

Alphonse E. Sirica, PhD, MS, AGAF, FAASLD



Professor Emeritus of Pathology
Virginia Commonwealth University
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Awards

Appointed to Distinguished Career Professorship at Virginia Commonwealth University, August 15, 2019

Recognized by Expertscape as an Expertscape World Expert in Cholangiocarcinoma (Top 0.1% Expert), June 28, 2019

Awarded the Albert Nelson Marquis Lifetime Achievement Award, November 1, 2017

Awarded the designation of Fellow of the American Association for the Study of Liver Diseases (FAASLD), September 8, 2014

Keynote Speaker, Hollings Cancer Center 2013 Spring Symposium on "Models of Human Cancer for Translational Research" Medical University of South Carolina, Charleston, SC, March 15, 2013

Dr. and Mrs. Michael A. Gerber Lectureship, Department of Pathology and Laboratory Medicine, Tulane University School of Medicine, New Orleans, LA, April 11, 2012

Visiting Professor, Mayo Medical Center, Rochester, MN, June 5-6, 2011

Inducted as a Fellow of the (AGAF), January 1, 2009

Recipient of Virginia Commonwealth University School of Medicine Recognition Award for Research and Scholarship, 2007

Recipient of Virginia Commonwealth University School of Medicine Research Recognition Award, 2002

Burroughs Wellcome Fund's Visiting Professorship in the Basic Medical Sciences (Pathology) at Pennsylvania State University College of Medicine, 10/10/00-10/13/00; sponsored by the Burroughs Wellcome Fund and the Federation of American Societies for Experimental Biology, 2000

Virginia Commonwealth University and Medical Center Appointments

VCU Professor Emeritus of Pathology (2020)

VCU Distinguished Career Professor (2019)

Full Professor with tenure, Departments of Pathology (1990-2020) and Internal Medicine (2001-2020)

Chair, Division of Cellular and Molecular Pathogenesis (1999-2014)

Chair, Division of Experimental Pathology (1993-1999)

Department of Pathology

Virginia Commonwealth University/Medical College of Virginia Campus, Richmond, VA

Research Interests:

Liver carcinogenesis and pathobiology; molecular mechanisms regulating biliary epithelial cell differentiation, proliferation and neoplastic transformation; bile ductular cell isolation and culture; liver stem cells, experimental therapeutics and chemoprevention of hepatobiliary cancer.

Virginia Commonwealth University and Medical Center Service

Member, VCU Department of Pathology's Executive Committee (1988-2014)

Member, VCU Department of Pathology Grand Rounds Committee (1989-1991; 2010-2014)

Director, VCU Department of Pathology Grand Rounds Committee (1989-1991)

Member, VCU Faculty Senate (2006-2009)

Over the past 30 years served on numerous other Department of Pathology and VCU committees, including the VCU IACUC (1991-1993) and various faculty

search and promotion-tenure review committees too numerous to list.

Professional Organizations

The American Society for Cell Biology

The American Association for Cancer Research

American Society for Investigative Pathology

Society for In Vitro Biology

American Association for the Advancement of Science

The New York Academy of Sciences

Association of Clinical Scientists

American Association for the Study of Liver Diseases

Society for Experimental Biology and Medicine

Hans Popper Hepatopathology Society

Society of Toxicology

American Gastroenterological Association

American Society for Clinical Pathology

International Study for the Study of Comparative Oncology (2002-2004)

Professional Service

Member of the 2014 Program Committee of the American Association for Cancer Research

Discussion Leader, 2012/10 ZCA1 RPRB-0 (O1) P-NCI Program Project Review Panel Meeting 1. National Cancer Institute, National Institutes of Health, June 14-15, 2012

Director, Board of Directors of CanLiv – The Hepatobiliary Cancers Foundation, May 2008-2011

Reviewer, ZCA1 RPRB-O (M1) Cellular & Tissue Oncology P01 Special Emphasis Panel, National Cancer Institute Scientific Review Group, National Institutes of Health, March 1-3, 2010

Reviewer, ZCA1 GRB-P (01) Special Emphasis Panel-Drug Discovery, Chemoprevention, and Targeted Therapy P01 Review Group. National Cancer Institute, National Institutes of Health, May 25-27, 2010

Reviewer, ZCA1 GRB-I (J1) P, SPORE in Sarcoma, Brain, Liver, Lung, and Prostate

Cancers. National Cancer Institute, National Institutes of Health, September 29-30, 2010

Regular Member, Metabolic Pathology Study Section, NCI, NIH, July 1, 1991-June 30, 1995

Regular Member, American Cancer Society Study Section: Scientific Advisory Board on Biochemistry and Chemical Carcinogenesis, reorganized in June 1989 to Scientific Advisory Board on Carcinogenesis and Nutrition (1989-1992)

Ad Hoc for numerous NIH and other agency scientific review panels, 1980-2012

National Conferences Organized:

Vice Chair, FASEB Summer Research Conference on **Hepatic Regeneration and Carcinogenesis**, Copper Mountain, CO. July 29-August 3, 1990

Organizer and Director, Symposium and Workshop on the **Pathobiology of Neoplasia**, Richmond, VA. April 24-28, 1989

Organizer and Director, Second Symposium and Workshop on the **Pathobiology of Neoplasia**, Sponsored by the American Society of Investigative Pathology, Richmond, VA. April 19-23, 1993

Program Committee Chair, American Society for Investigative Pathology, 1994-1996

Member Experimental Biology Program Committee, 1994-1995

First Organizer and Chair of **Pathobiology for Basic Scientists**, sponsored by the American Society of Investigative Pathology, at Experimental Biology '95, in Atlanta, GA, April 9, 1995. This course was adopted as a regular feature of the ASIP Annual Meeting.

Organizer and Chair, FASEB Summer Research Conference on **Growth Factor Receptor Tyrosine Kinases in Mitogenesis, Morphogenesis, and Tumorigenesis** (Vice Chair Dr. George Vande Woude), Snowmass Village, CO, July 31-August 5, 1999

Organizer and Chair, second FASEB Summer Research Conference on **Growth Factor, Receptor Tyrosine Kinases in Mitogenesis, Morphogenesis, and**

Tumorigenesis (Vice-Chair, Dr. George Vande Woude), Snowmass Village, CO, August 4-9, 2001

Co-Organizer and Co-Chair with Dr. Nicholas LaRusso of the Mayo Clinic of the American Association for the Study of Liver Diseases Single Topic Conference on the **Pathobiology of Biliary Epithelia**, Airlie Conference Center, Warrington, VA, June 7-10, 2001

Organizer and Chair (together with Dr. Nicholas LaRusso of the Mayo Clinic) of the Henry M. and Lillian Stratton Basic Research Single Topic Conference - **Pathobiology of Biliary Epithelia and Cholangiocarcinoma**, sponsored by the American Association for the Study of Liver Diseases, Emory Conference Center, Atlanta, GA, June 6-8, 2008. (Refer to AASLD webpage for details)

Organizer and Chair - **Hepatobiliary Cancers: Pathobiology and Translational Advances**, sponsored in part by the American Association for the Study of Liver Diseases and the Cholangiocarcinoma Foundation, Virginia Crossings Hotel and Conference Center, Glen Allen, VA, December 7-10, 2017.

(www.livercancerconference.vcu.edu for details)

Primary Organizer (Co-Organizers, Gregory J. Gores, M.D., Mayo College of Medicine and Clinic and Lopa Mishra, M.D., Feinstein Institutes for Medical Research), Keystone eSymposium on **“Hepatobiliary Cancers: Pathobiology and Translational Advances”**. Held as a virtual conference on March 22-24, 2021.

Organizer and Chair, FASEB Catalyst Conference titled **“Cholangiocarcinoma: Molecular Drivers, Microenvironment, and Precision Medicine”** held as a virtual conference on April 7, 2021.

Primary Organizer and Chair (Co-organizers, Mario Strazzabosco, M.D., Ph.D., Yale School of Medicine and Sumera I. Ilyas, M.B.B.S, Mayo College of Medicine and Clinic) FASEB Science Research Conference, **“The Cholangiocarcinoma Conference: Molecular Drivers, Microenvironment, and Precision Medicine”** to be held in 2023.

Scientific Talk:

Speaker, Keystone eSymposium on **“Hepatobiliary Cancers: Pathobiology and Translational Advances”**. Held as Virtual Conference on March 22-24, 2021.

Title of Presentation: The desmoplastic reaction and intrahepatic cholangiocarcinoma: CAFs, select molecular drivers, and prognostic implications.

National Study Sections:

Regular Member Metabolic Pathology Study Section, 1991-1995; Regular Member ACS Study Section on Carcinogenesis and Nutrition, 1989-1992; Ad Hoc Member, numerous NIH Study Sections, 1982-2012. (See also above)

Recent Professional Listings

Who's Who in America 70th Edition, 2016

Who's Who in Science and Engineering, 12th Edition, 2016-2017

Who's Who in the World 32nd Edition, 2015

Editorial Advisory Boards

In Vitro Cellular and Developmental Biology – Animal, 1987-2020

Experimental and Molecular Pathology, 1999-present

Member of Editorial Board of Annals of Clinical and Laboratory Science, 2010-present

Pathobiology, 1990-1998/99

Hepatology, 1991-1994

World J Gastroenterology, 2006-2009

Recent Grants

NIH-National Cancer Institute RO1 Grant 1 RO1 CA 083650-06-10: Altered Growth Factor Pathways in Biliary Cancer. Total project period: 02/01/05-12/31/11. Total amount of award: \$1,536,705.

NIH-National Cancer Institute R01 Grant 2RO1 CA 039225-22A1-26: Hepatic Oval Cells in Culture and In Vivo. Total project period: 07/01/07-05/31/13 Total amount of award: \$1,426,593.

NIH-National Cancer Institute R01 Grant 2R01 CA 083650-11A1-15: Altered Growth Factor Pathways in Biliary Cancer. Total project period: 04/01/2013-03/31/2018. Projected total amount of award: \$1,526,875. Total project period: 04/01/13-03/31/18. (No Cost extension 04/01/18-03/31/19).

VCU School of Medicine Bridge Grant Award, 2013. Total Amount awarded: \$31,304.

American Association for the Study of Liver Diseases Conference Grant, 2017. Total amount of award: \$15,000.

NIH-National Cancer Institute R13 Conference Grant 1R13 CA 216895-01: Hepatobiliary Cancers: Pathobiology and Translational Advances. Total project period: 07/01/17-06/30/18. Total amount of award: \$2,250.

Recent Invited Presentations

Speaker, Keystone eSymposium on "Hepatobiliary Cancers: Pathobiology and Translational Advances". Held as Virtual Conference on March 22-24, 2021. Title of Presentation: The desmoplastic reaction and intrahepatic cholangiocarcinoma: CAFs, select molecular drivers, and prognostic implications.

"TGF- β , periostin, and mesothelin in intrahepatic cholangiocarcinoma: pathological insights and translational implications" Presented to the University of Pittsburgh Department of Pathology, Pittsburgh, PA, October 23, 2019.

"Modeling the desmoplastic stroma of intrahepatic cholangiocarcinoma for therapeutic targeting." Presented at Hepatobiliary Cancers: Pathobiology and Translational Advances, Glen Allen, VA on December 8, 2017.

"Role of cancer-associated myofibroblasts with portal fibroblast biomarkers and TGF- β in the pathogenesis of desmoplastic intrahepatic cholangiocarcinoma." Presented to the Department of Pathology and Laboratory Medicine of Tulane University Health Science Center on March 18, 2016, New Orleans, LA.

"Modeling cholangiocarcinoma desmoplasia for rapidly identifying stromal targeting agents." Presented at Digestive Disease Week 2015 in the Poster Session titled "Bile Acid and Cancer Receptors" on May 16, 2015, Washington, DC. Session sponsored by the American Association for the Study of Liver Diseases.

"Cholangiocarcinoma cells interact with cancer-associated myofibroblasts in 3-D culture to provoke a strong desmoplastic-like reaction mediated by TGF- β ." Presented on November 17, 2015 in the Poster Session titled

“Experimental Hepatocarcinogenesis” at The Liver Meeting® 2015, AASLD’s Annual Meeting in San Francisco, CA.

“Origin and diversity of fibroblastic cells from intrahepatic cholangiocarcinoma.” Presented at Experimental Biology 2015 in Boston, MA, March 28-31, 2015. Given as an oral talk in the session entitled “Cellular and Molecular Basis of Liver Tumors” on March 28, 2015, and as a Poster Discussion Presentation in the session entitled “Club Hepatomania (Liver Pathobiology) Scientific Interest Group Poster Discussion and Networking Session” on March 31, 2015. Both sessions are sponsored by the American Society for Investigative Pathology at Experimental Biology 2015.

“Fibrogenesis and Intrahepatic Biliary Cancer: New Insights into the Cellular Origins, Genomic and Functional Diversity, and Clinical Significance of Cancer-Associated Fibroblasts.” Presented at Pathology Grand Rounds, Virginia Commonwealth University School of Medicine on May 11, 2015.

“Hepatic Bile Duct Cancer: Modeling, Microenvironment, and Molecular Cross-talk.” Presented in the MBG Seminar Series at Virginia Commonwealth University on October 13, 2015.

“Modeling cholangiocarcinoma desmoplasia for rapidly identifying stromal targeting agents. Accepted for presentation at DDW 2015 on February 10, 2015. To be presented at the Poster Session “Bile Acid and Cancer Receptors” May 16, 2015, Washington, DC.

“Cancer-associated fibroblasts in cholangiocarcinoma progression.” Presented at the 2014 FASEB Summer Research Conference on Liver Biology: Fundamental Mechanisms & Translational Applications, Keystone, CO on July 6-11, 2014.

“Cancer-associated fibroblasts and intrahepatic cholangiocarcinoma progression: mechanisms and targeting.” Presented to the Department of Pathology at the University of Pittsburgh on September 11, 2013.

“Liver biliary cancer progression: The role of myofibroblastic cells in the tumor microenvironment.” Presented as the Keynote talk at the Medical University of South Carolina Hollings Cancer Center 2013 Spring Research Symposium “Models of Human Cancer for Translational Research”, March 15, 2013 in Charleston, South Carolina.

“Tumor microenvironment and hepatic biliary cancer progression: New opportunities for therapy.” John F. Sander and Nancy K. Dunkel Memorial Lectureship in Physiology. Presented to the Department of Physiology of Michigan State University, East Lansing, MI on November 29, 2012.

“Organotypic cell culture modeling of desmoplastic cholangiocarcinoma progression.” Presented in the Poster Session entitled “Experimental Hepatocarcinogenesis” at the 63rd Annual Meeting of the American Association for the Study of Liver Diseases in Boston, MA, November 11, 2012.

Co-moderator, Early Morning Workshop entitled **“HCC: Cellular Mechanisms of Carcinogenesis”** at The Liver Meeting 2012 (63rd Annual Meeting of the American Association for the Study of Liver Diseases), November 11, 2012, Boston, MA.

Invited Speaker at the 2nd CanLiv Biliary Tract and Gallbladder Research Symposium on June 22, 2012 at ASCO Headquarters Conference Center, Alexandria, VA. Title of presentation: **“Fibroblasts, cell signaling pathways in cholangiocarcinoma.”**

Presenter of The Dr. and Mrs. Michael A. Gerber Memorial Lecture given at the 23rd Annual Health Sciences Research Days and the Department of Pathology & Laboratory Medicine, Tulane University on April 11, 2012. Lecture Title: **“Modeling cholangiocarcinoma progression: Do cancer-associated myofibroblasts matter?”**

Invited talk entitled **“Cancer-associated myofibroblastic cells and cholangiocarcinoma progression”** presented at the McArdle Laboratory for Cancer Research Symposium honoring Dr. Henry C. Pitot, University of Wisconsin-Madison on June 3, 2011.

“Cancer-associated fibroblastic cells significantly promote cholangiocarcinoma cell ductal growth in a novel 3-D co-culture model.” Presented in the oral session entitled “Mechanisms of Hepatobiliary Neoplasia”, sponsored by the American Association for the Study of Liver Diseases at Digestive Disease Week 2011, Chicago, IL on May 10, 2011.

“Molecular targeting strategies for cholangiocarcinoma therapy: Preclinical assessment of potential targets.” Presented at the Department of Biochemistry, George Washington University Medical Center, Washington, DC,

on October 19, 2010.

Invited Speaker at the **1st Annual Biliary Tract-Gallbladder Cancer Research Symposium** sponsored by CanLiv-The Hepatobiliary Cancers Foundation and by the Cholangiocarcinoma Foundation, in Alexandria, VA on May 7, 2010. Title of presentation: **"Intrahepatic cholangiocarcinoma: New insights from a preclinical animal model suggesting novel therapeutic targeting strategies."**

Invited Presenter at the 2009 NCI Translational Science Meeting, "NCI Translates" Vienna, VA, November 5-7, 2009. Presented in Poster Discussion Session titled "Targeting the EGFR Family" on November 5, 2009. Title of poster presentation: **"Preclinical assessment of dual ErbB1/ErbB2 targeting in intrahepatic cholangiocarcinoma."**

Intrahepatic Cholangiocarcinoma Progression: Molecular Insights from a Novel Rat Model Closely Mimicking the Human Cancer. Presented at the 5th Joint Meeting of the Japanese Society of Gastroenterology and the American Gastroenterological Association Sapporo, Hokkaido, Japan on May 8, 2009.

A Novel "Patient-Like" Rat Model of Cholangiocarcinoma Progression Highly Suitable for the Rapid *In Vivo* Testing of Target-Based Therapies. Presented in the American Association for Investigative Pathology sponsored session entitled "Liver Pathobiology Symposium: Interdisciplinary Approaches to Liver Disease" at Experimental Biology 2009, New Orleans, LA on April 19, 2009.

Preclinical assessment of dual ErbB1/ErbB2 targeting as a potential adjuvant molecular therapy for intrahepatic cholangiocarcinoma. Given as an oral presentation in Parallel Session XXVI: Hepatobiliary Cancer: Basic at the 59th Annual Meeting of the American Association for the Study of Liver Diseases, San Francisco, CA, November 3, 2008.

A Novel "Patient-Like" Rat Model of Intrahepatic Cholangiocarcinoma Progression as a Preclinical Platform for Rapid Testing of Molecular Target-based Therapies. Presented as an "Advances in Molecular and Cellular Pathology" seminar sponsored by the Graduate Program of the Departments of Pathology and Genomics and Pathobiology, University of Alabama at Birmingham on October 9, 2008.

ErbB Family Receptor Tyrosine Kinases as Potential Targets for Intrahepatic Cholangiocarcinoma Therapy. Presented at the Yale Digestive Diseases Section Research Conference, Yale University School of Medicine on September 23, 2008.

A Novel "Patient-like" Rat Model of Intrahepatic Cholangiocarcinoma Progression Mimicking Cellular, Molecular, and Clinical Features of the Human Disease. Presented at the University of North Carolina-Charlotte, April 30, 2008.

Hepatobiliary cancer: current concepts, new models, and future strategies for target-based therapies and chemoprevention. Presented at the 2008 Annual Meeting of the Association of Pathology Chairs in Colorado Springs, CO, July 18, 2008.

Establishment of a novel "patient-like" rat model of cholangiocarcinoma progression for molecular therapeutic studies. Presented at the 2008 Henry M. & Lillian Stratton Basic Research Single Topic Conference - Pathobiology of Biliary Epithelia and Cholangiocarcinoma, sponsored by the American Association for the Study of Liver Diseases (AASLD) Atlanta, GA, June 6-8, 2008.

A novel "patient-like" model of cholangiocarcinoma progression based on bile duct inoculation of transformed rat cholangiocytes overexpressing ErbB2. Given as a Poster Presentation at the 47th Annual Meeting of the Society of Toxicology & ToxExpo™ Seattle, WA, March 17th, 2008.

A novel preclinical model of intrahepatic cholangiocarcinoma progression based on orthotopic cell transplantation of spontaneous versus *erbB-2/neu*-transformed rat cholangiocytes. Presented to the Department of Pathology of the University of Pittsburgh School of Medicine on May 30, 2007.

A new and unique "patient-like" rat model of intrahepatic cholangiocarcinoma progression mimicking the human disease. Presented to the Department of Pathology of Emory University School of Medicine on February 27, 2007.

A novel preclinical rat model of rapid mass-forming cholangiocarcinoma growth in liver with prominent extrahepatic metastases recapitulating the advanced human disease. Given as a Poster Presentation at the 57th Annual Meeting of the American Association for the Study of Liver Diseases on October 30, 2006.

Cholangiocarcinoma: Novel Models and Molecular Targeting Strategies.

Presented to the Liver-Pancreatic-Biliary Center of the University of Connecticut Health Center on June 21, 2005.

Invited Speaker: 2005 Hans Popper Hepatopathology Society Seminar on PRIMARY liver Tumors, San Antonio, TX on February 27, 2005. Title of Presentation: **Cholangiocarcinoma: Molecular Pathogenesis and Potential Therapeutic Targets.** Presented to the Department of Medical Physiology of Texas A&M University System Health Science Center on November 18, 2004.

Cholangiocarcinoma: Immunochemical Profiling and Novel Models.

Presented to the Department of Pathology of the University of Pittsburgh School of Medicine on November 10, 2004.

Invited Speaker: 2004 FASEB Summer Research Conference entitled "Mechanisms of Liver Growth, Development and Disease" Snowmass Village, CO, August 7-12, 2004. Title of presentation: **Altered growth factor receptor signaling and molecular therapeutic targeting in cholangiocarcinoma. Biliary Cancer: Immunochemical Profiling, Novel Models, and Potential Therapeutic Targets.** Presented to the Department of Pathology and Microbiology of the University of South Carolina School of Medicine on July 19, 2004.

Recent Publications

Peer Reviewed Publications

Sirica, A.E., Strazzabosco, M. and Cadamuro, M.: 2021. Chapter 8-Intrahepatic cholangiocarcinoma: morpho-molecular pathology, tumor reactive microenvironment, and malignant progression. In: "Mechanisms and Therapy of Liver Cancer" (Fisher, P.B. and Sarkar, D., eds.) Advances in Cancer Research, 149: 321-387.

Sirica, A.E.: 2021. The 2021 FASEB Virtual Catalyst Conference on cholangiocarcinoma: molecular drivers, microenvironment, and precision medicine, April 7, 2021. FASEB J., 35: e21670

Brindley, P.J., Bachini, M., Ilyas, S. I., Khan, S A., Loukas, A., **Sirica, A.E.**, Teh, B.T., Wongkham, S. and Gores, G.J.: 2021. Cholangiocarcinoma. Nat Rev Dis Primers 7: 65.

Sirica, A.E., Gores, G.J., Groopman, J.D., Selaru, F.M., Strazzabosco, M., Wang, X.W., Zhu, A.X.: Intrahepatic Cholangiocarcinoma: Continuing Challenges and Translational Advances. *Hepatology* 2019; 69: 1803-1815.

Manzanares, M.Á., Campbell, D.J.W., Maldonado, G.T. and **Sirica, A.E.** Overexpression of periostin and distinct mesothelin forms predict malignant progression in a rat cholangiocarcinoma model. *Hepatology Communications* 2017; 2: 155-172.

Manzanares, M.Á., Usui, A., Campbell, D.J., Dumur, C.I., Maldonado, G.T., Fausther, M., Dranoff, J.A. and **Sirica, A.E.**: 2017. Transforming growth factors α and β are essential for modeling cholangiocarcinoma desmoplasia and progression in a 3-dimensional organotypic culture model. *Am J. Pathol.* 187: 1068-1092.

Li, L., Piontek, K., Ishida M., Fausther M., Dranoff J.A. Fu, R., Mezey, E. Gould, S.J., Fordjour, F.K., Meltzer, S.J., **Sirica, A.**, and Selaru, F.M.: 2017. Extracellular vesicles carry miR-195 to intrahepatic cholangiocarcinoma and improve survival in a rat model. *Hepatology*, 65: 501-514. (Editorialized in *Hepatology* 2017; 65: 404-406).

Liu, R., Zhou, R., Zhao, X., Liang, X., Campbell, D. J., Zhang, X., Zhang, L., Shi, R., Wang, G., Pandak, W.M., **Sirica, A.E.**, Hylemon, P.B., and Zhou, H.: 2014. Conjugated bile acids promote cholangiocarcinoma cell invasive growth via activation of sphingosine 1-phosphate receptor 2. *Hepatology*, 60: 908-918. (Editorialized in *Hepatology* 2014; 60: 795-797).

Sirica, A.E., Almenara, J.A., Li, C.: 2014. Periostin in intrahepatic cholangiocarcinoma: pathobiological insights and clinical implications. *Exptl. Mol. Pathol.*, 97: 515-524.

Sirica, A.E. and Gores, G.J.: 2014. Desmoplastic tumor stroma and cholangiocarcinoma: clinical implications and therapeutic targeting. *Hepatology*, 59: 2397-2402.

Razumilava, N., Gradilone, S.A., Smoot, R.L., Mertens, J.C., Bronk, S.F., **Sirica, A.E.**, and Gores, G.J.: 2014. Noncanonical hedgehog signaling contributes to chemotaxis in cholangiocarcinoma. *J. Hepatology*, 60: 599-605.

Fingas, C.D., Mertens, J.C., Razumilava, N., Sydor, S., Bronk, S.F., Christensen, J.D., Rizvi, S.H., Canbay, A., Treckmann, J.W., Paul, A., **Sirica, A.E.**, and Gores, G.J.: 2013. Polo-like kinase 2 is a mediator of hedgehog survival signaling in

cholangiocarcinoma. *Hepatology*, 58: 1362-1374.

Sirica, A.E.: 2012. Notching up on the cellular origins of intrahepatic cholangiocarcinoma. *Hepatology Elsewhere section*. *Hepatology*, 57: 1668-1671.

Mertens, J.C., Fingas, C.D., Christensen, J.D., Smoot, R.L., Bronk, S.F., Werneburg, N.W., Gustafson, M.P., Dietz, A.B., Roberts, L.R., **Sirica, A.E.**, and Gores, G.J.: 2013. Therapeutic effects of deleting cancer-associated fibroblasts in cholangiocarcinoma. *Cancer Res.*, 73: 897-907.

Campbell, D.J.W., Dumur, C.I., Lamour, N.F., DeWitt, J.L., and **Sirica, A.E.**: 2012. Novel organotypic culture model of cholangiocarcinoma progression. *Hepatology Research*, 42: 1119-1130.

Fingas, C.D., Mertens, J.C., Razumiliva, N., Bronk, S.F., **Sirica, A.E.**, Gores, G.J.: 2012. Targeting PDGFR- β in cholangiocarcinoma. *Liver International*, 32: 400-409.

Noda, T., Shimoda, M., Ortiz, V, **Sirica, A.E.**, and Wands, J.W.: 2012. Immunization with aspartate β -hydroxylase loaded dendritic cells produce anti-tumor effects in a rat model of intrahepatic cholangiocarcinoma. *Hepatology*, 55: 86-97.

Sirica, A.E.: 2012. The role of cancer-associated myofibroblasts in intrahepatic cholangiocarcinoma. *Nature Reviews Gastroenterology & Hepatology*, 9: 44-54.

Fingas, C.D., Bronk, S.F., Werneburg, N.W., Mott, J.L., Guicciardi, M.E., Cazanave, S.C., Mertens, J.C., **Sirica, A.E.**, and Gores G. J.: 2011. Myofibroblast-derived PDGF-BB promotes hedgehog survival signaling in cholangiocarcinoma cells. *Hepatology*, 54: 2076-2088.

Sirica, A.E., Campbell, D.J., and Dumur, C.I.: 2011. Cancer-associated fibroblasts in intrahepatic cholangiocarcinoma. *Current Opinion in Gastroenterology*, 27: 276-284.

Dumur, C.I., Campbell, D.J.W., DeWitt, J.L., Oyesanya, R.A., and **Sirica, A.E.**: 2010. Differential gene expression profiling of cultured *neu*-transformed *versus* spontaneously-transformed rat cholangiocytes and of corresponding cholangiocarcinomas. *Expt. Mol. Pathol.*, 89: 227-235.

Zhang, Z., Oyesanya, R.A., Campbell, D.J.W., Almenara, J.A., DeWitt, J.L., and **Sirica, A.E.**: 2010. Preclinical assessment of simultaneous targeting of epidermal growth factor receptor (ErbB1) and ErbB2 as a strategy for cholangiocarcinoma therapy. *Hepatology*, 52: 975-986. (For commentary on this paper, see Nanda, S.: 2010. *Nat Rev Gastroenterol Hepatol*. 7: 591).

Fingas, C.D., Blechacz, B.R.A., Smoot, R.L., Guicciardi, M.E., Mott, J., Bronk, S.F., Werneburg, N.W., **Sirica, A.E.**, Gores, G.J.: 2010. A smac mimetic reduces TNF related apoptosis inducing ligand (TRAIL)-induced invasion and metastasis of cholangiocarcinoma cells. *Hepatology*, 52: 550-561.

Blechacz, B.R.A., Smoot, R.L. Bronk, S.F., Werneburg, N.W., **Sirica, A.E.**, AND Gores, G.J.:2009. Sorafenib inhibits signal transducer and activator of transcription- 3 signaling in cholangiocarcinoma cells by activating phosphatase shatterproof 2. *Hepatology*, 50:1861-1870.

Sirica, A.E., Dumur, C.I., Campbell, D.J.W., Almenara, J.A., Ogunwobi, O.O., and DeWitt, J.L.: 2009. Intrahepatic cholangiocarcinoma progression: Prognostic factors and basic mechanisms. *Clin Gastroenterol Hepatol*, 7: S68-S78.

Sirica, A.E.: 2008. The role of ErbB family receptor tyrosine kinases in intrahepatic cholangiocarcinoma. *World J. Gastroenterology*, 14:7033-7058.

Sirica, A.E., Nathanson, M.H., Gores, G.J., LaRusso, N.F.: 2008. Pathobiology of biliary epithelia and cholangiocarcinoma: Proceedings of the Henry M. and Lillian Stratton Basic Research Single-Topic Conference. *Hepatology (AASLD Single Topic Conference Report)*, 48:2040-2046.

Sirica, A.E., Zhang, Z., Lai, G.-L., Asano, T., Shen, X.-N., Ward, D.J., Mahatme, A., and DeWitt, J.L.: 2008. A novel "patient-like" model of cholangiocarcinoma progression based on bile duct inoculation of tumorigenic rat cholangiocyte cell lines. *Hepatology*, 47:1178-1190. (Profiled on April 2008 journal cover).

Lai, G.-H., Zhang, Z., Shen, X.-N., Ward, D.J., DeWitt, J.L., Holt, S.E., Rozich, R.A., Hixson, D.C., **Sirica, A.E.**: 2005. *erbB-2/neu* Transformed rat cholangiocytes recapitulate key cellular and molecular features of human bile duct cancer. *Gastroenterology* 129:2047-2057.

Sirica, A.E.: 2005. Cholangiocarcinoma: Molecular targeting strategies for chemoprevention and therapy. *Hepatology* 41: 5-15.

Zhang, Z., Lai, G.-H., **Sirica, A.E.**: 2004. Celecoxib-induced apoptosis in rat cholangiocarcinoma cells mediated by Akt inactivation and Bax translocation. *Hepatology* 39: 1028-1037.

Lai, G.-H., Zhang, Z., **Sirica, A.E.**: 2003. Celecoxib acts in a cyclooxygenase-2 independent manner and in synergy with emodin to suppress rat cholangiocarcinoma growth *in vitro* through a mechanism involving enhanced Akt inactivation and increased activation of caspases-9 and -3. *Molecular Cancer Therapeutics*, 2:265-271.

Books/Journals

Sirica, A.E. and Fisher, P.B., Editors, Hepatobiliary Cancers: Translational Advances and Precision Medicine, *Advances in Cancer Research*, 2022; 156: In Preparation. (Anticipated publication date Spring 2022).

Sirica, A.E., and Longnecker, D.S., Editors, Biliary and Pancreatic Ductal Epithelia: Pathobiology and Pathophysiology, 1997, pp. 1-575, Marcel Dekker, Inc., New York, NY. (peer-reviewed). Published as Volume 3 in Marcel Dekker's "Gastroenterology and Hepatology" series.

Sirica, A.E., Editor/Author, *Cellular and Molecular Pathogenesis*, 1996, pp. 1-557, Lippincott-Raven Publ., Philadelphia, PA.

Sirica, A.E., Editor/Author, *The Role of Cell Types In Hepatocarcinogenesis*, 1992, pp. 1-358, CRC Press, Boca Raton, Fl.

Sirica, A.E., Editor/Author, *The Pathobiology of Neoplasia*, 1989, pp. 1-583, Plenum Publishing Corp., New York, NY.