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

Professor Emeritus of Pathology
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Awards

August 2019	Appointed to Distinguished Career Professorship at VCU
June 2019	Recognized by Expertscape as an Expertscape World Expert in Cholangiocarcinoma (Top 0.1% Expert)
November 2017	Awarded the designation of Fellow of the American Association for the Study of Liver Diseases (FAASLD)
September 2014	Awarded the Albert Nelson Marquis Lifetime Achievement Award
March 2013	Keynote Speaker, Hollings Cancer Center 2013 Spring Symposium on "Models of Human Cancer for Translational Research" Medical University of South Carolina, Charleston, SC.
April 2012	Dr. and Mrs. Michael A. Gerber Lectureship, Department of Pathology and Laboratory Medicine, Tulane University School of Medicine, New Orleans, LA.
2011	Visiting Professor, Mayo Medical Center, Rochester, MN.
2009	Inducted as a Fellow of the (AGAF)
2007	Recipient of VCU School of Medicine Recognition Award for Research and Scholarship

Virginia Commonwealth University & Medical Center Appointments

2020	VCU Professor Emeritus of Pathology
2019	VCU Distinguished Career Professor
1990-2020; 2001-2020	Full Professor with tenure, Depts. of Pathology and Internal Medicine
1999-2014	Chair, Division of Cellular and Molecular Pathogenesis
1993-1999	Chair, Division of Experimental Pathology Department of Pathology

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 & Medical Center Service

1988-2014	Member - VCU Department of Pathology Executive Committee
1989-1991; 2010-14	Member - VCU Department of Pathology Grand Rounds Committee
1989-1991	Director - VCU Department of Pathology Grand Rounds Committee
2006-2009	Member - VCU Faculty Senate

Over the past 30 years served on numerous 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

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, 2012

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

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

Reviewer, ZCA1 GRB-I (J1) P, SPORE in Sarcoma, Brain, Liver, Lung, and Prostate Cancers. National Cancer Institute, National Institutes of Health, 2010

Regular Member, Metabolic Pathology Study Section, NCI, NIH, 1991-1995

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. 1990

Organizer and Director, Symposium and Workshop on the Pathobiology of Neoplasia, Richmond, VA. 1989

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

Program Committee Chair, American Society for Investigative Pathology, 1994-96

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, 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, 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, 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 - Pathobiology of Biliary Epithelia, Airlie Conference Center, Warrington, VA, 2001

Organizer and Chair 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, 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, 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, 2021

Organizer and Chair, FASEB Catalyst Conference titled "Cholangiocarcinoma: Molecular Drivers, Microenvironment, and Precision Medicine" held as a virtual conference, 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" Palm Springs, CA 2023

Scientific Talk:
Speaker, Keystone eSymposium on **"Hepatobiliary Cancers: Pathobiology and Translational Advances"**. Held as Virtual Conference, March 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

2016	Who's Who in America 70th Edition
2016-2017	Who's Who in Science and Engineering, 12th Edition
2015	Who's Who in the World 32nd Edition

Editorial Advisory Boards

1987-2020	In Vitro Cellular and Developmental Biology – Animal
1999-2020	Experimental and Molecular Pathology
2010-present	Member of Editorial Board of Annals of Clinical and Laboratory Science
1990-1998/99	Pathobiology
1991-1994	Hepatology
2006-2009	World J Gastroenterology

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. (No Cost extension 04/01/1803/31/19).
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 March 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 2019.

Modeling the desmoplastic stroma of intrahepatic cholangiocarcinoma for therapeutic targeting Presented at Hepatobiliary Cancers: Pathobiology and Translational Advances, Glen Allen, VA December 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 March 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 November 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 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 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. Presented at the Poster Session **"Bile Acid and Cancer Receptors"** May 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, July 2014.

Cancer-associated fibroblasts and intrahepatic cholangiocarcinoma progression: mechanisms and targeting Presented to the Department of Pathology at the University of Pittsburgh, September 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 2013 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, November 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 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 2012, Boston, MA.

Invited Speaker at the 2nd CanLiv Biliary Tract and Gallbladder Research Symposium June 2012 at ASCO Headquarters Conference Center, Alexandria, VA. Title: **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, April 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, June 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 201, Chicago, IL, May 2011.

Molecular targeting strategies for cholangiocarcinoma therapy: Preclinical assessment of potential targets Presented at the Dept. of Biochemistry, George Washington University Medical Center, Washington, DC, October 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, May 2010. Title: **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 2009. Presented in Poster Discussion Session titled "Targeting the EGFR Family". 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, May 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, April 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 59thAnnual Meeting of the American Association for the Study of Liver Diseases, San Francisco, CA, November 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 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, September 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 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 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 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 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, May 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, February 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 2006.

Cholangiocarcinoma: Novel Models and Molecular Targeting Strategies. Presented to the Liver-Pancreatic-Biliary Center of the University of Connecticut Health Center June 2005.
Invited Speaker: 2005 Hans Popper Hepatopathology Society Seminar on PRIMARY liver Tumors, San Antonio, TX, February 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 November 2004.

Cholangiocarcinoma: Immunochemical Profiling and Novel Models. Presented to the Department of Pathology of the University of Pittsburgh School of Medicine November 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, July 2004.

Recent Publications

Peer Reviewed Publications

Sirica AE. Matricellular proteins in intrahepatic cholangiocarcinoma. Adv Cancer Res. 2022;156: 249-281.

Ko S, Kim M, Molina L, **Sirica AE**, Monga SP. YAP1 activation and Hippo pathway signaling in the pathogenesis and treatment of intrahepatic cholangiocarcinoma. Adv Cancer Res. 2022; 156:283-317.

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.,The 2021 FASEB Virtual Catalyst Conference on cholangiocarcinoma: molecular drivers, microenvironment, and precision medicine, April 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.

Additional Publications

Sirica AE. The 2021 FASEB Virtual Catalyst Conference on Cholangiocarcinoma: Molecular Drivers, Microenvironment, and Precision Medicine, April 7, 2021. FASEB J. 2021 Jul;35(7):e21670. doi: 10.1096/fj.202100745. PMID: 34169576.

Brindley PJ, Bachini M, Ilyas SI, Khan SA, Loukas A, **Sirica AE**, Teh BT, Wongkham S, Gores GJ. Cholangiocarcinoma. Nat Rev Dis Primers. 2021 Sep 9;7(1):65. doi: 10.1038/s41572-021-00300-2. PMID: 34504109; PMCID: PMC9246479.

Sirica AE. Matricellular proteins in intrahepatic cholangiocarcinoma. Adv Cancer Res. 2022;156: 249-281. doi: 10.1016/bs.acr.2022.01.010. Epub 2022 Feb 18. PMID: 35961702.

Ko S, Kim M, Molina L, **Sirica AE**, Monga SP. YAP1 activation and Hippo pathway signaling in the pathogenesis and treatment of intrahepatic cholangiocarcinoma. Adv Cancer Res. 2022; 156:283-317. doi: 10.1016/bs.acr.2022.02.003. Epub 2022 Mar 9. PMID: 35961703.

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: 400409.

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* Transformated 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 cyclooxyenase-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 capases-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, Vol. 156, pp. 1-449. Elsevier/Academic Press.

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.