biliary organoids in PSC.
231. October 28-29, 2018. Bile Acids, Transporters and Liver Disease. 19th PYW. Pichelschloss, 8812 Mariahof bei Neumarkt/Steiermark, Österreich. “What Bile derived Organoids tell us about PSC”
232. AASLD-EASL Master Class. Orlando, FL. Nov 29-30th, 2018. “Story of my Life”.
233. Early Morning Workshop 17. “Model systems to study cholestasis: mice, zebrafish and organoids. Nov 10, 2019. Boston.
234. Yale Liver Update 2019. Dec 13, 2019. “Autoimmune liver Disease”.
235. September 10, 2020. “Subacute Hepatic Necrosis”. Pathology Conference. Federal University of Minas Gerais, Belo Horizonte, Brazil (zoom)
236. April 20, 2021. AASLD/FDA. DILI Conference. “Suppressing Bile Acids to Treat CLD: Strategies to identify, assess and manage hepatotoxicity in Cholestatic liver disease trials - Can we mitigate risk for unintended DILI and Gallstone Formation?” - (video presentation).
237. December 11, 2021. H.G. Desai Oration. “Tales of a Peripatetic Bile-ologist”. Hyderabad, India (video presentation)
238. January 7, 2022. “Tales of a Peripatetic Bile-ologist”. Medical Students (Physiology) - Federal University of Minas Gerais, Belo Horizonte, Brazil (zoom).
239. November 25, 2022. “The role of fibrates in the treatment of cholestatic liver disease.” “1st International Congress of Digestive Disease and Endoscopy in Southwest China”, November 25-27, 2022, Chongqing, China (video presentation)
240. May 12-13, 2023. “A brief history of bile secretion and cholestasis”. EASL “Biliary Fibrosis, Florence, Italy.
241. July 25, 2023.” Reflections on the Most Impactful Innovation in Biliary Disease and Remaining Gaps and Anticipated Changes in Next Ten Years”. GSK, Durham NC.
242. January 18, 2024. Grand Rounds, Norwalk Hospital. “Cholestasis- current concepts and future therapeutic developments”
243. March 5, 2024. FDA lecture (Zoom). “Animal Models and Non-invasive Methods for Assessment of Progression in Primary Sclerosing Cholangitis (PSC) – How good are they?”

Original Publications:	495 total
Abstracts:	391 total

BIBLIOGRAPHY

1. Santer M, Boyer J, and Santer A. *Thiobacillus Novellus* I. Growth on organic and inorganic media. *J Bact* 78:197-202, 1959.
2. Boyer JL, and Basu AK. Hepatic blood flow, portal pressure and liver function in portal hypertension. Symposium on liver cirrhosis. *Ind Acad Med Sci*, Agra, Feb 1966.
3. Boyer JL, and Basu AK. Sulfobromophthalein liver function test in patients with portal hypertension. *Ind J Med Res*, 54:858-865, 1966.
4. Boyer JL, Catterjee C, Iber FL, and Basu AK. Effect of plasma volume expansion on portal hypertension. *New Engl J Med*, 275:750-755, 1966.
5. Boyer JL, Sen Gupta KP, Biswas SK, Pal NC, Basu Mallik KC, Iber FL, and Basu AK. Idiopathic portal hypertension. *Ann Int Med* 66:41-68, 1967.
6. Basu AK, Boyer J, Bhattacharya R, Basu Mallik KC, and Sen Gupta KP. Non-cirrhotic portal fibrosis with portal hypertension: A new syndrome. I. Clinical and functional studies and results of operations. *Ind J Med Res* 55:336-350, 1967.
7. Basu Mallik KC, Sen Gupta KP, Basu AK, Biswas SK, Pal NC, and Boyer JL. Non-cirrhotic portal fibrosis with portal hypertension. II. Histopathological studies. *Ind J Med Res* 55:568-572, 1967.
8. Boyer JL, Gill GN, and Epstein FH. Hyperglycemia and hyperosmolarity complicating peritoneal dialysis. *Ann Int Med* 67:568-572, 1967.
9. Boyer JL, and Andriole VT. Laboratory and clinical studies of a new antibiotic, cephaloglycin, in the treatment of urinary tract infections. *Yale J Biol Med* 40:284-295, 1968.
10. Boyer JL, Maddrey WC, Basu AK, and Iber FL. The source of albumin in the thoracic duct lymph in patients with portal hypertension and ascites. *Amer J Med Sci* 257:32-43, 1969.
11. Talner L, Boyer JL, and Clement A. Intrahepatic portal vein occlusion - A cause of portal hypertension. *Radiol* 92:1295, 1969.
12. Maddrey WC, Boyer JL, Sen NN, Thomas J, Basu AK, and Iber FL. Plasma volume expansion in portal hypertension. *The Johns Hopkins Med J* 125:171, 1969.
13. Boyer JL, and Scheig R. Hepatic metabolism of 1-¹⁴C octanoic and 1-¹⁴C margaric acids. *Lipids* 4:615, 1969.
14. Boyer JL, Scheig R, and Klatskin G. The effect of sodium taurocholate on the hepatic metabolism of sulfobromophthalein sodium (BSP). *J Clin Invest* 49:206, 1970.
15. Boyer JL, and Scheig R. Postheparin lipolytic activity in uremia and its relationship to hypertriglyceridemia. *Proc Soc Exp Biol Med* 134:603-605, 1970.
16. Boyer JL, and Klatskin G. Canalicular bile flow and bile secretory pressure - evidence of a non-bile salt dependent fraction in the isolated perfused rat liver. *Gastroenterol* 59:853-859, 1970.
17. Boyer JL, and Klatskin G. The prognostic significance of subacute hepatic necrosis in acute viral hepatitis.

New Engl J Med 283:1063-1071, 1970.

18. Simon JB, and Boyer JL. Production of lecithin: cholesterol acyltransferase by the isolated perfused rat liver. *Biochem Biophys Acta* 218:549-551, 1970.
19. Alexander NM, and Boyer JL. A rapid assay for the glyoxalase enzyme system. *Anal Biochem* 41:29-38, 1971.
20. Boyer JL. Canalicular bile formation in the isolated perfused rat liver. *Amer J Physiol* 221:1156-1163, 1971.
21. Alexander NM, and Boyer JL. Glyoxalase activity in hepatic regeneration. *Cancer Res* 31:1975-1978, 1971.
22. Boyer JL. Effect of chronic ethanol feeding on bile formation and secretion of lipids in the rat. *Gastroenterol* 62:294-301, 1972.
23. Boyer JL. The clinical and histologic spectrum of acute viral hepatitis. IN: Proceedings of Symposium on Viral Hepatitis and Blood Transfusion, March 25-26, Eds: GN Vyas, et al, Grune & Stratton, pp. 43-51, 1972.
24. Maddrey W, and Boyer JL. The acute and chronic effects of ethanol administration on bile secretion in the rat. *J Lab Clin Med* 82:215-225, 1973.
25. Boyer JL. Acute and chronic forms of viral hepatitis. *Chicago Medicine* 76:626, 1973.
26. Binder H, and Boyer JL. Bile salts - a determinant of the bile peritoneal electrical potential in the rat. *Gastroenterol* 65:943, 1973.
27. Bloomer JR, and Boyer JL. Inhibition of bilirubin clearance in man during sodium dehydrocholate cholestasis. *Gastroenterol* 65:929-935, 1973.
28. Winter SL, and Boyer JL. Brief recordings: Hepatic toxicity from large doses of vitamin B₃ (Nicotinamide). *New Engl J Med* 289:1180, 1973.
29. Boyer JL, Hales MR, and Klatskin G. "Idiopathic" portal hypertension due to occlusion of intrahepatic portal veins by organized thrombi - A study based on postmortem Vinylite-injection corrosion and dissection of the intrahepatic vasculature in 4 cases. *Medicine* 53:77-91, 1974.
30. Guzelian P, and Boyer JL. Glucose reabsorption from bile -evidence for a biliohepatic circulation. *J Clin Invest* 53:526-533, 1974.
31. Boyer JL. Cirrhosis. IN: Current Therapy, Ed. HF Conn, WB Saunders Company, pp. 324-332, 1974.
32. Mall JC, Chahremani GG, and Boyer JL. Caroli's disease associated with congenital hepatic fibrosis and renal tubular ectasia. *Gastroenterol* 66:1929-1035, 1974.
33. Russell RM, Boyer JL, Bagheri SA, and Hruban Z. Hepatic injury from chronic hypervitaminosis A resulting in portal hypertension and ascites. *New Engl J Med* 291:435-439, 1974.
34. Hruban Z, Russell RM, Boyer JL, Glagov S, Bagheri SA. Ultrastructural changes in livers of two patients with hypervitaminosis A. *Amer J Pathol* 76:451-461, 1974.

35. Boyer JL, and Bloomer JR. Canalicular bile secretion in man - Studies utilizing the biliary clearance of ¹⁴C-mannitol. *J Clin Invest* 54:773-781, 1974.
36. Bagheri SA, and Boyer JL. Peliosis hepatitis associated with androgenic anabolic steroid therapy. A severe form of hepatic injury. *Ann Int Med* 81:610-618, 1974.
37. Boyer JL, Bloomer JR, Maddrey WC, and Tilson D. Variation in hepatic bile composition following cholecystectomy in patients with previous gallstones. *Yale J Biol Med* 47:211-217, 1974.
38. Bloomer JR, and Boyer JL. Phenobarbital effects in cholestatic liver disease. *Ann Int Med* 82:310-317, 1975.
39. Boyer JL, and Reno D. Properties of (Na⁺ + K⁺) -activated ATPase in rat liver plasma membranes enriched with bile canaliculi. *Biochem Biophys Acta* 401:59-72, 1975.
40. Layden TJ, Schwarz J, and Boyer JL. Scanning electron microscopy of the rat liver - Studies of the effect of tauroolithocholate and other models of cholestasis. *Gastroenterol* 69:724-738, 1975.
41. Morley CGD, Kuku S, Rubenstein AH, and Boyer JL. Serum hormone levels following partial hepatectomy in the rat. *Biochem Biophys Res Comm* 67:653-661, 1975.
42. Bagheri SA, Bolt MG, Palmer RH, and Boyer JL. Lithocholic acid induced peliosis hepatis. Influence of microsomal enzyme metabolism on hepatic toxicity. IN: Advances in Bile Acid Research III. Bile Acid Meeting, Freiberg, June 13,-15, 1974. Eds: S Matern, J Hackenschmidt, P Back, W Gerok, GK Schattager, Verlag, Stuttgart, New York, pp. 249-254, 1975.
43. Boyer JL, Schwarz J, and Smith N. Selective hepatic uptake and biliary excretion of organic anions in elasmobranchs. *Gastroenterol* 70:254-256, 1976.
44. Boyer JL, Schwarz J, and Smith N. Biliary excretion in elasmobranchs I. Bile collection and composition. *Amer J Physiol* 230:970-973, 1976.
45. Boyer JL, Schwarz J, and Smith N. Biliary excretion in elasmobranchs, II. Hepatic uptake and excretion or organic anions. *Amer J Physiol* 230:974-981, 1976.
46. Nemchausky BA, Layden TJ, and Boyer JL. Effects of bile acids on the lipid composition and 3-dimensional structure of the bile canaliculus. IN: The Liver, Quantitative Aspects of Structure and Function II. S Karger, Eds: R Preisig, J Bircher, G Paumgartner, pp. 386-392, 1976.
47. Boyer JL, Reno D, and Layden T. Bile canalicular membrane Na⁺, K⁺ -ATPase. The relationship of enzyme activity to the secretion of bile salt independent canalicular flow. IN: Diseases of the Liver and Biliary Tract. Ed. CM Leevy, Proceedings of the 5th Quadr. Mtg. of the International Association for the Study of the Liver, Acapulco, 1974, pp. 108-112 (Karger, Basel) 1976.
48. Boyer JL. The diagnosis and pathogenesis of clinical variants in viral hepatitis. *Amer J Clin Path* 65:898-908, 1976.
49. Boyer JL. Chronic hepatitis - A perspective on classification and determinants of prognosis. *Gastroenterol* 70:1161-1171, 1976.
50. Layden TJ, and Boyer JL. The effect of thyroid hormone on bile salt independent bile flow and Na⁺, K⁺ -ATPase activity in liver plasma membrane enriched in bile canaliculi. *J Clin Invest* 57:1009-1018, 1976.

51. Levin DM, and Boyer JL. Principles of therapy in cirrhosis. *Primary Care* 3:311-329, 1976.
52. Boyer JL. Bile formation and secretion (p.222); Bilirubin metabolism (p.223); Protein synthesis by the liver (p. 226); Differential diagnosis of patterns of abnormal histology in liver Biopsies (p.254). IN: Disorders of the Gastrointestinal Tract -Disorders of the Liver - Nutritional Disorders. Ed: J.M. Dietschy. Vol. I of the Science and Practice of Clinical Medicine, Grune & Stratton, New York, 1976.
53. Wagonfeld JB, Nemchausky BA, Bolt M, Vander Horst J, Boyer JL, and Rosenberg IH. Comparison of vitamin D and 25-hydroxyvitamin D in the therapy of primary biliary cirrhosis. *Lancet* 391-394, August 21, 1976.
54. Schneider JF, Schoeller DA, Nemchausky B, Boyer JL, and Klein, PD. Breath analysis of $^{13}\text{CO}_2$ following N-demethylation of ^{13}C -aminopyrine: A measure of liver microsomal function. IN: Proceedings of the Second International Conference on Stable Isotopes. Ed. by ER Klein, PD Klein, pp. 259-265, 1976.
55. Nemchausky BA, Layden TJ, and Boyer JL. Effect of chronic choleretic infusions of bile acids on the membrane of the bile canaliculus - A biochemical and morphologic study. *J Lab Invest* 36:259-267, 1977.
56. Wood RAB, Baker AL, Hall AW, Boyer JL, and Moossa AR. Evaluation of a new monkey model for the repeated study of bile secretory physiology. *Ann Surg* 185:349-355, 1977.
57. Layden TJ, and Boyer JL. Tauroolithocholate induced cholestasis: Taurocholate, but not dehydrocholate, reverses cholestasis and bile canalicular membrane injury. *Gastroenterol* 73:120-128, 1977.
58. Boyer JL, Layden TJ, and Hruban Z. Mechanisms of cholestasis - Tauroolithocholate (TLC) alters canalicular membrane composition, structure, and permeability. IN: Membrane Alterations as Basis of Liver Injury. Eds: Bianchi and Popper, MTP Press Ltd, Lancaster, 1977, pp. 353-369, 1977.
59. Morley CGD, and Boyer JL. Stimulation of hepatocellular proliferation by a serum factor from thioacetamide-treated rats. *Biochem Biophys Acta* 477:165-176, 1977.
60. Bolt MG, and Boyer JL. Pitfalls in serum bile acid analysis in patients with cholestasis: Differing biochemical properties of 3-hydroxysteroid dehydrogenases from wild-type and mutant *Ps. testosteroni*. IN: Bile Acid Metabolism in Health and Disease. Ed. by G Paumgartner, A Stiehl, pp. 285-293, 1977.
61. Gordon J, Boyer JL, and Korn ED. Comparative biochemistry of non-muscle actins. *J Biol Chem* 252:8300-8309, 1977.
62. Boyer JL. Bile secretion and the pathogenesis of cholestasis. *View Points in Digestive Diseases* 10:No. 6, 1978.
63. Bagheri SA, Boyer JL, Bolt MG, and Palmer RM. Stimulation of liver and gallbladder cell turnover by lithocholate and deoxycholate in mice. *Gastroenterol* 74:188-192, 1978.
64. Tavoloni N, Reed JS, and Boyer JL. Hemodynamic effects on determinants of bile secretion. *Amer J Physiol* 234:(6):E584-E592, 1978.
65. Hruban Z, Tavoloni N, Reed Jr JS, and Boyer JL. Ultrastructural changes during cholestasis induced by chlorpromazine in the isolated perfused rat liver. *Virchows Arch B Cell Path* 26:289-305, 1978.
66. Boyer JL. Prognostic determinants in chronic hepatitis B infection - a re-evaluation. (Editorial) *The Western J of Medicine* 128:340, 1978.

67. Boyer JL. Mechanisms of chlorpromazine cholestasis - Hypersensitivity or toxic metabolite? (Editorial) *Gastroenterol* 74:1331-1333, 1978.
68. Schneider JF, Schoeller DA, Nemchausky B, Boyer JL, and Klein PD. Validation of ¹³CO₂ breath analysis as a measure of demethylation of stable isotope labeled aminopyrine in man. *Clinica Chem Acta* 84:153-162, 1978.
69. Layden TJ, and Boyer JL. Influence of bile acids on bile canalicular membrane morphology and the lobular gradient in canalicular size. *Lab Invest* 39:110-119, 1978.
70. Blitzer BL, and Boyer JL. Cytochemical localization of Na⁺,K⁺ -ATPase in the rat hepatocyte. *J Clin Invest* 62:1104-1108, 1978.
71. Layden TJ, Elias E, and Boyer JL. Bile formation in the rat. The role of the paracellular shunt pathway. *J Clin Invest* 62:1375-1385, 1978.
72. Layden TJ, and Boyer JL. Recruitment of central lobular hepatocytes for bile acid-dependent bile secretion. IN: Biological Effects of Bile Acids, Falk Symposium #26, eds. G Paumgartner, A Stiehl, W Gerok, Freiburg, June 12-14, 1978.
73. Boyer JL. Androgenic-anabolic steroid association peliosis hepatitis in man - A review of 38 reported cases. IN: Advances in Pharmacology and Therapeutics, Vol. 8: Drug-Action Modification-Comparative Pharmacology, ed. G Olive, Pergamon Press, Ltd., New York, pp. 175-184, 1978.
74. Reed JS, and Boyer JL. Viral hepatitis - Epidemiologic, serologic, and clinical manifestations. *Disease-a-Month* 25: No. 4, January, 1979.
75. Levin DM, Baker AL, Riddell RH, Rochman H, and Boyer JL. Non-alcoholic liver disease - Overlooked causes of liver injury in patients with heavy alcoholic consumption. *Amer J Med* 66:429-434, 1979.
76. Elias E, and Boyer JL. Mechanisms of intrahepatic cholestasis. IN: Progress in Liver Diseases, Vol. 6, eds. H Popper, F Schaffner, Grune and Stratton, pp. 457-470, 1979.
77. Baker AL, Elson CO, Jaspan J, and Boyer JL. Liver failure with steatonecrosis after jejuno-ileal bypass - Recovery with parenteral nutrition and reanastomosis. *Arch Int Med* 139:292, 1979.
78. Boyer JL, Elias, E, and Layden TJ. The paracellular pathway in bile formation. *Yale J Biol Med* 52:61-67, 1979.
79. Baker AL, Wood RAB, Moossa AR, and Boyer JL. Sodium taurocholate modifies the "bile acid-independent: fraction of canalicular bile flow in the Rhesus monkey. *J Clin Invest* 64:312-320, 1979.
80. Winter SL, Kraft SC, and Boyer JL: Antimitochondrial antibodies - Reagent variables may lead to diagnostic error. *Amer J Dig Dis* 24:15, 1979.
81. Tavoloni N, Reed JS, Hruban Z, and Boyer JL. Chlorpromazine alters hepatocyte membrane structure during impairment in hepatic perfusion and bile secretory function in the isolated perfused rat liver. *J Lab Clin Med* 94:726-741, 1979.
82. Elias E, and Boyer JL. Chlorpromazine and its metabolites alter gelation and polymerization of actin. *Science* 206:1404-1406, 1979.
83. Stellaard F, Bolt MG, Boyer JL, and Klein PD. Phenobarbital treatment in primary biliary cirrhosis

- differences in bile acid composition between responders and non responders. *J Lab Clin Med* 94:853-861, 1979.
84. Reed JS, Meredith SC, Nemchausky BA, Rosenberg IH, and Boyer JL. Bone disease in primary biliary cirrhosis: Reversal of osteomalacia with oral 25-hydroxyvitamin D. *Gastroenterol* 78:512-517, 1980.
 85. Boyer JL. New concepts of mechanisms of hepatocyte bile formation. *Phys Rev* 60:303-326, 1980.
 86. Elias E, Hruban Z, Wade JB, and Boyer JL. Phalloidin-induced cholestasis: A microfilament-mediated change in junctional complex permeability. *Proc Natl Acad Sci* 77:2229-2223, 1980.
 87. Boyer JL. Cholestasis - Concepts of pathogenesis based on current models of bile secretion. *Hepatology* 3rd Quarter, (Falk Foundation), 1980.
 88. Tavoloni N, and Boyer JL. Relationship between hepatic metabolism of chlorpromazine and cholestatic effects in the isolated perfused rat liver. *J Pharm and Exp Ther* 214:(2)269-274, 1980.
 89. Schneider JF, Baker AL, Haines NW, Hatfield G, and Boyer JL. Aminopyrine N-demethylation: A prognostic test of liver function in patients with alcoholic liver disease. *Gastroenterol* 79:1145-1150, 1980.
 90. Boyer JL. The role of the paracellular pathway in hepatocyte bile formation. IN: Communication of Liver Cells, Falk Symposium #27, eds. H Popper, L Bianchi, F Gudat, W Reutter (MTP Press Ltd. Lancaster, England) pp. 177-184, 1980.
 91. LaGarde S, Elias E, Wade JB, and Boyer JL. Structural heterogeneity of hepatocyte "tight" junctions - A quantitative analysis. *Hepatology* 1(3):193-203, 1981.
 92. Haines NW, Baker AL, Boyer JL, Glagov S, Schneider H, Jaspan J, and Ferguson DJ. Prognostic indicators of hepatic injury following jejunoileal bypass performed for refractory obesity: A prospective study. *Hepatology* 1(2):161-167, 1981.
 93. Boyer JL. Membrane events in mechanisms of bile formation and drug induced cholestasis. IN: Drug Reactions and the Liver. Eds. M Davis, JM Tredger, R Williams (Pitman Medical) pp. 64-71, 1981.
 94. Boyer JL, and Miller DJ. Chronic hepatitis. IN: Diseases of the Liver, ed. L Schiff, 5th edition (J.D. Lippincott Co. Philadelphia, Toronto), pp. 771-811, 1982.
 95. Smith ND, and Boyer JL. Permeability characteristics of the bile duct in the rat. *Amer J Physiol* 242:G52-G57, 1982.
 96. Reed JS, Smith ND, and Boyer JL. Hemodynamic effects on oxygen consumption and bile flow in the isolated skate liver. *Amer J Physiol* 242:G313-G318, 1982.
 97. Reed JS, Smith ND, and Boyer JL. Determinants of biliary secretion in the isolated perfused skate liver. *Amer J Physiol* 242:G319-G325, 1982.
 98. Boyer JL. Hepatocellular junctional complexes and the paracellular pathway - a regulatory role in bile formation. (Eds. SE Bradley, EF Purcell) IN: The Paracellular Pathway pp. 209-221, Josiah Macey, Jr. Foundation 1982.
 99. Blitzer BL, and Boyer JL. Cellular mechanisms of bile formation. *Gastroenterol* 82:346-357, 1982.
 100. Fisher RL, Anderson DW, Boyer JL, Ishak K, Klatskin G, Lachin JM, Phillips MJ, and the Steering Committee for the National Cooperative Gallstone Study Group. A prospective morphologic evaluation of

hepatic toxicity of chenodeoxycholic acid in patients with cholelithiasis: The national cooperative gallstone study. *Hepatology* 2:187-201, 1982.

101. Blitzer BL, Ratoosh SL, Donovan CB, and Boyer JL. Effects of inhibitors of Na⁺ -coupled transport on bile acid uptake by isolated rat hepatocytes. *Amer J Physiol* 243:G48-G53, 1982.
102. Forrest Jr JN, Boyer JL, Ardito TA, Murdaugh HV, and Wade JB. Structure of tight junctions during chloride secretion in the perfused rectal gland of the dogfish shark (*Squalus acanthius*). *Amer J Physiol* 242:C388-C392, 1982.
103. Reuben A, Howell K, and Boyer JL. Interactions between lipids, pigment and proteins in rat bile. *J Lipid Res* 23:1039-1052, 1982.
104. Tavoloni N, Reed JS, and Boyer JL. Effect of chlorpromazine on hepatic clearance and excretion of bile acids by the isolated perfused rat liver. *Proceedings of the Society for Experimental Biology and Medicine* 170:486-492, 1982.
105. Boyer JL. Mechanisms of bile formation and cholestasis. *Acta Hepatol Japan* 23:(10), 1982. (Special Lecture of 18th Annual Meeting of the Japan Society of Hepatology).
106. Traube M, Bock J, and Boyer JL. D-lactic acidosis after jejunioleal bypass. Letter to the Editor, *N Engl J Med* 307:1027, 1982.
107. Boyer JL, Allen RM, and Ng OC. Biochemical separation of Na⁺, K⁺-ATPase from a "purified" light density, "canalicular" enriched plasma membrane fraction from rat liver. *Hepatology* 3:18-28, 1983.
108. Duffy MG, Blitzer BL, and Boyer JL. Direct determination of the driving forces of taurocholate uptake into rat liver plasma membrane vesicles. *J Clin Invest* 72:1470-1481, 1983.
109. Easter DW, Wade JB, and Boyer JL. Structural integrity of hepatocyte tight junctions. *J Cell Biol* 96:745-749, 1983.
110. Traube M, Bock JL, and Boyer JL. D-Lactic acidosis after jejunioleal bypass: Identification of organic anions by nuclear magnetic resonance spectroscopy. *Ann Int Med* 98:171-173, 1983.
111. Phillips JM, Fisher RL, Anderson DW, Lan S-P, Lachin JM, Boyer JL, and the Steering Committee for the National Cooperative Gallstone Study. Ultrastructural evidence of intrahepatic cholestasis before and after chenodeoxycholic acid therapy in patients with cholelithiasis. *Hepatology* 3:209-220, 1983.
112. Roll J, Boyer JL, Barry D, and Klatskin G. The prognostic importance of clinical and histologic features in asymptomatic primary biliary cirrhosis. *N Engl J Med* 308:1-7, 1983.
113. Weiss JS, Gautam A, Lauf JJ, Michael MS, Sundberg W, Jatlow P, Boyer JL, and Seligson D. The clinical importance of a protein-bound fraction of serum bilirubin in patients with hyperbilirubinemia. *N Engl J Med* 309:147-150, 1983.
114. Boyer JL. Tight junctions in normal and cholestatic liver: does the paracellular pathway have functional significance? *Hepatology* 3:614-617, 1983.
115. Boyer JL. Friedenwald Presentation to Gerald Klatskin, M.D. *Gastroenterol* 85:1235-1238, 1983.
116. Boyer JL. Mechanisms of bile formation and cholestasis. *Scand J Clin Invest* 51-55, 1984.
117. Beswick DR, and Boyer JL. Primary biliary cirrhosis. *Hepatology* 4:298-328, 1984.

118. Gautam A, Seligson H, Gordon ER, Seligson D, and Boyer JL. Irreversible binding of conjugated bilirubin to albumin in cholestatic rats. *J Clin Invest* 73:873-877, 1984.
119. Meier PJ, Sztul ES, Reuben A, and Boyer JL. Structural and functional polarity of canalicular and basolateral plasma membrane vesicles isolated in high yield from rat liver. *J Cell Biol* 98:991-1000, 1984.
120. Gordon ER, Meier PJ, Goresky CA, and Boyer JL. Mechanism and subcellular site of bilirubin diglucuronide formation in rat liver. *J Biol Chem* 259(8):5500-5506, 1984.
121. Meier PJ, St. Meier-Abt A, Barrett C, and Boyer JL. Mechanisms of taurocholate transport in canalicular and basolateral rat liver plasma membrane vesicles. Evidence for an electrogenic canalicular organic anion carrier. *J Biol Chem* 259:10614-10622, 1984.
122. Graf J, Gautam A, and Boyer JL. Isolated rat hepatocyte couplets: A primary secretory unit for electrophysiologic studies of bile secretory function. *Proc Natl Acad Sci* 81:6516-6520, 1984.
123. Weisiger RA, Zacks CM, Smith ND, and Boyer JL. Effect of albumin binding on extraction of sulfobromophthalein by perfused elasmobranch liver: evidence for dissociation-limited uptake. *Hepatology* 4:492-501, 1984.
124. Primor N, Zadunaitsky JA, Murdaugh Jr HV, Boyer JL, and Forrest Jr JN. Pardaxin increases solute permeability of gills and rectal gland in the dogfish shark (*Squalus Acanthias*). *Comp Biochem Physiol* 78C:483-490, 1984.
125. Meier PJ, Knickelbein R, Moseley RH, Dobbins JW, and Boyer JL. Evidence for carrier-mediated chloride/bicarbonate exchange in canalicular rat liver plasma membrane vesicles. *J Clin Invest* 75:1256-1263, 1985.
126. Boyer JL. Hepatic granulomas. *JAMA* 253:2894, 1985.
127. Beswick DR, Klatskin G, and Boyer JL. Asymptomatic primary biliary cirrhosis. A progress report on long-term follow-up and natural history. *Gastroenterol* 89:267-271, 1985.
128. Moseley RH, and Boyer JL. Mechanisms of electrolyte transport in the liver and their functional significance. *Seminars in Liver Disease* 5:122-135, 1985.
129. Meier PJ, and Boyer JL. Mechanisms and driving forces for taurocholate transport in canalicular membrane vesicles of rat liver. IN: Enterohepatic Circulation of Bile Acids and Metabolism ed. G Paumgartner, A Stiehl, W Gerok, MTP Press Limited, Falk Symposium 42, pp. 59-66, 1985.
130. Boyer JL, Ng OC, and Gautam A. Formation of canalicular spaces in isolated rat hepatocyte couplets. *Proceedings of Amer Assoc Phys Vol. XCVIII*: 21-29, 1985.
131. Boyer JL. New approaches to the study of canalicular membrane function in rat liver. IN: Recent Advances in Bile Acid Research ed. L Barbara, RH Dowling, AF Hofmann, E Roda Raven Press, New York, pp. 11-16, 1985.
132. Mills PR, Meier PJ, Boyer JL, and Gordon ER. The effect of ethanol and calcium on fluid state of plasma membrane rat hepatocytes. *Alcohol* 2:153-156, 1985.
133. Boyer JL. Mechanisms of bile secretion and hepatic transport. IN: Physiology of Membrane Disorders, ed. TE Andreoli, JF Hoffman, DD Fanestil, SG Schultz, Plenum Publishing Corp, Chapter 35, pp. 609-636,

1986.

134. Ballatori N, and Boyer JL. Slow biliary elimination of methylmercury in the marine elasmobranchs Raja Erinacea and Squalus Acanthias. *Toxicol Appl Pharm* 85:407-415, 1986.
135. Duffy MC, and Boyer JL. Pathophysiology of intrahepatic cholestasis and biliary obstruction. IN: Bile Pigments and Jaundice ed. JD Ostrow, Marcel Dekker, Inc., Chapter 14, pp. 333-372, 1986.
136. Moseley RH, Meier PJ, Aronson PS, and Boyer JL. Na-H exchange in rat liver basolateral but not canalicular plasma membrane vesicles. *Amer J Physiol* 250:G35-G43, 1986.
137. Ballatori N, Moseley RH, and Boyer JL. Sodium gradient-dependent L-glutamate transport is localized to the canalicular domain of liver plasma membranes. *J Biol Chem* 261:6216-6221, 1986.
138. Boyer JL. Mechanisms of bile formation: recent studies of the role of ion transport. Section II - Bile Secretion and Intrahepatic Cholestasis. IN: Bile in Health and Disease, ed. E Elias, G Murphy, Proceedings of the Sixth BSG-SK&F International Workshop 1985, sponsored by Smith Kline & French Laboratories Ltd, pp. 32-37, 1986.
139. Ballatori N, Jacob R, and Boyer JL. Intrabiliary glutathione hydrolysis. A source of glutamate in bile. *J Biol Chem* 261:7869-7865, 1986.
140. Smith ND, and Boyer JL. Are antimitochondrial antibodies of prognostic value in primary biliary cirrhosis? Editorial, *Hepatology* 6:739-741, 1986.
141. Lorenzini L, Sakisaka S, Meier PJ, and Boyer JL. Demonstration of a transcellular vesicle pathway for biliary excretion of inulin in rat liver. *Gastroenterol* 91:1278-1288, 1986.
142. Smith ND, Mosley RH, and Boyer JL. Na/H exchange and ionic control of growth in hepatocytes. IN: Modulation of Liver Cell Expression, Ed. W Reutter et al., *Proced of 43rd Falk Symposium*, MTP Press Ltd., pp. 165-178, 1987.
143. Helzberg JH, and Boyer JL. Primary Sclerosing Cholangitis. IN: Current Gastroenterology, Volume 7 ed. G. Gitnick Year Book Medical Publishers Inc., pp. 336-343, 1987.
144. Helzberg JH, Petersen JM, and Boyer JL. Improved survival with primary sclerosing cholangitis. A review of clinicopathologic features and comparison of symptomatic asymptomatic patients. *Gastroenterol* 92:1869-1875, 1987.
145. Henderson RM, Graf J, and Boyer JL. Na-H exchange regulates intracellular pH in isolated rat hepatocyte couplets. *Amer J Physiol* 252:G109-G113, 1987.
146. Graf J, Henderson RM, Krumholz B, and Boyer JL. Cell membrane and transepithelial voltages and resistances in isolated rat hepatocyte couplets. *J Memb Biol* 95:241-254, 1987.
147. Grossbard ML, Boyer JL, and Gordon ER. The excretion pattern of biliverdin and bilirubin in bile of the small skate (Raja erinacea). *J Comp Physiol B* 157:61-66, 1987.
148. Witzleben CL, Boyer JL, and Ng OC. Manganese-bilirubin cholestasis. Further studies in pathogenesis. *Lab Invest* 56:151, 1987.
149. Meier PJ, St. Meier-Abt A, and Boyer JL. Properties of the canalicular bile acid transport system in rat liver. *Biochem J* 242:465-469, 1987.

150. Sztul ES, Biemesderfer D, Caplan MJ, Kashgarian M, and Boyer JL. Localization of Na⁺,K⁺ -ATPase α -subunit to the sinusoidal and lateral but not canalicular membranes of rat hepatocytes. *J Cell Biol* 104:1239-1248, 1987.
151. Mills PR, Meier PJ, Smith DJ, Ballatori N, Boyer JL, and Gordon ER. The effect of changes in the fluid state of rat liver plasma membrane on the transport of taurocholate. *Hepatology* 7:61-66, 1987.
152. Gautam A, Ng OC, and Boyer JL. Isolated rat hepatocyte couplets in short-term culture: structural characteristics and plasma membrane reorganization. *Hepatology* 7:216-233, 1987.
153. Smith DJ, Grossbard M, Gordon ER, and Boyer JL. Isolation and characterization of a polarized isolated hepatocyte preparation in the skate *Raja erinacea*. *J of Exp Zool* 241: 291-296, 1987.
154. Smith DJ, Grossbard M, Gordon ER, and Boyer JL. Taurocholate uptake by isolated skate hepatocytes: Effect of albumin. *Am J Physiol* 252: G479-G484, 1987.
155. Moseley RH, Ballatori N, Smith DJ, and Boyer JL. Ursodeoxycholate stimulates Na⁺ -H⁺ exchange in rat liver basolateral plasma membrane vesicles. *J Clin Invest* 80:684-690, 1987.
156. Hugentobler G, Fricker G, Boyer JL, and Meier PJ. Anion transport in basolateral (sinusoidal) liver plasma-membrane vesicles of the little skate. *Biochem J* 247: 589-595, 1987.
157. Fricker G, Hugentobler G, Meier PJ, Kurz G, and Boyer JL. Identification of a single sinusoidal bile salt uptake system in skate liver. *Am J Physiol* 16: G816-G822, 1987.
158. Boyer JL, and Bianchi L. *Liver Cirrhosis*. Lancaster: MTP Press Ltd, 1987.
159. Boyer JL, and Miller D. Chronic Hepatitis. IN: Diseases of the Liver, edited by Schiff, L and Schiff, ER: Lippincott, p. 687-724, 1987.
160. Hugentobler G, Fricker G, Boyer JL, and Meier PJ. Anion Transport in Basolateral (Sinusoidal) Liver Plasma-Membrane Vesicles of the Little Skate. *Biochem J* 247: 589-595, 1987.
161. Ballatori N, and Boyer JL. Characteristics of L-Alanine Uptake in Freshly Isolated Hepatocytes of Elasmobranch *Raja erinacea*. *Am J Physiol* 254(23): R801-808, 1988.
162. Boyer JL. Mechanisms of Bile Acid Independent Bile Flow. IN: Gastrointestinal and Hepatic Secretions: Mechanism and Control. Edited by: JS Davison and EA Shaffer, Univ. of Calgary Press, pp. 12-17, 1988.
163. Boyer JL. Definitive Therapy in Primary Biliary Cirrhosis. *Gastroenterol* (editorial), 95:242-245, 1988.
164. Boyer JL, and Ransohoff D. Is Colchicine Effective Therapy for Cirrhosis? *New Eng J Med* (editorial), 318:1751-1752, 1988.
165. Graf J, Henderson RM, Meier PJ, and Boyer JL. Regulation of intracellular pH in hepatocytes. IN: pH Homeostasis - Mechanisms and Control, Ed. D Haussinger, Academic Press, London, pp. 43-60, 1988.
166. Ballatori N, Jacob R, Barrett C, and Boyer JL. Biliary catabolism of glutathione and differential reabsorption of its amino acid constituents. *Am J Physiol* 254: G1-G7, 1988.
167. Ballatori N, Shi C, and Boyer JL. Altered Plasma Membrane Ion Permeability in Mercury-Induced Cell Injury: Studies in Hepatocytes of Elasmobranch *Raja erinacea*. *Toxicology and Applied Pharmacology*

95:279-291, 1988.

168. Sakisaka S, Ng OC, and Boyer JL. Tubulovesicular transcytotic pathway in isolated rat hepatocyte couplets in culture: effect of colchicine and taurocholate. *Gastroenterol* 95:793-804, 1988.
169. Henderson RM, Krumholz B, Boyer JL, and Graf J. Effect of intracellular pH on potassium conductance in liver. *Pflugers Arch. European Journal of Physiology* 412:334-335, 1988.
170. Graf J, Henderson RM, and Boyer JL. Electrophysiological and energetic aspects of hepatobiliary transport in isolated rat hepatocyte couplets. IN: Gastrointestinal and Hepatic Secretions: Mechanisms and Control. Edited by J.S. Davison and E.A. Shaffer, Univ. of Calgary Press, pp. 24-29, 1988.
171. Boyer JL, Gautam A, and Graf J. Mechanisms of Bile Secretion: Insights from the Isolated Rat Hepatocyte Couplet. *Seminars in Liver Disease* Vol 8(4):308-316, 1988.
172. Ballatori N, Wondergem R, and Boyer JL. Effects of L-alanine on Membrane Potential, Potassium (⁸⁶Rb) Permeability and Cell Volume in Hepatocyte from *Raja erinacea*. *Biochim Biophys Acta* 946:261-269, 1988.
173. Karlaganis G, Bradley SE, Boyer JL, Batta AK, Salen G, Egestad B, and Sjoval J. A bile alcohol sulfate as a major component in the bile of the small skate (*Raja Erinacea*). *J of Lipid Research* 30:317-322, 1989.
174. Ballatori N, Truong AT, Ma AK, and Boyer JL. Determinants of Glutathione Efflux and Biliary GSH/GSSG Ratio in Perfused Rat Liver. *Am J Physiol* 256 (Gastrointest Liver Physiol 19):G482-G490, 1989.
175. Anderson JM, Glade JL, Stevenson BR, Boyer JL, and Mooseker MS. Hepatic Immunohistochemical Localization of the Tight Junction Protein ZO-1 in Rat Models of Cholestasis. *Am J Pathol* 134:1055-1062, 1989.
176. Weinman SA, Graf J, and Boyer JL. Voltage-driven taurocholate-dependent secretion in isolated hepatocyte couplets. *Am J Physiol* 256 (Gastrointest Liver Physiol 19):G826-G832, 1989.
177. Henderson RM, Graf J, and Boyer JL. Inward-rectifying potassium; membrane potential; isolated cells. *Am J Physiol* 256 (Gastrointest Liver Physiol 19):G1028-G1035, 1989.
178. Gleeson D, Smith ND, and Boyer JL. Bicarbonate dependent and independent intracellular pH regulatory mechanisms in rat hepatocytes. Evidence for Na⁺-HCO₃⁺ cotransport. *J Clin Invest* 84:312-321, 1989.
179. Gautam A, Ng OC, Strazzabosco M, and Boyer JL. Quantitative assessment of canalicular bile formation in isolated hepatocyte couplets using microscopic optical planimetry. *J Clin Invest* 83:565-573, 1989.
180. Corasanti JG, Smith ND, Gordon ER, and Boyer JL. Protein kinase C agonists inhibit bile secretion independently of effects on the microcirculation in the isolated perfused rat liver. *Hepatology* 10.1:8-13, 1989.
181. Weinman SA, Thom H, Schramm U, Buscher HP, Kurz G, and Boyer JL. Microfluorometric measurements of bile salt transport in individual hepatocytes and hepatocyte couplets. IN: Trends in Bile Acid Research (Falk Symposium 52) pg. 123-131, Edited by G Paumgartner, A Stiehl, W Gerok. Kluwer Academic Publishers, 1989.
182. Sellinger M, Weinman SA, Henderson RM, Zweifach A, Boyer JL, and Graf J. Properties of an Anion Channel in Rat Liver Canalicular Membranes. IN: Bicarbonate, Chloride, and Proton Transport Systems, Edited by John H Durham and Marcos A Hardy. *Annals of the New York Academy of Sciences*, 574:57-

59, 1989.

183. Corasanti JG, Gleeson D, and Boyer JL. Ionic Mechanism of Cell Volume Regulation in Isolated Rat Hepatocytes. IN: Bicarbonate, Chloride and Proton Transport Systems, Edited by John H Durham and Marcos A Hardy. Annals of the New York Academy of Sciences, 574:57-59, 1989.
184. Sellinger M, Barrett C, Malle P, Gordon ER, and Boyer JL. Cryptic Na⁺, K⁺-ATPase activity in rat liver canalicular plasma membranes: Evidence for its basolateral origin. *Hepatology* 11(2), 223-229, 1990.
185. Bonner GF, and Boyer JL. Hepatomegaly: an approach to diagnosis. *Hospital Medicine* 116-133, 1990.
186. Corasanti JG, Gleeson D, and Boyer JL. Effects of osmotic stresses on isolated rat hepatocytes I. Ionic mechanisms of cell volume regulation. *Am J Physiol* 258:G290-G298, 1990.
187. Gleeson D, Corasanti JG, and Boyer JL. Effects of osmotic stresses on isolated rat hepatocytes II. Modulation of intracellular pH. *Am J Physiol* 258:G299-G307, 1990.
188. Simmons TW, Moseley RH, Boyer J, and Ballatori N. Modulation of Na⁺/alanine cotransport in liver sinusoidal membrane vesicles by internal divalent cations. *Biochim Biophys Acta* 1023:462-468, 1990.
189. Sellinger M, and Boyer JL. Physiology of Bile Secretion and Cholestasis. IN: Progress in Liver Diseases, Edited by Hans Popper, M.D., Ph.D. and Fenton Schaffner, M.D. W.B. Saunders Company, Vol IX: 237-259, 1990.
190. Graf J, and Boyer JL. The use of isolated rat hepatocyte couplets in hepatobiliary physiology. *Journal of Hepatology* 10:387-394, 1990.
191. Hayakawa T, Ng OC, Ma A, and Boyer JL. Taurocholate stimulates transcytotic vesicular pathways labeled by horseradish peroxidase in the isolated perfused rat liver. *Gastroenterol* 99:216-228, 1990.
192. Fallon MB, Boyer JL. Hepatic toxicity of Vitamin A and synthetic retinoids. *Journal of Gastroenterology and Hepatology* 5:334-342, 1990.
193. Litzky BE, Ouellette G, and Boyer JL. Approaches to the treatment of Primary Biliary Cirrhosis - A status report. *Gastroenterology International* 3(3):134-139, 1990.
194. Boyer JL, Phillips JM, and Graf J. Preparation and Specific Applications of Isolated Hepatocyte Couplets. IN: Methods in Enzymology, Edited by Sidney Fleischer and Becca Fleischer. Academic Press, Inc. 192:501-516, 1990.
195. Boyer JL, and Meier PJ. Characterizing Mechanisms of Hepatic Bile Acid Transport Utilizing Isolated Membrane Vesicles. IN: Methods in Enzymology, Edited by Sidney Fleischer and Becca Fleischer. Academic Press, Inc. 192:517-533, 1990.
196. Meier PJ, and Boyer JL. Preparation of Basolateral (Sinusoidal) and Canalicular Plasma Membrane Vesicles for the Study of Hepatic Transport Processes. IN: Methods in Enzymology, Edited by Sidney Fleischer and Becca Fleischer. Academic Press, Inc. 192:534-545, 1990.
197. Hayakawa T, Bruck R, Ng OC, and Boyer JL. DBcAMP stimulates vesicle transport and HRP excretion in isolated perfused rat liver. *Am J Physiol* 259 (Gastrointest Liver Physiol 22):G727-G735, 1990.
198. Sellinger M, Ballatori N, and Boyer JL. Mechanism of Mecurial Inhibition of Sodium-Coupled Alanine Uptake in Liver Plasma Membrane Vesicles from *Raja erinacea*. *Toxicology and Applied Pharmacology*

107:369-376, 1991.

199. Strazzabosco M, Sakisaka S, Hayakawa T, and Boyer JL. Effect of UDCA on intracellular and biliary pH in isolated rat hepatocyte couplets and perfused livers. *Am J Physiol* 260 (Gastrointest Liver Physiol 23):G58-G69, 1991.
200. Strazzabosco M, Mennone A, and Boyer JL. Intracellular pH regulation in isolated rat bile duct epithelial cells. *J Clin Invest* 87:1503-1512, 1991.
201. Bruck R, Hayakawa T, Ng O, and Boyer JL. Taurocholate stimulates the excretory phase of the transcytotic vesicular pathway in rat liver. IN: Bile Acids as Therapeutic Agents, From Basic Science to Clinical Practice, Edited by G Paumgartner, A Stiehl and W Gerok. Kluwer Academic Publishers, Falk Symposium 58:151-166, 1991.
202. Haddad P, Beck JS, Boyer JL, and Graf J. Role of chloride ions in liver cell volume regulation. *American Physiological Society* G340-G348, 1991.
203. Nathanson MH, and Boyer JL. Mechanisms and Regulation of Bile Secretion. *Hepatology* 14:551-566, 1991.
204. Benedetti A, Strazzabosco M, Corasanti JG, Haddad P, Graf J, and Boyer JL. Cl^- - HCO_3^- exchanger in isolated rat hepatocytes: role in regulation of intracellular pH. *American Physiological Society* G512-G522, 1991.
205. Gleeson D, and Boyer JL. Intrahepatic Cholestasis. IN: Oxford Textbook of Clinical Hepatology, Oxford University Press, 1991.
206. Strazzabosco M, Okolicsanyi L, and Boyer JL. Acid/base transport system in isolated rat bile ductular epithelial cells. IN: Experimental and Clinical Hepatology. Eds. P Gentilini and MU Dianzani, Elsevier Science Publishers B.V. pp.133-141, 1991.
207. Boyer JL. Treatment of intrahepatic cholestasis. IN: Therapy in Liver Diseases. Edited by J Rodés and V Arroyo; Ediciones Doyma, Spain, pp. 73-82, 1992.
208. Boyer JL. Chapter 5, Hans Popper - A Tribute. Eds. PD Berk, F Schaffner and R Schmid, Raven Press, New York, pp. 22-24, 1992.
209. Boyer JL, Graf J, and Meier PJ. Hepatic transport systems regulating pH_i , cell volume, and bile secretion. *Annu Rev Physiol* 54:415-38, 1992.
210. Sellinger M, Weinman SA, Henderson RM, Zweifach A, Boyer JL, and Graf J. Anion channels in rat liver canalicular plasma membranes reconstituted into planar lipid bilayers. *Amer J Physiol* 262(25):G1027-G1032, 1992.
211. Boyer JL, Shockcor W, and Mahl TC. The Natural History of primary Biliary Cirrhosis. IN: Transactions of the American Clinical and Climatological Association. Waverly Press, 103:157-163, 1992.
212. Boyer JL. Isolated Rat Hepatocyte Couplets: A Model for the Study of Bile Secretion and Cholestasis. IN: In Vitro Methods in Toxicology, Edited by G Jolles, and A Cordier. Academic Press, Inc. San Diego, pp. 189-196, 1992.
213. Hayakawa T, Katagiri K, Hoshino M, Nakai T, Ohiwa T, Kumai T, Miyaji M, Takeuchi T, Corasanti J, and Boyer JL. Papaverine Inhibits Transcytotic Vesicle Transport and Lipid Excretion into Bile in Isolated Perfused Rat Liver. *Hepatology* 16(4):1036-1042, 1992.

214. Ballatori N, and Boyer JL. Taurine transport in skate hepatocytes I. Uptake and efflux. *Amer J Physiol* 262(25):G445-G450, 1992.
215. Ballatori N, and Boyer JL. Taurine transport in skate hepatocytes II. Volume activation, energy, and sulfhydryl dependence. *Amer J Physiol* 262(25):G451-G460, 1992.
216. Bruck R, Haddad P, Graf J, and Boyer JL. Regulatory volume decrease stimulates bile flow, bile acid excretion, and exocytosis in isolated perfused rat liver. *Amer J Physiol* 262(25):G806-G812, 1992.
217. Nathanson MH, Gautam A, Ng OC, Bruck R, and Boyer JL. Hormonal regulation of paracellular permeability in isolated rat hepatocyte couplets. *Amer J Physiol* 262(25):G1079-G1086, 1992.
218. Nathanson MH, Gautam A, Bruck R, Isales CM, and Boyer JL. Effects of Ca^{2+} agonists on cytosolic Ca^{2+} in isolated hepatocytes and on bile secretion in the isolated perfused rat liver. *Hepatology* 15(1):107-116, 1992.
219. Boyer JL, and Ockner RK. Eds. IN: Progress in Liver Diseases, Volume X. W B Saunders Co, Philadelphia, 1992.
220. Boyer JL, Hagenbuch B, Ananthanarayanan M, Suchy F, Stieger B, and Meier PJ. Phylogenic and ontogenic expression of hepatocellular bile acid transport. *Proc Natl Acad Sci, USA*, 90:435-438, 1993.
221. Boyer JL. Isolated Rat Hepatocyte Couplets: A Model for the Study of Bile Secretory Function. IN: Hepatic Transport and Bile Secretion: Physiology and Pathophysiology. Ed. by N Tavoloni and PD Berk, Chapter 40, pp.597-606, 1993.
222. Garcia-Tsao G, and Boyer JL. Outpatient Liver Biopsy: How Safe Is It? *Ann Int Med* 118(2):150-153, 1993.
223. Weinman SA, Graf J, Veith C, and Boyer JL. Electroneutral uptake and electrogenic secretion of a fluorescent bile salt by rat hepatocyte couplets. *Amer J Physiol* 27(2):G220-G230, 1993.
224. Beuers U, Nathanson MH, and Boyer JL. Effects of Tauroursodeoxycholic Acid on Cytosolic Ca^{2+} Signals in Isolated Rat Hepatocytes. *Gastroenterol* 104:604-612, 1993.
225. Combes B, Carithers RL, Maddrey WC, Munoz SJ, McDonald MF, Garcia-Tsao G, Boyer JL, Luketic V, Shiffman ML, Peters MG, White H, Zetterman R, and Markin RA. Randomized, double-blind, placebo-controlled trial of ursodeoxycholic acid in primary biliary cirrhosis. IN: Bile Acids and the Hepatobiliary System: From Basic Science to Clinical Practice. Ed. by Paumgartner G, Stiehl A & Gerok W. Kluwer Academic Publishers, pp.289-291, 1993.
226. Beuers U, Nathanson MH, and Boyer JL. Effect of taurine-conjugated ursodeoxycholic acid on Ca^{++} homeostasis in rat hepatocytes. IN: Bile Acids and the Hepatobiliary System: From Basic Science to Clinical Practice. Ed. by Paumgartner G, Stiehl A, & Gerok W. Kluwer Academic Publishers, Dordrecht, The Netherlands, pp.211-216, 1993.
227. Cho WK, and Boyer JL. *Hepatology Elsewhere* "Is Vesicular Exocytosis and Membrane Recycling a Mechanism for Secretin-Induced Choleresis in Bile Duct Epithelium?" *Hepatology* 17:517-519, 1993.
228. Alvaro D, Cho WK, Mennone A, and Boyer JL. Effect of Secretin on Intracellular pH Regulation in Isolated Rat Bile Duct Epithelial Cells. *J Clin Invest* 92:1314-1325, 1993.
229. Alvaro D, Mennone A, and Boyer JL. Effect of ursodeoxycholic acid on intracellular pH regulation in

isolated rat bile duct epithelial cells. *Amer J Physiol* 265:G783-G791, 1993.

230. Bruck R, Benedetti A, Strazzabosco M, and Boyer JL. Intracellular alkalinization stimulates bile flow and vesicular-mediated exocytosis in IPRL. *Am J Physiol* 265(28):G347-G353, 1993.
231. Blumrich M, Petzinger E, and Boyer JL. Characterization of bumetanide transport in isolated skate hepatocytes. *Am J Physiol* 28(5):G926-G933, 1993.
232. Beuers U, Nathanson MH, Isales CM, and Boyer JL. Tauroursodeoxycholic Acid Stimulates Hepatocellular Exocytosis and Mobilizes Extracellular Ca^{++} Mechanisms Defective in Cholestasis. *J Clin Invest* 92:2984-2993, 1993.
233. Boyer JL, and Ockner RK. Eds. IN: Progress in Liver Diseases, Volume XI. W B Saunders Co.: Philadelphia, 1993.
234. Benedetti A, Strazzabosco M, Ng OC, and Boyer JL. Regulation of activity and apical targeting of the $\text{Cl}^-/\text{HCO}_3^-$ exchanger in rat hepatocytes. *Proc Natl Acad Sci USA* 91:792-796, 1994.
235. Boyer JL, Ng OC, Ananthanarayanan M, Hofmann AF, Schteingart CD, Hagenbuch B, Stieger B, and Meier PJ. Expression and Characterization of a functional rat liver Na^+ bile acid cotransport system in COS-7 cells. *Am J Physiol* 266(29):G382-G387, 1994.
236. Boyer JL. The role of vesicle transport and exocytosis in bile formation and cholestasis: Influence of cell volume, pHi , hormones and bile acids. IN: Cholestasis, P Gentilini et al, editors, Elsevier Science BV, p. 69-78, 1994.
237. Mahl TC, Shockcor W, and Boyer JL. Primary biliary cirrhosis: survival of a large cohort of symptomatic and asymptomatic patients followed for 24 years. *J Hepatology* 20:707-713, 1994.
238. Nathanson MH, and Boyer JL. Vesicular Trafficking in the Hepatocyte. IN: The Liver: Biology and Pathobiology, Arias et al, editors, Raven Press, p.655-664, 1994.
239. Boyer JL. Relation of the Liver to Other Organs. IN: The Liver: Biology and Pathobiology, Arias et al, editors, Raven Press, p. 1167-1168, 1994.
240. Beuers U, and Boyer JL. Bile: A Historical Review of Studies on its Form and Function. IN: The Growth of Gastroenterologic Knowledge During the Twentieth Century. Joseph B Kirsner, editor, Lea & Febiger, p.267-288, 1994.
241. Bruck R, Nathanson MH, Roelofsen H, and Boyer JL. Effects of Protein Kinase C and Cytosolic Ca^{2+} on Exocytosis in the Isolated Perfused Rat Liver. *Hepatology* 20:1032-1040, 1994.
242. Boyer JL. Regulation of transport across hepatocyte membranes - determinants of bile formation. IN: Transport in the Liver. Falk Symposium 74. D. Keppler K, Jungermann, editors, Kluwer Academic Publishers, London, pp. 32-38, 1994.
243. Ananthanarayanan M, Ng OC, Boyer JL, and Suchy FJ. Characterization of the Cloned Rat Liver Sodium-Bile Acid Cotransporter using C-Terminal Peptide and Fusion Protein Antibodies. *Amer J Physiol* 267(30):G637-G643, 1994.
244. Ballatori N, Simmons TW, and Boyer JL. A Volume-Activated Taurine Channel in Skate Hepatocytes: Membrane Polarity and Role of Intracellular ATP. *Amer J Physiol* 267, 30(2):G285-G291, 1994.

245. Fricker G, Dubost V, Finsterwald K, and Boyer JL. Characteristics of bile salt uptake into skate hepatocytes. *Biochem J* 299(3):665-670, 1994.
246. Boyer JL. Mechanisms of Bile Formation. IN: Cholestatic Liver Diseases: New Strategies for Prevention and Treatment of Hepatobiliary and Cholestatic Liver Diseases. Edited by van Berge Henegouwen GP, van Hoek B, de Groote J, Matern S, and Stockbrugger RW. (Falk Symposium 75) Kluwer Academic Publishers: Dordrecht, pp. 13-22, 1994.
247. Strazzabosco M, and Boyer JL. Isolated Rat Hepatocyte Couplets. IN: Methods in Biliary Research. Edited by Muraca M. CRC Press: Boca Raton, pp. 265-277, 1994.
248. Strazzabosco M, and Boyer JL. Use of Isolated Bile Ductular Epithelial Cells in Biliary Physiology. IN: Methods in Biliary Research. Edited by Muraca M. CRC Press: Boca Raton, pp. 279-291, 1994.
249. Boyer JL. Perspectives on Progress and Future Developments of the Cellular and Molecular Biology of Bile Acid Transport Mechanisms. IN: Perspectives in Gastroenterology: Current Facts and Future Trends. Edited by Meyer zum Büschenfelde K-H, Paumgartner G, and Schölmerich J. Urban & Schwarzenberg: Munich, pp.123-127, 1995.
250. Jacquemin E, Hagenbuch B, Wolkoff AW, Meier PJ, and Boyer JL. Expression of sodium-independent organic anion uptake systems of skate liver in *Xenopus laevis* oocytes. *Am J Physiol* 268(31):G18-G23, 1995.
251. Henson JH, Capuano S, Nesbitt D, Hager DN, Nundy S, Miller DS, Ballatori N, and Boyer JL. Cytoskeletal Organization in Clusters of Isolated Polarized Skate Hepatocytes: Structural and Functional Evidence for Microtubule-Dependent Transcytosis. *J Experimental Zoology* 271:273-284, 1995.
252. Mennone A, Alvaro D, Cho W, and Boyer JL. Isolation of Small Polarized Bile Duct Units. *Proc Natl Acad Sci* 92(14):6527-6531, 1995.
253. Felig DM, Brusilow SW, and Boyer JL. Hyperammonemic Coma Due to Parenteral Nutrition in a Woman with Heterozygous Ornithine Transcarbamylase Deficiency. *Gastroenterology* 109:282-284, 1995.
254. Chutaputti A, Burrell MI, and Boyer JL. Pseudotumor of the Pancreas Associated with Retroperitoneal Fibrosis: A Dramatic Response to Corticosteroid Therapy. *Amer J Gastro* 90(7):1155-1158, 1995.
255. Combes B, Carithers RL, Maddrey WC, Lin D, McDonald MF, Wheeler DE, Eigenbrodt EH, Munoz SJ, Rubin R, Garcia-Tsao G, Bonner GF, West AB, Boyer JL, Luketic VA, Shiffman ML, Mills AS, Peters MG, White HM, Zetterman RK, Rossi SS, Hofmann AF, and Markin RS. A Randomized, Double-Blind, Placebo-Controlled Trial of Ursodeoxycholic Acid in Primary Biliary Cirrhosis. *Hepatology* 22(3):759-766, 1995.
256. Ballatori N, Troung AT, Jackson PS, Strange K, and Boyer JL. ATP Depletion and Inactivation of an ATP-Sensitive Taurine Channel by Classic Ion Channel Blockers. *Molecular Pharmacology* 48:472-476, 1995.
257. Boyer JL, and Soroka CJ. Vesicle Targeting to the Apical Domain Regulates Bile Excretory Function in Isolated Rat Hepatocyte Couplets. *Gastroenterol* 109(5):1600-1611, 1995.
258. Nathanson MH, Mariwalla K, Ballatori N, and Boyer JL. Effects of Hg^{2+} on cytosolic Ca^{2+} in isolated skate hepatocytes. *Cell Calc* 18:429-439, 1995.
259. Beuers U, Paumgartner G, and Boyer JL. Effects of bile acids on signalling mechanisms in the hepatocyte.

IN: Bile Acids in Gastroenterology: Basic and Clinical Advances. Edited by Hoffman, Paumgartner and Stiehl. Falk Symposium 80. Kluwer: Dordrecht, pp. 162-166, 1995.

260. Boyer JL, and Soroka CJ. The role of vesicle targeting in hepatic bile acid transport. IN: Bile Acids in Gastroenterology: Basic and Clinical Advances. Edited by Hoffman, Paumgartner and Stiehl. Falk Symposium 80. Kluwer: Dordrecht, pp. 176-180, 1995.
261. Gartung C, and Boyer JL. The hepatic Na⁺/taurocholate cotransporter is down-regulated in experimental models of cholestasis. IN: Bile Acids in Liver Diseases. Edited by G Paumgartner and U Beuers. International Falk Workshop. Kluwer: Dordrecht, pp.68-73, 1995.
262. Boyer JL, Roelofsen H, and Soroka CJ. Vesicle targeting to the canalicular domain regulates bile acid transport and bile secretory function in the liver. IN: Bile Acids in Liver Diseases. Edited by G Paumgartner and U Beuers. International Falk Workshop. Kluwer: Dordrecht, pp. 109-112, 1995.
263. Boyer JL, and Soroka CJ. The role of vesicle targeting in hepatic bile acid transport. IN: Bile Acids in Gastroenterology: Basic and Clinical Advances. eds. A F Hofmann, G Paumgartner, A Stiehl. Falk Symposium 80. Lancaster, UK: Kluwer Acad Publ, 176-180, 1995.
264. Boyer JL, Roelofsen H, and Soroka CJ. The role of vesicle transport in the regulation of bile secretory function in hepatocytes. IN: Cell Biology and Molecular Basis of Liver Transport. eds. F Wehner, E Petzinger. Second International Ringberg Conference on Hepatic Transport. Dortmund, Germany: Projekt Verlag, 18-24, 1995.
265. Gartung C, Ananthanarayanan M, Rahman MA, Schuele S, Nundy S, Soroka CJ, Stolz A, Suchy FJ, and Boyer JL. Down-regulation of expression and function of the rat liver Na⁺/bile acid cotransporter in extrahepatic cholestasis. *Gastroenterology* 110:199-209, 1996.
266. Boyer JL. Bile duct epithelium: frontiers in transport physiology. *Amer J Physiol* 270(33):G1-G5, 1996.
267. Strazzabosco M, and Boyer JL. Regulation of intracellular pH in the hepatocyte: Mechanisms and physiological implications. *J Hepatology* 24:631-644, 1996.
268. Miller DS, Fricker G, Schramm U, Henson JH, Hager DN, Nundy S, Ballatori N, and Boyer JL. Active microtubule-dependent secretion of a fluorescent bile salt derivative in skate hepatocyte clusters. *Am J Physiol* 270(33):G887-G896, 1996.
269. Boyer JL. Bile secretion - models, mechanisms, and malfunctions. A perspective on the development of modern cellular and molecular concepts of bile secretion and cholestasis. *J Gastroenterol* 31:475-481, 1996.
270. Jackson PS, Churchwell K, Ballatori N, Boyer JL, and Strange K. Swelling-activated anion conductance in skate hepatocytes: regulation by cell Cl⁻ and ATP. *Am J Physiol* 270(39):C57-C66, 1996.
271. Nathanson MH, Burgstahler AD, Mennone A, and Boyer JL. Characterization of cytosolic Ca²⁺ signaling in rat bile duct epithelia. *Amer J Physiol* 271 (34):G86-G96, 1996.
272. Beuers U, Throckmorton DC, Anderson MS, Isales CM, Thasler W, Kullak-Ublick G-A, Sauter G, Koebe HG, Paumgartner G, and Boyer JL. Tauroursodeoxycholic acid activates protein kinase C in isolated rat hepatocytes. *Gastroenterol* 110:1553-1563, 1996.
273. Boyer JL. Molecular pathogenesis of cholestasis. IN: Acute and Chronic Liver Diseases: Molecular Biology and Clinics. Edited by R Schmid et al. International Falk Workshop, Kluwer: Dordrecht, pp. 87-

95, 1996.

274. Strazzabosco M, and Boyer JL. Ion transporters that regulate intracellular pH and secretion in bile duct epithelial cells. IN: Biliary and Pancreatic Ductal Epithelia: Pathobiology and Pathophysiology. Edited by Sirica AE, and Longnecker DS. Marcel Dekker, Inc., New York, pp. 85-106, 1997.
275. Setchell KDR, Rodrigues CMP, Clerici C, Solinas A, Morelli A, Gartung C, and Boyer JL. Bile acid concentrations in human and rat liver tissue and in hepatocyte nuclei. *Gastroenterol* 112:226-235, 1997.
276. Boyer JL. Opening Lecture: Vanishing bile duct syndrome-pathophysiology and treatment. IN: Vanishing Bile Duct Syndrome: Pathophysiology and Treatment (International Falk Workshop). Edited by D Alvaro, A Benedetti, M Strazzabosco. Kluwer Academic Publishers, pp. 3-4, 1997.
277. Boyer JL. Vanishing bile duct syndrome-from bench to bedside. IN: Vanishing Bile Duct Syndrome: Pathophysiology and Treatment (International Falk Workshop). Edited by D Alvaro, A Benedetti, M Strazzabosco. Kluwer Academic Publishers, pp. 240-245, 1997.
278. Trauner M, Nathanson MH, Mennone A, Rydberg SA, and Boyer JL. Nitric oxide donors stimulate bile flow and glutathione disulfide excretion independent of cyclic guanosine 3',5'-cyclic monophosphate in the isolated perfused rat liver. *Hepatology* 25 (2):263-269, 1997.
279. Gartung C, Schuele S, Schlosser SF, and Boyer JL. Expression of the rat liver Na⁺/taurocholate cotransporter is regulated *in vivo* by retention of biliary constituents but not their depletion. *Hepatology* 25 (2):284-290, 1997.
280. Trauner M, Nathanson MH, Rydberg SA, Koeppl TA, Gartung C, Sessa WC, and Boyer JL. Endotoxin Impairs Biliary Glutathione and HCO₃⁻ Excretion and Blocks the choleretic Effect of Nitric Oxide in Rat Liver. *Hepatology* 25(5): 1184-1191, 1997.
281. Fricker G, Wössner R, Drewe J, Fricker R, and Boyer JL. Enterohepatic circulation of scymnol sulfate in an elasmobranch, the little skate (*Raja erinacea*). *Amer J Physiol* 36(5):G1023-G1030, November 1997.
282. Boyer JL. Effects of bile acids on bile secretion. IN: Bile Acids in Hepatobiliary Diseases: Basic Research and Clinical Application, Eds: G Paumgartner, et al, Kluwer Academic Publishers, pp. 205-212, 1997.
283. Alvaro D, Mennone A, and Boyer JL. Role of kinases and phosphatases in the regulation of fluid secretion and Cl⁻/HCO₃⁻ exchange in cholangiocytes. *Amer J Physiol* 273():G303-G313, 1997.
284. Boyer JL. Isolated hepatocyte couplets and bile duct units – Novel preparations for the *in vitro* study of bile secretory function. *Cell Biol Toxicol* 13(4-5):289-300, 1997.
285. Cho WK, Mennone A, Rydberg SA, and Boyer JL. Bombesin stimulates bicarbonate secretion from rat cholangiocytes: Implications for neural regulation of bile secretion. *Gastroenterol* 113:311-321, 1997.
286. Trauner M, Arrese M, Soroka CJ, Ananthanarayanan M, Koeppl TA, Schlosser SF, Suchy FJ, Keppler D, and Boyer JL. The rat canalicular conjugate export pump (Mrp2) is down-regulated in intrahepatic and obstructive cholestasis. *Gastroenterol* 113:255-264, 1997.
287. Koeppl TA, Trauner M, Baas JC, Thies JC, Schlosser SF, Post S, Gebhard M-M, Herfarth C, Boyer JL, and Otto G. Extrahepatic biliary obstruction impairs microvascular perfusion and increases leukocyte adhesion in rat liver. *Hepatology* 26:1085-1091, 1997.

288. Trauner M, Arrese M, Lee H, Boyer JL, and Karpen S. Endotoxin downregulates rat hepatic *ntcp* gene expression via decreased activity of critical transcription factors. *J Clin Invest* 101:2092-2100, 1998.
289. Roelofsen H, Soroka CJ, Keppler D, and Boyer JL. Cyclic AMP stimulates sorting of the canalicular organic anion transporter (Mrp2/cMoat) to the apical domain in hepatocyte couplets. *J Cell Science* 111:1137-1145, 1998.
290. Boyer JL. Fish Stories: 100 Years at Mount Desert Island Biological Laboratory. *Transactions of the American Clinical and Climatological Association* 109: 73-83, 1998.
291. Koepfel TA, Trauner M, Mennone A, Arrese M, Rios-Velez L, and Boyer JL. Role of glutathione in hepatic bile formation during reperfusion after cold ischemia of the rat liver. *J of Hepatology* 28:812-819, 1998.
292. Crawford JM, and Boyer JL. Clinicopathology conferences: inflammation-induced cholestasis. *Hepatology* 28:253-260, 1998.
293. Arrese M, Trauner M, Meenakshisundaram A, Boyer JL, and Suchy FJ. Maternal cholestasis does not affect the ontogenic pattern of expression of the Na⁺/taurocholate cotransporting polypeptide (ntcp) in the fetal and neonatal rat liver. *Hepatology* 28(3): 789-795, 1998.
294. Trauner M, Meier PJ, and Boyer JL. Molecular pathogenesis of cholestasis. *New England Journal of Medicine* 339(17): 1217-1227, Oct 1998.
295. Boyer JL, and Forrest Jr JN. The J.I.M. Interview (ed. B. J. Culliton), *Journal of Investigative Medicine* 46(8), October 1998.
296. Cho WK, Mennone A, and Boyer JL. Intracellular pH regulation in bombesin-stimulated secretion in isolated bile duct units from rat liver. *Amer Journal of Physiology* 275:G1028-G1036, November 1998.
297. Trauner M, Mennone A, Gigliozzi A, Fraioli F, and Boyer JL. Nitric oxide and guanosine 3',5'-cyclic monophosphate stimulate bile secretion in isolated rat hepatocyte couplets, but not in isolated bile duct units. *Hepatology* 28(6):1621-1628, December 1998.
298. Beuers U, Boyer JL, and Paumgartner G. Ursodeoxycholic acid in cholestasis: Potential mechanisms of action and therapeutic applications. *Hepatology* 28(6):1449-1453, December 1998.
299. Wolkoff A, Suchy F, Mosely R, Meier P, Gollan J, Freimer N, Fitz J, Boyer JL, Berk P, and Scharschmidt B. Advances in hepatic transport: Molecular mechanisms, genetic disorders, and treatment. A summary of the 1998 AASLD single topic conference. *Hepatology* 28(6):1713-1719, 1998.
300. Zheng TS, Schlosser SF, Dao T, Hingorani R, Crispe IN, Boyer JL, and Flavell RA. Caspase-3 controls both cytoplasmic and nuclear events associated with Fas-mediated apoptosis *in vivo*. *Proc Natl Acad Sci USA* 95:13618-13623, 1998.
301. Gartung C, and Matern S. Molecular regulation of organic anion transport in cholestasis. Manns M, Boyer JL, Jansen PLM, Reichen J, editors. IN: Falk Symposium: 102-Cholestatic Liver Diseases. Kluwer Academic Publishers, pp. 21-28, 1998.
302. Boyer JL, and Nathanson MH. Bile formation. Schiff ER, Sorrell MF, Maddrey WC, editors. IN: Schiff's Diseases of the Liver. Chapter 4, 8th ed. Lippincott-Raven, 119-146, 1999.

303. Beuers U, Probst I, Soroka C, Boyer JL, Kullak-Ublick G-A, Paumgartner G. Modulation of protein kinase C by tauroolithocholic acid in isolated rat hepatocytes. *Hepatology* 29(2):477-482, 1999.
304. Hayes JH, Soroka CJ, Rios-Velez L, and Boyer JL. Hepatic sequestration and modulation of the canalicular transport of the organic cation, daunorubicin, in the rat. *Hepatology* 29(2):483-493, 1999.
305. Trauner M, and Boyer JL. Cholestatic syndromes. *Curr Opin Gastro* 15: 217-228, 1999.
306. Diseases of the Liver and the Bile Ducts, Falk Symposium 107. Edited by Spicak J, Boyer JL, Gilat T, Kotrlík J, Marecek Z, and Paumgartner G. Published by Kluwer Academic publishers, 1999.
307. Cho WK, and Boyer JL. Characterization of ion transport mechanisms involved in bombesin-stimulated biliary secretion in rat cholangiocytes. *J of Hepatol* 30:1045-1051, 1999.
308. Trauner M, Meier PJ, and Boyer JL. Molecular regulation of hepatocellular transport systems in cholestasis. *J of Hepatol* 31:165-178, 1999.
309. Gleeson D, and Boyer JL. Chapter 23.3 IN: Oxford Textbook of Clinical Hepatology, "Intrahepatic cholestasis." Editors, Bircher J, Benhamou J-P, McIntyre N, Rizzetto M, Rodes J. Oxford University Press, 2nd ed. (Vol 2), pp.1591-1620, 1999.
310. Combes B, Carithers Jr RL, Maddrey WC, Munoz S, Garcia-Tsao G, Bonner GF, Boyer JL, Luketic VA, Shiffman ML, Peters MG, White H, Zetterman RK, Risser R, Rossi SS, and Hofmann AF. Biliary bile acids in primary biliary cirrhosis: Effect of ursodeoxycholic acid. *Hepatology* 29(6):1649-1654, 1999.
311. Lee JM, Trauner M, Soroka CJ, Stieger B, Meier P, and Boyer JL. The molecular expression of the bile salt export pump, sister of P-glycoprotein (Spgp), in experimental models of cholestasis. IN: Bile Acids and Cholestasis, Chapter 14. Editors: Paumgartner G, Stiehl A, Gerok W, Keppler D, Leuschner U. Kluwer Academic Publishers, pp.123-128, 1999.
312. Boyer JL, Lee JM, Trauner M, Soroka CJ, Gartung C, and Karpen SJ. Cellular and molecular response of hepatic bile salt transporters to cholestatic liver injury. IN: Bile Acids and Cholestasis, Chapter 17. Editors: Paumgartner G, Stiehl A, Gerok W, Keppler D, Leuschner U. Kluwer Academic Publishers, pp. 145-150, 1999.
313. Beuers U, Probst I, Soroka CJ, Boyer JL, Kullak-Ublick G-A, and Paumgartner G. Concentration-dependent modulation of cytosolic free calcium and protein kinase C by tauroolithocholic acid in isolated rat hepatocytes. IN: Bile Acids and Cholestasis, Chapter 18. Editors: Paumgartner G, Stiehl A, Gerok W, Keppler D, Leuschner U. Kluwer Academic Publishers, pp. 151-155, 1999.
314. Combes B, Markin RS, Wheeler DE, Rubin R, West AB, Mills AS, Eigenbrodt EH, Maddrey WC, Munoz SJ, Garcia-Tsao G, Bonner GF, Boyer JL, Luketic VA, Shiffman ML, Peters MG, White HM, Zetterman RK, and Carithers Jr RL. The effect of ursodeoxycholic acid on the florid duct lesion of primary biliary cirrhosis. *Hepatology* 30(3):602-605, 1999.
315. Soroka CJ, Pate MK, and Boyer JL. Canalicular export pumps traffic with polymeric immunoglobulin A receptor on the same microtubule-associated vesicle in rat liver. *J Biol Chem* 274(37): 26416-26424, 1999.
316. Ballatori N, Hager DN, Nundy S, Miller DS, and Boyer JL. Carrier-mediated uptake of lucifer yellow in skate and rat hepatocytes: a fluid-phase marker revisited. *Amer J Physiol* 277(40):G896-G904, 1999.
317. Runnegar M, Seward DJ, Ballatori N, Crawford JM, and Boyer JL. Hepatic toxicity and persistence of ser/thr protein phosphatase inhibition by microcystin in the little skate *Raja erinacea*. *Toxicol Appl Pharmacol* 161:40-49, 1999.

318. Cho WK, and Boyer JL. Vasoactive intestinal polypeptide is a potent regulator of bile secretion from rat cholangiocytes. *Gastroenterology* 117:420-428, 1999.
319. Ballatori N, Rebbeor NF, Connolly GC, Seward DJ, Lenth BE, Henson JH, Sundaram P, and Boyer JL. Bile salt excretion in skate liver is mediated by a functional analog of Bsep/Spgp, the bile salt export pump. *Am J Physiol* 278:G57-G63, 2000.
320. Lee J, Azzaroli F, and Boyer JL. Adaptive responses in bile salt transport proteins in cholangiocytes and kidney in a rat model of obstructive cholestasis. IN: Falk Symposium 117, *Hepatology* 2000, Symposium in Honour of Gustav Paumgartner, edited by AL Gerbes, U Beuers, D Jüngst, GR Pape, M Sackmann, T Sauerbruch. Kluwer Academic Publishers, Chapter 1:3-4, 2000.
321. Lee JM, Trauner M, Soroka CJ, Stieger B, Meier PJ, and Boyer JL. Expression of the bile salt export pump is maintained after chronic cholestasis in the rat. *Gastroenterol* 118:163-172, 2000.
322. Trauner M, and Boyer JL. Cholestatic Syndromes. *Curr Opin Gastroenterol* 16:239-250, 2000.
323. Rebbeor JF, Connolly GC, Henson JH, Boyer JL, and Ballatori N. ATP-dependent GSH and glutathione S-conjugate transport in skate liver: role of an Mrp functional homologue. *Am J Physiol Gastrointest Liver Physiol* 279: G417-G425, 2000.
324. Boyer JL. New insights on ursodiol's mechanisms of action. *International Ursodiol Reference Center Scientific Update* 1:1-4, 2000.
325. Dranoff JA, O'Neill AF, Franco AM, Cai S-Y, Connolly GC, Ballatori N, Boyer JL, and Nathanson MH. A primitive ATP receptor from the little skate *Raja erinacea*. *J Biol Chem* 275:30701-30706, 2000.
326. Schlosser SF, Azzaroli F, Dao T, Hingorani R, Crispe IN, and Boyer JL. Induction of murine hepatocyte death by membrane-bound CD95 (Fas/APO-1)-ligand: Characterization of an *in vitro* system. *Hepatology* 32:779-785, 2000.
327. Gigliozi A, Fraioli F, Sundaram P, Lee J, Mennone A, Alvaro D, and Boyer JL. Molecular identification and functional characterization of Mdr1a in rat cholangiocytes. *Gastroenterol* 119:1113-1122, 2000.
328. Ballatori N, Connolly GC, and Boyer JL. Elasmobranch hepatocytes. IN: The Hepatocyte Review. Editors: Berry MN, Edwards AM. Kluwer Academic Publishers, pp. 37-47, 2000.
329. Lee J, and Boyer JL. Molecular alterations in hepatocyte transport mechanisms in acquired cholestatic liver disorders. *Seminars in Liver Disease* 20:373-384, 2000.
330. Book: Liver cirrhosis and its development. Edited by Boyer JL, Blum HE, Maier KP, Sauerbruch T, Stalder GA. *Falk Symposium*, Kluwer Academic Publishers, 2001.
331. Cho WK, Mennone A, and Boyer JL. Isolation of functional polarized bile duct units from mouse liver. *Am J Physiol Gastrointest Liver Physiol* 280:G241-G246, 2001.
332. Mennone A, Biemesderfer D, Negoianu D, Yang C-L, Abbiati T, Schultheis PJ, Shull GE, Aronson PS, and Boyer JL. Role of sodium/hydrogen exchanger isoform NHE3 in fluid secretion and absorption in mouse and rat cholangiocytes. *Am J Physiol Gastrointest Liver Physiol* 280:G247-G254, 2001.
333. Boyer JL. Advancing the bile-ology of cholestatic liver disease. *Hepatology* 33:758-759, 2001.

334. Trauner M, and Boyer JL. Cholestatic Syndromes. *Curr Opin Gastroenterol* 17:242-256, 2001.
335. Soroka CJ, Lee JM, Azzaroli F, and Boyer JL. Cellular localization and up-regulation of multidrug resistance-associated protein 3 in hepatocytes and cholangiocytes during obstructive cholestasis in rat liver. *Hepatology* 33:783-791, 2001.
336. Cai S-Y, Wang L, Ballatori N, and Boyer JL. Bile salt export pump is highly conserved during vertebrate evolution and its expression is inhibited by PFIC type II mutations. *Am J Physiol Gastrointest Liver Physiol* 281:G316-G322, 2001.
337. Boyer JL. Molecular pathophysiology of membrane transport function in cholestasis. IN: The Liver: Biology and Pathobiology, 4th edition, Chapter 46. Editors: Arias IM, Boyer JL, Chisari FV, Fausto N, Schachter D, Shafritz DA. Lippincott Williams & Wilkins, pp. 663-677, 2001.
338. Wang W, Seward D, Li L, Boyer JL, and Ballatori N. Expression cloning of 2 genes that together mediate organic solute and steroid transport in the liver of a marine vertebrate. *PNAS* 98(16):9431-9436, 2001.
339. Singh S, Mennone A, Gigliozi A, Fraioli F, and Boyer JL. Cl^- - dependent secretory mechanisms in isolated rat bile duct epithelial units. *Am J Physiol Gastrointest Liver Physiol* 281:G438-G446, 2001.
340. Cai S-Y, Wang L, Ballatori N, and Boyer JL. Molecular identification and functional characterization of the bile export pump (Bsep) in a marine vertebrate – evidence that this liver-specific transporter is highly conserved in evolution. IN: Biology of Bile Acids in Health and Disease, Falk Symposium 120. Editors: van Berge Henegouwen GP, Keppler D, Leuschner U, Paumgartner G, Stiehl A. Kluwer Academic Publishers, pp. 113-115, 2001.
341. Lee J, Azzaroli F, Wang L, Soroka C, Gigliozi A, Setchell KDR, Kramer W, and Boyer JL. Adaptive Regulation of Bile Salt Transporters in Kidney and Liver in Obstructive Cholestasis in the Rat. *Gastroenterology* 121:1473-1484, 2001.
342. Oude Elferink R, Ottenhoff R, Fricker G, Seward D, Brooks C, Ballatori N, and Boyer JL. The importance of biliary phospholipid secretion: an evolutionary analysis. IN: Hepatobiliary Transport: From Bench to Bedside. Editors: Matern S, Boyer JL, Keppler D, Meier-Abt PJ. Kluwer Academic Publishers, pp. 68-72, 2001.
343. Boyer JL, Soroka CJ, Lee J, Azzaroli F, Wang L, Gigliozi A, and Kramer W. Adaptive regulation of bile salt transporters in liver, cholangiocytes and kidney in obstructive cholestasis in the rat. IN: Hepatobiliary Transport: From Bench to Bedside. Editors: Matern S, Boyer JL, Keppler D, Meier-Abt PJ. Kluwer Academic Publishers, pp.111-113, 2001.
344. Shi-Ying C, Wang W, Soroka CJ, Ballatori N, and Boyer JL. An evolutionarily ancient Oatp: insights into conserved functional domains of these proteins. *Am J Physiol* 282:G702-G710, 2002.
345. Boyer JL. Milestones in Liver Disease. A commentary (Sperber, I. Secretion of organic anions in the formation of urine and bile. *Pharmacol Rev* 1959:11:109-134; *J Hepatology* 36:4-7, 2002.
346. Trauner M, and Boyer JL. Cholestatic syndromes. *Curr Opin in Gastroenterology* 18:314-329, 2002.
347. Bohan A, and Boyer JL. Mechanisms of Hepatic Transport of Drugs: Implications for Cholestatic Drug Reactions. *Seminars in Liver Disease* 22(2):123-136, 2002.
348. Mennone A, Verkman AS, and Boyer JL. Unimpaired osmotic water permeability and fluid secretion in

bile duct epithelia of AQP1 null mice. *Am J Physiol* 283:G739-G746, 2002.

349. Azzaroli F, Mehal W, Soroka CJ, Wang L, Lee J, Crispe N, and Boyer JL. Ursodeoxycholic Acid Diminishes Fas-Ligand-Induced Apoptosis in Mouse Hepatocytes. *Hepatology* 36:49-54, 2002.
350. Denson LA, Bohan A, Held MA, and Boyer JL. Organ-specific alterations in RAR alpha:RXR alpha abundance regulate rat Mrp2 (Abcc2) expression in obstructive cholestasis. *Gastroenterology* 123(2):599-607, 2002.
351. Wang L, Soroka CJ, and Boyer JL. The role of bile salt export pump mutations in progressive familial intrahepatic cholestasis type II. *J Clin Invest* 110:965-972, 2002.
352. Boyer JL. A biliary milestone: functional expression of the human bile salt export pump. *Gastroenterology* Nov;123(5):1733-5, 2002
353. Cai S-Y, Soroka CJ, Ballatori N, and Boyer JL. Molecular characterization of a multidrug resistance associated protein from the Little Skate, *Raja Erinacea*. *Am J Physiol Regul Integr Comp Physiol* Jan;284(1):R125-30, 2003.
354. Trauner M, and Boyer JL. Bile salt transporters: molecular characterization, function, and regulation. *Physiol Rev* Apr;83(2):633-71, 2003.
355. Arrese M, Trauner M, Ananthanarayanan M, Pizarro M, Solis N, Accatino L, Soroka C, Boyer JL, Karpen SJ, Miquel JF, and Suchy FJ. Down-regulation of the Na⁺/taurocholate cotransporting polypeptide during pregnancy in the rat. *J of Hepatol* Feb;38(2):148-55, 2003.
356. Seward DJ, Koh AS, Boyer JL, and Ballatori N. Functional complementation between a novel mammalian polygenic transport complex and an evolutionarily ancient organic solute transporter, OSTalpha /OSTbeta. *J Biol Chem* 278:27473-27482, 2003.
357. Mattingly CJ, Colby GT, Forrest JN, and Boyer JL. The Comparative Toxicogenomics Database (CTD). *Environmental Health Perspectives* 111:793-795, 2003.
358. Trauner M, and Boyer JL. Cholestatic syndromes. *Cur Opin in Gastroenterol* 19:216-231, 2003.
359. Beuers U, Denk GU, Soroka CJ, Wimmer R, Rust C, Paumgartner G, and Boyer JL. Tauroolithocholic Acid Exerts Cholestatic Effects via Phosphatidylinositol 3-Kinase-dependent Mechanisms in Perfused Rat Livers and Rat Hepatocyte Couplets. *J Biol Chem* 278(20):17810-17818, 2003.
360. Bohan L, Denson, LA, and Boyer JL. Organ-specific regulation of nuclear hormone receptors and bile salt transport proteins in obstructive cholestasis. IN: Bile Acids: From Genomics to Disease and Therapy. Editors: Paumgartner G, Deppler D, Leuschner U, Stiehe A. Falk Symposium 129. Kluwer Academic Publishers, 111-116, 2003.
361. Beuers U, Denk GU, Soroka C, Wimmer R, Rust C, Paumgartner G, and Boyer JL. Tauroolithocholic acid impairs bile secretion by phosphatidylinositol 3-kinase- and protein kinase C- ϵ -dependent mechanisms. IN: Bile Acids: From Genomics to Disease and Therapy. Editors: Paumgartner G, Deppler D, Leuschner U, Stiehe A. Falk Symposium 129. Kluwer Academic Publishers, 138-139, 2003.
362. Bohan A, Chen W-S, Denson LA, Held MA and Boyer JL. Tumor Necrosis Factor α -dependent Up-regulation of Lrh-1 and Mrp3(Abcc3) Reduces Liver Injury in Obstructive Cholestasis. *J Biol Chem* 278(38):36688-36698, 2003.

363. Boyer JL. Bile Formation and Cholestasis. Chapter 5 . In: Diseases of the Liver ,9th edition. Eds: Eugene R. Schiff, Michael F. Sorrell, Willis C. Maddrey. Lippincott Williams and Wilkins. Philadelphia,135-165,2003
364. Boyer JL. Mechanisms of Bile Formation: An Introduction. IN: Molecular Pathogenesis of Cholestasis. Editors: Trauner M, and Jansen PLM. Medical Intelligence Unit. Kluwer Academic/Plenum Publishers, 1-8, 2003.
365. Mattingly CJ, Colgy GT, Rosenstein MC, Forrest Jr JN, and Boyer JL. Promoting comparative molecular studies in environmental health research: an overview of the comparative toxicogenomics database (CTD). Pharmacogenomics J 4:5-8, 2004.
366. Wang L, and Boyer JL. The Maintenance and Generation of Membrane Polarity in Hepatocytes. Hepatology 39:892-899, 2004.
367. Elferink RP, Ottenhoff R, Fricker G, Deward DJ, Ballatori N, and Boyer JL. Lack of biliary lipid excretion in the little skate, *Raja erinacea*, indicates the absence of functional Mdr2, Abcg5, and Abcg8 transporters. Am J Physiol Gastrointest Liver Physiol 286:G762-G768, 2004.
368. Denk GU, Soroka CJ, Mennone A, Koepsell H, Beuers U, and Boyer JL. Down-Regulation of the Organic Cation Transporter 1 of Rat Liver in Obstructive Cholestasis. Hepatology 39:1382-1389, 2004.
369. Trauner M, and Boyer JL. Cholestatic syndromes. Curr Opin Gastro 20:220-230, 2004.
370. Denk GU, Soroka CJ, Takeyama Y, Chen W-S, Schuetz JD, and Boyer JL. Multidrug resistance-associated protein 4 is up-regulated in liver but down-regulated in kidney in obstructive cholestasis in the rat. J Hepatology 40:585-591, 2004.
371. Gigliozi A, Fraioli F, Boyer JL. Hormonal regulation of cholangiocytes secretion. IN: The Pathophysiology of Biliary Epithelia. Editors: Alpini G, Alvaro D, Marzioni M, LeSage G, LaRusso N. Landes Bioscience, Medical Intelligence Unit, 89-95, 2004.
372. Chen W-S, Bohan A, Denk G, Soroka C, Denson L, and Boyer JL. Adaptive regulation of bile salt transporters in cholestasis – the role of MRPs. IN: Bile Acid Biology and its Therapeutic Implications. Editors: Paumgartner G, Keppler D, Leuschner U, Stiehl U. Falk Symposium 129. Springer Publishers, 130-131, 2005.
373. Sheela H, Seela S, Caldwell C, Boyer JL, and Jain D. Liver biopsy: evolving role in the new millennium. J Clin Gastroenterol 39:603-610, 2005.
374. Boyer JL. Nuclear receptor ligands: rational and effective therapy for chronic cholestatic liver disease? Gastroenterology 129:735-740, 2005.
375. Sadler KC, Amsterdam A, Soroka C, Boyer J, and Hopkins N. A genetic screen in zebrafish identifies the mutants vps18, nf2 and foie gras as models of liver disease. Development and Disease 132:3561-3572, 2005.
376. Seela S, Sheela H, and Boyer JL. Autoimmune hepatitis type 1: safety and efficacy of prolonged medical therapy. Liver International 25:734-739, 2005.
377. Ballatori N, Christian WV, Lee JY, Dawson PA, Soroka CJ, Boyer JL, Madejczyk MS, and Li N. OST α -OST β : A major basolateral bile acid and steroid transporter in human intestinal, renal, and biliary epithelia. Hepatology 42:1270-1279, 2005.

378. Combes B, Emerson SS, Flye NL, Munoz SJ, Luketic VA, Mayo MJ, McCashland TM, Zetterman RK, Peters MG, Di Bisceglie AM, Benner KG, Kowdley KV, Carithers Jr RL, Rosoff Jr L, Garcia-Tsao G, Boyer JL, Boyer TD, Martinez EJ, Bass NM, Lake JR, Barnes DS, Bonacini M, Lindsay KL, Mills AS, Markin RS, Rubin R, West AB, Wheeler DE, Contos MJ, and Hofmann AF. Methotrexate (MTX) plus ursodeoxycholic acid (UDCA) in the treatment of primary biliary cirrhosis. *Hepatology* 42:1184-1193, 2005.
379. Wilson JH, Paturzo FX, Johnson LK, Carreiro MP, Hixson DC, Mennone A, Boyer JL, Pober JS, and Harding MJ. Rat hepatocyte engraftment in severe combined immunodeficient x beige mice using mouse-specific anti-fas antibody. *Xenotransplantation* 13:53-62, 2006.
380. Denk GU, Cai S-Y, Chen W-S, Lin A, Soroka CJ, and Boyer JL. A comparison of gene expression in mouse liver and kidney in obstructive cholestasis utilizing high-density oligonucleotide microarray technology. *World J Gastroenterol* 12:2536-2548, 2006.
381. Boyer JL, Trauner M, Mennone A, Soroka CJ, Cai S-Y, Moustafa T, Zollner G, Lee JY, and Ballatori N. Upregulation of a basolateral FXR-dependent bile acid efflux transporter OST α -OST β in cholestasis in humans and rodents. *Am J Physiol Gastrointest Liver Physiol* 290:G1124-G1130, 2006.
382. Cai S-Y and Boyer JL. FXR: a target for cholestatic syndromes? *Expert Opin Ther Targets* 10:409-421, 2006.
383. Ballatori N, Henson JH, Seward DJ, Cai S-Y, Runnegar M, Fricker G, Miller DS, and Boyer JL. Retention of structural and functional polarity in cultured skate hepatocytes undergoing in vitro morphogenesis. *Comp Biochem and Physiol B Biochem Mol Biol* 144:167-179, 2006.
384. Mattingly CJ, Rosenstein MC, Colby GT, Forrest Jr JN, and Boyer JL. A comparative toxicogenomics database (CTD): A resource for comparative toxicological studies. *J Exp Zool A Comp Exp Biol* 305:689-692, 2006.
385. Mattingly CJ, Rosenstein MC, Davis AP, Colby GT, Forrest JN, and Boyer JL. The Comparative Toxicogenomics Database (CTD): A cross-species resource for building chemical-gene interaction networks. *Toxicol Sci* 92(2):587-595, 2006.
386. Wang W, Soroka CJ, Mennone A, Rahner C, Harry K, Pypaert M, and **Boyer JL**. Radixin is required to maintain apical canalicular membrane structure and function in rat hepatocytes. *Gastroenterology* 131:878-884, 2006.
387. Tradtrantip, L, **Boyer JL**, Suksamrarn A, and Piyachaturawat P. Differential effects of hydroxyacetophenone analogues on the transcytotic vesicular pathway in rat liver. *European J Pharmacol* 547:152-159, 2006.
388. Villaneuva SSM, Ruiz ML, Soroka CJ, Cai S-Y, Luquita MG, Torres AM, Pozzi EJS, Pellegrino JM, Boyer JL, Catania VA, and Mottino AD. Hepatic and extrahepatic synthesis and disposition of dinitrophenyl-s-glutathione in bile duct-ligated rats. *Drug Met and Disp* 34:1301-1309, 2006.
389. Mennone A, Soroka CJ, Cai S-Y, Harry K, Adachi M, Hagey L, Schuetz JD, and **Boyer JL**. Mrp4 $^{-/-}$ mice have an impaired cytoprotective response in obstructive cholestasis. *Hepatology* 43:1013-1021, 2006.
390. Meier-Abt F, Hammann-Hänni A, Stieger B, Ballatori N, and **Boyer JL**. The organic anion transport polypeptide 1d1 (Oatp1k1) mediates hepatocellular uptake of phalloidin and microcystin into skate liver. *Toxicology and Applied Pharmacology* 218:274-279, 2007.

391. **Boyer, JL.** New perspectives for the treatment of cholestasis: Lessons from basic science applied clinically. *J. Hepatol* 46:365-371, 2007.
392. Chen W, Cai SY, Xu S, Denson L, Soroka C, and **Boyer J.** Nuclear Receptors RXR α :RAR α are Repressors for Human MRP3 Expression, *Am J Physiol Gastrointest Liver Physiol* 292(5):G1221-7, 2007.
393. Tradtrantip L, Piyachaturawat P, Soroka C, Harry K, Mennone A, Mahagita C, Ballatori N, and **Boyer JL.** Phloracetophenone-Induced Cholestasis in Rat is Mediated Through Mrp2. *Amer j Phys.* 293(1):G66-74, 2007.
394. Soroka CJ, Xu S, Cai SY, Ballatori N and **Boyer JL.** Insights into the regulation of expression of human OST α -OST α . In Falk Symposium 155. Bile acids: Biological actions and clinical relevance. Eds. Keppler, Beuers, Leuschner et al. Springer, Dordrecht, The Netherlands. Pp 53-56, 2007.
395. Cai SY, Xiong L, Wray CG, Ballatori N, and **Boyer JL.** The farnesoid X receptor, FXR {alpha}/NR1H4. *Amer J Phys Comp Physiol* 293(3):R1400-9, 2007.
396. Azzaroli F, Mennone A, Feletti V, Simoni P, Baglivo E, Montagnani M, Rizzo N, Pelusi G, DE Aloysio D, Lodato F, Festi D, Colecchia A, Roda E, **Boyer JL,** and Mazzella G. Clinical trial: modulation of human placental multidrug resistance proteins in cholestasis of pregnancy by ursodeoxycholic acid. *Aliment Pharmacol Ther* 26(8):1139-46, 2007.
397. Sun AQ, Ponamgi VM, **Boyer JL,** and Suchy FJ. Membrane Trafficking of the Human OrganicAnion-Transporting Polypeptide C (hOATPC). *Pharm Res* 25:463-474, 2007.
399. Lam P, Pearson CL, Soroka C, Xu S, Mennone A, and **Boyer JL.** The Level of Plasma Membrane Expression in Progressive and Benign Mutations of the Bile Salt Export Pump (Bsep/Abcb11) Correlate with Severity of Cholestatic Diseases. *Am J Physiol Cell Physiol* 293:C17009-C1716, 2007.
400. Boyer, JL. Bile canalicular secretion - tales from Vienna and Yale. *Wien Med Wochenschr.*; 158:534-538, 2008.
401. Soroka CJ, Xu S, Mennone A, Lam P, and **Boyer JL.** N-Glycosylation of the alpha subunit does not influence trafficking or the functional activity of the human organic solute transporter alpha/beta. *BMC Cell Biol* 9:57, 2008. PMCID 2575201.
402. Wang L, Dong H, Soroka CJ, Wei N, **Boyer JL,** and Hochstrasser M. Degradation of the bile salt export pump at endoplasmic reticulum in progressive familial intrahepatic cholestasis type II. *Hepatology* 48(5):1558-69, 2008. PMCID 2587109.
403. Cai SY, Gautam S, Nguyen T, Soroka CJ, Rahner C, and **Boyer JL.** ATP8B1 Deficiency Disrupts the Bile Canalicular Membrane Bilayer Structure in Hepatocytes, But FXR Expression and Activity are Maintained. *Gastroenterology* Mar;136(3):1060-9, 2009.
404. Mayo MJ, Parkes J, Adams-Huet B, Combes B, Mills AS, Markin RS, Rubin R, Wheeler D, Contos M, West AB, Saldana S, Getachew Y, Butsch R, Luketic V, Peters M, Di Bisceglie A, Bass N, Lake J, Boyer T, Martinez E, **Boyer J,** Garcia-Tsao G, Barnes D and Rosenberg WM. Prediction of clinical outcomes in primary Biliary cirrhosis by serum enhance liver fibrosis assay. *Hepatology* 48:1549-1557, 2008.
405. Madejczyk MS, **Boyer JL,** and Ballatori N. Hepatic uptake and biliary excretion of manganese in the little skate, *Leucoraja erinacea*. *Comp Biochem Physiol C Toxicol Pharmacol* 149:566-571, 2009.

406. Ballatori N, Li N, Fang F, **Boyer JL**, Christian WV, Hammond CL. OST alpha-OST beta: a key membrane transporter of bile acids and conjugated steroids. *Front Biosci* Jan 1;14:2829-44, 2009. PMC2694352
407. **Boyer JL** It's all about bile. *Hepatology* Mar;49(3):711-23, 2009.
408. Weerachayaphorn J, Cai S-Y, Soroka CJ and **Boyer JL**. Nuclear Factor Erythroid-Related Factor 2 is a Positive Regulator of Human bile Salt Export Pump Expression. *Hepatology* 50: 1588-1596, 2009.
409. **Boyer JL**. Adaptive Regulation of Hepatocyte Transporters in cholestasis. In: *The Liver*. Eds. Arias IM, Alter HJ, BoyerJL, Cohen DE, Fausto N, Shafritz DA and Wolkoff AW.pp681-702. Wiley-Blackwell, 2009
410. **Boyer JL**. Canalicular Bile Secretion. (Advances in Hepatology, Section Editor: Eugene R. Schiff, MD) *Gastroenterology & Hepatology* 5:11:762-764, 2009.
411. Cai S-Y, Gautam S, Nguyen T, Soroka CJ, Rahner C, **Boyer JL**. Fic1-deficient rat hepatocytes reveal structural and functional defects in the bile canalicular membrane when exposed to hydrophobic bile acids. In: *Bile Acid Biology and Therapeutic Actions*. Falk Symposia 165. pp 18-20. Eds. Keppler D, Beuers U, Stiehl A, and Trauner M. Springer and Falk Foundation, 2009
412. Thomas DJ, Nava GM, Cai SY, **Boyer JL**, Hernandez-Zavalia A, Gaskins HR. Aresenic (3+ Oxidation State) Methyltransferase and the Methylation of Arsenicals in the Invertebrate Chordate *Ciona intestinalis*. *Toxicol Sci*. 113:70-76, 2010.
413. Soroka CJ, Mennone A, Hagey LR, Ballatori N, **Boyer JL**. Mouse organic solute transporter alpha deficiency enhances renal excretion of bile acids and attenuates cholestasis. *Hepatology* 51(1):181-90, 2010.
414. Cai SY, He H, Nguyen T, Mennone A, **Boyer JL**. Retinoic acid represses CYP7A1 expression in human hepatocytes and HepG2 cells by FXR/RXR-dependent and independent mechanisms.
415. *J Lipid Res*.51(8):2265-74,2010. PMID: 20338915
416. Soroka CJ, Ballatori N, **Boyer JL**. Organic solute transporter, OSTalpha-OSTbeta: its role in bile acid transport and cholestasis. *Semin Liver Dis*. 30(2):178-85, 2010.PMID: 20422499
417. Lam P, Soroka CJ, **Boyer JL**. The bile salt export pump: clinical and experimental aspects of genetic and acquired cholestatic liver disease. *Semin Liver Dis*. 30(2):125-33, 2010.PMID: 20422495
418. **Boyer JL**. Cholestasis: genetic and acquired. *Semin Liver Dis*. 30(2):113-5, 2010. PMID: 20422493
419. Li M, Wang W, Soroka CJ, Mennone A, Harry K, Weiman EJ, **Boyer JL**. NHERF-1 binds to Mrp2 and regulates hepatic Mrp2 expression and function. *J Biol Chem*. 18;285(25):19299-307, 2010. PMID: 20404332
420. Xu S, Weerachayaphorn J, Cai SY, Soroka CJ, **Boyer JL**. The aryl hydrocarbon receptor (AhR) and NF-E2-related factor 2 (Nrf2) are key regulators of human MRP4 expression. *Am J Physiol Gastrointest Liver Physiol*.299(1):G126-35, 2010. PMID: 20395535
421. Mennone A, Soroka CJ, Harry KM, **Boyer JL**. Role of breast cancer resistance protein in the adaptive response to cholestasis. *Drug Metab Dispos*. 38(10):1673-8, 2010. PMID: 20601550

422. Srivastava S. and **Boyer JL**. Effect of Psychological Stress in Relapses in Autoimmune Hepatitis. *Liver International* 30:1439-1447, 2010. PMID: 20849437
423. Ghatak S, Biswas A, Dhali GK, Chowdhury A, **Boyer JL**, Santra A. Oxidative stress and hepatic stellate cell activation are key events in arsenic induced liver fibrosis in mice. *Toxicol Appl Pharmacol*. 15;251(1):59-69, 2011. PMID: 21134390
424. McCrann CH, **Boyer JL**. Small-duct sclerosing cholangitis associated with *Schistosoma mansoni*. *Hepatology*. 53:712-3, 2011. PMID: 20882579
425. He H, Mennone A, **Boyer JL**, Cai SY. Combination of retinoic acid and ursodeoxycholic acid attenuates liver injury in bile duct-ligated rats and human hepatic cells. *Hepatology*. 53(2):548-57, 2011. PMID: 21274875
426. Padda, MS, Sanchez M, Akhtar AJ and **Boyer JL**. Drug Induced Cholestasis. *Hepatology*. 53(4): 1377 – 1387, 2011. PMCID: PMC3089004.
427. Soroka CJ, Velazquez H, Mennone A, Ballatori N, **Boyer JL** Ost α depletion protects liver from oral bile acid load. *Am J Physiol Gastrointest Liver Physiol*. 2011 Sep;301(3):G574-9. PMID:21719738
428. Chai J, He Y, Cai SY, Jiang Z, Wang H, Li Q, Chen L, Peng Z, He X, Wu X, Xiao T, Wang R, **Boyer JL**, Chen W. Elevated hepatic MRP3/ABCC3 expression in human obstructive cholestasis is mediated through TNF α and JNK/SAPK signaling pathway. *Hepatology* 55:1485-1494, 2012. PMID: 22105759.
429. Lam P, Xu S, Soroka CJ, **Boyer JL** A c-terminal tyrosine-based motif in the bile salt export pump directs clathrin-dependent endocytosis. *Hepatology*. 2011 Dec 12. doi:10.1002/hep.25523. PMID: 221615771
430. Weerachayaphorn J, Mennone A, Soroka CJ, Harry K, Hagey LR, Kensler TW, Boyer J. Nuclear factor-E2-related factor 2 is a major determinant of bile acid homeostasis in the liver and intestine *Am J Physiol Gastrointest Liver Physiol*. [Am J Physiol Gastrointest Liver Physiol](#). 2012;302(9):G925-36. PMID: 22345550.
431. Kenney P, Prasad PB, and **Boyer J**. Hepatobiliary Sarcoidosis. In *Sarcoidosis*: Eds Mitchell DN, Wells AU, Sprio SG, Moller DR. pp227-234, 2011.
432. Lionarons DA, **Boyer JL**, Cai SY Evolution of substrate specificity for the bile salt transporter ASBT (SLC10A2). *J Lipid Res*. 2012 Aug;53(8):1535-42. Epub 2012 Jun 5. PMID: 22669917.
433. **Boyer JL**, Soroka CJ. A cholecystohepatic shunt pathway: does the gallbladder protect the liver? *Gastroenterology*. 2012 Jun;142(7):1416-9. Epub 2012 Apr 26. No abstract available. PMID: 22542828
434. Cai SY, Lionarons DA, Hagey L, Soroka CJ, Mennone A, **Boyer JL** Adult sea lamprey tolerates biliary atresia by altering bile salt composition and renal excretion. *Hepatology*. 2013 Jun;57(6):2418-26. PMID: 23175353 .
435. Ghonem NS, **Boyer JL** Fibrates as adjuvant therapy for chronic cholestatic liver disease: its time has come. *Hepatology*. 2013 May;57(5):1691-3. PMID: 23174993
436. Soroka CJ, **Boyer JL**. Biosynthesis and trafficking of the bile salt export pump, BSEP: Therapeutic implications of BSEP mutations. *Mol Aspects Med*. 2013 May 15. pii: S0098-2997(13)00034-4. PMID:23685087

437. **Boyer JL.** Bile formation and secretion. *Compr Physiol.* 2013 Jul;3(3):1035-78
438. Assis DN, Leng L, Du X, Zhang CK, Grieb G, Merk M, Garcia AB, McCrann C, Chapiro J, Meinhardt A, Mizue Y, Nikolic-Paterson DJ, Bernhagen J, Kaplan MM, Zhao H, **Boyer JL**, Bucala R. The role of macrophage migration inhibitory factor in autoimmune liver disease. *Hepatology.* 2013 Aug 2. PMID:23913513
439. Wheeler SG, Hammond CL, Jornayvaz FR, Samuel VT, Shulman GI, Soroka CJ, **Boyer JL**, Hinkle PM, Ballatori N. *Osta*^{-/-} mice exhibit altered expression of intestinal lipid absorption genes, resistance to age-related weight gain and modestly improved insulin sensitivity. *Am J Physiol Gastrointest Liver Physiol.* 2013 Dec 31. [Epub ahead of print] PMID: 24381083
440. Weerachayaphorn J, Luo Y, Mennone A, Soroka CJ, Harry K, **Boyer JL.** Deleterious effect of oltipraz on extrahepatic cholestasis in bile duct-ligated mice. *J Hepatol.* 2014 Jan;60(1):160-6. PMID: 23978715
441. Mistry PK, Liu J, Sun L, Chuang WL, Yuen T, Yang R, Lu P, Zhang K, Li J, Keutzer J, Stachnik A, Mennone A, **Boyer JL**, Jain D, Brady RO, New MI, Zaidi M. Glucocerebrosidase 2 gene deletion rescues type1 Gaucher disease. *Proc Natl Acad Sci U S A.* 2014 Apr 1;111(13):4934-9. PMID:24639522
442. Cai SY, Mennone A, Soroka CJ, **Boyer JL.** All-trans-retinoic acid improves cholestasis in α -naphthylisothiocyanate-treated rats and *Mdr2*^{-/-} mice. *J Pharmacol Exp Ther.* 2014 Apr;349(1):94-8 PMID:24492652
443. Cai SY, Mennone A, Soroka CJ, **Boyer JL.** Altered expression and function of canalicular transporters during early development of cholestatic liver injury in *Abcb4*-deficient mice. *Am J Physiol Gastrointest Liver Physiol.* 2014 Apr;306(8):G670-6 . PMID:24481602
444. Ghonem NS, Ananthanarayanan M, Soroka CJ, **Boyer JL.** Peroxisome proliferator- activated receptor α activates human multidrug resistance transporter 3/ATP-binding cassette protein subfamily B4 transcription and increases rat biliary phosphatidylcholine secretion. *Hepatology.* 2014 Mar;59(3):1030-42. PMID:24122873
445. Wheeler SG, Hammond CL, Jornayvaz FR, Samuel VT, Shulman GI, Soroka CJ, **Boyer JL**, Hinkle PM, Ballatori N. *Osta*^{-/-} mice exhibit altered expression of intestinal lipid absorption genes, resistance to age-related weight gain, and modestly improved insulin sensitivity. *Am J Physiol Gastrointest Liver Physiol.* 2014 Mar1;306(5):G425-38 . PMID: 24381083
446. **Boyer JL.** The hepatobiliary paracellular pathway: a paradigm revisited.. *Gastroenterology.* 2014 Nov;147(5):965-8. PMID:25263297 (editorial)
447. **Boyer JL** The origins of hepatobiliary and gastrointestinal physiology. *Hepatology.* 2015 Feb 11. (editorial)
448. Ghonem NS, Assis DN, **Boyer JL.** On fibrates and cholestasis: A review. *Hepatology.* 2015 Feb [Epub ahead of print] PMID:25678132
449. Perry RJ, Zhang D, Zhang XM, **Boyer JL**, Shulman GI Controlled-release mitochondrial protonophore reverses diabetes and steatohepatitis in rats. *Science.* 2015 Feb 26. PMID:25721504
450. Wong DT, Mihm MC, **Boyer JL** and Jain D. Historical Path of Discovery of Viral Hepatitis. *Harvard Medical Student Review.* Issue 3, September 2015, pp18-36

451. Li M, Mennone A, Soroka CJ, Hagey LR, Ouyang X, Weinman EJ, **Boyer JL**. Na(+) /H(+) exchanger regulatory factor 1 knockout mice have an attenuated hepatic inflammatory response and are protected from cholestatic liver injury. *Hepatology*. 2015 Oct;62(4):1227-36. PMID:26108984
452. Chai J, Cai SY, Liu X, Lian W, Chen S, Zhang L, Feng X, Cheng Y, He X, He Y, Chen L, Wang R, Wang H, **Boyer JL**, Chen W. Canalicular membrane MRP2/ABCC2 internalization is determined by Ezrin Thr567 phosphorylation in human obstructive cholestasis. *J Hepatol*. 2015 Dec;63(6):1440-8. PMID:26212029
453. Xu S, Soroka CJ, Sun AQ, Backos DS, Mennone A, Suchy FJ, **Boyer JL**. A Novel Di-Leucine Motif at the N-Terminus of Human Organic Solute Transporter Beta Is Essential for Protein Association and Membrane Localization. *PLoS One*. 2016 Jun 28;11(6): PMID:27351185
454. Assis DN, Abdelghany O, Cai SY, Gossard AA, Eaton JE, Keach JC, Deng Y, Setchell KD, Ciarleglio M, Lindor KD, **Boyer JL**. Combination Therapy of All-Trans Retinoic Acid with Ursodeoxycholic Acid in Patients With Primary Sclerosing Cholangitis: A Human Pilot Study. *J Clin Gastroenterol*. 2016 Jul 14. [Epub ahead of print. PMID:27428727
455. Kulkarni SR, Soroka CJ, Hagey LR, **Boyer JL**. Sirtuin 1 activation alleviates cholestatic liver injury in a cholic acid fed mouse model of cholestasis. *Hepatology*. 2016 Sep 17. doi: 10.1002/hep.28826. [Epub ahead of print] PMID: 27639250
456. Assis DN, Takahashi H, Leng L, Zeniya M, **Boyer JL**, Bucala R. A Macrophage Migration Inhibitory Factor Polymorphism Is Associated with Autoimmune Hepatitis Severity in US and Japanese Patients. *Dig Dis Sci*. 2016 Oct 1. PMID: 27696094
457. **Boyer JL**. Treatment of chronic cholestasis: What we know and what we will know? *Clin Liver Dis (Hoboken)*. 2016 Dec 30;8(6):140-144. doi: 10.1002/cld.591. eCollection 2016 Dec. Review. PMID 32041082
458. Cai SY, **Boyer JL** The Role of Inflammation in the Mechanisms of Bile Acid-Induced Liver Damage. *Dig Dis*. 2017;35(3):232-234. PMID:28249287
459. Yu D, Zhang H, Lionarons DA, **Boyer JL**, Cai SY The Na⁺-taurocholate cotransporting polypeptide (NTCP/SLC10A1) ortholog in the marine skate, *Leucoraja erinacea* is not a physiological bile salt transporter. *Am J Physiol Regul Integr Comp Physiol*. 2017 Jan 11;. [Epub ahead of print]. PMID: 28077388
460. Li M, Soroka CJ, Harry K, **Boyer JL**. CFTR-associated ligand is a negative regulator of Mrp2 expression. *Am J Physiol Cell Physiol*. 2017;312(1):C40-C46. PMID: 27834195.
461. Cai SY, Ouyang X, Chen Y, Soroka CJ, Wang J, Mennone A, Wang Y, Mehal WZ, Jain D, **Boyer JL** Bile acids initiate cholestatic liver injury by triggering a hepatocyte-specific inflammatory response. *JCI Insight*. 2017 Mar 9;2(5):e90780. doi: 10.1172/jci.insight.90780. PMID:28289714
462. Cai SY, **Boyer JL** Studies on the mechanisms of bile acid initiated hepatic inflammation in cholestatic liver injury. *Inflamm Cell Signal*. 2017;4(2). pii: e1561. Epub 2017 Jun 19. PMID:28804737
463. Li M, Cai SY, **Boyer JL**. Mechanisms of bile acid mediated inflammation in the liver. *Mol Aspects Med*. 2017 Aug;56:45-53. doi: 10.1016/j.mam.2017.06.001. Epub 2017 Jul 1. Review. PMID:28606651

- 464 **Boyer JL**. Maintaining a Vibrant and Productive Laboratory as a Senior Investigator..Cell Mol Gastroenterol Hepatol. Jun 7;4(2):299-300. 2017. PMID:28840184.
- 465 Yu, Dongke, Cai S-Y, Mennone A, Vig P, **Boyer JL**. Cenicriviroc, a cytokine receptor antagonist, potentiates all-trans retinoic acid in reducing liver injury in cholestatic rodents. Liver International, Jan 21,2018 Epub ahead of print. PMID:29356312
- 466 Goldberg DS¹, Levy C², Yimam K³, Gordon SC⁴, Forman L⁵, Verna E⁶, Yu L⁷, Rahimi R⁸, Schwarz K⁹, Eksteen B¹⁰, Pratt D¹¹, **Boyer JL**¹², Assis D¹², Bowlus C¹³. Primary Sclerosing Cholangitis Is Not Rare Among Blacks in a Multicenter North American Consortium. Clin Gastroenterol Hepatol. 2018 Apr;16(4):591-593. doi: 10.1016/j.cgh.2017.10.028. Epub 2017 Nov 2.
467. **Boyer JL**. OST α -OST β Guards the Ileal Enterocyte From the Accumulation of Toxic Levels of Bile Acids.(editorial).Cell Mol Gastroenterol Hepatol. 2018 Feb 10;5(4):649-650.PMID:29713669
468. Gurung A, Assis DN, McCarty T, Mitchell KA, **Boyer JL**, Jain D.Histological features of autoimmune hepatitis: a critical appraisal. Hum Pathol. 2018 Jul 21. pii: S0046-8177(18)30281-8. doi: 10.1016/j.humpath.2018.07.014. [Epub ahead of print]. PMID:30041025
469. Pan Q, Zhang X, Zhang L, Cheng Y, Zhao N, Li F, Zhou X, Chen S, Li J, Xu S, Huang D, Chen Y, Li L, Wang H, Chen W, Cai SY, **Boyer JL**, Chai J. Solute Carrier Organic Anion Transporter Family Member 3A1 Is a Bile Acid Efflux Transporter in Cholestasis. Gastroenterology. 2018 Jul 29. pii: S0016-5085(18)34819-4. doi: 10.1053/j.gastro.2018.07.031. [Epub ahead of print]. PMID:30063921.
470. Jiang Y, Huang Y, Cai S, Song Y, **Boyer JL**, Zhang K, Gao L, Zhao J, Huang W, Liang G, Liangpunsakul S, Wang L H19 Is Expressed in Hybrid Hepatocyte Nuclear Factor 4 α + Periportal Hepatocytes but Not Cytokeratin 19+ Cholangiocytes in Cholestatic Livers.Hepatol Commun. 2018 Sep 24;2(11):1356-1368. doi: 10.1002/hep4.1252. eCollection 2018 Nov. PMID:30411082
471. McDonald GB, Freston JW, **Boyer JL**, DeLeve LD. Liver complications following treatment of hematologic malignancy with anti-cd22-calicheamicin (Inotuzumab Ozogamicin). Hepatology. 2018. Aug 18. doi: 10.1002/hep.30222. [Epub ahead of print].PMID:30120894
472. Cai SY, **Boyer JL**. Bile Infarcts - new insights into the pathogenesis of obstructive cholestasis (editorial). Hepatology.69:473-475,2019. PMID: 30251326
473. Soroka CJ, Assis DN, Boyer JL. Chapter 24. Patient -Derived Organoids from Human Bile: An In Vitro Method to Study Cholangioipathies. Methods Mol Biol. 2019;1981:363-372. PMID:31016667.
474. Soroka CJ, Assis DN, Alrabadi LS, Roberts S, Cusack L, Jaffe AB, **Boyer JL**.Bile-Derived Organoids From Patients With Primary Sclerosing Cholangitis Recapitulate Their Inflammatory Immune Profile. Hepatology. May,2018 PMID:30561836
475. **Boyer JL**.Harold J. Fallon, M.D. (1931-2018). Hepatology. 2019 May;69(5):2308-2309. PMID: 30811607
476. Lynch KD, Chapman RW, Keshav S, Montano-Loza AJ, Mason AL, Kremer AE, Vetter M, de Krijger M, Ponsioen CY, Trivedi P, Hirschfield G, Schramm C, Liu CH, Bowlus CL, Estes DJ, Pratt D, Hedin C, Bergquist A, de Vries AC, Janneke van der Woude C, Yu L, Assis DN, **Boyer J**, Ytting H, Hallibasic E, Trauner M, Marschall HU, Daretti LM, Marzioni M, Yimam KK, Perin N, Floreani A, Beretta-Piccoli BT, Rogers JK; International Primary Sclerosing Cholangitis Study Group

(IPSCSG), Levy C. Effects of Vedolizumab in Patients with Primary Sclerosing Cholangitis and Inflammatory Bowel Diseases. Clin Gastroenterol Hepatol. 2020 Jan;18(1):179-187.e6. PMID:31100458.

477. Shetty S, **Boyer JL**. Bile acid metabolism and T cell responses in cholangiopathy: Not one-way traffic. J Hepatol. 2019 Oct;71(4):657-659. PMID:31447221

478. Gao E, Cheema H, Waheed N, Mushtaq I, Erden N, Nelson-Williams C, Jain D, Soroka CJ, **Boyer JL**, Khalil Y, Clayton PT, Mistry PK, Lifton RP, Vilarinho S. OST α deficiency: A disorder with cholestasis, liver fibrosis and congenital diarrhea. Hepatology. 2020 May;71(5):1879-1882. PMID: 31863603

479. Cai SY, Ge M, Mennone A, Hoque R, Ouyang X, **Boyer JL**. Inflammasome Is Activated in the Liver of Cholestatic Patients and Aggravates Hepatic Injury in Bile Duct-Ligated Mouse. Cell Mol Gastroenterol Hepatol 2020;9(4):679-688. PMID: 31887435

480. A Positive Feedback Loop of TET3 and TGF- β 1 Promotes Liver Fibrosis. Xu Y, Sun X, Zhang R, Cao T, Cai SY, **Boyer JL**, Zhang X, Li D, Huang Y. Cell Rep. 2020 Feb 4;30(5):1310-1318.e5. doi: 10.1016/j.celrep.2019.12.092. PMID: 32023451

481. Ghonem NS, Auclair AM, Hemme CL, Gallucci GM, de la Rosa Rodriguez R, Boyer JL, Assis DN. Fenofibrate Improves Liver Function and Reduces the Toxicity of the Bile Acid Pool in Patients With Primary Biliary Cholangitis and Primary Sclerosing Cholangitis Who Are Partial Responders to Ursodiol. Clin Ther. 2020. Dec;108(6):1213-1223.. PMID: 32480421

482. Shi-Ying Cai¹, Dongke Yu², Carol J Soroka², Jing Wang², James L Boyer. Hepatic NFAT signaling regulates the expression of inflammatory cytokines in cholestasis.³ J. Hepatology. 2021 Mar;74(3):550-559. PMID: 33039404

483. James Lorenzen Boyer¹, Carol Jean Soroka² Bile formation and secretion: An update J. Hepatology. 2021 Jul;75(1):190-201. PMID: 33617926

484. Soroka CJ, Roberts SJ, Boyer JL, Assis DN. Role of Biliary Organoids in Cholestasis Research and Regenerative Medicine. Semin Liver Dis. 2021 May;41(2):206-212. PMID: 33957696

485. Cumali Efe, Renumathy Dhanasekaran, Craig Lammert, Berat Ebik, Fatima Higuera-de la Tijera, Costica Aloman, Ali Rıza Çalışkan, Mirta Peralta, Alessio Gerussi, Hatf Massoumi, Andreea M. Catana, Murat Torgutalp, Tugrul Purnak, Cristina Rigamonti, Andres Jose Gomez Aldana, Nidah Khakoo, Hüseyin Kacmaz, Leyla Nazal, Shalom Frager, Nurhan Demir, Kader Irak, Zeynep Melekoğlu Ellik, Yasemin Balaban, Kadri Atay, Fatih Eren, Laura Cristoferi, Ersin Batıbay, Álvaro Urzua, Romee Snijders, Murat Kızılcı, Murat Akyıldız, Nazım Ekin, Rotonya M. Carr, Murat Harputluoğlu, Ibrahim Hatemi, MaHenuel Mendizabal, Marcelo Silva, Ramazan Idilman, Marina Silveira, Joost P.H. Drenth, David N. Assis, Einar Björnsson, James L. Boyer, Pietro Invernizzi, Cynthia Levy, Thomas D. Schiano, Ezequiel Ridruejo, Staffan Wahlin. Outcome of COVID-19 in Patients with Autoimmune Hepatitis. Hepatology. 73: June 2021, 2099-2109.

486. Cai SY, Boyer JL. The role of bile acids in cholestatic liver injury. Ann Transl Med. 2021 Apr;9(8):737. doi: .21037/atm-20-5110. PMID: 33987435

487. Li B, Cai SY, Boyer JL. The role of the retinoid receptor, RAR/RXR heterodimer, in liver physiology. *Biochim Biophys Acta Mol Basis Dis.* 2021 May 1;1867(5):166085. doi: 10.1016/j.bbadis.2021.PMID: 33497820
488. Stieger B, Boyer JL. In Memoriam: Peter J. Meier (1947-2021). *J Hepatol.* 2021 Jul 28;S0168278(21)01889 .PMID: 34332756.
489. Gallucci GM, Trottier J, Hemme C, Assis DN, **Boyer JL**, Barbier O, Ghonem NS. Adjunct Fenofibrate Up-regulates Bile Acid Glucuronidation and Improves Treatment Response For Patients With Cholestasis. *Hepatol Commun.* 2021 Dec;5(12):2035-2051. doi: 10.1002/hep4.1787. Epub 2021 Aug 27. PMID: 34558841
490. Efe C, Lammert C, Taşçılar K, Dhanasekaran R, Ebik B, Higuera-de la Tijera F, Çalışkan AR, Peralta M, Gerussi A, Massoumi H, Catana AM, Purnak T, Rigamonti C, Aldana AJG, Khakoo N, Nazal L, Frager S, Demir N, Irak K, Melekoğlu-Ellik Z, Kacmaz H, Balaban Y, Atay K, Eren F, Alvares-da-Silva MR, Cristofori L, Urzua Á, Eşkazan T, Magro B, Snijders R, Barutçu S, Lytvyak E, Zazueta GM, Demirezer-Bolat A, Aydın M, Heurgue-Berlot A, De Martin E, Ekin N, Yıldırım S, Yavuz A, Bıyık M, Narro GC, Kıyıcı M, Akyıldız M, Kahramanoğlu-Aksoy E, Vincent M, Carr RM, Günşar F, Reyes EC, Harputluoğlu M, Aloman C, Gatselis NK, Üstündağ Y, Brahm J, Vargas NCE, Güzelbulut F, Garcia SR, Aguirre J, Anders M, Ratusnu N, Hatemi I, Mendizabal M, Floreani A, Fagiuoli S, Silva M, Idilman R, Satapathy SK, Silveira M, Drenth JPH, Dalekos GN, N Assis D, Björnsson E, **Boyer JL**, Yoshida EM, Invernizzi P, Levy C, Montano-Loza AJ, Schiano TD, Ridruejo E, Wahlin S. Effects of immunosuppressive drugs on COVID-19 severity in patients with autoimmune hepatitis. *Liver Int.* 42:607-614, 2021 PMID: 34846800
491. Qiong Pan¹, Gang Luo¹, Jiaquan Qu¹, Sheng Chen², Xiaoxun Zhang¹, Nan Zhao¹, Jingjing Ding¹, Hong Yang¹, Mingqiao Li¹, Ling Li¹, Ying Cheng¹, Xuan Li¹, Qiaoling Xie¹, Qiao Li¹, Xueqian Zhou¹, Huiling Zou³, Shijun Fan⁴, Lingyun Zou⁵, Wei Liu⁶, Guohong Deng⁷, Shi-Ying Cai⁸, **James L Boyer**⁸, Jin Chai¹. A homozygous R148W mutation in Semaphorin 7A causes progressive familial intrahepatic cholestasis. *EMBO Mol Med.* 2021 Nov 8;13(11):e14563. PMID: 345858
492. Alrabadi LS, Dutton A, Rabiee A, Roberts SJ, Deng Y, Cusack L, Silveira MG, Ciarleglio M, Bucala R, Sinha R, **Boyer JL**, Assis DN. Mindfulness-based stress reduction may decrease stress, disease activity, and inflammatory cytokine levels in patients with autoimmune hepatitis. *JHEP Rep.* 2022 Feb 18;4(5):100450. PMID: 35434588
493. Gallucci GM, Alsuwayt B, Auclair AM, **Boyer JL**, Assis DN, Ghonem NS. Fenofibrate Downregulates NF- κ B Signaling to Inhibit Pro-inflammatory Cytokine Secretion in Human THP-1 Macrophages and During Primary Biliary Cholangitis. *Inflammation* 2022 Jul 15. PubMed ID: 35838934
494. Nan Zhao¹, Xiaoxun Zhang¹, Jingjing Ding¹, Qiong Pan¹, Ming-Hua Zheng², Wen-Yue Liu³, Jiaquan Qu¹, Mingqiao Li¹, Ling Li¹, Ying Cheng¹, Ying Peng¹, Qiaoling Xie¹, Qinglin Wei¹, Qiao Li¹, Lingyun Zou^{4,5}, Xinshou Ouyang⁶, Shi-Ying Cai⁷, **James L Boyer**⁷, Jin Chai¹. PMID: SEMA7AR148W mutation promotes lipid accumulation and NAFLD progression via increased localization on the hepatocyte surface. *JCI Insight* 2022 Aug 8;7(15):e154113. 35938531
495. Javitt NB, **Boyer JL**. Letter to the Editor: On the mechanisms of biliary flux. *Hepatology.* 2022 Feb;75(2):492-493. Epub 2021 Dec 15. PMID: 34543482

496. Li X, Li Y, Xiao J, Wang H, Guo Y, Mao X, Shi P, Hou Y, Zhang X, Zhao N, Zheng M, He Y, J, Tan. Liao M, Li L, Peng Y, Li X, Pan Q, Xie Q, Li Q, Li J, Li Y, Chen Z, Huang Y, Assis DN, Cai.SY, **Boyer JL**, Huang X, Tang CE, Liu X, Peng S, Chai J . Unique DUOX2⁺ACE2⁺ small cholangiocytes are pathogenic targets for primary biliary cholangitis.*Nat Commun.* 2023 9;14(1):29.PMID: 36759512.
497. Zhang L, Pan Q, Zhang L, Xia H, Liao J, Zhang X, Zhao N, Xie Q, Liao M, Tan Y, Li Q, Zhu J, Li L, Fan S, Li J, Zhang C, Cai SY, **Boyer JL**, Chai J. Runt-related transcription factor-1 ameliorates bile acid-induced hepatic inflammation in cholestasis through JAK/STAT3 signaling. *Hepatology.* 2023 Jan 3. Online ahead of print.PMID: 36647589.
498. Pan Q, Zhu G, Xu Z, Zhu J, Ouyang J, Tong Y, Zhao N, Zhang X, Cheng Y, Zhang L, Tan Y, Li J, Zhang C, Chen W, Cai SY, **Boyer JL**, Chai. Organic Anion Transporting Polypeptide (OATP) 1B3 is a Significant Transporter for Hepatic Uptake of Conjugated Bile Acids in Humans. *J. Cell Mol Gastroenterol Hepatol.* 2023;16(2):223-242. PMID: 37146714.
499. **Boyer JL** Bile Acid Induced Inflammation and the Role of β -Catenin. *Cell Mol Gastroenterol Hepatol.* 2023;16(6):1033. Epub 2023 Sep 7.PMID: 37690462

ABSTRACTS AND PRESENTATIONS

1. Boyer JL, Maddrey WC, Basu AK, Iber FL. The source of albumin in the thoracic duct lymph of patients with portal hypertension and ascites. Clin Res 16:528, 1968 (abstract). (Presented at the Eastern Sectional Meeting of American Federation for Clinical Research, December 1968).
2. Maddrey WC, Basu AK, Boyer JL, Sen NN, Thomas J, Iber FL. The relationship of plasma volume and red cell mass to portal hypertension of various etiologies. Gastroenterol 56:413, 1969.
3. Boyer JL, Scheig R, Klatskin G. The effect of bile salts on the hepatic metabolism of BSP. Gastroenterology 56:402, 1969 (abstract). (Presented at the American Association for the Study of Liver Diseases, October 31, 1968).
4. Boyer JL, Klatskin G. The prognostic significance of subacute hepatic necrosis in acute viral hepatitis. Clin Res 17:298, 1969 (abstract). (Presented at the National Meeting of the American Federation for Clinical Research, April 1, 1969).
5. Boyer JL, Scheig R. The significance of chain length on the hepatic metabolism of fatty acids. Clin Res 17:298, (abstract), 1969.
6. Boyer JL. Hepatitis in the drug user. (Presented at a symposium on drug abuse. Regional Meeting of the American College of Physicians, New Haven, CT., September 26, 1969).
7. Boyer JL, Fessel M, Klatskin G. Non-dependence of bile secretory pressure on biliary bile salt excretion. Gastroenterology 58:300, 1970 (abstract). (Presented at the American Association for the Study of Liver Diseases, October 30, 1969).
8. Boyer JL, and Klatskin G. Evidence for a non-bile salt dependent fraction of canalicular bile flow. Clin Res 18:377, 1970 (abstract). (Presented at American Federation of Clinical Research, May 1970).
9. Boyer JL, Hales M, Klatskin G. Intrahepatic portal vein thrombosis - A primary cause of portal hypertension. Gastroenterology 58:1025, 1970 (abstract). (Presented at the Annual Meeting of the American Gastroenterology Association, May 1970).
10. Boyer JL. Inhibition of bile flow and hepatic ATPase by Scillaren. (Presented at the American Association for the Study of Liver Diseases, November 5, 1970).
11. Woods JS, Boyer JL, Handschumacher RE. Hepatic homeostasis of plasma L-asparaginase. Fed Proc 30:627, 1971.
12. Boyer JL. The effect of chronic ethanol feeding on bile consumption in the rat. Clin Res 19:388, 1971.
13. Boyer JL. Presentation: Panel on chronic active hepatitis - AGA, Miami, Florida, May 14, 1971.
14. Boyer JL. The biliary excretion of the organic anion, sulfobromophthalein (BSP) and phenoldibromophthalein (DESP) by *Squalus acanthius*. Bull Mt Desert Island Biol Lab 11:2-3, 1971.
15. Boyer JL. A comparative study of the composition of hepatic and gallbladder bile in *Squalus acanthius*. Bull Mt Desert Island Biol Lab 11:4-5, 1971.
16. Maddrey WC, Boyer JL. The acute and chronic effects of ethanol on bile secretion in the rat. Gastroenterology 62:186, 1972. (Presented at the annual meeting of the American Association for the Study of Liver Diseases, November 4, 1971).
17. Boyer JL. Presentation: Symposium on viral hepatitis and blood transfusion, University of California, San Francisco, March 25, 1972.
18. Kneapler D, Boyer JL. Bile flow and its effect on hepatic excretion of sulfobromophthalein (BSP). Clin Res 20:457, 1972.
19. Boyer JL, Maddrey WC, Bloomer JB, Tilson MD, Wright H. Intermittent secretion of lithogenic bile by the liver of patients with previous gallstones. Gastroenterology 62:868, 1972. (Presented at the annual meeting of the American Gastroenterology Association, May 1972).
20. Tilson MD, Boyer JL, Wright HK. Induction of active bile salt transport in jejunal remnants after ileal resection. Surg Forum 23:359, 1972.

21. Bloomer J, Boyer JL, Klatskin G. Inhibition of hepatic bilirubin clearance during sodium dehydrocholate (decholin) cholerisis in man. *Gastroenterology* 64:176, 1973.
22. Guzelian P, Boyer JL. Reabsorption of glucose from bile - a possible explanation for the blood-bile glucose gradient. *Gastroenterology* 64:161, 1973. (Presented at the annual meeting of the American Association for the Study of Liver Diseases, November 1972).
23. Boyer JL. Workshop presentation - Chronic hepatitis. Annual Meeting of the American College of Physicians, April 1973.
24. Boyer JL, Bloomer JR, Maddrey WC. Estimates of canalicular bile secretion and its determinants in man utilizing the biliary clearance of 14-C manitol. *J Clin Invest* 52:11a, 1973. (Presented at joint meeting of AFCR and ASCI, April 29, 1973).
25. Bagheri SA, Palmer RH, Boyer JL, Hunter RL. Production of peliosis hepatis in mice by the oral administration of sodium lithocholate. *Gastroenterology* 64:878, 1973.
26. Bloomer JR, Boyer JL. Phenobarbital therapy in cholestatic liver disease. *Gastroenterology* 64:702, 1973. (Presented at annual meeting of the American Gastroenterological Association, May 1973).
27. Russell RM, Bagheri SA, Boyer JL. The hepatic lesion of hypervitaminosis A - A unique pattern of hepatic fibrosis with portal hypertension and ascites. *Gastroenterology* 65:568. (Presented at the annual meeting of the American Association for the Study of Liver Disease), 1973.
28. Boyer JL, Bend JR, Pohl B, Schwarz J, Smith N. Effects of phenobarbital on bile secretion, glutathione-S-aryltransferase activity and hepatic mixed function oxidase (MFO) pathways in the small skate, *Raja erinacea*. *Bull Mt Desert Island Biol Lab* 13: #4, 14-15, 1973.
29. Boyer JL, Schwarz J, Smith N. Selective hepatic uptake and biliary secretion of organic anions in elasmobranchs (*Squalus acanthius* and *Raja erinacea*). *Bull Mt Desert Island Biol Lab* 13: #5, 15-16, 1973.
30. Boyer JL, Silva P, Schwarz J, Smith N. Bile secretion and composition in the little skate, *Raja erinacea*. *Bull. Mt Desert Island Biol Lab* 13: #6, 16-17, 1973.
31. Bagheri SA, Boyer JL. Peliosis hepatis with intraperitoneal hemorrhage, hepatic failure and death in patients receiving androgenic anabolic steroids. *Gastroenterology* 65:526, 1973.
32. Morley CGD, Ho H, Boyer JL. The regulations of ornithine decarboxylase (ODC) in mouse liver. #324 in *Federation Proceedings*, (presented), 1974.
33. Layden T, Boyer JL. Thyroid hormone - an important determinant of bile salt independent flow (BSIF) and Na⁺, K⁺ -ATPase activity in bile canalicular enriched plasma membranes. *Clin Res* 22:363, 1974 (presented AFCR, May 1974).
34. Boyer JL, Reno D, Layden T, Schwarz J. The role of bile canalicular membrane enzymes, Na⁺, K⁺ -ATPase and sodium transport in secretion of bile salt independent canalicular flow (BSIF). *J Clin Invest* 53:9-10A, 1974.
35. Bagheri SA, Barbato TL, Ferguson DJ, Boyer JL. The development of Laennec's cirrhosis in asymptomatic patients with small bowel bypass for massive obesity. *Gastroenterol* 66:878, 1974.
36. Boyer JL, Reno D, Layden T. Bile canalicular membrane Na⁺, K⁺ ATPase - The relationship of enzyme activity to the secretion of bile salt independent canalicular flow. (Presented at the International Association for the Study of Liver Diseases, Acapulco, October 1974).
37. Boyer JL, Schwarz J, Smith N. Preliminary studies of bile secretion in the isolated perfused liver of the small skate, *Raja erinacea*. *Bull Mt Desert Island Biol Lab* 14, 1974.
38. Layden T, Schwarz J, and Boyer JL. Scanning electron microscopic (SEM) evaluation of models of cholestasis-lithocholate produces a distinct injury to bile canalicular membranes. *Gastroenterol* 67:#4, 806, 1974. (Presented at AASLD meeting, October 1974).
39. Nemchausky B, Reno D, Boyer JL. Synthetic and naturally occurring bile salts -modifiers of ATPase activity in canalicular enriched liver plasma membranes (LPM). *Clin Res* 23:254, 1975. (Presented at AFCR, May 1975).
40. Riely CA, Bloomer JR, Boyer JL. Phenobarbital induced changes in liver plasma membrane phosphatase

- enzymes. Clin Res 23:255, 1975.
41. Layden T, Schwarz J, Boyer JL. Effects of thyroid hormone (THY) on canalicular enriched liver plasma membrane (LPM) phospholipids (PL) and proteins during changes in bile secretion and LPM ATPase activity. Clin Res 23:394, 1975.
 42. Boyer JL, Schwarz J, Smith N. Selective hepatic uptake and biliary excretion of organic anions in elasmobranchs. Gastroenterol April 1975. (Presented at AGA meeting, May 1975).
 43. Winter SL, Kraft SC, Boyer JL. Validity of antimitochondrial antibody (AMA) test in primary biliary cirrhosis (PBC): Studies of reagent variables. Gastroenterol April 1975. (Presented at AASLD meeting, May 1975).
 44. Nemchausky B, Layden T, Boyer JL. Alteration in canalicular membrane structure and lipid composition during bile salt induced cholestasis in the rat. (Presented at GSTAAD Symposium, Switzerland, Sept. 2-4, 1975).
 45. Bagheri SA, Boyer JL. Liver dysfunction with steroid therapy. Mod Med pg. 162, April 1975.
 46. Schneider JF, Schoeller DA, Nemchausky BA, Bolt M, Boyer JL, Rosenberg IH. Low serum 25-hydroxyvitamin D levels (25-OHD) and skeletal demineralization in patients with primary biliary cirrhosis (PBC): Therapeutic response to oral 25-OHD after failure of oral and parenteral vitamin D. Gastroenterol 69:878, 1975. (Presented at AASLD meetings in Chicago, November 1975).
 47. Layden T, Boyer JL. Bile salt reversal of tauroolithocholate (TLC) cholestasis: Effect on canalicular membrane permeability as determined by bile plasma 3H-inulin and 14C-erythritol ratios and scanning electron microscopy (SEM). Gastroenterol 69:840, 1975. (Presented at AASLD meetings in Chicago, November 1975).
 48. Morley CGD, Boyer JL. A liver growth stimulating factor in serum from rats with thioacetamide (TA) induced hepatic necrosis. Clin Res 23:519, 1975. (Presented at Central Society for Clinical Research meetings, November 1975).
 49. Boyer JL, Root M. Chlorpromazine metabolites - inhibitors of Na⁺, K⁺ -ATPase in liver plasma membranes (LPM) enriched in bile canaliculi. Clin Res 14:281A, 1976.
 50. Boyer JL, Itabashi M, Nemchausky B, Layden T, Hruban Z, Schwarz J. Dehydrocholate (DHC) cholestasis produces alterations in hepatocyte morphology that resemble cholestasis. Clin Res 14:431A, 1976.
 51. Nemchausky BA, Boyer JL, Layden TJ, Schwarz J. In vivo effects of bile acids on canalicular membrane enzymes, lipid composition and 3-dimensional structure. Gastroenterol 70:131A, 1976.
 52. Tavoloni N, Reed JS, Boyer JL. Chlorpromazine (CPZ) inhibits bile acid independent flow (BAIF) in the isolated perfused rat liver (IPRL). Gastroenterol 71:931, 1976.
 53. Layden TJ, Schwarz J, Boyer JL. Quantitation of scanning electron microscopic (SEM) changes in bile canalicular membrane (BC) produced by bile acid cholestasis. Gastroenterol 71:917, 1976.
 54. Baker AL, Wood RAB, Boyer JL, and Moossa AR. Bile acids modify bile acid independent canalicular flow and biliary permeability in the Rhesus monkey. Gastroenterol 71:895, 1976. (Presented at the AASLD meetings, Chicago, November 1976).
 55. Reed JS, Smith ND, Tavoloni N, Boyer JL. Bile secretory function in isolated perfused liver of the small skate, Raja erinacea II. Bull Mt Desert Island Biol Lab 16:83-84, 1976.
 56. Levin DM, Baker AL, Rochman H, Boyer JL. Alcoholic patients with chronic abnormalities in liver function harbor unsuspected non-alcoholic liver diseases, detectable only by liver biopsy. Gastroenterol 72:1172, 1977.
 57. Baker AK, Elson CO, Driscoll RH, Boyer JL. Liver failure with alcoholic-like hyaline after jejunoileal bypass - Reversed by parenteral nutrition and reanastomosis. Gastroenterology 72:1170, 1977.
 58. Reed JS, Meredith SC, Nemchausky BA, Rosenberg IH, Boyer JL. Assessment of morphologic response to 25-OH vitamin D (25-OHD) therapy in patients with primary biliary cirrhosis (PBC). (Presented at AASLD plenary session, Toronto, May 1977). Gastroenterology 72:1181, 1977.
 59. Tavoloni N, Reed JS, Rezai-Zadeh K, Boyer JL. Changes in regional distribution of hepatic blood flow

- (RDHBF): Influence on bile acid independent bile flow (BAIF). *Gastroenterology* 73:1249, 1977.
60. Hruban Z, Tavoloni H, Reed JS, Boyer JL. Chlorpromazine (CPZ) alters hepatic membrane ultrastructure during inhibition of bile acid independent flow (BAIF) in the isolated perfused rat liver (IPRL). (Presented at AASLD meetings, Chicago, November 1977). *Gastroenterology* 73:1249, 1977.
 61. Layden TJ, Boyer JL. Evidence that bile acids are a determinant of the lobular gradient for canalicular bile secretion. (Presented at AASLD meetings, Chicago, November 1977). *Gastroenterology* 73:1231, 1977.
 62. Reed JS, Smith ND, Boyer JL. Bile secretory function in isolated perfused liver of the little skate, *Rajaperinacea IV*. Studies of intercellular junctional permeability. *Bull Mt Desert Island Biol Lab* 17:58-59, 1977.
 63. Reed JS, Smith ND, Boyer JL. Bile secretory function in isolated perfused liver of the little skate, *Rajaperinacea IV*. Studies of intercellular junctional permeability. *Bull Mt Desert Island Biol Lab* 17:58-59, 1977.
 64. Layden TJ, Elias E, Boyer JL. Bile acids increase the permeability of junctional complexes and move fluid into bile through paracellular pathways. *Clin Res* 26:498A, 1978. (Presented, National Meeting, AFCR-ASCI, May 1978).
 65. Elias E, Boyer JL. Taurodehydrocholate (TDHC) choleresis increase low molecular weight proteins in bile and the penetration of ionic lanthanum into the bile canalicular "tight junctions" in the rat. *Clin Res* 26:317A, 1978. (Presented, National Meeting, AFCR, May 1978).
 66. Haines N, Baker A, Glasgow S, Ferguson D, Landau R, Boyer JL. A prospective study of prognostic indicators of liver disease following jejunoileal bypass (JLB). *Gastroenterology* 74:1170, 1978. (Presented, National Meeting, AGA/AASLD, May 1978).
 67. Blitzner B, Boyer JL. Cytochemical localization of Na⁺, K⁺ -ATPase in rat hepatocytes. *Gastroenterology* 74:1169, 1978. (Presented, National Meeting, AGA/AASLD, May 1978).
 68. Tavoloni N, Nemchausky B, and Boyer JL. Metabolism affects the hepatic toxicity of chlorpromazine (CPZ) in the isolated perfused rat liver (IPRL). *Gastroenterology* 75:990, 1978.
 69. Elias E, Boyer JL. A lobular gradient for hepatocyte junction permeability during physiologic changes in bile secretion. *Gastroenterology* 75:962, 1979.
 70. Elias E, Boyer JL. Gelation and syneresis in rat liver extract - Evidence for involvement of contractile proteins. *Clin Res* 27:265A, 1979. (Presented, National Meetings, AFCR/ASCI 1979).
 71. Elias E, Boyer JL. Chlorpromazine and its metabolites alter gelation and polymerization of actin. *Gastroenterology* 76:1279A, 1979. (Presented, National Meeting, AGA/AASLD 1979).
 72. Elias E, Hruban Z, Wade J, Boyer JL. Increased permeability of hepatocyte junctional complexes - A microfilament mediated mechanism of cholestasis. *Clin Res* 27:454A, 1979. (Presented, National Meetings, AFCR/ASCI, 1979).
 73. Forrest Jr JN, Boyer JL, Ross B, Ardito TA, Rieck D, Murdaugh HV, Wade JB. Structure of tight junctions in chloride-secreting epithelia in the rectal gland of *Squalus Acanthias*. *Bull Mt Desert Island Biol Lab* 14:105-108, 1979.
 74. Riely CA, Fine PO, Boyer JL. Progressively rising serum bile acids - a common effect of parenteral nutrition. *Gastroenterology* 77:A34, 1979.
 75. Boyer JL, Wade JB. Pigmented sinusoidal lining cells in elasmobranch liver. *Bull Mt Desert Island Biol Lab* 19:95-96, 1979.
 76. Blitzner BL, Ratoosh SL, Boyer JL. Inhibitors of Na⁺ -coupled ion transport block taurocholate uptake by isolated rat hepatocytes. *Clin Res* 28:273A, 1980.
 77. Lagarde S, Elias E, Wade J, and Boyer JL. Hepatocyte tight junctions - a quantitative analysis of strand number and depth. *Gastroenterology* 78:1311, 1980.
 78. Boyer JL. Letter to the Editor, *Gastroenterology* January 1980.
 79. Elias E, Boyer JL. Gelation and syneresis in rat liver extract - evidence for involvement of contractile proteins. IN: *Communications of Liver Cells*, H Popper, L Bianchi, F Gudat, W Reutter, eds., MTP

- Press Ltd., Lancaster, England, 1980, pp. 397. Proceedings of Falk Symposium #27, on the occasion of the 5th International Congress of Liver Diseases, Basel, Switzerland, October 5-7, 1979.
80. Reuben A, Howell K, Boyer JL. Studies on the relationship between mixed lipid biliary micelles, pigment and protein in bile: Physicochemical interactions in bile. Presented at VI Bile Acid Symposium, Freiburg, Germany, October 1980. Bile Acids and Lipids, MTP Press Ltd., pp. 153-156, 1981.
 81. Roll J, Boyer JL, Klatskin G. Long-term survival of asymptomatic and symptomatic patients with primary biliary cirrhosis. *Gastroenterology* 79(5):1050, November 1980.
 82. Reuben A, Howell KE, Boyer JL. Bile salt lipid micelles do not form complexes with pigments or proteins in bile under physiological conditions. *Gastroenterology* 79(5):1048, November 1980.
 83. Boyer JL, Lagarde S, Wade JB. Structural heterogeneity in strand number and depth of tight junctions in central and portal zones of liver in the small skate. *Bull Mt Desert Island Biol Lab* 20, 1980.
 84. Fisher RL, Anderson D, Boyer JL, Ishak K, Klatskin G, Lachin J, Phillips MJ. Abnormal hepatic morphology in patients with cholelithiasis - Light (LM) and electron (EM) microscopic interpretation. *Gastroenterology* May 1981.
 85. Fisher RL, Anderson D, Boyer JL, Ishak K, Klatskin G, Lachin J, Phillips MJ. A prospective morphologic evaluation of hepatic toxicity of chenodeoxycholic acid (CDCA) in patients with cholelithiasis. *Gastroenterology* May 1981.
 86. Easter DW, Wade JW, Boyer JL. Hepatocyte tight junction integrity in normal and bile duct ligated rats. *Gastroenterology* May 1981.
 87. Boyer JL, Lagard S, Ng OC, Groszmann R. Enhanced biliary regurgitation of 14C-sucrose (14C-S) and lanthanum (La⁺⁺⁺) in ethinyl estradiol (EE) treated rats following retrograde bile duct infusions - a possible mechanism for intrahepatic cholestasis. *Hepatology* 1:298, 1982(A). (Presented at Annual Meeting AASLD, November 1981).
 88. Duffy MC, Blitzer BL, Boyer JL. Direct determination of the driving forces for taurocholate (TC) uptake into liver plasma membrane (LPM) vesicles. *Hepatology* 1:507, 1981(A). (Presented at Annual Meeting AASLD, November 1981).
 89. Weisinger R, Zacks C, Smith N, and Boyer JL. Kinetics of 35S-sulfobromophthalein uptake from albumin solutions in elasmobranch liver. *Bull Mt Desert Island Biol Lab* 1981.
 90. Zacks CM, Reed JS, Weisinger RJ, Boyer JL. Differences in the determinants of 35S-sulfobromophthalein (35S-BSP) and 14C-taurocholate (14C-Tc) clearance in the isolated perfused skate liver. *Bull Mt Desert Island Biol Lab* 1981.
 91. Easter D, Ng OC, Wade JB, and Boyer JL. Quantitative assessment of hepatocyte tight junction (TJ) in models of cholestasis in the rat. *Hepatology* 2, 1982. (Presented IASL, Hong Kong, Feb 12, 1982).
 92. Gautam A, Weiss JS, Lauff J, Jatlow P, Boyer JL, Seligson D. Delta bilirubin (δ -bil) - a significant, albumin-bound fraction of serum bilirubin in hepatobiliary diseases. *Clin Res* 30, 1982. (Presented at Joint Session of ASCI/AFCR Meetings, May 10, 1982).
 93. Gautam A, Boyer JL. Fasting (FA) for 24 hours increases bile acid (BA) output and 14C-sucrose clearance (14C-S) in acute bile fistula rats. *Gastroenterology* 82:1228, 1982(A).
 94. Reuben A, Allen RM, Boyer JL. Intrahepatic sources of "biliary-like" bile acid (BA) - phospholipid (PL) - cholesterol (CH) micelles. *Gastroenterology* 82:1241, 1982(A). (Presented at AASLD Poster Session May 19, 1982).
 95. Weisinger R, Zacks C, Smith N, Boyer JL. Hepatic uptake of 35S-sulfobromophthalein (BSP) from albumin solutions in elasmobranchs. *Gastroenterology* 82:1249, 1982. (Presented at AASLD Poster Session, May 19, 1982).
 96. Boyer JL, Roll J, Barry D, Klatskin G. Determination of risk and survival estimates in patients with primary biliary cirrhosis (PBC). *Hepatology* Sept/Oct, 1982. (Presented at the Annual Meeting, AASLD, November 1982).
 97. Gautam A, Seligson H, Okuda K, Boyer JL, Seligson D. Experiments concerning the origin of bilirubin

- (BR) bound covalently to albumin (BIL-ALB). *Hepatology* Sept/Oct, 1982. (Presented at the Annual Meeting, AASLD, November 1982).
98. Lorenzini I, Ilter T, Meier P, Boyer JL. Taurochenodeoxycholic acid (TCDA) stimulates hepatic uptake of 3H-methoxyinulin (3HMI) into membrane bound compartments. *Hepatology* Sept/Oct, 1982. (Presented at Annual Meeting, AASLD, November 1982).
 99. Meier PJ, Duffy MC, Boyer JL. Isolation of purified canalicular plasma membranes (cLPM) in high yield from rat liver. *Hepatology* Sept/Oct, 1982. (Presented at Annual Meeting, AASLD, November 1982).
 100. Karlaganis G, Boyer JL, Bradley SE. Evaluation of a sulfated bile alcohol in the bile of the small skate (*Raja erinacea*). *Mt Desert Island Biol Lab* 1982.
 101. Goos SO, Bradley S, and Boyer JL. The canalicular permeability barrier in the small skate (*Raja erinacea*). *Mt Desert Island Biol Lab* 1982.
 102. Zacks C, Boyer JL. Mechanisms of taurocholate uptake in the skate liver effects of sodium ion and albumin. *Mt Desert Island Biol Lab* 1982.
 103. Meier PJ, Boyer JL. The electrical membrane potential is a driving force for taurocholate (TC) excretion into bile canaliculi. *Hepatology* 3:860, 1983. (Presented at Annual Meeting, AASLD, November 1983).
 104. Meier PJ, Sztul E, Boyer JL. Secretory component (SC) is present in basolateral (b1LPM) but not in canalicular (cLPM) rat liver plasma membranes. *Hepatology* 3:860, 1983. (Presented at Annual Meeting AASLD, November 1983).
 105. Beswick DR, Klatskin G, Boyer JL. Prognostic determinants in asymptomatic primary biliary cirrhosis (PBC) - A heterogeneous disorder with normal survival. *Gastroenterology* 84:1104, 1983. (Presented at Annual AGA Meeting) May 1983.
 106. Ilter T, Ng OC, Boyer JL. A comparative study of bile acids on the biliary clearance of 3H-methoxy-inulin (3HMI) and 14C-sucrose (14CS) and canalicular membrane permeability. *Gastroenterology* 84:1194, 1983. (Presented at Annual Meeting, AGA, May 1983).
 107. Gordon ER, Meier PJ, Goresky C, Boyer JL. Characteristics and subcellular site of bilirubin diglucuronide formation in rat liver. *Gastroenterology* 84:1373, 1983. (Presented at Annual Meeting, AGA, May 1983).
 108. Boyer JL, Gautam A, Giebisch G, Graf J. Electrophysiologic demonstration of paracellular ion transport in bile formation of isolated rat hepatic secretory units. *J Physiol* 343:75P, 1983. (Presented at the Scientific Meeting of the Physiological Society, Cambridge, England) June 16-18, 1983.
 109. Brainard M, Gordon ER, Forrest JN, Boyer JL. The role of the adenylate cyclase - cyclic AMP system in bile secretion by the isolated skate liver. *The Bulletin Mt Desert Island Biological Lab* 23:71, 1983.
 110. Grossbard M, Boyer JL, Gordon ER. The secretion pattern of tetrapyrroles in the small skate (*Raja Erinacea*). *The Bulletin Mt Desert Island Biological Lab* 23:73.
 111. Gautam A, Weiss J, Lauff JJ, Gordon ER, Jatlow P, Seligson D, Boyer JL. Distribution of serum bilirubin (BR) conjugates in hepatobiliary diseases. *Hepatology* 4:1076, 1984. (Presented at Annual Meeting, AASLD, November 1984).
 112. Moseley RH, Meier PJ, Knickelbein R, Aronson PS, Boyer JL. Evidence for Na⁺ -H⁺ exchange in rat liver basolateral but not canalicular membrane vesicles. *Hepatology* 4:1040, 1984. (Presented at Annual Meeting, AASLD, November 1984).
 113. Smith D, Grossbard M, Boyer JL. Effect of albumin on the transport by isolated skate (*Raja Erinacea*) hepatocytes. *The Bulletin Mt Desert Island Biological Lab* 24:82, 1984.
 114. Henderson RM, Graf J, Boyer JL. Measurement of intracellular and intracanalicular pH in isolated rat hepatocyte couplets using microelectrodes. *Fed Proc* 44:3920, 1985. (Presented at FASEB, 1985).
 115. Podell DN, Hardin JA, Moseley RH, Boyer JL. The spectrum of antinuclear antibodies in primary biliary cirrhosis. *Clin Res* 33:511, 1985. (Presented at APCR, 1985).

116. Gautam A, Ng OC, Missal P, Graf J, Boyer JL. Rearrangement of canalicular membrane MgATPase in isolated rat hepatocyte couplets (IHC). *Gastroenterology* 88:1660, 1985. (Presented at AGA/AASLD Meetings, May 1985).
117. Boyer JL, Ng OC, Gautam A. Formation of canalicular spaces in isolated rat hepatocyte couplets (IRHC). *Clin Res* 33:602, 1985. (Presented at Plenary Session AAP, 1985).
118. Davis BH, Pratt BM, Boyer JL, Madri JA. Development of a serum assay of procollagen type I amino propeptide. *Gastroenterology* 88:1655, 1985. (Presented at Annual Meetings, AGA/AASLD, 1985).
119. Boyer JL, Graf J, Henderson RM. Microelectrode measurement of intracellular pH isolated rat hepatocytes: inhibition of recovery from acidification by reduction of external sodium or by amiloride. *J Physiol* 368: In press, 1985. (Presented at The Physiological Society, June 1985).
120. Ballatori N, Moseley RH, Boyer JL. Sodium gradient-dependent L-glutamate transport is localized to the canalicular domain of liver plasma membranes. *Hepatology* 5:950, 1985. (Presented at Annual Meeting, AASLD, November 1985).
121. Ballatori N, Jacob R, Boyer JL. Intrabiliary glutathione hydrolysis - a source of glutamate cyst(e)ine, and glycine in bile. *Hepatology* 5:951, 1985. (Presented at Annual Meeting, AASLD, November 1985).
122. Henderson RM, Graf J, Boyer JL. The effect of amiloride upon recovery from an intracellular acid load in isolated rat hepatocyte couplets in the absence of external bicarbonate. *Hepatology* 5:1016, 1985. (Presented at Annual Meeting, AASLD, November 1985).
123. Sztul E, Caplan M, Biemesderfer D, Barrett L, Kashgarian M, Boyer JL. Localization of Na⁺, K⁺-ATPASE α -subunit to the basolateral (BLPM) but not canalicular membrane (CLPM) of rat hepatocytes with poly- and monoclonal antibodies. *Hepatology* 5:1016, 1985. (Presented at Annual Meeting, AASLD, November 1985).
124. Moseley RH, Ballatori N, Smith D, Boyer JL. Ursodeoxycholate stimulates Na⁺-H⁺ exchange in rat liver basolateral plasma membrane vesicles. *Hepatology* 5:1017, 1985. (Presented at Annual Meeting AASLD, November 1985).
125. Graf J, Henderson RM, Krupholz B, Boyer JL. Ionic dependence of intracellular (ID) and canalicular (C) electric potentials (PD) and effects of sodium pump activity in isolated rat hepatocyte couplets (IRHC). *Hepatology* 5:1031, 1985. (Presented Annual Meeting, AASLD, November 1985).
126. Ballatori N, Boyer JL. Slow biliary elimination of methylmercury in the marine elasmobranchs, Raja Erinacea and Squalus Acanthias. Submitted, The Bulletin Mt Desert Island Biological Lab 1986.
127. Gautam A, Scaramuzza D, Boyer JL. Quantitative assessment of primary canalicular ecretion in isolated rat hepatocyte couplets (IRHC) by optical planimetry. *Gastroenterology* 90:1727, 1986. (Presented Annual Meeting AGA, San Francisco, CA, May 1986).
128. Moseley RH, Barrett C, Boyer JL. Na⁺/H⁺ exchange activity is enhanced in liver plasma membrane (LPM) vesicles derived from partially hepatectomized rats. *Gastroenterology* 90:1749, 1986.
129. Boyer JL, Meier PJ, Graf J. Mechanisms of canalicular bile formation. 9th International Symposium on Bile Acids, Cortina, Italy, March 20-22, 1986.
130. Ballatori N, Boyer JL. Slow elimination of methylmercury in the marine elasmobranch, R. Erinacea and S. Acanthias. *Toxicologist* 6:159, 1986. (Presented, Annual Meeting of the Society of Toxicology, New Orleans, March 3-7, 1986).
131. Boyer JL. Mechanisms of bile acid secretion and ion transport. (Presented, Gastrointestinal Secretion Symposium, Calgary, Alberta, July 20-23, 1986).
132. Helzberg JH, Peterson JM, Boyer JL. Improved survival with primary sclerosing cholangitis: A review of clinicopathologic features and comparison of symptomatic and asymptomatic patients. *Gastroenterology* 90:1733, 1986.
133. Smith DJ, Grossbard M, Gordon ER, Boyer JL. Structural and functional characteristics of

isolated hepatocyte suspensions (IHS) from the elasmobranch, Raja Erinacea (small skate) - A highly stable preparation. *Gastroenterology* 90:1769, 1986.

134. Ballatori N, Ma A, Boyer JL. Determinants of hepatic glutathione efflux, and of the biliary GSH/GSSG Ratio in the isolated perfused rat liver (IPRL). *Hepatology* 6:1137, 1986. (Presented, Annual AASLD Meeting, November 1986).
135. Ballatori N, Jacob R, Barrett C, Boyer JL. Extensive intrabiliary catabolism of glutathione (GSH), and reabsorption of some of its metabolic products from bile in guinea pigs, rabbits, and dogs. *Hepatology* 6:1137, 1986.
136. Smith ND, Boyer JL. Phorbol esters stimulate Na-H exchange in isolated rat hepatocytes. *Hepatology* 6:1170, 1986. (Presented, Annual AASLD Meeting, November 1986).
137. Fricker G, Hugentabler G, Kurz G, Boyer JL. Identification of a single transport protein for hepatic uptake of organic anions in the liver of the elasmobranch little skate (R. Erinacea) by bile salt photoaffinity labeling and kinetic studies. *Hepatology* 6:1169, 1986. (Presented, Annual AASLD Meeting, 1986).
138. Gautam A, Ma A, McGuire T, Gordon ER, Boyer JL. Forskolin, but not its adenylate-cyclase inactive analog, stimulates choleresis in the isolated, perfused rat liver. *Hepatology* 6:1169, 1986. (Presented, Annual AASLD Meeting, 1986).
139. Sakisaka S, Ng O-C, Bourdaben J, Boyer JL. Evidence for tubulovesicular transcellular transport of horseradish peroxidase (HRP) in isolated rat hepatocyte couplets (IRHC) in short term culture. *Hepatology* 6:1170, 1986. (Presented, Annual AASLD Meeting, 1986).
140. Wondergem R, Boyer JL. Rheogenic L-alanine Transport in cultured hepatocytes of the little skate (Raja Erinacea). *MDIBL Bulletin* 26:108, 1986.
141. Fricker G, Hugentobler G, Kurz G, Meier PJ, Boyer JL. Identification of an organic anion transport protein in sinusoidal plasma membranes of hepatocytes of the little skate (R. Erinacea) by photoaffinity labeling and kinetic studies. *MDIBL Bulletin* 26:173-176, 1986.
142. Smith ND, Sakisaka S, Boyer JL. Measurement and modification of intracellular pH (pHi) using BCECF in isolated rat hepatocyte couplets (IRHC) and subconfluent hepatocyte monolayers (SHM). *Gastroenterology* 92:1778, 1987.
143. Gautam A, Boyer JL. Ursodeoxycholate (U) does not induce hypercholeresis at the canalicular (C) level in isolated rat hepatocyte couplets (IHC). *Gastroenterology* 92:1734, 1987.
144. Graf J, Boyer JL. Inward-rectifying potassium in isolated rat hepatocytes. *Am Soc Clin Invest* 1988.
145. Boyer JL, Ng O, Sakisaka S. Taurocholate (TC) facilitates transformation of vesicles to tubules in the pericanalicular region of isolated rat hepatocyte couplets (IRHC). *Hepatology* 7(5):1023, 1987. (Presented annual AASLD meeting, 1987).
146. Weinman SA, Scaramuzza DM, Boyer JL. Direct evidence that electrical potential difference drives taurocholate-dependent fluid secretion across the canalicular membrane of isolated rat hepatocyte couplets. *Hepatology* 7(5):1023, 1987. (Presented annual AASLD meeting, Nov 1987).
147. Helzberg JH, Smith ND, Corasanti JG, and Boyer JL. Spectrum of liver biopsy findings in asymptomatic patients with elevated serum aminotransferases (SAT). *Hepatology* 7(5):1023, 1987.
148. Weinman SA, Thom H, Kurz G, Boyer JL. Uptake and secretion of 7B-nitrobenzoxadiazol taurocholate (NBDTC) by the isolated rat hepatocyte couplet: Effects of membrane potential. Presented FASEB annual meeting. *FASEB Journal* 2:A1725, 1988.
149. Cho JO, Boyer JL, Marchesi VT. Antibodies to cytoskeletal erythrocyte protein 4.1 recognizes domain specific proteins of the hepatocyte plasma membrane in isolated hepatocyte couplets. *Gastroenterology* 94(5):A529. (Presented AGA, May 1988).
150. Corasanti JG, Ma AK, Okada Y, Boyer JL. Effects of protein kinase C in the isolated perfused rat liver: Evidence for perfusion-secretion mismatch. *Gastroenterology* 94(5):A531. (Presented AGA, May 1988).

151. Gleeson D, Scaramuzza DM, Boyer JL. Bicarbonate (HCO_3^-) dependent and independent pH regulatory mechanisms in rat hepatocytes. *Gastroenterology* 94(5):A542. (Presented AGA, May 1988).
152. Ballatori N, Shi CY, Boyer JL. Altered plasma membrane ion permeability in mercury-induced injury to isolated hepatocytes from Raja Erinacea. *MDIBL Bulletin* 27, 1988.
153. Sellinger M, Barrett C, Malle P, Gordon ER, Boyer JL. Is Na^+ , K^+ -ATPase present on the canalicular membrane domain? *Hepatology* 8(5):805, 1988.
154. Hayakawa T, Ng OC, Boyer JL. Taurocholate (TC) stimulates transcellular vesicle pathways labelled by horseradish peroxidase (HRP) in the isolated perfused rat liver (IRPL). *Hepatology* 8(5):932, 1988.
155. Corasanti JG, Gleeson D, Boyer JL. Cell volume regulation in hepatocytes: mechanisms of regulatory volume decrease (RVD) and regulatory volume increase (RVI). *Hepatology* 8(5):179, 1988.
156. Gleeson D, Corasanti JG, Boyer JL. Effects of hypo-and hypertonic stress on Na^+/H^+ exchange in isolated rat hepatocytes. *Hepatology* 8(5):579, 1988.
157. Anderson JM, Glade J, Stevenson BR, Boyer JL, Mooseker MS. Altered immunohistochemical localization of the tight junction protein, ZO-1, in ethinyl estradiol and bile duct ligation-induced cholestasis. *Hepatology* 8(5):34, 1988.
158. Ng OC, Hayakawa T, Boyer JL. Effect of choleretic bile acids on vesicle-tubular transformation in the pericanalicular area in hepatocyte couplets (HC) and isolated perfused rat liver (IRPL). *Hepatology* 8(5):580, 1988.
159. Strazzabosco M, Sakisaka S, Gleeson D, Gautam A, Boyer JL. Effect of ursodeoxycholic acid (U) on canalicular and intracellular pH in isolated rat hepatocyte couplets (IRHC). *Hepatology* 8(5):169, 1988.
160. Sellinger M, Henderson RM, Zweifach A, Boyer JL, Graf J. Identification and characterization of a Cl^- channel in canalicular rat liver plasma membranes. *Hepatology* 8:126A, 1988.
161. Hayakawa T, Ma A, Ng OC, Boyer JL. Dibutyladenosine 3',5' -cyclic monophosphate (DBcAMP) stimulates bile flow and microtubule dependent vesicle transport in the isolated perfused rat liver (IRPL). *Gastroenterology* 96:A606, 1989.
162. Sellinger M, Ballatori N, Boyer JL. Mercury (HgCl_2) directly inhibits Na^+ -alanine co-transport in liver plasma membranes from the elasmobranch raja erinacea. *Gastroenterology* Vol. 96 5(2) pp. A659, 1989.
163. Graf J, Schild L, Boyer JL, Giebisch G. Osmotic water flux in a two-cell gland derived from isolated hepatocytes. *FASEB J* 3:A983, 1989.
164. Sellinger M, Ballatori N, Boyer JL. Effect of mercury on sodium alanine co-transport in basolateral liver plasma membranes isolated from raja erinacea. *Bulletin of the Mt Desert Island Biological Laboratory*, 1989.
165. Strazzabosco M, Mennone A, Boyer JL. Isolation of bile ductular cells (BDC) from bile duct ligated rats for studies of ion transport - measurement of intracellular pH (pHi). *Hepatology* Nov 1989.
166. Hayakawa T, Corasanti JG, Philips KA, Boyer JL. The Protein Kinase C Agonist, 12,13 Phorbol Dibutyrate (PDB) counteracts cAMP-stimulated Horseradish Peroxidase (HRP) Excretion in the Isolated Perfused Rat Liver (IPRL). *Hepatology* Nov 1989.
167. Hayakawa T, Ma A, Ng OC, Boyer JL. Dibutyladenosine 3', 5'-cyclic monophosphate (DBcAMP) stimulates bile flow and microtubule dependent vesicle transport in the isolated perfused rat liver (IRPL). *Gastroenterology* 96:A606, 1989.
168. Gautam A, Corasanti JG, Isales C, Boyer JL. Calcium dependence of regulatory volume decrease (RVD) in isolated rat and guinea pig hepatocytes. *Gastroenterology* 96:A598, 1989.
169. Graf J, Schild L, Boyer JL, Giebisch G. Volumetric analysis of water and solute fluxes in isolated rat hepatocyte couplets. *Renal Physiol Biochem* 13:166A, 1990.

170. Nathanson MH, Gautam A, Boyer JL. Effects of vasopressin (VP) and phorbol dibutyrate (PDB) on bile secretion in isolated rat hepatocyte couplets (IRHC). *Gastroenterology* May 1990.
171. Haddad P, Beck JS, Graf J, Boyer JL, Giebisch G. Membrane Cl⁻ conductance increases during regulatory volume decrease (RVD) in isolated rat hepatocytes. *Gastroenterology* May 1990.
172. Mahl T, Shockcor W, Kuo S, Boyer JL. Primary biliary cirrhosis - Survival in a cohort of 279 patients followed for 29 years. *Gastroenterology* May 1990.
173. Benedetti A, Strazzabosco M, Corasanti JC, Haddad P, Graf J, Boyer JL. Cytoplasmic pH (pHi) recovery from an alkali load in isolated rat hepatocytes is mediated by a Cl⁻/HCO₃⁻ exchanger. *Gastroenterology* May 1990.
174. Ballatori N, Mynhier M, Boyer JL. Taurine transport and volume regulation in hepatocytes of the little skate (*Raja Erinacea*). *Bulletin of the Mount Desert Island Biology Laboratory* 29:71-72, 1990.
175. Benedetti A, Strazzabosco M., Boyer JL. Cellular regulation of Cl⁻/HCO₃⁻ exchange activity by cAMP and colchicine in isolated rat hepatocytes. *Hepatology* 12(4):197, 1990.
176. Bruck R, Haddad P, Graf J, Boyer JL. Regulatory volume decrease (RVD) following hypotonic stress stimulates bile flow (BF), bile acid (BA) excretion and exocytosis in the isolated perfused rat liver (IPRL). *Hepatology* 12(4):201, 1990.
177. Nathanson MH, Bruck R, Isales C, Boyer JL. Influx of extracellular calcium (Ca⁺⁺) decreases hepatocyte bile secretion. *Hepatology* 12(4):217, 1990.
178. Boyer JL, Hagenbuch B, Ananthanarayanan M, Suchy F, Steiger B, Meier PJ. Phylogenic and ontogenic expression of the hepatic Na⁺/bile acid cotransport system. *Hepatology* Oct 1991.
179. Bruck R, Nathanson MH, Ward SA, Boyer JL. Exocytosis of horseradish peroxidase (HRP) is stimulated by protein kinase C (PKC) and inhibited by increased [Ca⁺⁺]_i in the isolated perfused rat liver (IPRL). *Hepatology* Oct 1991.
180. Ng OC, Benedetti A, Boyer JL. Bicarbonate increases the apical targeting of transport proteins in the isolated rat hepatocyte couplet (IRHC). *Hepatology* Oct 1991.
181. Alvaro D, Mennone A, Benedetti A, Ng OC, Boyer JL. Secretin stimulates Cl⁻/HCO₃⁻ exchange in bile duct epithelial cells (BDE). *Hepatology* Oct 1991.
182. Bruck R, Benedetti A, Strazzabosco M, Boyer JL. Intracellular alkalinization induces DIDS and colchicine-inhibitable stimulation of bile flow (BF) in isolated perfused rat liver (IPRL). *Gastroenterology* 100(5, Part2), 1991.
183. Fricker G, Dubost V, Finsterwald K, Kurz G, Boyer JL. Heterogeneity of hepatic transport systems in the liver of the little skate (*R. Erinacea*). *Gastroenterology* 100(5, Part2), 1991.
184. Blumrich M, Petzinger E, and Boyer JL. SH-Groups are essential for uptake of bile acids in hepatocytes of the little skate (*Raja Erinacea*). *Bulletin of the Mount Desert Island Biological Laboratory* 30:43-45, 1991.
185. Wilmarth L, Ballatori N, Boyer JL. Taurine transport in liver plasma membrane vesicles of the little skate (*Raja Erinacea*). *Bulletin of the Mount Desert Island Biological Laboratory* 30:71, 1991.
186. Ballatori N, Truong AT, Jutte D, Gardner J, Boyer JL. Volume-activated, energy and sulfhydryl-dependent taurine transport in hepatocytes from the little skate (*Raja Erinacea*). *Bulletin of the Mount Desert Island Biological Laboratory* 30:83, 1991.
187. Combes B, Carithers RL, McDonald MF, Maddrey WC, Munoz SJ, Boyer JL, Zetterman R, Peters MG, Luketic V. Ursodeoxycholic acid therapy in patients with primary biliary cirrhosis. *Hepatology* 14(4) pt.2, 174, 1991.
188. Strazzabosco M, Boyer JL. Letters to the Editor. *Amer J Physiol* 24:G374-G375, 1991.
189. Blumrich M, Petzinger E, and Boyer JL. Bumetanide uptake in isolated hepatocytes of the little skate (*Raja Erinacea*). *Bulletin of the Mount Desert Island Biological Laboratory* 31:98-100, 1992.
190. Ballatori N, Truong AT, Gardner J, Boyer JL. Volume regulatory mechanisms in hepatocytes from *Raja Erinacea*: Impairment by Mercury. *Bulletin of the Mount Desert Island Biological Laboratories* 31:145-146, 1992.

191. Beuers U, Nathanson MH, Boyer JL. Tauroursodeoxycholic acid (TUDCA) modulates signal transduction pathways that influence intracellular Ca^{++} . *Gastroenterology* 102 May 1992.
192. Boyer JL, Ng OC, Hagenbuch B, Stieger B, Meier PJ. Transient expression of a Na^{+} -dependent bile acid co-transport system from rat liver in COS-7 cells. *Clin Res* 40:320A, 1992.
193. Blumrich M, Petzinger E, and Boyer JL. Isolated hepatocytes of the little skate (*Raja Erinacea*) have a sodium-dependent organic anion transporter. *J Hepatology* 1992.
194. Jacquemin E, Hagenbuch B, Wolkoff A, Meier PJ, Boyer JL. Expression of Na^{+} -independent organic anion uptake systems of skate liver in *xenopus laevis* oocytes. *Hepatology* 16(2) pt.2, 436, 1992.
195. Beuers U, Boyer JL. Tauroursodeoxycholic acid (TUDCA) stimulates vesicular exocytosis into bile by Ca^{++} -dependent mechanisms. *Hepatology* 16(2) pt.2, 424, 1992.
196. Alvaro D, Mennone A, Boyer JL. Ursodeoxycholic acid (UDCA) does not stimulate bicarbonate excretion from isolated bile duct epithelial cells (BDE). *Hepatology* 16(2) pt.2, 831, 1992.
197. Beuers U, Nathanson MH, Boyer JL. Bile acid-induced Ca^{++} signals are diminished in cholestatic hepatocytes. *Hepatology* 16(2) pt.2, 834, 1992.
198. Combes B, Carithers RL, Maddrey WC, Munoz SJ, McDonald MF, Garcia-Tsao G, Boyer JL, Luketic V, Shiffman M, Peters MG, White H, Zetterman R, Markin R. A Randomized, Double-Blind, Placebo-Controlled Trial of Ursodeoxycholic Acid (UDCA) in Primary Biliary Cirrhosis. AASLD Falk Symposium No. 68, XII International Bile Acid Meeting, "Bile Acids and the Hepatobiliary System", October 12-14, 1992.
199. Simmons TW, Mort ME, Ballatori N, Boyer JL. Polarity of volume-activated taurine efflux in isolated perfused livers from *Raja Erinacea*. *Bulletin of the Mount Desert Island Biological Laboratories*, Vol 32:54-55, 1993.
200. Miller DS, Fricker G, Simmons T, Henson JH, Hager D, Filmore J, Boyer JL. Transport of a fluorescent bile salt derivative in hepatocytes from little skate *Raja Erinacea*. *Bulletin of the Mount Desert Island Biological Laboratories* Vol 32:50-52, 1993.
201. Fricke, G, Woessner R, Kurz G, Boyer JL. Bile Alcohol Transport in Skate (*Raja Erinacea*) Liver. *Bulletin of the Mount Desert Island Biological Laboratories* Vol 32:59-60, 1993.
202. Cho WK, Mennone A, Boyer JL. Forskolin Stimulates Secretion in Isolated Polarized Bile Ductular Units (IBDU) by Mechanisms Primarily Lacking A H^{+} -ATPase Response-Evidence for Heterogeneity in the Biliary Epithelium. *Hepatology* 18:957A, 1993.
203. Boyer JL, McGrath JW, Ng OC. Microtubule Dependent Targeting of Transporters to the Apical Membrane Determines the Canalicular Excretion of Bile Acids in Hepatocyte Couplets. *Hepatology* 18:107A, 1993.
204. Beuers U, Throckmorton DO, Anderson MH, Isales CM, Boyer JL. Tauroursodeoxycholic Acid Induces Translocation of α -, but not δ -, ϵ - and ζ -Protein Kinase C in Rat Hepatocytes. *Hepatology* 18:135A, 1993.
205. Henson JH, Nesbitt D, Capuano S, Hager D, Nundy S, Ballatori N, Boyer JL. Cytoskeletal Organization in Clusters of Polarized Isolated Skate Hepatocytes. *Amer Soc for Cell Biology* 1993.
206. Ananthanarayanan M, Ng, OC, Boyer JL, Suchy FJ. Characterization of the Cloned Rat Liver Sodium-Bile Acid Cotransporter Using C-Terminal and Fusion Protein Antibodies. *Hepatology* 18:136A, 1993.
207. Gartung C, Ananthanarayanan M, Rahman MA, Stolz A, Suchy FJ, Boyer JL. Cholestasis Induces Down-Regulation of the Sodium Dependent Bile Acid (BA) Cotransporter and Cytosolic Binding Proteins Following Bile Duct Ligation (BDL) in the Rat. *Hepatology* 18:139A, 1993.
208. Combes B, Carithers RL, Maddrey WC, Munoz SJ, McDonald MF, Garcia-Tsao G, Boyer JL, Luketic V, Shiffman M, Peters MG, White H, Zetterman R, Markin R. A Randomized, Double-Blind, Placebo-Controlled Trial of Ursodeoxycholic Acid (UDCA) in Primary Biliary Cirrhosis. *Hepatology* 18:175A, 1993.

209. Fiarman G, Garcia-Tsao G, Rodriguez-Perez F, West AB, Boyer JL. Primary Sclerosing Cholangitis (PSC), A Follow-up Study of the Yale Experience. *Hepatology* 18:212A, 1993.
210. Cho WK, Mennone A, Boyer JL. Forskolin Stimulates Secretion in Isolated Polarized Bile Ductular Units (IBDU) by Mechanisms Primarily Lacking a H⁺-ATPase Response-Evidence for Heterogeneity in the Biliary Epithelium. *Hepatology* 18:296A, 1993.
211. Ballatori N, Simmons TW, Boyer JL. A Volume-Activated Taurine Channel in Hepatocytes from Raja Erinacea. *Bulletin of the Mount Desert Island Biological Laboratories Vol* 33:50-52, 1994.
212. Hager D, Nundy S, Rexroad J, Ballatori N, Miller D, Boyer JL. Carrier Mediated Uptake of Lucifer Yellow in Liver of Raja Erinacea, The Little Skate: A Fluid Phase Marker Revisited. *The Bulletin of the Mount Desert Island Biological Laboratories Vol* 33:69-71, 1994.
213. Wossner R, Fricker G, Kurz G, Boyer JL. Enterohepatic Circulation in the Little Skate (Raja Erinacea). *The Bulletin of the Mount Desert Island Biological Laboratories Vol* 33:103-104, 1994.
214. Garcia-Tsao G, Fiarman G, Rodriguez-Perez F, West AB, Boyer JL. Primary Sclerosing Cholangitis (PSC): Natural History and Outcome. *Hepatology* 1994.
215. Chatila R, Boyer JL, West AB. Hepatocellular Glycogenosis in Brittle Diabetics: Clinical, Biochemical and Histologic evaluation.
216. Roelofsen H, Soroka CJ, Boyer JL. Bafilomycin A1, an inhibitor of the vacuolar proton pump, alters the targeting of the canalicular multispecific organic anion transporter in hepatocyte couplets. *Hepatology* 20:175A, 1994.
217. Roelofsen H, Soroka CJ, Boyer JL. Cyclic AMP stimulates sorting of the canalicular multispecific organic anion transporter into the transcytotic bile secretory pathway in hepatocyte couplets. *Hepatology* 20:174A, 1994.
218. Rahman MA, Boyer JL. Functional cloning, sequencing and characterization of a novel Na⁺-independent organic anion transporter from the liver of the small skate (Raja Erinacea). *Hepatology* 20:173A, 1994.
219. Jackson PS, Churchwell K, Ballatori N, Boyer JL, Strange K. Properties and Regulation of the Volume-Sensitive Organic Osmolyte/Anion Channel VSOAC in Hepatocytes of the Marine Skate Raja Erinacea. *The Bulletin of the Mount Desert Island Biological Laboratories Vol* 34:69-70, 1995.
220. Nathanson MH, Mariwalla K, Jones RM, Kaljuvee J, Ballatori N, Boyer JL. Effect of Hg²⁺ on Cytosolic Ca²⁺ in Hepatocytes Isolated from the Little Skate Raja Erinacea. *The Bulletin of the Mount Desert Island Biological Laboratories Vol* 34:85-86, 1995.
221. Ballatori N, Truong AT, Jackson PS, Strange K, Boyer JL. ATP Depletion and Inactivation of an ATP-Sensitive Taurine Channel by Classic Ion Channel Blockers in Hepatocytes from Raja Erinacea. *The Bulletin of the Mount Desert Island Biological Laboratories Vol* 34:72-74, 1995.
222. Boyer JL, Mennone A, Alvaro D, Cho W. Isolated polarized bile duct units - A new model for studies of biliary physiology in small interlobular bile ducts. *The FASEB Journal* 1995.
223. Jackson PS, Churchwell K, Ballatori N, Boyer JL, Strange K. Properties of volume-sensitive organic osmolyte/anion channels (VSOAC) in hepatocytes of the marine skate raja erinacea. *The FASEB Journal* 1995.
224. Nathanson MH, Mariwalla K, Ballatori N, Boyer JL. Effect of Hg²⁺ (Ca²⁺) in hepatocytes isolated from the little skate Raja Erinacea. *Gastroenterology* 1995.
225. Cho WK, Mennone A, Boyer JL. Effect of bombesin on secretion in isolated polarized intrahepatic bile ductular units (IBDU). *Gastroenterology* 1995.
226. Chatila R, Boyer JL, West AB. Hepatocellular glycogenosis in brittle diabetics: Clinical, biochemical and histologic evaluation. *Gastroenterology* 1995.
227. Boyer JL, Roelofsen H, Soroka CJ. Vesicle Targeting in Hepatocytes - Regulation of organic anion transport. *Biol Chem Hoppe-Seyler* 376:S65, 1995.
228. Woessner R, Boyer JL, Kurz G, Fricker G. Bile Alcohols Undergo an Enterohepatic Circulation in an Elasmobranch, Little Skate, Raja Erinacea. *AASLD* 1995.

229. Gartung C, Schuele S, Schlosser S, Boyer JL. Expression of the Rat Liver Na⁺/Taurocholate Cotransporter (ntcp) is Regulated In Vivo by Retention of Biliary Constituents, but not their depletion. AASLD 1995.
230. Schlosser SF, Gartung C, Boyer JL. Tauroursodeoxycholic Acid (TUDCA) Prevents Taurochenodeoxycholic Acid (TCDCA)-Induced Reductions in Rat Liver Na⁺/Taurocholate Cotransporter (ntcp) mRNA levels in primary cultures of Rat Hepatocytes. AASLD 1995.
231. Nundy S, Hager DN, Kaljuvee J, Rexroad J, Ballatori N, Miller D, Boyer JL. Carrier Mediated Uptake of Lucifer Yellow in Liver of Raja Erinacea, the Small Skate and the Rat: A Fluid Phase Marker Revisited. AASLD 1995.
232. Trauner M, Nathanson MH, Mennone A, Rydberg SA, Bruck R, Boyer JL. Nitric Oxide Stimulates Bile Flow and Glutathione Excretion Independent of Cyclic GMP-Induced HCO₃⁻ Excretion. AASLD 1995.
233. Trauner M, Nathanson MH, Rydberg SA, Gartung C, Sessa WC, Boyer JL. Nitric Oxide - Induced Cholerisis is Impaired in Isolated Perfused Livers of Endotoxemic Rats. AASLD 1995.
234. Cho WK, Rydberg SA, Boyer JL. Bombesin Stimulates Bicarbonate Secretion from Bile Ducts. *Hepatology* 22:315A, 1995.
235. Cho WK, Mennone A, Rydberg SA, Boyer JL. VIP is a Potent Stimulus of Bicarbonate and Fluid Secretion in Bile Ducts. *Hepatology* 22:294A, 1995.
236. Boyer JL, Soroka C, Trauner M, Mennone A. Use of Isolated Rat Hepatocyte Couplets (IRHC) and Bile Duct Units (IBDU) in Studies of Bile Secretory Function. *Cell Biology and Toxicology* 2:S5, 1996.
237. Nathanson MH, Burgstahler AD, Mennone A, Boyer JL. Acetylcholine (ACh) and ATP Induce Distinct Cytosolic Ca²⁺ (Cai²⁺) Signaling Patterns in Rat Bile Duct Epithelia. *J Invest Med* 44(3):299A, 1996.
238. Trauner M, Mennone A, Nathanson MH, Boyer JL. Nitric Oxide Stimulates Bile Secretion in Isolated Rat Hepatocyte Couplets, but not in Isolated Bile Duct Units. *J Invest Med* 44(3):301A, 1996.
239. Gartung C, Trauner M, Schuele S, Boyer JL. Role of TNF- α steroids and estrogens in the regulation of the Na⁺/taurocholate cotransporter (ntcp) in rat liver during the early phase of extrahepatic cholestasis. *Hepatology* 24(4):369A, 1996.
240. Gartung C, Trauner M, Hagenbuch B, Meier PJ, Boyer JL. Sodium-independent uptake of bile acids is unaffected by down-regulation of an organic anion transporter (oatp 1) in rat liver during cholestasis produced by common bile duct ligation (CBDL). *Hepatology* 24(4):369A, 1996.
241. Trauner M, Ananthanarayanan M, Yi JR, Arrese M, Kaplowitz N, Boyer JL. Effects of endotoxin on the expressions of the canalicular glutathione (GSH) and multispecific organic anion transporters (cMOAT) in rat liver. *Hepatology* 24(4):216A, 1996.
242. Arrese M, Annathanarayanan M, Trauner M, Boyer JL, Suchy FJ. Effect of pregnancy on mRNA expression of liver transporters. *Hepatology* 24(4):215A, 1996.
243. Singh SK, Mennone A, Boyer JL. Na-K-2C1 Cotransport participates in stimulated fluid secretion in isolated polarized bile duct units from rat liver. *Hepatology* 24(4):148A, 1996.
244. Schlosser SF, Dao T, Hingorani R, Crispe N, Boyer JL. Fas-ligand induces an early increase of Na⁺/H⁺ exchange activity in isolated rat hepatocytes undergoing apoptosis. *Hepatology* 24(4):366A, 1996.
245. Hayes JH, Soroka CJ, Rydberg SA, Pate MK, Boyer JL. Regulators of intravesicular pH and transcytotic vesicular transport decrease vesicular sequestration and enhance biliary excretion of the cationic MDR substrate daunorubicin. *Hepatology* 24(4):128A, 1996.
246. Soroka CJ, Hayes JH, Pate MK, Rydberg SA, Boyer JL. Regulation of vesicular sequestration and biliary excretion of the cationic MDR substrate daunorubicin. *J Cell Biology* 7:612A, 1996.
247. Koepfel TA, Trauner M, Baas JC, Thies JC, Schlosser SF, Post S, Boyer JL, Otto G. Impairment of the hepatic microcirculation in the bile duct ligated rat. *Gastroenterology* 112:May, 1997.

248. Trauner M, Arrese M, Soroka C, Ananthanarayanan M, Koepfel TA, Schlosser SF, Suchy FJ, Keppler D, Boyer JL. The rat canalicular conjugate export pump (MRP 2) is down-regulated in intrahepatic and obstructive cholestasis. *Journal of Hepatology* 26:April, 1997.
249. Soroka CJ, Pate MK, Boyer JL. Microtubule-associated vesicles isolated by taxol polymerization contain the apical transport proteins, MRP-2, P-glycoprotein and ecto-ATPase. AASLD Single Topic Conference 1997.
250. Ballatori N, Donald A, Seward D, Beal A, Fisher A, Boyer JL. Divalent metals modulate the osmoregulatory taurine efflux pathway in skate (*rajia erinacea*) hepatocytes. *The Bulletin of the Mount Desert Island Biological Laboratories* Vol 36, 1997.
251. Ballatori N, Donald A, Seward D, Beal A, Fisher A, Runnegar M, Boyer JL. Regulation of swelling-activated taurine efflux in skate (*rajia erinacea*) hepatocytes by ATP and protein phosphatase inhibitors, but not by arachidonic acid metabolites. *The Bulletin of the Mount Desert Island Biological Laboratories* Vol 36, 1997.
252. Ballatori N, Donald A, Seward D, Beal A, Fisher A, Boyer JL. Divalent metals modulate the osmoregulatory taurine efflux pathway in skate (*rajia erinacea*) hepatocytes. *The Bulletin of the Mount Desert Island Biological Laboratory* Vol 36, 1997.
253. Arrese M, Trauner M, Ananthanarayanan M, Boyer JL, Suchy FJ. Maternal cholestasis does not affect the ontogenic pattern of expression of the Na⁺/taurocholate cotransporting polypeptide. *Gastroenterology* 112, May 1997.
254. Singh S, Cavestro GM, Mennone A, Boron WF, Boyer JL. Distinct apical and basolateral Na-H exchangers in isolated perfused intrahepatic bile duct segments. *Gastroenterology* 112, May 1997.
255. Runnegar MTC, Donald A, Seward D, Ballatori N, Boyer JL. Hepatic transport & toxicity of the cyanobacterial toxin microcystin in the little skate *rajia erinacea*. *The Bulletin Mount Desert Island Biological Laboratory* 36:77-80, 1997.
256. Koepfel TA, Trauner M, Mennone A, Arrese M, Boyer JL. Glutathione is a driving force for hepatic bile formation following cold ischemia of the rat liver. *Hepatology* 26(4), 164A, 1997.
257. Schlosser SF, Zheng T, Dao T, Hingorani R, Crispe N, Flavell R, Boyer JL. Caspase-3 (CPP32) but not Caspase-1 (ICE) controls transition from nuclear condensation to fragmentation during CD95 (FAS/APO-1)-ligand induced apoptosis of murine hepatocytes. *Hepatology* 26(4), 255A, 1997.
258. Trauner M, Arrese M, Lee HR, Boyer JL, Karpen SJ. Endotoxin-induced down-regulation of the rat liver Na⁺/taurocholate cotransporter (ntcp) gene is mediated by decreased activity of hepatocyte nuclear factor 1 (HNF 1). *Hepatology* 26(4), 262A, 1997.
259. Beuers U, Probst I, Boyer JL, Kullak-Ubick GA, Paumgartner G. Concentration-dependent modulation of cytosolic free calcium and protein kinase C by taurochenodeoxycholic acid in isolated rat hepatocytes. *Hepatology* 26(4), 262A, 1997.
260. Arrese M, Trauner M, Ananthanarayanan M, Koepfel T, Boyer JL, Suchy FJ. Adaptive regulation of bile salt transport in experimental diabetes: role of basolateral and canalicular transporters. *Hepatology* 26(4), 292A, 1997.

261. Cho WK, Boyer JL. VIP stimulates bile secretion in cholangiocytes by cAMP-, PKA-independent mechanisms. *Hepatology* 26(4), 397A, 1997.
262. Cho WK, Mennone A, Boyer JL. Isolation of functional polarized isolated bile duct units (IBDUs) from mouse liver. *Hepatology* 26(4), 398A, 1997.
263. Sundaram P, Soroka CJ, Jones C, Boyer JL. Stable transfection and expression of a green fluorescent protein-sodium taurocholate co-transporter construct in HepG2 cells. *Hepatology* 28(4), 426A, 1998.
264. Lee JM, Trauner M, Soroka CJ, Steiger B, Meier PJ, Boyer JL. The molecular expression of the bile salt excretory pump, sister of p-glycoprotein (SPGP), is selectively preserved in cholestatic liver injury. *Hepatology* 28(4), 429A, 1998.
265. Soroka CJ, Pate MK, Boyer JL. The apical transport protein MRP2 co-localizes with the polymeric immunoglobulin A receptor on isolated rat liver transcytotic vesicles. *Hepatology* 28(4), 513A, 1998.
266. Trauner M, Mennone A, Gigliozi A, Fraioli F, Boyer JL. Nitric oxide (NO) and guanosine 3',5'-cyclic monophosphate (cGMP) stimulate bile secretion in isolated rat hepatocyte couplets, but not in isolated bile duct units. *Hepatology* 28(4), 531A, 1998.
267. Mennone A, Negoianu D, Cavestro GM, Biemesderfer D, Aronson PS, Schultheis PJ, Shull GE, Boyer JL. NHE3 is an apical membrane NA/H exchanger isoform responsible for fluid absorption in cholangiocytes. *Hepatology* 28(4), 535A, 1998.
268. Gigliozi A, Fraioli F, Sundaram P, Alvaro D, Boyer JL. Molecular identification and functional characterization of the *mdr1a*-gene product in rat cholangiocytes. *Gastroenterology* 116(4), A1215, 1999.
269. Runnegar MTC, Seward D, Ballatori N, Crawford J, Boyer JL. Protein phosphatase inhibition and toxicity of microcystin in the little skate *raja erinacea*. *The Bulletin Mount Desert Island Biological Laboratory* 38, 1999.
270. Fricker G, Gutman H, Seward D, Miller D, Boyer JL. Functional evidence for the multidrug resistance associated protein (MRP2; cMOAT) in cultured skate hepatocytes. *The Bulletin Mount Desert Island Biological Laboratory* 38, 1999.
271. Ballatori N, Rebbeor JF, Connolly GC, Seward D, Lenth BE, Henson JH, Boyer JL. ATP-dependent bile salt transport in skate (*Raja Erinacea*) hepatocytes mediated by a functional analogue of the sister of p-glycoprotein, spgp. *The Bulletin Mount Desert Island Biological Laboratory* 38, 1999.
272. Ballatori N, Barnes DM, Seward D, O'Connell D, Toure J, Dobak L, Henson JH, Runnegar M, Miller DS, Xie Z, Boyer JL. A long-term primary culture model of hepatocytes isolated from the little skate, *raja erinacea*. *The Bulletin Mount Desert Island Biological Laboratory* 38, 1999.
273. Boyer JL. Asymptomatic primary biliary cirrhosis--should everyone be treated? Editorial, *AJG* 94(1): 2-3, 1999.

274. Boyer JL. Structural & functional determinants of bile secretion. *Ital J of Anatomy & Embryology* 104:67, Supplement 1, 1999.
275. Boyer JL. Arsenic: an endothelial cell toxin in the liver? *Indian J Gastroenterol* 18:141, 1999.
276. Lee JM, Azzaroli F, Gigliozzi A, Mennone A, Boyer JL. Adaptive regulation of the ileal sodium-dependent bile salt transporter (ISBT), and the multispecific organic anion transporter (MRP2), in kidney and cholangiocytes in chronic cholestasis – alternative pathways for bile salt excretion. *Hepatology* 30:417A, 1999.
277. Ballatori N, Rebbeor JF, Connolly GC, Seward DJ, Lenth BE, Henson JH, Sundaram P, Boyer JL. Bile salt excretion in skate liver is mediated by a functional analogue of BSEP/SPGP, the bile salt export pump. *Hepatology* 30:467A, 1999.
278. Boyer JL. Cellular and molecular mechanisms of bile salt transport in health and disease. In: *Bile Acids in Hepatobiliary Disease*, Chapter 1. Editors: Northfield TC, Ahmed H., Jazwari R, Zentler-Munro P. Kluwer Academic Publishers, pp. 3-5, 2000.
279. Dranoff JA, O'Neill AF, Cai S-Y, Franco AM, Connelly GC, Ballatori N, Boyer JL, Nathanson MH. A primitive ATP receptor from the little skate *erina*. *The Bulletin Mount Desert Island Biological Laboratory* 39, 2000.
280. Cai S-Y, Ballatori N, Boyer JL. Molecular identification of the bile salt export pump (sister of p-glycoprotein) is cloned from liver of the small skate, *erina*. *The Bulletin Mount Desert Island Biological Laboratory* 39, 2000.
281. Lee J, Azzaroli F, Boyer JL. Adaptive responses in bile salt transport proteins in cholangiocytes and kidney in a rat model of obstructive cholestasis. *J Gastroenterol and Hepatol* 15 (Suppl.):F68, 2000.
282. Mennone A, Ma T, Verkman AS, Boyer JL. Aquaporin-1 contributes to osmotically driven water transport in mouse cholangiocytes but is not rate-limiting for forskolin stimulated fluid secretion. *Hepatology* 32(4):432A, 2000.
283. Cai S-Y, Wang L, Ballatori N, Boyer JL. Molecular identification and functional characterization of the bile export pump (Bsep) in a marine vertebrate – evidence that this liver specific transporter is highly conserved in evolution. *Hepatology* 32(4):493A, 2000.
284. Soroka CJ, Lee JM, Azzaroli F, Boyer JL. Mrp3 is progressively up-regulated on hepatocytes from central to portal regions of the hepatic lobule in obstructive cholestasis. *Hepatology* 32(4):428A, 2000.
285. Azzaroli F, Mehal W, Lee JM, Crispe N, Boyer JL. Ursodeoxycholic acid protects primary mouse hepatocytes in a physiological model of Fas ligand induced apoptosis. *Hepatology* 32(4):334A, 2000.
286. Wang W, Li L, Boyer JL, O'Reilly MA, Ballatori N. Expression cloning of a novel polygenic organic solute transporter (Ost α , Ost β) from the liver of a marine vertebrate. *Hepatology* 32(4):316A, 2000.

287. Cai S-Y, Wang W, Ballatori N, Boyer JL. Molecular and functional characterization of an organic anion transporting polypeptide (Oatp) from the little skate, *rajia erinacea*. *Bull MDIBL* Vol 40:83-85, 2001.
288. Wang W, Li L, Seward DJ, Boyer JL, Ballatori N. Expression cloning of a novel polygenic organic solute transporter (Ost α , Ost β) from the liver of the little skate, *rajia erinacea*. *Bull MDIBL* Vol 40:21-22, 2001.
289. Bohan A, Denson LA, Bajwa HJ, Held MA, Boyer JL. Reciprocal alterations in nuclear hormone receptor (NHR) expression may explain organ specific changes in bile salt synthesis and transport in the cholestatic rat. *Hepatology* 34:261A, 2001.
290. Denson LA, Bohan A, Bajwa HHJ, Held MA, Boyer JL. Alterations in nuclear hormone receptors (NHR) are associated with changes in the expression of multidrug resistance proteins Mrp3 in liver and kidney in cholestasis. *Hepatology* 33:264A, 2001.
291. Beuers U, Soroka C, Denk G, Wimmer R, Boyer JL. Taurochenodeoxycholic acid impairs hepatocellular bile acid and organic anion secretion by a phosphatidylinositol 3-kinase-dependent mechanism. *Hepatology* 47:1A, 2001.
292. Cai S, Wang W, Soroka C, Ballatori N, Boyer JL. Molecular and functional characterization of a novel hepatic organic anion transporting polypeptide (OATP) from a primitive vertebrate. *Hepatology* 47:4A, 2001.
293. Mattingly et al. Comparative Toxicogenomics database. National Center for Toxicogenomics Dec 3-4, 2001.
294. Cai S-H, Soroka CJ, Ballatori N, Boyer JL. Molecular identification and tissue distribution of a multidrug resistance associated protein (Mrp2) isolated from the liver of the little skate, *Raja Erinacea*. *The Bulletin of the Mt Desert Island Biological Laboratory* 40:83-85, 2001.
295. Wang W, Seward DJ, Li L, Boyer JL, Ballatori N. Expression cloning of two novel genes (Ost α , Ost β) that together mediate organic solute and steroid transport in the liver of the little skate, *Raja erinacea*. *The Bulletin of the Mt Desert Island Biological Laboratory* 40:21-22, 2001.
296. Cai S-Y, Soroka CJ, Ballatori N, Boyer JL. Molecular identification and tissue distribution of a multidrug resistance associated protein (Mrp2) isolated from the liver of the little skate, *Raja Erinacea*. *Bull MDIBL* 2002.
297. Bohan A, Denson LA, Held MA, Hicks JL, Boyer JL. Hepatic induction of Mrp3 is dependent on cytokine signaling and reduces liver injury in obstructive cholestasis. *Hepatology* 36:241A, 2002.
298. Bohan A, Denson LA, Held MA, Hicks JL, Boyer JL. RXR α is a primary determinant of LRH-1 and Mrp3 expression and a cholestatic phenotype. *Hepatology* 36:242A, 2002.
299. Wang L, Soroka CJ, and Boyer JL. Characterization of missense mutations in bile salt export pump associated with progressive familial intrahepatic cholestasis type 11. *Hepatology* 36:297A, 2002.
300. Chen W, Denson LA, Cai S, Soroka CJ, Boyer JL. Nuclear hormone regulation of the human multidrug resistance protein (MRP3) gene in human hepatoma cell lines. *Hepatology* 36:343, 2002.
301. Cai S, Cheng W, Bezerra J, Boyer JL. Global gene expression profile in cholestatic liver and kidney. *Hepatology* 36:1109, 2002.
302. Soroka CJ, Cai S, Boyer JL. Effects of cholestasis on the regulation of membrane transporter expression in intestine and kidney. *Hepatology* 36:462A, 2002.
303. Diu MW, Katz KH, Boyer JL, Makuch RW, Grossmann R, Garica-Tsao G. Liver-spleen scan (LSS) is useful in the non-invasive diagnosis of compensated cirrhosis but not in the diagnosis of clinically significant portal hypertension (CSPH). *Hepatology* 36:510A, 2002.
304. Bouchard G, Casavant S, Korstanje R, Soroka C, Boyer JL. Overactivity of ABCC2 is a major determinant of murine cholesterol gallstone (ChGS) risk as evidenced by positional cloning, sequencing, and gene-targeted deletion. *Gastroenterology* 124:A-50, #460 (AGA 2003).

305. Seward DJ, Bennet C, Boyer JL, Ballatori N. Expression of nuclear hormone receptors in the liver of the little skate, *Raja erinacea*. The Bulletin of the Mt Desert Island Biological Laboratory 42:64-65, 2003.
306. Ballatori N, Seward DJ, Bennet C, Boyer JL. Low biliary excretion of indocyanine green in perfused skate (*Raja erinacea*) liver: possible role of the multidrug resistance p-glycoprotein-2, Mdr2, in hepatic elimination of this hydrophobic anionic dye. The Bulletin of the Mt Desert Island Biological Laboratory 42:130-131, 2003.
307. Seward DJ, Koh AS, Boyer JL, Ballatori N. Molecular identification and functional complementation between a novel human and mouse organic solute transporter, and a transporter from the little skate, *Raja erinacea*, OST α /OST β . The Bulletin of the Mt Desert Island Biological Laboratory 42:66-67, 2003.
308. Bohan A, Denson LA, Chen WS, Held M, Boyer JL. MRP3/Mrp3 is up-regulated by cytokines and bile salts and is associated with increased DNA binding of cholesterol 7 α hydroxylase promoter factor (CPF) to its response element on the MRP3/Mrp3 promoter. Hepatology 38(4):49A, 2003.
309. Soroka CJ, Mennone A, Boyer JL. Susceptibility to estrogen induced cholestasis in the female is associated with loss of radixin, an Mrp2 tethering protein, from the canalicular membrane. Hepatology 38(4):104A, 2003.
310. Chen WS, Denson LA, Bohan A, Cai SY, Wang L, Soroka CJ, Boyer JL. The cholesterol-7 α hydroxylase promoter factor (CPF) up-regulates the human multidrug resistance-associated protein 3 (MRP3) and is induced by bile salts in HepG2 cells. Hepatology 38(4):55A, 2003.
311. Denk GU, Soroka CJ, Mennone A. Obstructive cholestasis results in down-regulation and functional impairment of the organic cation transporter 1 (Oct1) in rat liver. Hepatology 38(4):49A, 2003.
312. Wang L, Soroka CJ, Boyer JL. Distinct lipid rafts function in the apical sorting of rat bile salt export pump expressed in MDCK cells. Late breaking abstract – AASLD 2004.
313. Harding MJ, Wilson JH, Paturzo FX, Johnson L, Hixson DC, Boyer JL, Pober JS. A simple and efficient method of engrafting rat hepatocytes in SCID/bg mice using mouse-specific anti-fas antibody induction of mouse hepatocytes apoptosis. Poster presented at the 10th International Conference on Hepatitis C Virus, Kyoto, Japan, Dec 2-6, 2003.
314. Boyer JL. Efficacy and safety of prolonged immunosuppressive therapy in chronic autoimmune hepatitis type-1. Liver International 24(4):12, 2004.
315. Meier-Abt F, Hagenbuch B, Ballatori N, Boyer JL. The organic anion transport protein 1d1, Oatp1d1, mediates hepatocellular uptake of phalloidin in the little skate, *Leucoraja erinacea*. The Bulletin of the Mt Desert Island Biological Laboratory, 2004.
316. Cai S-Y, Ballatori N, Boyer JL. A full-length farnesoid X receptor (FXR) from *Leucoraja erinacea*, the little skate. The Bulletin of Mt Desert Island Biological Laboratory, 2004.
317. Cai S-Y, Ballatori N, Boyer JL. Bile duct obstruction and drainage modulates Bsep and Ost α gene expression in *Leucoraja erinacea*, the little skate. The Bulletin of the Mt Desert Island Biological Laboratory, 2004.
318. Chen Sr W-S, Denk Sr GU, Denson Sr LA, Wang L, Soroka CJ, Boyer J. Release of transcriptional repression from RXRa and RAR α results in up-regulation of MRP3 (The multidrug resistance-associated protein 3) in obstructive cholestasis. Hepatology 40:170A, 2004.
319. Sun A-Q, Chen W-S, Shahid M, Boyer JL, Suchy FJ. Plasma membrane localization of human organic anion-transporting polypeptide C (HOATP-C). Hepatology 40:487A, 2004.
320. Kim JK, Seela S, Seela H, Robert ML, Dziura JD, Boyer JL. Rate of progression to cirrhosis in patients with chronic hepatitis C infection. Hepatology 40:683A, 2004.
321. Saldana S, Frawley W, Combes B, Mills SA, Markin R, Rubin R, Wheeler D, Contos M, West B, Flye N, Butsch R, Emerson S, Carithers RL, Luketic VA, Benner KD, Peters MG, Di Bisceglie A, McCashland T, Bass N, Kowdley JRLK, Boyer TD, Martinez E, Munoz SJ, Boyer JL, Garcia-Tsao G,

- Barnes D, Bonacini M, Donovan J, Rosoff L, Mayo MJ. Are serial liver biopsies useful in assessing disease progression in individuals with primary biliary cirrhosis? *Gastroenterology* May, 2005.
322. Wang W, Soroka CJ, Mennone A, Harry K, Boyer JL. Radixin is essential for the maintenance of the apical canalicular membrane structure and function in collagen sandwich cultured bat hepatocytes. *Hepatology*: 42:254A, 2005.
 323. Mennone A, Soroka CJ, Cai S-Y, and Harry K, Adachi M, Scheutz JD, Boyer JL. MRP4 protects the mouse from cholestatic liver injury following bile duct ligation. *Hepatology*: 42:42:411A, 2005.
 324. Soroka CJ, Mennone A, Ballatori N, Trauner M, Boyer JL. The heterodimeric organic solute transporter, (OST α/β) is up-regulated in the liver of patients with primary cirrhosis and variably induced in rat and mouse cholangiocytes following bile duct ligation. *Hepatology*: 42:414A, 2005.
 325. Cai S-Y, Xiong L, Ballatori N, Boyer JL. An evolutionally primitive farnesoid X receptor (FXR) demonstrates greater ligand promiscuity than its mammalian ortholog. *Hepatology*: 42:504A, 2005.
 326. Boyer JL, Chen WS, Cai S-Y, Denk G, Bohan A, Soroka C, Denson L. Adaptive regulation of bile salt transporters in cholestasis. *Falk Symposium 144, Gastroenterology Yesterday – Today – Tomorrow: A Review and Preview* 186-188, 2005.
 327. Cai S-Y, Xiong L, Ballatori N, Boyer JL. Retinoids are conserved ligands for the farnesoid X receptor, FXR. *The Bulletin of the Mt Desert Island Biological Laboratory*, 45:2006.
 328. Ballatori N, Henson JH, Seward DJ, Cai S-Y, Runnegar M, Fricker G, Miller DS, Boyer JL. Plasma membrane polarity of cultured skate (*Leucoraja erinacea*) hepatocytes undergoing in vitro morphogenesis. *The Bulletin of the Mt Desert Island Biological Laboratory*, 45:2006.
 329. Azzaroli F, Mennone A, Feletti V, Simoni P, Magliuolo M, Baglivo E, Rizzo N, Lodato F, Festi D, Colecchia A, Roda A, Boyer JL, Mazzella G. Modulation of placental bilirubin and bile acids transporters during cholestasis of pregnancy. *Gastroenterology* 130:4:818A, April 2006 (AGA 006).
 330. Mattingly CJ, Rosenstein MC, Davis AP, Forrest Jr JN, Boyer JL. The comparative toxicogenomics database (CTD): a public resource for building chemical-gene networks. *The Bulletin of the Mt Desert Island Biological Laboratory* 45:2006.
 331. Ballatori N, Henson JH, Seward DJ, Cai S-Y, Runnegar M, Fricker G, Miller DS, Boyer JL. Plasma membrane polarity of cultured skate (*Leucoraja erinacea*) hepatocytes undergoing in vitro morphogenesis. *The Bulletin of the Mt Desert Island Biological Laboratory* 45:2006.
 332. Cai S-Y, Nguyen T, Lee JY, Ballatori N, Boyer JL. Bile salts are weak modulators of Fxr, Bsep, Ost α , and Ost β gene expression in isolated hepatocytes from *Leucoraja erinacea*, the little skate. *The Bulletin of the Mt Desert Island Biological Laboratory* 45:2006.
 333. Soroka CJ, Xu S, Cai S-Y, Ballatori N, Boyer JL. Mechanism of OST α -OST β subunit expression and function in HepG2 cells. *Hepatology* 44:193A, 2006.
 334. Lam P, Pearson C. Xu S, Boyer JL. Mutants of the liver bile salt export pump (BSEP) result in variable processing and trafficking defects that largely account for difference in disease phenotype. *Hepatology* 44:378A, 2006.
 335. Cai S-Y, Nguyen T, Boyer JL. Signal transduction pathways (P13K and MAPKs) are involved in bile expression and activity of human FXR α (NR1H4). *Hepatology* 44:591A, 2006.
 336. Cai S-Y, Nguyen T, Xiong L, Boyer JL. Retinoic acid is an activator of human FXR regulated lipid but not bile genes. October 27-31: The Liver Meeting 2006.
 337. Mayo MJ, Parks J, Huet B, Combes B, Mills SA, Markin R, Rubin R, Wheeler D, Contos M, West B, Saldana S, Getachew Y, Butsch R, Luketic VA, Peters M, DiBisceglie A, Bass N, Lake JR, Kowdley KV, Boyer TD, Martinez E, Munoz SJ, Boyer JL, Garcia-Tsao G, Rosenberg WM. Serum fibrosis markers predict future clinical decompensation in primary biliary cirrhosis better than liver biopsy, bilirubin, or mayo rise score. *Hepatology* 44:603A, 2006.
 338. Boyer JL. Hepatic transporters and their role in drug toxicity. *Drug Metabolism Reviews* 38(2):13, 2006.
 339. Cai S-Y, Ballatori N, Boyer JL. Bile salts do not affect lipid content in cultured hepatocytes from

- the little skate, *Leucoraja erinacea*. The Bulletin of the Mt Desert Island Biological Laboratory 46:97,2007.
340. Cai S-Y, Ballatori N, Boyer JL. The farnesoid X receptor, RXR α /NR1H4, acquired ligand specificity for bile salts late in vertebrate evolution. The Bulletin of the Mt Desert Island Biological Laboratory. 46:94-96,2007.
 341. Cai S-Y, Gautam S, Ballatori N, Boyer JL. Arsenic alters expression of membrane transporters in hepatocytes isolated from the little skate, *Leucoraja erinacea*. The Bulletin of the Mt Desert Island Biological Laboratory. 46:165-166,2007.
 342. Levine K, Cai S-Y, Madejczyk MS, Notenboom S, Ballatori N and Boyer JL. Dexamethasone does not affect adhesion or morphology of primary cultured hepatocytes of the little skate, *Leucoraja erinacea*. The Bulletin of the Mt Desert Island Biological Laboratory. 46:128, 2007.
 343. Madejczyk M, Notenboom S, Boyer JL and Ballatori N. Liver of the little skate, *Leucoraja erinacea*, as a model for studying the mechanisms of hepatobiliary manganese excretion. The Bulletin of the Mt Desert Island Biological Laboratory. 46:159-160, 2007.
 344. Henson JH, Voss MK, Ballatori S, Ballatori N and Boyer JL. Factors influencing in vitro morphogenesis in cultures of hepatocytes isolated from the little skate, *Leucoraja erinacea*. The Bulletin of the Mt Desert Island Biological Laboratory. 46:156-158, 2007.
 345. Soroka CJ, Xu S, Cai S-Y, Boyer JL. Insights into the regulation of expression of human OST α -OST β . XIX International Bile Acid Meeting; Bile Acids: Biological Actions and Clinical Relevance, 2006.
 346. Pearson CL, Lam P, Boyer JL. Role of the N-terminal sequence of Bsep (Abc11) in protein trafficking and stability. Hepatology 46:768A, 2007.
 347. Cai S-Y, Gautam S, Soroka CJ, Rahner C, Boyer JL. Fic1 deficient rat hepatocytes reveal structural and functional defects in canalicular membrane when exposed to hydrophobic bile acids. Hepatology 46:337A-338A, 2007.
 348. Sun A-Q, Ponamgi VM, Boyer JL, Suchy FJ. Membrane trafficking of the human organic anion-transporting polypeptide C(HOATP). Hepatology 46:330A, 2007.
 349. Lam P, Soroka CJ, Boyer JL. Chemical chaperones partially reverse the misprocessing of a BRIC2 mutant of the bile salt export pump, ABCB11. Hepatology 46:330A, 2007.
 350. Cai S-Y, Nava GM, Gaskins HR, Boyer JL. Identification of ABC transporters and nuclear receptors in *Ciona intestinalis*. The Bulletin of the Mt Desert Island Biological Laboratory. 47: 2008. 47:75-76, 2008.
 351. Nava GM, Cai S-Y, Boyer JL, Hernandez-Zavala A, Thomas DJ, Gaskins HR. Arsenic (+3 oxidation state) methyltransferase and the methylation of arsenicals in the invertebrate chordate *Ciona intestinalis*. The Bulletin of the Mt Desert Island Biological Laboratory. 47:109-110, 2008.
 352. Wray CG, Cai S-Y and Boyer JL. Computational reconstruction of ancestral chordate and vertebrate farnesoid x receptor (NR1H4/5). Bulletin of the Mt Desert Island Biological Laboratory 47:58-60, 2008.
 353. Xu S, Weerachayaphorn J, Cai S-Y, Mennone A, Soroka CJ, Boyer JL. AhR and Nrf2 up-regulate human MRP4 expression in HepG2 cells. Hepatology 48:491A, 2008.
 354. Cai S-Y, Mennone A, Boyer JL. Retinoic acid treatment improves ANIT induced chronic cholestatic liver injury in the rat. Hepatology 48:665A, 2008.
 355. Li M, Wang W, Soroka CJ, Boyer JL. Mrp2 Associates with EBP50 and the Complexes Partially Co-localize to the Rat Liver Canalicular Domain. Hepatology 48:475A, 2008.
 356. Li M, Soroka CJ, Mennone A, Boyer JL. Deletion of EBP50-NHERF-1 mice results in reduced hepatic MRP2 expression and bile acid independent bile flow. Hepatology 50:66A, 2009.
 357. Soroka CJ, Mennone A, Hagey L, Ballatori N, Boyer JL. OST α deficient mice have enhanced renal excretion of bile acids and are protected against cholestatic liver injury. Hepatology 50:72A, 2009.

358. Cai S-Y, He H, Mennone A, Boyer JL. Retinoic acid repressed CYP7A1 expression in human hepatocytes and HEPG2 cells via RXR as well as FXR dependent mechanisms. *Hepatology* 50:624A, 2009.
359. Weerachayaphorn J, Cai S-Y, Soroka CJ, Boyer JL. The antioxidant transcription factor NF-E2-related factor 2 (NRF2) up-regulates expression of the human bile salt export pump (BSEP). *Hepatology* 50:905A, 2009.
360. Michael S. Madejczk, James L. boyer and Ned Ballatori. Hepatobiliary transport of manganese in the little skate, *Leucoraja erinacea*. *The Bulletin, MDI Biological Laboratory* 48:93-95,2009.
361. Shi-Ying Cai, Katherine Han, Albert Mennone, H.Rex Gaskins and James L. Boyer. Identification of a full-length Abcb11 transporter in *Ciona intestinalis*. *The Bulletin, MDI Biological Laboratory* 48:99-101, 2009.
362. Li M, Mennone A, Soroka CJ, Harry KM, Weinman EJ, Boyer JL. NERF-1 knockout mice express low levels of the apical sodium-dependent bile acid transporter (ASBT) in ileum and kidney and are protected from cholestasis induced by bile duct ligation. *Hepatology* 52:432A, 2010. Oral presentation, AASLD, 2010.
363. Cai S-Y, Yeh C-Y, Hagey LR, Soroka CJ, Mennone A, Li W, Boyer JL. Sea Lamprey (*Petromyzon marinus*) – a unique cholestatic animal model that tolerates biliary atresia. *Hepatology* 52:665A, 2010. Presented poster AASLD 2010.
364. Weerachayaphorn J, Luo Y, Mennone A, Soroka CJ, IHarry KM, Boyer JL. Oltipraz, an NF-E2-related factor 2 (Nrf2) agonist and antioxidant, aggravates liver injury induced by bile duct ligation in mice. *Hepatology* 52:665A, 2010. Presented poster AASLD, 2010
365. He H, Mennone A, Boyer JL, Cai S-Y. Supplementation of retinoic acid to ursodeoxycholic acid reduces bile acid pool size and liver fibrosis in bile duct ligated rats by mechanisms verified in human hepatic cell cultures. *Hepatology* 52:1266, 2010. Presented poster AASLD, 2010.
366. Shi-Ying Cai, Weiming Li, Chu-Yin Yeh, Lee Hagey, Carol Soroka, Albert Mennone, Victory Smith, Katherine Han and James L. Boyer. Sea lamprey (*Petromyzon marinus*) – a unique cholestatic animal model. *The Bulletin, MDI Biological Laboratory* 49: 61 – 63, 2010.
367. David N. Assis, Savita Srivastava, Gerrit Grieb, Melanie Merk, Xin Du, Clarence K. Zhang, Catherine McCrann, Lin Leng, Hongyu Zhao, Juergen Bernhagen, Richard Bucala, James L. Boyer. Macrophage Migration Inhibitory Factor (MIF) and its Receptor CD74 may mediate effects of Psychological Stress in Autoimmune Hepatitis (AIH). *Hepatology* 54:229A,2011.
368. David N. Assis, Gerrit Grieb, Melanie Merk, Xin Du, Savita Srivastava, Clarence K. Zhang, Catherine McCrann, Lin Leng, Hongyu Zhao, Juergen Bernhagen, Richard Bucala, James L. Boyer. Differential profiles of Macrophage Migration Inhibitory Factor (MIF) and its receptor CD74 in Autoimmune Hepatitis (AIH) compared to Primary Biliary Cirrhosis (PBC). *Hepatology* 54:228A, 011.
369. Carol J. Soroka, Heino Velazquez, Albert Mennone, Nazzareno Ballatori, and James L. Boyer. α Deficient Mice are Partially Protected from Liver Injury after Cholic Acid Feeding. *Hepatology* 54:193A, 2011.
370. Shuhua Xu, Ping Lam, Carol J. Soroka and James L. Boyer. Endocytosis of the bile salt export pump is directed by a C-terminal tyrosine-based motif. *Hepatology* 54:110A,2011.
371. Lionarons DA, Boyer JL, Cai S-Y. A primitive apical sodium-dependent bile salt transporter (ASBT) shares essential residues and transport funcoitn with h9uman ASBT although bile salt selectivity is different. *Hepatology* 54:730A,2011.
372. S-Y Cai, H. He, A Mennone, D. Assis and J. Boyer. All trans-retinoic acid (AtRA) +/- ursodeoxycholic acid (UDCA) has antifibrotic effects in cholestatic liver injuryFibrosis: Translation of Basic Research to Human Disease and Novel Therapeutics. *Keystone Symposia*: March 30-April 4, 2012.
373. Ghonem NS, Ananthanarayanan M, Soroka CJ. Amd Boyer JL. Fenofibrate, a peroxisome

- proliferator-activated receptor alpha (PPARalpha) agonist up-regulates human MDR3/ABCB4. XXII International Bile Acid Meeting, Vienna Sept 14-14, 2012
374. Lionarons D, Boyer JL and Cai S-Y. Evolution of substrate specificity for the bile salt transporter ABST (SLC10A2). XXII International Bile Acid Meeting, Vienna Sept 14-14, 2012
 375. Ghonem N, Ananthanarayanan M, Soroka C and Boyer, JL. Fenofibrate, a specific peroxisome proliferator-activated receptor alpha (PPARa) agonist, up-regulates MDR3/ABCB4 expression in human hepatocytes. *Hepatology* 56: 731, October 2012.
 376. S-Y Cai, Mennone A, Soroka C and Boyer JL. Altered expression and function of canalicular transporters may contribute to cholestatic liver injury in Abcb4 deficient mice. *Hepatology* 6:742, October 2012.
 377. Man L, Soroka C and Boyer, JL. CFTR-associated ligand (CAL) is a negative regulator of Mrp2 cell surface expressions, an effect counter-regulated by NHERF-1. *Hepatology* 56: 1240, October 2012.
 378. Man L, Mennone A, Soroka C, Harry K, Weinman E and Boyer JL. NHERF-1 Knockout Mice Have Lower Hepatic ICAM-1 Expression and Are Protected from Liver Injury Induced by Bile Duct Ligation. *Hepatology* 58: 225, October 2013.
 379. Ghonem N, Ananthanarayanan M, Soroka C and Boyer, JL. PPARa positively regulates human MDR3/ABCB4 transcription and increases biliary phosphatidylcholine secretion. *Hepatology* 58: 228, October 2013.
 380. S-Y Cai, Mennone A, Soroka C, Ouyang X and Boyer JL. Bile salts induce Cxcl2 expression as an initial event in cholestatic liver injury in Abcb4^{-/-} and WT mouse hepatocytes via P13K pathways. *Hepatology* 58: 382, October 2013.
 381. Assis D, Hiroki T, Leng L, Bucala R, Zeniya M and Boyer JL. A novel risk factor for severity of autoimmune hepatitis (AIH): a high expression macrophage migration inhibitory factor (MIF) allele is associated with inflammatory markers in both American and Japanese patients. *Hepatology* 58: 753, October 2013.
 382. Cai Shi-Ying, Ouyang Xinshou, Mennone Albert, Smith Matthew R., Soroka Carol J., Mehal Wajahat Z., Boyer JL. Ccl2-deficiency protects mice from cholestatic liver injury by blocking hepatic leukocyte infiltration. *Hepatology* 60:300A, 2014.
 383. Assis David, Cai Shi-Ying, Boyer JL. Efficacy Trial of All-trans Retinoic Acid (ATRA) in combination with Ursodeoxycholic Acid (UDCA) in primary Sclerosing Cholangitis (PSC). *Hepatology* 60:346A, 2014.
 384. Kulkarni Supriya, Soroka Carol J, Boyer JL. Activation of Sirtuin 1 pathway reverse liver injury in a cholic acid fed mouse model of cholestasis. *Hepatology* 60:404A, 2014.
 385. Encarnacao Proscilla C, Soroka Carol J, Boyer JL, Ananthanarayanan Meena. Regulation of Multidrug and Toxin Extrusion Pump-1 (MATE-1) in Cholestasis. *Hepatology* 60:771A, 2014.
 386. Kulkarni S, Soroka CJ, Hagey LR, Boyer JL. SRT1720 protects against cholestatic liver injury in mice by altering hepatic bile acid composition and enhancing urinary excretion of bile acids. *Hepatology* 62:218A, 2015.
 387. Assis DN, Bucala R, Boyer JL. Macrophage migration inhibitory factor (MIF) may mediate the effect of Psychological Stress in Autoimmune Hepatitis (AIH). *Hepatology* 62:363A, 2015.
 388. Cai S-Y, Ouyang X, Mennone A, Soroka S, Mehal WZ, Boyer JL. Bile acid induced cholestatic liver injury involves TLR9 initiated inflammatory signals in mouse hepatocytes. *Hepatology* 62:610A, 2015.
 389. Li M, Mennone A, Soroka SJ, Hagey LR, Harry KM, Weinman EJ, Boyer JL. NHERF-1 assembles macromolecular complexes in the liver that are essential for the inflammatory response in cholestasis. *Hepatology* 62:621A, 2015
 390. Cai SY, Mennone A, Boyer JL. Calcineurin/NFAT signaling is involved in bile acid induced chemokine expression in mouse hepatocytes and cholestatic mouse livers. *Hepatology* 64:155A,

2016.

391. Kulkarni S, Soroka CJ, Boyer JL. Cholic acid feeding increases bile acid transporter *Osta* expression in mouse adipose tissue. *Hepatology* 64:156A, 2016.
392. Soroka, CJ, Mennone A, Boyer JL. *Ost* alpha deficient mice have alterations in Notch-dependent cell lineage development in the ileum that are unrelated to changes in the bile acid pool. *Hepatology* 64:155A, 2016.
393. Yu D, Zhang H, Lionarons DA, Boyer JL, Cai S-Y. The Na⁺-taurocholate cotransporting polypeptide (Ntcp)/Slc10a1 is expressed in the marine skate, *Leucoraja erinacea* but has not yet evolved as a bile salt transporter. *Hepatology* 64:158A, 2016.
394. Yu D, Cai S-Y, Mennone A, Vig P, Boyer JL. Cenicriviroc (CVC) in combination with all-trans retinoic acid (atRA) has superior therapeutic effects in bile duct ligated (BDL) rats. *Hepatology* 64:259A, 2016.
395. McCarty TR, Cho M, Mitchell KA, Boyer JL, Assis DN. The Clinical Significance of IgG4 Positive Autoimmune Hepatitis. *Hepatology* 64:818A, 2016.
396. Soroka, CJ, Alrabadi L, Mennone A, Assis DN, de la Rosa Rodriguez, Boyer JL. Human Bile contains stem cells which can be cultured as 3D organoids. *Hepatology* 66:64A, 2017
397. Roberts S, Leng L, Harry KM, Boyer JL. A small molecule inhibitor of macrophage migration inhibitory factor (MIF) significantly reduces liver injury in an antigen- and liver-specific re-clinical model of autoimmune hepatitis (AIH). *Hepatology* 66:67A, 2017.
398. Kulkarni S, Soroka CJ, McDonald JG, Boyer JL. Deficiency of bile acid transporter *Osta* alters plasma oxysterol mediated Lx α/β signaling and lipid accumulation in mouse adipose. *Hepatology* 66:108A, 2017.
399. Li M, Hirsova P, Mennone A, Gores GJ, Boyer JL. Bile acids induce release of pro-inflammatory extracellular vesicles from mouse hepatocytes. *Hepatology* 66:133A, 2017.
400. Kumar V, Viera SM, Ruff W, Dehner C, Kassam Z, Boyer JL, Assis DN, Feuerstadt P, Goodman A, Kriegel M. The gut microbiome in autoimmune hepatitis links to disease progression and is significantly different in Lups and healthy controls. *Hepatology* 66:189A, 2017.
401. Cai S-Y, Guerra MT, Nathanson MH, Boyer JL. Nuclear Ca²⁺ determines bile acid induction of chemokines in mouse hepatocytes. *Hepatology* 66:229A, 2017.
402. Yu D, Cai S-Y, Mennone A, Vig P, Boyer JL. Cenicriviroc, a cytokine receptor antagonist, potentiated the effects of all-trans retinoic acid by reducing neutrophils and T cells in the liver of rodent cholestatic models. *Hepatology* 66:938A, 2017.
403. Yu, D, Cai S-Y, Mennone A, Hagaey L, Boyer JL. Cholecystectomy increases secondary bile acids in the liver and results in liver injury in male but not female mice. *Hepatology* 66:942A, 2017.
442. Auclair AM, Assis DN, Boyer JL, Ghonem NS. Fenofibrate improves cholestasis and reduces bile acid toxicity *in vivo*. *Hepatology* 68:161A, 2018.
443. Soroka CJ, Assis DN, Alrabadi L, Roberts S, Cusack L, Silveria M, Boyer JL. Bile derived organoids from PSC patients recapitulate the inflammatory immune profile seen in cholangiopathies, providing an *in vitro* model to test candidate therapeutic agents. *Hepatology* 68:1080A, 2018.
444. Alrabadi L, Dutton A, Roberts S, Deng Y, Cusack L, Rabiee A, Silveria MG, Ciarleglio M, Sinha R, Assis DN, Boyer JL. Mindfulness-based stress reduction improves stress, disease activity and cytokine levels in patients with autoimmune hepatitis (AIH). *Hepatology* 68:1119A, 2018.