CURRICULUM VITAE

NAME AND DEGREE: Yan-Hua Chen, PhD

CURRENT TITLE: Professor of Neurotherapeutics Chemical Biology

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EDUCATION:

B.S.	East China Normal University Department of Biology Shanghai, P. R. China	1982	Biology
M.S.	Shanghai Institute of Cell Biology Academia Sinica. P. R. China	1985	Developmental Biology
M.S.	Emory University School of Medicine Department of Anatomy and Cell Biology Atlanta, GA	1992	Cell Biology
Ph.D.	Emory University School of Medicine Department of Anatomy and Cell Biology Atlanta, GA	1993	Cell Biology and Biophysics

POSTDOCTORAL TRAINING:

Research Associate (1993-1994):	Laboratory of Dr. R. L. DeHaan Department of Anatomy and Cell Biology Emory University School of Medicine Atlanta, GA
Research Fellow (1994-2000):	Laboratory of Dr. D. A. Goodenough Department of Cell Biology Harvard Medical School Boston, MA

OTHER EDUCATION:

1989: Hopkins Marine Station of Stanford University. “Molecular Biology of Ion Channels”
1992: Life Technologies, Inc. “Recombinant DNA techniques”
2007: 2007 Johns Hopkins Phenotyping Symposium: “Mice and beyond”
2011: UNC Lineberger Cancer Center Symposium: “Cell Metabolism and Cancer”

ACADEMIC EMPLOYMENTS:

1986-1993:	Graduate Research Assistant Department of Anatomy and Cell Biology Emory University School of Medicine
1993-1994:	Research Associate Department of Anatomy and Cell Biology Emory University School of Medicine
1994-2000:	Research Fellow Department of Cell Biology Harvard Medical School
2001-2008:	Assistant Professor, Department of Anatomy and Cell Biology East Carolina University Brody School of Medicine
2008-2018:	Associate Professor, Department of Anatomy and Cell Biology East Carolina University Brody School of Medicine
2008-2015	Member, Leo Jenkins Cancer Center, The Brody School of Medicine, East Carolina University
2008-	Full Member, Lineberger Comprehensive Cancer Center, University of North Carolina at Chapel Hill
2010-	Member, East Carolina Diabetes and Obesity Institute (ECDOI) at East Carolina University.
2015-	Adjunct Associate Professor, Department of Pediatrics, ECU
2015-2023	Graduate Program Director, Anatomy and Cell Biology, ECU
2018-2023	Professor, Department of Anatomy and Cell Biology, East Carolina University Brody School of Medicine
2024-	Professor, Department of Chemistry and Biochemistry, University of South Carolina

AWARDS AND HONORS:

1989:	Grass Foundation Scholarship recipient Hopkins Marine Station of Stanford University
1991:	Travel Award for International Gap Junction Conference, Asilomar, CA
1992:	Travel Award for 32nd ASBMB/Biophysical Society Joint Meeting, Houston, TX
1994-95:	NIH NRSA Fellowship recipient.
1996:	Travel Award for International Gap Junction Conference, France. (Invited Speaker)
2000:	Travel Award for Keystone Symposia: Intercellular Junction. (Invited Speaker)
2003-05:	Faculty Research Award from East Carolina University Brody School of Medicine
2005-06:	Faculty Author Recognition Award Division of Health Sciences at East Carolina University
2007-08:	Research Development Award from the Division of Research and Graduate Studies of East Carolina University
2008:	Travel Award for International Tight Junction Conference in Berlin, Germany (Invited Speaker)
2008:	Featured in ECU alumni magazine, September, 2008
2008:	News release in the local Newspaper The Daily Reflector (September 8, 2008): Research Studies Critical Protein
2009:	East Carolina University Inaugural Inventor Award
2009-15:	Faculty Author Recognition Award Laupus Health Science Library.
2009:	Travel Award for FASEB Experimental Biology Meeting Symposium (Invited Speaker)
2012:	Travel Award for International Conference: Apical Junctional Complex in epithelia and

endothelia in Merida Mexico (Invited Speaker)
2013: Inaugural Induction into National Academy of Inventors.
2014: Travel Award for 19th World Congress on Advances in Oncology, Athens Greece (Invited Speaker)
2014: ECU Research Award for undergraduate student Michael Shea (as Research Mentor)
2014: Invited speaker for FASEB Experimental Biology Meeting (Given by Pediatric Fellow, Parvesh Garg, MD)
2015: Invited speaker for FASEB Experimental Biology Meeting (Given by Pediatric Fellow, Srikanth Ravisankar, MD)
2016: Travel Award for International Tight Junction Conference in Berlin, Germany (Invited Speaker, unable to attend due to leg broken before the conference date)
2017: News release in the local Newspaper The Daily Reflector (March 5, 2017): Grants fund intestinal research at ECU
2017: Designated as a 2017 University Scholar
2017: Poster of Distinction Award from American Physiology Society at FASEB Experimental Biology Meeting 2017.
2018: Travel Award for PhD student Tiaosi Xing from American Association of Anatomists to give an oral presentation at FASEB Experimental Biology meeting 2018 (as PhD advisor)
2018: ECU Research Award for undergraduate student Lesley Jasmine Benderman (as Research Mentor)
2018: ECU Research Award for undergraduate student Stephiya Sabu (as Research Mentor)
2019: Celebrating Women - Dr. Yan-Hua Chen, featured on the ECU website In honor of Women's History Month by Office for Equity and Diversity
2019: Brody Brothers Endowment Research Award (Featured in ECU website: FUNDING BREAKTHROUGHS, January 9th, 2019)
2019: Invited speaker for Digestive Disease Week 2019 in Distinguished Abstract Plenary Session
2019: Travel Award for PhD student Tiaosi Xing from American Gastroenterology Association Society to give an oral presentation at Digestive Disease Week annual meeting 2019 (as PhD advisor)
2020: William R Valentine, Jr. Memorial Graduate Student Award 2020 for PhD student Tiaosi Xing (as PhD advisor)
2021: Eastern North Carolina Graduate Women in Science Research and Professional Development Award for PhD student Amna Naser (as PhD advisor)
2021: Invited Speaker for International Tight Junction Conference in Berlin, Germany (September 27-29, 2021. Virtual)
2022: Post of Distinction at Digestive Disease Week, May 21-24, 2022
2022: Berbecker Award for PhD student Amna Naser (as PhD advisor)

PROFESSIONAL SOCIETIES:

1988-1994: Member, American Biophysical Society
1991-Present: Active member, American Society for Cell Biology
2005-2009: Member, American Heart Association
2007-2010: Member, American Society of Nephrology
2008-Present: Active member, New York Academy of Sciences
2009-Present: Active member, The American Physiological Society - Gastrointestinal and Liver Physiology
2010-2019: Member, American Association for Cancer Research

JOURNAL AND BOOK REVIEWS: (2001-2021)

Molecular Biology of the Cell; Journal of Cell Science; Experimental Cell Research; Journal of Biological Chemistry; Cell & Tissue Research; Journal Nephrology Dialysis Transplantation; Trends in Cell Biology; The American Journal of Physiology - Cell Physiology; Biochimica et Biophysica Acta (Biomembranes); HEPATOLOGY; Journal of Membrane Biology; Pflugers Archiv-European Journal of Physiology; Pediatric Metabolic Syndrome (Book Chapter); The American Journal of Physiology - Renal Physiology; Journal of Advances in Bioscience and Biotechnology; Future Medicine; Bioorganic & Medicinal Chemistry Letters; Nanomedicine; BBA - Reviews on Cancer; Future Medicine-Nanomedicine; Journal of Nanomedicoine: Nanotechnology, Biology, and Medicine; Molecular Biology Reports; Biochimica et Biophysica Acta; Molecular Biology Reports; Oncogene; Tumor Biology; American J. of Medical Science; Nanomedicine; Science Publications; iConceptPress: Introduction to Genetic (DNA methylation and gene regulation); PLoSONE; ISRN Nutrition; Book Chapter: Drug Delivery Across Physiological Barriers; GENE; Thoracic Cancer; Digestive Diseases and Sciences; Drug Delivery; Current Cancer Drug Targets, Bentham Science Publishers; World Journal of Gastroenterology; Journal of Biological Sciences; Oncotarget; Journal of Gastroenterology and Hepatology Research; Journal of Proteome Research; BBA - Molecular Cell Research; Tissue Barriers; Gene; American Journal of Physiology-Gastrointestinal and Liver Physiology; Oncology Reports; AJP: Regulatory, Integrative and Comparative Physiology; Frontiers in Oncology, section Molecular and Cellular Oncology; Annals of the New York Academy of Sciences; Tight Junction Book Chapter

GRANT REVIEWS:

2004: Israel Science Foundation
2005: Israel Science Foundation
2009: NIH CMBK (Cell & Molecular Biology of Kidney) study section February 9, 2009 meeting
2009: NIH Challenge Grant, Special Emphasis Panel/Scientific Review Group 2009/05 CMBK study section
2010: Italian Ministry of Health in association with NIH, Serve as an Ad Hoc Reviewer.
2013: Italian Ministry of Health, Serve as an Ad Hoc Reviewer and Team Leader.
2014: Oak Ridge Associated University (ORAU)
2014: Italian Ministry of Health
2015: National Health Service (NHS) Trust, UK
2016: Oak Ridge Associated University (ORAU)
2017: Italian Ministry of Health, Serve as an Ad Hoc Reviewer and Team Leader
2018: Italian Ministry of Health, Serve as an Ad Hoc Reviewer and Team Leader
2021: NIH/NIDDK, DKUS Special Emphasis Panel, March 18, 2021 meeting (virtual)
2021: NIH/NIDDK, Digestive and Nutrition Physiology and Diseases (DNPD) study section Special Emphasis Panel ZRG1 DNPD, March 28-29, 2021 (virtual)
2021: NIH/NIDDK Digestive and Nutrition Physiology and Diseases (DNPD) study section, ZRG1 DNPD-A, June 28-29, 2021(virtual)
2021: NIH/NIDDK Special Emphasis Panel Study section - Gastrointestinal Immunology and Diseases, ZRG1 DKUS-H, July 23, 2021 (virtual)
2022: Italian Ministry of Health, Serve as an Ad Hoc Reviewer

Editorial Service:

2011-Present: World Journal of Clinical Urology, Editorial Board Member,

2012-Present: ISRN Nutrition, Editorial Review Board
2012-Present: Tissue Barriers, Editorial Board Member
2013-Present: Science Publications, Associate Editor
2014-Present: World Journal of Biological Chemistry, Editorial Board Member
2015-Present: Journal of Cell Biology and Histology, Editorial Board Member
2018-Present: Oncology Letters, Editorial Board Member

Symposium Chair for Nano-oncology session, The 2nd Annual Would Congress of Nanomedicine, 2011, Shenzhen, China

Section Co-Chair for Cancer Regulation section, 6th World Congress of Cancer meeting, 2013, Xi-an, China

Session Chair for Lung Cancer/Brain Tumors, 19th World Congress on Advances in Oncology and 17th International Symposium on Molecular Medicine, October, 2014, Athens, Greece

ADMINISTRATIVE ACTIVITIES:

Department of Anatomy and Cell Biology:

2002-2006: Graduate Program Committee member, elected
2008-2011: Graduate Program Committee member, elected
2008-2013: Department Space Committee member, appointed
2011-2012: Department Personnel Committee member, elected
2011-2014: Department Tenure and Promotion Committee member
2013-2014: Chair, Department Personnel Committee, elected
2013-2014: Chair, Department Performance Review Committee, elected
2015-2023 Chair, Graduate Program Committee, appointed
2017-2019 Department Personnel Committee member, elected
2018-2019 Department Faculty Search Committee member
2018- Department Tenure and Promotion Committee member
2021-2023 Department Pre-candidacy Committee member

Brody School of Medicine:

2011-2012: Program Chair of Brody Woman Faculty Committee, elected
2011-2012: Co-Chair for Leo Jenkins Cancer Center, Tumor Biology and Microenvironment Focus Group, appointed
2011: Moderator for December Brody School of Medicine Chairs Roundtable meeting: “Challenges of Managing and Promoting Diversity within a Department – What Can the BWFC Do to Help?”
2016-2017: Chair, Graduate Studies Committee at Brody School of Medicine, elected
2021-2022: Chair, Graduate Studies Committee at Brody School of Medicine, elected
2021-2022: Chair, Graduate Studies Curriculum Committee at Brody School of Medicine, appointed

East Carolina University:

2012: Planning and organizing 2012 Professional Leadership in Medicine and Science Conference, East Carolina University
2013-2014: Vice Chair for Student Scholarships, Fellowships, and Financial Aid Committee, Elected

Mentoring Activities:

2004: PhD student Michele Alexandra **received Carol F. Volkman Award** at ECU Research and Creative Achievement Week.
2009-2016: Brody Woman Faculty Committee promotion and tenure PAD annual mentoring session (speaker)
2012: PhD student Zhe Lu **received Carol F. Volkman Award** at 6th Annual ECU Research and Creative Achievement Week.
2013: Mentoring M1 Medical student Eden Maria Rouse's summer research.
Project title: Investigating Small GTPases and Their Roles in Lung Cancer
2013: Dr. Zhe Lu **received Helms Award** by ECU chapter of Sigma Xi. Attend ECU Award ceremony for Dr. Zhe Lu.
2013: Dr. Junming Fan, a postdoc fellow, was **invited to give an oral presentation** at 2013 Experimental Biology Annual meeting, Boston, MA
2013: Dr. Junming Fan, the postdoc fellow, **received the travel award** from 2013 Experimental Biology Annual meeting, Boston, MA
2013: Michael Shea, an undergraduate student, **received Undergraduate Research and Creative Award**
2014: Parvesh Garg MD, a Neonatal Medicine fellow, was **invited to give an oral presentation** at 2014 Experimental Biology Annual meeting, San Diego, CA
2014: PhD student Jongdee Nopparat **received Carol F. Volkman Award** at 8th Annual ECU Research and Creative Achievement Week.
2015: Srikanth Ravisankar, MD, a Neonatal Medicine fellow, was **invited to give an oral presentation** at 2015 Experimental Biology Annual meeting, Boston, MA
2015: Spencer M. Jackson, an undergraduate student, **received Undergraduate Research and Creative Award**
2016: Mentoring M4 Medical student Maja Herco's research project in fall semester.
2017: PhD student Tiaosi Xing, her meeting abstract was selected as a **Poster of Distinction** for 2017 Experimental Biology Annual meeting, Chicago, IL
2018: Tiaosi Xing received a **Travel Award** from American Association of Anatomists for attending AAA annual meeting at EB 2018 in San Diego, CA.
Tiaosi Xing gave an oral presentation in a AAA session at AAA's Annual Meeting at EB 2018 in San Diego, CA.
Tiaosi Xing's 2nd abstract was selected for an oral presentation by The American Physiological Society for 2018 EB meeting in San Diego, CA.
2018: Lesley Benderman, an undergraduate student, **received Undergraduate Research and Creative Award**
2018: Stephiya Sabu, an undergraduate student, **received Undergraduate Research and Creative Award**
2019: Tiaosi Xing was invited to give an oral presentation at Digestive Disease Week annual meeting 2019
2019: Tiaosi Xing received a **Travel Award** from American Gastroenterology Association Society to attend Digestive Disease Week annual meeting 2019
2020: Tiaosi Xing received **William R Valentine, Jr. Memorial Graduate Student Award** 2020
2021: Amna Naser received the Eastern North Carolina **Graduate Women in Science Research and Professional Development Award** in March 2021
2022: Amna Naser received **Post of Distinction** at Digestive Disease Week, May 21-24, 2022
2022: Amna Naser received **Berbecker Award** in May 2022

COMMITTEES:
Department of Anatomy and Cell Biology:

2002-05: Graduate Student (**Shiloh B. Jones**) PhD Dissertation Committee member
2003-06: Chair of **Michelle Alexandre**'s PhD Dissertation Committee
2003-05: Precandidacy Committee member for **Kristjan Thompson**
2003-05: Precandidacy Committee member for **Sarah James**
2005-10: Graduate Student (**Kristjan Thompson**) PhD Dissertation Committee member
2006-09: Precandidacy Committee member for **Na Luo**
2008-2010: Precandidacy Committee member for **Jongdee Nopparat**
2009-2013: Chair of **Zhe Lu**'s PhD Dissertation Committee
2009-2013: Graduate Student (**Amy Friesland**) PhD Dissertation Committee member
2010-2014: Chair of **Jongdee Nopparat** 's PhD Dissertation Committee
2012-2013: Chair of IDPBS student **Do Hyung Kim**'s Precandidacy Committee
2013-2016: Chair of IDPBS student **Do Hyung Kim**'s PhD Dissertation Committee
2014-2017: Graduate Student (**Elizabeth Krewson**) PhD Dissertation Committee member
2014-2019: Graduate Student (**Yi Zhu**) PhD Dissertation Committee member
2015-2016: Chair of **Tiaosi Xing**'s Precandidacy Committee
2016-2020: Chair of **Tiaosi Xing**'s PhD Dissertation Committee
2019-2020: Chair of **Amna Naser**'s Precandidacy Committee
2019-2020: Chair of **Shayan Nik Akhtar**'s Precandidacy Committee
2020-2022 Chair of **Amna Naser**'s PhD Dissertation Committee
2020-2022 Master student **Jessica Gugger**'s Thesis Committee member
2021-2023 Graduate Student's **Shayan Nik Akhtar**'s PhD Dissertation Committee member

Department of Biochemistry and Molecular Biology:

2007-2010: Graduate Student (**Tara Ann Cartwright**) PhD Dissertation Committee member
2019-2021 Master student **Cody Hatchett**'s Thesis Committee member
2021- Graduate Student (**Adam Burch**) PhD Dissertation Committee member
2021- Graduate Student (**Cody Hatchett**) PhD Dissertation Committee member

Department of Internal Medicine:

2013-2014: Master Student (**Zhou Yu**) Thesis Committee member
2013-2014: Master Student (**Joshua Moses Corbin**) Thesis Committee member
2014-2017: Graduate Student (**Calvin Justus)** PhD Dissertation Committee member
2015-2018: Graduate Student **(Edward Sanderlin)** PhD Dissertation Committee member
2017-2019: Graduate Student **(Mona A Marie)** Pre-Candidacy Committee member
2019-2022: Graduate Student **(Mona A Marie)** PhD Dissertation Committee member

Department of Biology:
2006-07: Master student (**Tracy Newby**) Thesis Committee member
2008-2011: Chair of Master student (**John E Hoggard**) Thesis Committee
2010-2012: Master student (**Christi Boykin**) Thesis Committee member

Department of Chemistry:

2010-2013: Co-Chair for Interdisciplinary PhD Student (**Dileep Vezzu**) and PhD Dissertation Committee

Brody School of Medicine:
2006-Present: Member of Brody Woman Faculty Committee (BWFC)
2006-2012: Member of Women Cell and Molecular Biologists Committee

2010-2012: Brody Woman Faculty Committee part time tenure subcommittee, appointed
2009-2014: Brody School of Medicine Tenure and Promotion Guideline Revision Committee, appointed
2010-2014: Brody School of Medicine Tenure and Promotion Committee, elected
2011-2019: BWFC promotion and tenure PAD workshop, Speaker.
2015- BSOM Graduate Studies Program Committee
2015: Ad Hoc Committee to work on BSOM graduate program consolidation guidelines
2016-2019: Monthly meeting with Dean of BSOM, Faculty Senate member
2018-2020: Graduate Foundations Curriculum Task Force Committee
2020: Department of Pharmacology and Toxicology Tenure and Promotion Committee member

East Carolina University:

2007-2010: Honorary Degrees, Awards and Distinctions Committee member
2007-2010: Citation Appeals Board member
2009-2012: Unit Code Screening Committee member
2012-2013: Student Scholarships, Fellowships, and Financial Aid Committee member
2013-2014: Vice Chair, Student Scholarships, Fellowships, and Financial Aid Committee
2013: Involved in Organizing 2013 ECU Student Scholarship Workshop
2014: Involved in Organizing 2014 ECU Student Scholarship Workshop
2011-2017: Faculty Senate, elected
2018- Faculty Senate Alternative, elected
2019-2020: Faculty Senate Research-Creative Activities Committee

International:
2010: Thesis Committee member (**Jiao Zhang)**, PhD student from Southeast University, Nanjing, China. Attended Jiao Zhang's thesis defense in Southeast University, China in 2010.
2010: Thesis Committee member (**Yuejiao Zhong)**, PhD student from Southeast University School of Clinical Medicine, Nanjing, China. Attended Yuejiao Zhong's thesis defense in Southeast University School of Clinical Medicine, Nanjing, China in 2010.
2013: Thesis Committee member (**Yan-Ting Zhang)**, PhD student from Jinan University, Guangzhou, China. Attended Yan-Ting Zhang's thesis defense in Jinan University, China in 2013.

TEACHING ACTIVITIES:

1989-1990: BAHS 503: Human Anatomy and Cell Biology.
Allied Health Science Master Program
Emory University School of Medicine
1991: IBS 501: Introductory Cell Biology, Graduate Course
Emory University School of Medicine
2000-2002: MCBI 6410/ANAT 6202: Molecular Cell Biology, Graduate Course
Brody School of Medicine, East Carolina University

2002-Present: ANAT7210: Medical Histology, Brody M1 Medical Student Course;
2002-2006: ANAT 6242 Research Problems in Anatomy and Cell Biology, Graduate

Course.
2003-2019: MCBI 7410/ANAT 7202: Molecular Cell Biology, Graduate Course; Brody School of Medicine
2004-2023: ANAT 7240 Research Problems in Anatomy and Cell Biology. Graduate Course.
2005: ANAT6291: Current Topics in Anatomy. Graduate Course;
2005-2012: BIOL 6880 Introduction to Research. Graduate Course.
2007-2021: BIOL4504: Undergraduate laboratory research course
2009-2023: ANAT7210: Medical Histology Laboratory, Brody M1 Medical Student.
2009-2023t: ANAT 7250: Seminar in Anatomy and Cell Biology, Graduate Course.
2012-2023: ANAT 9000: Dissertation, Graduate Course
2015-2017: BIOL4514: ECU Honors College Undergraduate Research Thesis
2015-2023: Academic Advisor for all Pre-candidacy graduate students, Department of Anatomy and Cell Biology
2020-2022: BMSC7002 Foundations in Biomedical Sciences I; Graduate Course, Brody School of Medicine
2021-2023: MCBI 7410/ANAT 7202: Molecular Cell Biology, Graduate Course; Brody School of Medicine

Former Graduate Students:

Michelle Alexandre, Received PhD degree in August, 2006.
Dissertation Title: The Role of Claudin-7 in Paracellular Transport by Kidney Epithelial Cells
Position: Postdoctoral Fellow in Department of Biological Chemistry, The Johns Hopkins University School of Medicine
Current position: Research Scientist, North Carolina Central University

John Hoggard: Received Master degree in November, 2010.
Thesis Title: Claudin-7 Increases Chemosensitivity to Cisplatin in Human NCI-H522 Lung Cancer Cells.
Position: Dental student, School of Dental Medicine, East Carolina University, NC. Graduated in 2016. Dentist in
Current position: DMD, Dentistry in Greenville, NC

Gen Zhang, Received PhD degree in December, 2011. Joint PhD training program with Southeast University, Nanjing, China.
Dissertation Title: Nanoparticles Induced Cancer Cell Apoptosis and Growth Inhibition.
Current position: Assistant Professor, Nanjing Medical School, Nanjing, China.

Dileep Vezzu: Received PhD degree in April, 2013.
Dissertation Title: Synthesis, Structure, Photophysics, and Biological Activity of Cyclometalated Platinum (II) Complexes.
Current position: Scientist, DSM Pharmaceuticals, Greenville, NC

Zhe Lu: Received PhD degree in June, 2013.
Dissertation Title: Functions of claudin-7 in human lung cancer
Current position: Assistant Professor, Hangzhou Normal University, Hangzhou, China

Jongdee Nopparat: Received PhD degree in May 2014.
Dissertation Title: δ-Catenin Implications in Prostate Cancer Progression
Current position: Lecturer, Department of Anatomy. Faculty of Science, Prince of Songkla

University, Hat-Yai, Songkhla, Thailand

Do Hyung Kim: Received PhD degree in May 2016.
Dissertation Title: Tight junction protein Claudin-7 modulates multiple processes of cancer progression in human lung cancer cells
Current position: Postdoctoral fellow at Department of Pharmacology, Uniformed Services University of the Health Sciences, Bethesda, MD

Tiaosi Xing: Received PhD degree in July 2020.
Dissertation Title: Functions of claudin-7 in the self-renewal of intestinal epithelium
Current position: Postdoctoral fellow at Department of Pathology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, 02115

Amna Naser: Received PhD degree in December 2022.
Dissertation Title: Investigating non-tight Junction Functions of Claudin-7: Regulating Large Intestine Stem Cell Functions and Niche Maintenance, and Junctional Protein Nanoarchitecture
Current position: Manager, Grants & Collaborative Projects, The Endocrine Society 2055 L Street NW #600, Washington, DC 20036

Graduate Students Mentored or Supervised:

2002-06: **Michelle Alexandre,** PhD graduate student, PhD Dissertation, Department of Anatomy and Cell Biology at Brody School of Medicine.
- ❖ Received Carol Volkman Award for Best Poster Presentation in 2004 ECU Graduate Student Research Day.

2004: **Kristjan Thompson,** PhD graduate student, Preceptorship, Department of Anatomy and Cell Biology at Brody School of Medicine.

2005-06: **Tracy Newby**, Master student, Department of Biology at East Carolina University. Co-mentor (Mentor: Dr. Lee Sutton)

2006-07: **Na Luo**, PhD graduate student, Preceptorship, Department of Anatomy and Cell Biology at Brody School of Medicine.
- ❖ Submitted an abstract as a coauthor for 47th American Society of Cell Biology Annual Meeting, 2007

2007-08: **Zhe Lu,** PhD graduate student, Preceptorship, Department of Anatomy and Cell Biology at Brody School of Medicine.
- ❖ Presented a poster entitled "Inhibition of Lung Cancer Cell Growth by Overexpression of Claudin-7 in NCI-H1299 Human Lung Carcinoma Cells" at 2nd Annual Research and Creative Achievement Week in East Carolina University March 31, 2008

2008-09: **Amy Friesland**, PhD graduate student, Preceptorship, Department of Anatomy and Cell Biology at Brody School of Medicine.

2009-11: **John E. Hoggard**, Master student from Department of Biology, East Carolina University. Master thesis advisor.
- ❖ Received 2009 Summer Research Scholarship to conduct research in my lab.

- ❖ John Hoggard's research work has been presented at 4th Annual Research and Creative Achievement Week in East Carolina University, April 5-9, 2010.
- ❖ John Hoggard's research work has been presented in American Association for Cancer Research 101st Annual Meeting 2010.
- ❖ John Hoggard received his Master degree in 2011 and entered the Dental School in 2012.

2009-10: **Gen Zhang**, PhD student from Southeast University, Nanjing, China. Co-Mentor.

- ❖ Gen Zhang's research work has been presented in American Society for Cell Biology 49th Annual Meeting 2009.
- ❖ Gen Zhang published two first author papers in 2011.

2008-13: **Zhe Lu,** PhD graduate student, Department of Anatomy and Cell Biology. PhD Dissertation advisor.

- ❖ Zhe Lu's research work has been presented at 3rd Annual Research and Creative Achievement Week in East Carolina University, March 30-April 3, 2009.
- ❖ Zhe Lu's research work has been presented in American Society for Cell Biology 49th Annual Meeting 2009.
- ❖ Zhe Lu's research work has been presented in American Association for Cancer Research 101st Annual Meeting 2010, 2011, and 2012.
- ❖ Zhe Lu received ECU Research and Creativity Award in 2011.
- ❖ Zhe Lu received Sigma Xi Helms Award on 2013.
- ❖ Zhe Lu has published 3 first author papers and 1 co-author paper.

2009-10: **Jiao Zhang**, PhD student from Southeast University, Nanjing, China. Dissertation Committee member. Attended Jiao Zhang's thesis defense in Southeast University, China in 2010.

2009-10: **Jongdee Nopparat**, PhD graduate student, Preceptorship, Department of Anatomy and Cell Biology at Brody School of Medicine.

- ❖ Jongdee Nopparat received Carol F. Volkman Award at 8th Annual ECU Research and Creative Achievement Week.

2010-13: **Dileep Vezzu**, Interdisciplinary PhD student from Department of Chemistry, Co-mentor for PhD Dissertation.

- ❖ Dileep Vezzu's research work has been presented at 6th Research and Creative Achievement Week in East Carolina University, March 26-30, 2012.

2010-12: **Daniel Kim,** PhD graduate student, Preceptorship, Department of Anatomy and Cell Biology at Brody School of Medicine.

2012: **Eden Maria Rouse**, M1 Medical student, summer research program, Department of Anatomy and Cell Biology.

- ❖ Eden Maria Rouse's research work has been presented at BSOM Graduate Medical Research Day, July, 2012.
  Poster Title: Investigating Small GTPases and Their Roles in Lung Cancer

2013: **Yi Zhu**, PhD graduate student, Preceptorship, Department of Anatomy and Cell Biology

2013: **Samantha Sellers**, PhD graduate student, Preceptorship, Department of Anatomy

and Cell Biology

2013: **Jordan Jenkins**, PhD graduate student, summer research training, Department of Anatomy and Cell Biology

2012-16: **Do Hyung Kim,** PhD graduate student for Interdisciplinary Doctoral Program in Biological Sciences (IDPBS). Preceptorship advisor and Dissertation advisor.

- ❖ Do Hyung Kim's research work has been presented at Research and Creative Achievement Week in East Carolina University, March 23-27, 2015
- ❖ Do Hyung Kim's research work has been presented in Experimental Biology Annual Meeting, Boston, MA, 2015.

2014: **Maja Herco**, M4 Medical student, Research project: The role of tight junction proteins in Necrotizing Enterocolitis. Department of Anatomy and Cell Biology.

2014-20: **Tiaosi Xing,** PhD graduate student, Preceptorship advisor and Dissertation advisor. Department of Anatomy and Cell Biology.

- ❖ Tiaosi Xing's research work has been presented at Research and Creative Achievement Week in East Carolina University, April 3-7, 2017
- ❖ Tiaosi Xing's research work has been presented in Experimental Biology Annual Meeting, Chicago, IL, 2017. The poster has been selected as a **Poster of Distinction for the meeting.**
- ❖ Tiaosi Xing received a **Travel Award** from American Association of Anatomists for attending AAA annual meeting at EB 2018 in San Diego, CA.
- ❖ Tiaosi Xing gave an oral presentation in an AAA session at AAA's Annual Meeting at EB 2018 in San Diego, CA.
  The title is "Critical role of claudin-7 in maintaining intestinal crypt stem cell functions"
- ❖ Tiaosi Xing's 2nd abstract was selected for an oral presentation by The American Physiological Society for 2018 EB meeting in San Diego, CA.
  The title is "Deletion of claudin-7 disrupts epithelial cell self-renewal in mouse colon".
- ❖ Tiaosi Xing received a **Travel Award** from Digestive Disease Week, 2019
- ❖ Tiaosi Xing received **William R Valentine, Jr. Memorial Graduate Student Award** 2020

2019-2020: **Shayan Nik Akhtar,** PhD graduate student, Preceptorship. Department of Anatomy and Cell Biology.

2019-2023: **Amna Naser,** PhD graduate student, Preceptorship advisor and Dissertation advisor. Department of Anatomy and Cell Biology.

- ❖ Amna Naser received the Eastern North Carolina **Graduate Women in Science Research and Professional Development Award** in March 2021
- ❖ Amna Naser received **Post of Distinction** at Digestive Disease Week, May 21-24, 2022
- ❖ Amna Naser received **Berbecker Award** in May 2022

Undergraduate Students Mentored or Supervised:

2003: **Christa Register**, High school student, Summer Ventures of Science and Mathematics Institute.

- Ms. Register's Research Presentation: "Differential Expression of Claudin Proteins in Human Colon Carcinoma Cells"

2004: **Carmen Edwards** and **Vi Vo**, Undergraduate students, Department of Biology at East Carolina University.

2005-08: **Rodney Tatum**, Undergraduate student, Department of Biology at East Carolina University.

- Mr. Tatum's Research Abstract (1st author): Hypertension-Related WNK4 Kinase Phosphorylates Claudin-7 and Increases Paracellular Conductance to NaCl. 2007. 61st Annual High Blood Pressure Research Conference.
- Mr. Tatum's Research manuscript (1st author): WNK4 Phosphorylates Ser^{206} of Claudin-7 and Promotes Paracellular Cl^- Permeability. 2007. FEBS Letters. Under Revision.

2007: **Nicholas Kochenour**, Undergraduate student, Department of Biology at East Carolina University. Co-mentor (Mentor: Dr. Lee Sutton).

- Mr. Kochenour's reseach work presented at ECU Centennial Celebration Research and Creative Achievement Week: "Effects of Beta Lactoglobulin on the Tight Junction Stability of MDCK Monolayers"

2008: **Megan Alexander** and **Virag Patel**, Undergraduate students, Department of Biology at East Carolina University.

2009: **Callie Stegall**, Undergraduate students, Department of Biology at East Carolina University.

- **Mr. Callie Stegall** presented his research work "Analysis of Tight Junction Assembly in the MDCK II Cell Line" at ECU 3rd Annual Research and Creative Achievement Week, March 30, 2009.
-

2009: **Ashley Brewer**, Undergraduate students, Department of Biology at East Carolina University.

2010: **Jayme Elizabeth Hostetter**, Undergraduate students, Department of Biology at East Carolina University.

- **Ms. Jayme Hostetter** presented her research work "MDCK Cells as an Epithelial Transport Model" at ECU 4th Annual Research and Creative Achievement Week, April 5-9, 2010.

2010: **Sheelah Mani Iyengar,** Undergraduate students, Department of Biology at East Carolina University.

- **Ms. Sheelah Iyengar** presented her research work "MDCK Cells as an Epithelial Transport Model" at ECU 4th Annual Research and Creative Achievement Week, April 5-9, 2010.

2011: **John Purvis**, Undergraduate students, Department of Biology at East Carolina University. Involved in lung cancer project.

2011-15: **Michael Shea**, Undergraduate students, Department of Biology at East Carolina University. Involved in lung cancer project.

- **Mr. Michael Shea** presented his research work "The Role of Claudin-7 in Human Lung Cancer Cell Migration" at ECU Annual Research and Creative Achievement Week, March 31-April 4, 2014.
- **Mr. Michael Shea** received 2013 Undergraduate Research and Creative Award.
- **Mr. Michael Shea** is a co-presenter for Experimental Biology annual meeting, March 2015.
  Current position: Medical student at BSOM

2013-14: **Christian Lewis**, Undergraduate students, Department of Biology at East Carolina University. Involved in intestinal stem cell project.
Current position: Nursing student at Craven College, NC

2015-16: **Spencer M Jackson,** an undergraduate student, Department of Biology at East Carolina University. Involved in lung cancer project.

- **Mr. Spencer Jackson** presented his research work "Suppression of claudin-7 enhances human lung cancer cell survival" at ECU 10th Research and Creative Achievement Week, April 6, 2016.
- **Mr. Spencer Jackson** received 2015 Undergraduate Research and Creative Award.
- **Mr. Spencer Jackson** is a co-presenter for Experimental Biology annual meeting, April 6 2016.
  Current position: Medical student at BSOM

2017-2018 **Andrew Kaufmann**, Undergraduate students, Department of Biology at East Carolina University. Involved in intestinal inflammation project.

2017-2020 **Stephiya Sabu,** an undergraduate student, Department of Health Education and Promotion at East Carolina University. Involved in intestinal stem cell project.

- **Stephiya Sabu** presented her research work "Claudin-7 Plays a Critical Role in Maintaining the Number of Intestinal Stem Cells" at ECU 12th Research and Creative Achievement Week, March 28, 2018.
- **Stephiya Sabu** is a co-presenter for Experimental Biology annual meeting, April 26, 2017.
- **Stephiya Sabu** is a co-presenter for Experimental Biology annual meeting, April 22, 2018.
- **Stephiya Sabu** received 2018 Undergraduate Research and Creative Award.

2017-2019 **Lesley Jasmine Benderman,** an undergraduate student, Department of Chemistry at East Carolina University. Involved in intestinal stem cell project.

- **Lesley Jasmine Benderman** presented her research work "Claudin-7 is Required for the Epithelial differentiation of Mouse Intestinal Organoids" at ECU 12th Research and Creative Achievement Week, March 28, 2018.
- **Lesley Jasmine Benderman** is a co-presenter for Experimental Biology annual meeting, April 26, 2017.
- **Lesley Jasmine Benderman** is a co-presenter for Experimental Biology annual meeting, April 22, 2018.
- **Lesley Jasmine Benderman** received 2018 Undergraduate Research and Creative Award.

- **Lesley Jasmine Benderman** give an oral presentation "Claudin-7 regulates the inflammatory signaling in intestinal epithelial cells" at ECU 13th Research and Creative Achievement Week, April 3rd, 2019.

2022-2023 **Yanni Pavlikianidis,** an undergraduate student, Department of Biology at East Carolina University. Involved in screening small molecules for cancer project.

2022-2023 **Jalen Walker,** an ECU honor College student, Department of Biology at East Carolina University. Involved in screening small molecules for intestinal inflammation project.

Postdoctoral Fellow Mentored or Supervised:

2006-2008: **Yuguo Zhang**, PhD. Research Associate, Department of Anatomy and Cell Biology at Brody School of Medicine.
Research Project: Characterization of claudin-7 knockout mice

2009-2011: **Lei Ding**, MD, PhD, Research Fellow, Associated Professor of Clinical Oncology, Department of oncology, Beijing Shijitan Hospital Affiliated Capital Medical University, Beijing, China.
Research Project: Claudin-7 and intestinal inflammation
Current position: Professor, Vice Chair, Department of oncology, Beijing Shijitan Hospital Affiliated Capital Medical University, Beijing, China.

2011-2013: **Junming Fan**, PhD, Research Fellow from Zhejing University, China.
Received Travel Award from Experimental Biology Annual meeting, 2013.
Invited to give a talk at Experimental Biology Annual meeting, 2013.
Research Project: Role of Claudin-7 in hypertension and kidney diseases
Current position: Associate Professor, Wenzhou University, Medical School, Wenzhou, China

2013-2015: **Srikanth Ravisankar**, MD, Neonatology Fellow, Department of Pediatrics
Research Project: Investigating the role of claudin proteins in Necrotizing enterocolitis
Current position: Assistant Professor, Chief of Neonatology Division, Department of Pediatrics, Brody School of Medicine, East Carolina University

2013-2015: **Parvesh Mohan Garg**, MD, Neonatology Fellow, Department of Pediatrics
Research Project: Study the kidney function in Necrotizing enterocolitis
position: Physician, Elmhurst Medical Center affiliated with Ichan school of medicine, New York, NY 11373
Current position: Assistant Professor of Pediatrics, Division Neonatology, University of Mississippi Medical Center

2015: **Zhibin Yang**, MD, Visiting Scientist, Associate Professor, Kunming Medical University, Kunming, China.

2015-2017: **Rolando Camacho,** MD, Neonatology Fellow, Department of Pediatrics.
Research Project: Intestinal mucosa and microflora colonization

RESEARCH ACTIVITIES:

Ongoing Research Projects:

Homeostatic Reset as a New Therapeutic Paradigm for Slow Progression Diseases.
NIH National Institute of General Medical Sciences
R01GM146257, 09/15/2021 – 08/31/2026
Co-Investigator (15%), $627,118/yr, (Principal investigator: Qun Lu)

Enhanced Understanding of Sandy Run Hide Using Biochemical and Morphological Approaches.
Devro Inc 130700-25-72692, 10/1/2015 – 4/1/2026
PI, $27,299. Co-PI, Qun Lu

Completed Research Projects:

Role of claudin-7 in intestinal structure and inflammation
NIH National Institute of Diabetes and Digestive and Kidney Diseases
R15 DK103166, 09/20/2016 – 08/31/2019 (No-Cost-Extension to 08/31/2021 due to COVID-19 pandemic)
Principal investigator (15%), $100,000/yr

Effects of HMYS101 on junctional complex
ELIONCO, INC
2015-INFA-03, 04/01/2016 – 03/31/2019 (No-Cost-Extension to 12/31/2021 due to COVID-19 pandemic)
Principal investigator (10%), 125,000/yr

Investigating the role of claudin-7 in intestinal epithelial stem cell functions
Brody Brothers Endowment grant
01/01/2019 – 4/31/2020
$35,000

Intestinal mucosa integrity is essential for normal microflora colonization and immune homeostasis
Brody Brothers Endowment grant
01/01/2016 – 06/30/2017
$23,500

The Function of Claudin-7 in Renal Epithelial Cells
NIH National Heart, Lung, and Blood Institute
R01 HL085752, 07/10/2008-06/30/2015 (No-cost extension)
Principal investigator (25%), $225,000/yr

Rho GTPases and Neuroprotection Model in Cancer Therapy
NIH/NCI-CA165202-01
05/15/2012-04/30/2016
Co- Principal Investigator (5%), (PI, Qun Lu) $100,000/yr

Roles of Claudin-7 in Lung Cancer
NIH National Institute of Environmental Health Sciences

R03 ES016888, 09/01/2008-08/31/2012 (No-cost extension)
Principal investigator (10%), $50,000/yr

δ-Catenin and Cell-Cell Adhesion in Prostate Cancer
NIH National Cancer Institute.
R01CA111891, 03/01/2006-01/31/2012
Co- Principal Investigator (5%) (PI: Qun Lu), $193,830/yr

Renal Tubular Dysfunction in Claudin-7 Null Mice
North Carolina Biotechnology Center #2007-BRG-1210, 09/01/2007-04/30/2009
Principal investigator (10%), $50,000/yr

Regulation of Paracellular Ion Permeability by Phosphorylation
American Heart Association 0555434U, 07/01/2005-06/30/2008.
Principal investigator (10%), $66,000/yr

Acute Renal Tubular Necrosis in Claudin-7 Deficient Mice
The Division of Research and Graduate Studies of ECU
07/01/2007-06/30/2008.
Principal investigator, $35,000

Delta-catenin cleavage by presenilin and synaptic remodeling.
National Institute on Aging. 2005-2007.
Co- Principal Investigator (5%), (PI: Qun Lu), $50,000/yr

Molecular Mechanisms of Tight Junction Formation and Regulation
ECU Faculty Research Grant.
07/01/2003-06/30/2005.
Principal investigator, $20,000/yr

Molecular Interactions of Tight Junction Membrane Proteins
NIH Pilot research grant through Boston Children's Hospital. DK34854-NIDDK.
07/01/1999-06/30/2000.
Principal investigator, $20,000

PUBLICATIONS: https://www.ncbi.nlm.nih.gov/myncbi/yan-hua.chen.1/bibliography/public/

1. DeHaan, R.L. and **Y.-H. Chen**. 1989. Voltage dependence of junctional conductance in the embryonic heart. In: *Molecular and Cellular Mechanisms of Antiarrhythmic Agents*. L. Hondeghem, ed. Futura, Mount Kisco, NY pp. 19-43
2. DeHaan, R.L. and **Y.-H. Chen**. 1990. Development of gap junctions. In: *Embryonic Origins of Defective Heart Development*. D.E. Bockman and M.L. Kirby, Eds. Ann. N.Y. Acad. Sci. 588:164-173
3. **Chen, Y.-H**. and R.L. DeHaan. 1991. The role of channel sub-states in voltage-induced decay of junctional conductance. In: *1991 International Meeting on Gap Junctions*. Asilomar, CA
4. **Chen, Y.-H**. and R.L. DeHaan. 1992. Multiple-channel conductance states and voltage regulation of embryonic chick cardiac gap junctions. *J. Membrane Biol*. 127:95-111.
5. **Chen, Y.-H**. and R.L. DeHaan. 1993. Temperature-dependence of embryonic cardiac gap junction conductance and channel kinetics. *J. Membrane Biol*. 136: 125-134.

6. **Chen, Y.-H**. and R.L. DeHaan. 1993. Multiple channel conductance states in gap junctions. In: *Gap Junctions*. J.S. Hall, G.A. Zampighi, and R.M. Davis, Eds. Elsevier, Amsterdam. pp. 97-103
7. R.L. DeHaan and **Y.-H. Chen**. 1995. Multiple connexins and asymmetric currents in embryonic cardiac gap junction. In: *Process in Cell Research*, ed. Y. Kanno, Elsevier Science, B.V., Amsterdam. 4: 187-200
8. **Chen, Y.-H**. and R.L. DeHaan. 1996. Asymmetric voltage-dependence of embryonic cardiac gap junction channels. *American Journal of physiology, Cell Physiology*. 270: C276-C285.
9. **Chen, Y.-H**., C.S. Merzdorf, D.L. Paul and D.A. Goodenough. 1997. COOH terminus of occludin is required for tight junction barrier function in early Xenopus embryos. *J. Cell Biology*. 138: 891-899.
10. Merzdorf, C.S., **Y.-H. Chen** and D.A. Goodenough. 1998. Formation of functional tight junctions in Xenopus embryos. *Developmental Biology*. 195: 187-203.
11. **Chen, Y.-H**. 2000. Diverse Functions of Vertebrate Junctional Complexes in Human Health and neurological disorders. *Fudan Lectures in Neurobiology*. 235:93-104.
12. **Chen, Y.-H**., Q. Lu, E. E. Schneeberger and D.A. Goodenough. 2000. Restoration of Tight Junction Structure and Barrier Function by Down-Regulation of the Mitogen-activated Protein Kinase Pathway in Ras-transformed Madin-Darby Canine Kidney Cells. *Mol Biol Cell*. 11:849-862.
13. Kim, K., A. Sirota, **Y.-H. Chen**, S. B. Jones, R. Dudek, G.W. Lanford, C. Thakore, and Q. Lu. 2002. Dendrite-like Process Formation and Cytoskeletal Remodeling Regulated by δ-Catenin Expression. *Exp. Cell Res*. 275: 171-184.
14. **Chen, Y.-H**., Q. Lu, D.A. Goodenough and B. Jeansonne. 2002. Non-Receptor Tyrosine Kinase c-Yes Interacts with Occludin During Tight Junction Formation in Canine Kidney Epithelial Cells. *Mol Biol Cell*. 13: 1227-1237.
15. **Chen, Y.-H.** and Lu, Q. 2002. Association of Nonreceptor Tyrosine Kinase c-Yes with Tight Junction Protein Occludin by Coimmunoprecipitation Assay. From: *Cancer Cell Signaling, Methods in Molecular Biology.* 218: 127-132.
16. Jones, S.B., Lanford, G.W., **Chen, Y.-H**., Moribito, M., Kim, K., and Lu, Q. 2002. Glutamate-Induced δ–Catenin Redistribution and Dissociation from Postsynaptic Receptor Complexes. *Neuroscience*. 115 (4): 1009-1021.
17. Jeansonne, B., Lu, Q., Goodenough, D.A. and **Chen, Y.-H.** 2003. Claudin-8 Interacts with Multi-PDZ Protein 1 (MUPP1) and Reduces Paracellular Conductance in Epithelial Cells. *Cellular and Molecular Biology.* 49 (1): 13-21. Special thematic issue of tight junction.
18. **Chen, Y.-H**., D.A. Goodenough, and Q. Lu. 2004. Occludin, a Constituent of Tight Junctions. In: *Tight Junctions, 3rd edition*. Ronald G. Landes. pp. 1-14.
19. Alexandre, M.D., Lu, Q., and **Chen, Y.-H.** 2005. Overexpression of Claudin-7 Decreases the Paracellular Cl^- Conductance and Increases the Paracellular Na^+ Conductance in LLC-PK1 Cells. *J. Cell Science.* 118: 2683-2693.
20. Lu, Q., Dobbs, L. J., Gregory, C. W., Lanford, B. A., Revelo, M. P., Shappell, S., **Chen, Y.-H.** 2005. Increased expression of δ–Catenin/neural plakophilin-related armadillo protein is associated with the down-regulation and redistribution of E-cadherin and $p120^{ctn}$ in human prostate cancer. *Human Pathology*. 36: 1037-1048.
21. Alexandre, M. D., Jeansonne, B. G., Renegar, R. H., Tatum, R and **Chen, Y.-H.** 2007. The First Extracellular Domain of Claudin-7 Affects the Paracellular Cl^- Permeability. *Biochemical and Biophysical Research Communications*. 357:87-91.
22. Tatum, R., Zhang, Y., Lu, Q., Kim, K., Jeansonne, B. J., and **Chen, Y.-H.** 2007. WNK4 Phosphorylates Ser^{206} of Claudin-7 and Promotes Paracellular Cl^- Permeability. *FEBS Letters*. 581:3887-3891.
23. Lu, Q., Zhang, J., Allison, R., Gay, H., Yang, W., Bhowmick, N., Frelix, G., Shappell, S., and **Chen, Y.-H**. 2008. Identification of extracellular δ-catenin accumulation for prostate

cancer detection. *The Prostate*. 69 (4): 411-418.
24. Lu, Q., Longo, F., Zhou, H., Massa, S., and **Chen, Y.-H.** 2009. Signaling through Rho GTPase pathway as viable drug target. *Current Medicinal Chemistry*. 16 (11): 1355-1365.
25. **Chen, Y.-H**., Lin, J-J., Jeansonne, B. J., Tatum, R., and Lu Q. 2009. Analysis of Claudin Genes in Pediatric Patients with Bartter's Syndrome. *Ann. N. Y. Acad. Sci.* 1165: 126-134.
26. Zeng Y, Abdallah A, Lu JP, Wang T, **Chen Y-H**, Terrian DM, Kim K, Lu Q. 2009. δ-Catenin Promotes Prostate Cancer Cell Growth and Progression by Altering Cell Cycle and Survival Gene Profiles. *Molec Cancer.* 8:19.
27. Tatum, R., Zhang, Y., Salleng, K., Lu, Z., Lin, JJ., Lu, Q., Jeansonne, B. G., Ding, L. and **Chen Y.-H**. 2010. Renal Salt Wasting and Chronic Dehydration in Claudin-7-Deficient Mice. *Am J Physiol Renal Physiol* 298: F24-34. **This paper is the Editorial Focus of this issue.**
28. Lu, Q., Zhang, J., and **Chen, Y.-H**. 2009. Prostate cancer cell growth and death: complex roles of pro- and anti-oncogenic protein signaling. *Handbook of Prostate Cancer Cell Research*. 431-447
29. Wang T, **Chen Y.-H**., Hong H, Bareiss S, Jeansonne B, Lu Q. 2009. Increased nucleotide polymorphic changes in the 5'-untranslated region of *δ-catenin* (CTNND2) gene in prostate cancer. *Oncogene.* 28(4): 555-564.
30. Zhang, J., **Chen, Y.-H**., & Lu, Q. 2010. Pro-oncogenic and anti-oncogenic pathways: opportunities and challenges of cancer therapy. *Future Oncology*. 6 (4): 587-603.
31. Lu J, Zhang J, Kim K, Case T, Matusik R, Caudy M, Wolfe M, **Chen Y.-H**, Nopparat J and Lu Q. 2010. Human homolog of Drosophila Hairy and enhancer of split 1, Hes1, negatively regulates delta-catenin (CTNND2) expression in cooperation with E2F1 in prostate cancer. *Molec Cancer.* 9:304.
32. Ding, L., Zhang, Y., Tatum, R., and **Chen, Y.-H**. 2011. Detection of Tight Junction Barrier Function in Vivo by Biotin, *CLAUDINS: METHODS AND PROTOCOL*. Humana Press, pp 91-100.
33. Zhang, G, Lai, BB, Zhou, YY, Chen, BA, Wang, XM, Lu, Q, **Chen, YH**. 2011. Fe3O4 Nanoparticles With Daunorubicin Induce Apoptosis Through Caspase-8/PARP Pathway And Inhibit K562 Leukemia Cell-Induced Tumor Growth In Vivo. *Nanomedicine: nanotechnology, biology, and medicine*. 7: 595-603.
34. Zhang, G, Ding, L, Renegar, R, Wang, XM, Lu, Q, Huo, SQ, **Chen, YH**. 2011. Hydroxycamptothecin-Loaded Fe3O4 Nanoparticles Induce Human Lung Cancer Cell Apoptosis through Caspase-8 Pathway Activation and Disrupt Tight Junctions. *Cancer Science*. 102(6): 1216-1222.
35. Lu, Z., Ding L., Hong, H., Hoggard, J., Lu, Q., **Chen, Y.-H**. 2011. Claudin-7 Inhibits Human Lung Cancer Cell Migration and Invasion through ERK/MAPK Signaling Pathway. *Exp Cell Res.* 317: 1395-1946.
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37. Yang, W., Qiang, D., Zhang, M., Ma, L., Zhang, Y., Chen Qing, Yunlong Xu, Chunlan Zhen, Jikai Liu, **Chen, Y.-H.** 2011. Isoforskolin pretreatment attenuates lipopolysaccharide-induced acute lung injury in animal models. *Int. Immunopharmacol.* 11(6): 683-92.
38. Ding, L., Lu, Z., Foreman, O., Tatum, R., Lu, Q., Renegar, R., Cao, J., and **Chen, Y.-H**. 2012. Inflammation and Disruption of the Mucosal Architecture in Claudin-7-Deficient Mice. *Gastroenterology*. 142: 305-315. **This paper is the Editorial Highlight of this issue.**
39. Chen YH, Rodriguez AA, and Lu Q. Urine Biomarkers for Prostate Cancer Detection. 2012. *In*: Cancer Biomarkers. CRC Press. Chapter 4. 77-100.
40. Hoggard, J., Fan, JM; Lu, Z; Lu, Q; Sutton, L; **Chen, Y.-H.** 2013. Claudin-7 increases chemosensitivity to cisplatin through the upregulation of caspase pathway in human NCI-

H522 lung cancer cells. *Cancer Science.* 104(5): 611-618. **This paper is the Editorial Highlight of this issue.**
41. Lu, Z., Ding L., Lu, Q., **Chen, Y.-H.** 2013. Claudins in Intestines: Distribution and Functional Significance in Health and Diseases. *Tissue Barriers.* 1(3): e24978.
42. Lu, Z., Lu, Q., Ding L., **Chen, Y.-H.** 2013. The Role of Claudin Proteins in Lung Tumorigenesis. In: Lung Cancer, A Comprehensive Overview. Nova Science Publishers, Inc, New York. p255-276.
43. Ding L., Lu, Z., Lu, Q., **Chen, Y.-H.** 2013. The Claudin family of proteins in human malignancy: A clinical perspective. Cancer Management and Research. 5: 367-375.
44. Friesland A, Zhao Y, **Chen YH**, Wang L, Zhou H, and Lu Q. Small molecule targeting Cdc42-intersectin interaction disrupts Golgi organization and suppresses cell motility. *Proc Natl Acad Sci USA.* 2013; 110(4):1261-1266.
45. Vezzu, D.A.K., Lu, Q., **Chen, Y.-H.,** Huo, S. 2014. Cytotoxicity of Cyclometalated Platinum Complexes Based on Tridentate NCN and CNN-coordinating ligands: Remarkable Coordination Dependence. J. Inorganic. Biochemistry. 134:49-56.
46. Khairallah H, Andalousi JE, Annie Simard A, Haddad N, **Chen, Y.-H.,** Hou JH, Ryan AK, and Gupta IR. 2014. Claudin-7, -16, and -19 during mouse kidney development. *Tissue Barriers.* 2(4):e964547.
47. Lu, Q., Lanford, G. W., Hong, H., & **Chen, Y.-H.** 2014. δ-Catenin as a potential cancer biomarker. *Pathology International*, 64 (5), 243-246.
48. Nopparat J, Zhang J, Lu J-P, **Chen Y-H**, Zheng D, Neufer PD, Fan J, Hong H, Boykin C, and Lu Q. 2015. δ-Catenin, a Wnt/β-catenin modulator, reveals inducible mutagenesis-promoting cancer cell survival adaptation and metabolic reprogramming. *Oncogene.* 34(12):1542-1552.
49. Lu Z, Kim DH, Fan JM, Lu Q, Verbanac K, Ding L, Renegar R, and **Chen, Y-H**. 2015. A non-tight junction function of claudin-7 – Interaction with integrin signaling in suppressing lung cancer cell proliferation and detachment. *Molecular Cancer*. 14:(120) 1-15.
50. Garg PM, Tatum R, Ravisankar S, Shekhawat PS, and **Chen, Y-H**. 2015. Necrotizing enterocolitis in a mouse model leads to widespread renal inflammation, acute kidney injury, and disruption of renal tight junction proteins. Pediatric Research. 146:1-6.
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52. Xing TS, Camacho Salazar R and **Chen, Y-H**. 2017. Animal models for studying epithelial barriers in neonatal necrotizing enterocolitis, inflammatory bowel disease and colorectal cancer. *Tissue Barriers*, 5:4, e1356901.
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55. Li WJ, Xu C, Wang K, Li TY, Wang XN, Yang H, Xing TS, Li WX, **Chen, Y-H,** Gao H, Ding L. 2018. Severe Intestinal Inflammation in the Small Intestine of Mouse Induced by Controllable Deletion of Claudin-7. *Digestive Diseases and Sciences*. 63:1200-1209.
56. Fan J, Tatum R, Hoggard J, **Chen, Y-H**. 2019. Claudin-7 Modulates Cl^- and Na^+ Homeostasis and WNK4 Expression in Renal Collecting Duct Cells. *Int J Mol Sci.* 20 (15): 3798.
57. KIM DH, LU Q and **Chen, Y-H**. 2019. Claudin-7 modulates cell-matrix adhesion that controls cell migration, invasion and attachment of human HCC827 lung cancer cells. *ONCOLOGY LETTERS* 17: 2890-2896.
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intersectin interaction by small molecule ZCL367 impedes cancer cell cycle progression, proliferation, migration, and tumor growth. *Cancer Biol and Ther.* 20 (6): 740–749.
59. Xing TS, Benderman LJ, Sabu S, Parker J, Yang J, Lu Q, Ding L, and **Chen, Y-H**. 2020. Tight Junction Protein Claudin-7 Is Essential for Intestinal Epithelial Stem Cell Self-Renewal and Differentiation. *Cell Mol Gastroenterol Hepatol.* 9 (4): 641-659. **This paper is an Editorial Featured Article of this issue with a cover page**.
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61. Naser A, Xing TS, Lu Q, and **Chen Y-H**. 2022. Non-tight junction functions of claudin proteins: roles in cell-matrix interactions and stem cell regulations. In: *Tight Junctions*, L. González-Mariscal (ed.), Springer Nature. 199-216.
62. Lu, Q and **Chen Y-H**. 2022. TRPV4: En *RhoA* To a Cure? *BioEssays*. 44(6):e2200071. doi: 10.1002/bies.202200071. Epub ahead of print. PMID: 35441721.
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64. Naser A, Lu, Q and **Chen Y-H**. 2022. Three-dimensional culture of murine colonic crypts to study intestinal stem cell function *ex vivo*. *Journal of Visualized Experiments.* 188: 1-12; DOI: 10.3791/64534
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66. Naser A, Xing TS, Tatum R, Lu, Q, Boyer PJ and **Chen Y-H**. 2024. Colonic crypt stem cell functions are controlled by tight junction protein claudin-7 through Notch/Hippo signaling. *Ann NY Acad Sci.* 1-17, DOI: 10.1111/nyas.15137
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PEER-REVIEWED ABSTRACTS:

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2. **Chen, Y.-H**. and R.L. DeHaan. 1989. Cardiac gap junction channels shift to lower conductance states when temperature is reduced. *Biophys. J*. 55:152a
3. **Chen, Y.-H**. and R.L. DeHaan. 1990. The effects of varying pH and temperature on dye coupling through gap junctions in pairs of embryonic chick heart cells. *Int. Biophys. Congr*. 10:316
4. **Chen, Y.-H**. and R.L. DeHaan. 1992. Multiple channel conductance states in embryonic chick cardiac gap junctions. *Biophys. J*. 61:A506
5. **Chen, Y.-H**. and R.L. DeHaan. 1993. Immunolocalization of Cx42, Cx43, and Cx45 proteins between embryonic chick ventricle myocytes. *Mol. Biol. Cell*. 4:1899.
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10. **Chen, Y.-H**. and D.A. Goodenough. 2000. Occludin tyrosine phosphorylation and tight junction function. *Keystone Symposia* 2000.
11. Jones, S. B., A. Sirota, **Y.-H. Chen**, K. Kim, G. W. Lanford, M. Moribito, Q. Lu. 2001. δ-Catenin Is a Postsynaptic Scaffolding Protein Which Modulates Neuronal Dendritic Differentiation. *Mol. Biol. Cell*. 12: 184a.
12. Kim, K., A. Sirota, **Y.-H. Chen**, S. B. Jones, R. Dudek, G. W. Lanford, C. Thakore, Q. Lu. 2001. Dendrite-like Process Formation and Dynamic Cytoskeletal Interplay Regulated by δ-Catenin Expression. *Mol. Biol. Cell*. 12: 42a.
13. **Chen, Y.-H**., Q. Lu, D.A. Goodenough and B. Jeansonne. 2001. Interaction of Occludin with non-Receptor Tyrosine Kinase c-Yes Regulates Tight Junction Formation in Canine Kidney Epithelial Cells. *Mol. Biol. Cell*. 12: 219a.
14. Jones SB, Sirota A, **Chen YH**, Kim K, Lanford GW, Moribito M and Lu Q. δ-catenin is a postsynaptic scaffolding protein which modulates neuronal dendritic differentiation. *Mole Biol Cell*. 2001, 12(S): 184a.
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16. Lu, Q., Lanford, G.W., Jones, S.H., **Chen, Y.H.** 2002. An essential role of δ-catenin in neuronal dendritic morphogenesis. Abstr. *Soc Neurosci*. 452.4.
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19. Alexandre, M.D. and **Chen, Y.H.** 2003. Claudin-7 over-expression decreases the paracellular conductance in kidney epithelial cells. *Mol. Biol. Cell.* 14: 459a.
20. Lu, Q, Dobbs, LJ, Gregory, CW, Lanford, GW, Revelo, MP, Shappell, S and **Chen, YH**. 2005. Increased Expression of δ-Catenin/Neural Plakophilin-Related Armadillo Protein

(NPRAP) Is Associated with the Downregulation and Redistribution of E-Cadherin and p120^{ctn} In Human Prostate Cancer. *96th Annual Meeting of American Association for Cancer Research*.

21. Alexandre, M.D. and **Chen, Y.H.** 2005. Extracellular Domains of Claudin-7 Affect the Paracellular Chloride Conductance in LLC-PK1 Cells. *Mol. Biol. Cell.* 16: 702a.
22. **Chen, Y. H.,** Jeansonne, B., Bareiss, K., Lu, Q. 2005. Analysis of δ-Catenin Mutations and Modifications in Cancer. *Mol. Biol. Cell.* 16: 99a.
23. Wang, T, **Chen, Y.-H**., Beverly Jeansonne, Heng Hong, Yan Zeng, Kwonseop Kim, Sonja K. Bareiss and Qun Lu. 2007. Analyses of δ-Catenin Gene Overexpression in Human Prostate Cancer. Proc. Am. Assoc. Cancer Res 48:1237
24. Zeng, Y, Agustin Abdul, Tao Wang, **Chen, Y.-H**., Kwonseop Kim, David Terrian, Douglas Weidner and Qun Lu. 2007. A Non-canonical Role of δ-Catenin/NPRAP/Neurojungin in Prostate Cancer Cell Cycle Misregulation and Genetic Instability. *Proc. Am. Assoc. Cancer Res* 48:1237
25. Tatum, R., Zhang, Y. G., Lu, Q., Kim, K., Jeansonne, B. G and **Chen Y. H.** 2007. Hypertension-Related WNK4 Kinase Phosphorylates Claudin-7 and Increases Paracellular Conductance to NaCl. 61st Annual High Blood Pressure Research Conference. *Hypertension* 50 (4): e75.
26. Lu, Q., Zeng, Y., Wang, T., Jeansonne, B., James, S., Sonja Bareiss; and **Chen**, **Y.-H.** 2008. Novel Oncogenic Functions of Delta-catenin in Prostate Cancer Progression. *IMPact Inaugural Meeting of DOD Prostate Cancer Research Program*.
27. Zhang, Y. G., Tatum, R., Salleng, K., Jeansonne, B. G., Lu, Q., Luo, N., Terrian, D. M., Lin, J-J., and **Chen Y. H.** 2007. Renal Tubular Dysfunction in Claudin-7 Deficient Mice. *Mol. Biol. Cell.* 18: 240a.
28. Wang, T., Kim, K., **Chen, Y. H**., Hong, H., & Lu, Q. 2007. Transcriptional Regulation of delta-Catenin/NPRAP/Neurojungin (CTNND2) Gene Expression in Human Prostate Cancer. *Mol. Biol. Cell.* 18: 106a.
29. **Chen, Y.-H**., Tatum, R., Zhang, Y., Salleng, K., Lin, J., Jeansonne, B., Lu, Z., Lu, Q. 2009. Salt wasting and chronic dehydration in claudin-7-deficient mice. Journal of the American Society of Nephrology. 10: 109A.
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31. Lu, Z., Hong, H., Lu, Q., and **Chen, Y.-H**. 2009. Inhibition of cell migration by claudin-7 is mediated through p42/44 MAPK signaling pathway. *Mol.Biol.Cell 20 (suppl)* p408.
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33. Lu, Q., Boykin, C., Zhang, G., **Chen, Y.-H**., Zhang, R., XE Fan, and Weimin Yang. 2010. Anticancer potential of curcurbitacin IIa trough STAT3/JAK2-independent, survivin and PARP mediated apoptosis and disruption of actin cytoskeleton. *Am. Assoc. Cancer Research, 51 (4531)*, 1099.
34. Ding, L., Lu, Z., Tatum, R., Foreman, O., Lu, Q., Renegar, R., and **Chen, Y.-H**. 2010. Disruption of Intestinal Architecture Involving Up-regulation of MMPs in Claudin-7 Knockout Mice. *Mol Biol Cell* 22: 1523.
35. Tatum, R., Ding, L., Jeansonne, B., and **Chen, Y.-H**. 2011. Deletion of claudin-7 affects the expression of WNK4 kinase *in vivo* and *in vitro*. *FASEB J.* 25:1039.28
36. **Chen, Y.-H**. 2011. Drug-loaded Nanoparticles Induce Cancer Cell Apoptosis through Caspase-8 Pathway and Inhibit Tumor Growth *in Vivo***.** *BIT's 2nd annual world congress of Nanomedicine.*
37. Tatum, R., Ding, L., Jeansonne, B., Daniel Kim, and **Chen, Y.-H**. 2011. Deletion of claudin-7 affects the expression of WNK4 kinase in vivo and in vitro. *FASEB Journal, 25*, 1039.28.

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39. Lu, Z., Lu, Q., Ding, L., Renegar, R., and **Chen, Y.-H**. 2012. Discovering a novel role of claudin-7 as a basolateral protein maintaining cell-matrix interactions in human lung cancer cells and in mouse intestines. *Cancer Research,* 72 (8): 5175.
40. Lu, Z., Lu, Q., Ding, L., and **Chen, Y.-H**. 2012. Suppression of claudin-7 expression promotes cell proliferation and disrupts cell-matrix interactions in human lung cancer cells. *Proceedings of the 10th International Congress on Cell Biology, July 25-28, 2012, Rio de Janeiro, Brazil. P727,*B-5.
41. Lu, Q. & **Chen, Y.-H**. 2012. Non-Invasive Urine Biomarkers for Prostate Cancer Detetcion. Eighth Biomarker World Congress, Philadelphia, Pennsylvania.
42. Fan, JM., Tatum, R., Hoggard, J., Jeansonne, B.G., and **Chen, Y.-H**. 2013. Deletion of claudin-7 in renal collecting duct cells impairs paracellular chloride permeability. *FASEB J. 27: 1148.16.*
43. Weng, Z., Friesland, A., Lu, Z., **Chen, Y.-H**., Longo, E.M., Boykin C., and Lu, Q. 2013. Differential effects of cisplatin on lung cancer cells and primary neurons: roles of small GTPase RhoA. *FASEB J. 27: 1105.28.*
44. Lu, Q. & Chen, Y.-H. 2013. Targeting Ras Downstream to Control Motions: Rho GTPase. *Am. Assoc. Cancer Research*. *Ras Oncogene Conference*.
45. Nopparat, J., Zhang, J., **Chen, Y.-H**., and Lu, Q. 2013. Delta-catenin mutation promotes prostate tumorigenesis in mice overexpressing Myc oncogene. *Cancer Research,* 73 (8): 308.
46. Ravisankar, S., and **Chen, Y.-H**. 2014. Differential Regulation and Expression of Tight Junction Proteins in Necrotizing Interocolitis. American Academy of Pediatrics Section on Perinatal Pediatrics, Southeastern Conference on Perinatal Research. Invited Oral Presentation.
47. Nopparat, J., **Chen, Y.-H**., Zhang, J., Boykin, C., Zhu, Y., Qun Lu. 2014. Inducible functional nonsense mutations of δ-catenin promote prostate tumorigenesis in mice overexpressing Myc oncogene and alters Wnt/β-catenin signaling. 19th World Congress on Advances in Oncology and 17th International Symposium on Molecular Medicine, Athens, Greece.
48. Ravisankar, S., Garg, P., Tatum, R., Shekhawat, P., & **Chen, YH**. 2014. Necrotizing Enterocolitis is Associated with Increased Gastrointestinal Permeability Mediated through Differential Regulation of Tight Junction Proteins. Pediatric Academy Society Annual Meeting.
49. Garg, P., Tatum, R., Ravisankar, S., Shekhawat, P., Howe-Lowe, K., **Chen YH**. 2014. Necrotizing Enterocolitis (NEC) Leads to Renal Dysfuction Mediated through Tight Junction Proteins. Pediatric Academy Society Annual Meeting.
50. Ravisankar, S., Tatum, R., Garg, P., Shekhawat, P., & **Chen, YH**. 2014. Necrotizing enterocolitis leads to increased intestinal permeability mediated through differential expression of tight junction proteins. *FASEB J. 28:650.7*.
51. Garg, P., Tatum, R., & Ravisankar, S. **Chen, YH**. 2014. Necrotizing enterocolitis leads to renal abnormality mediated through tight junction proteins. *FASEB J. 28:60.8.*
52. Aguilar, B., **Chen, Y.-H**., Huo, S., & Lu, Q. 2015. Inhibition of Cdc42 decreases migration and invasion in A549 lung cancer cells with oncogenic KRAS and upregulated Cdc42. American Chemical Society National meeting.
53. Kim DH, Lu Z, Lu Q, Shea M and **Chen, YH**. 2015. Dual Roles of claudin-7 in human lung cancer cell growth and metastasis. *FASEB J. 29:629.10*
54. Ravisankar, S, Tatum, R, Herco M and **Chen, YH**. 2015. Disruption of Tight Junction Barrier Function and Upregulation of Inflammatory Signaling Pathway in a Necrotizing Enterocolitis Mouse Model. *FASEB J. 29:265.5*

55. Lu Q, Li MC, Zhang J, **Chen YH**, Boykins C, Du J, Ai X, Chen BA, Jiang YG. 2017. Compartmentalized δ-Catenin Driven by Genomic Rearrangement in Prostate Cancer Dictates Growth Factor Dependent, Intratumoral Cell Fate and Behavior. *Eur Urol Suppl* 16 (3) 161.
56. Xing TS, Ding L, Camacho R, **Chen, YH**. 2017. Deletion of claudin-7 disrupts epithelial cell differentiation in mouse intestines. **Selected as a Poster of Distinction of the Gastrointestinal & Liver Section of the APS.** *FASEB J.*
57. Xing TS, Lesley Benderman, Stephiya Sabu, **Chen, YH**. 2018. Deletion of Claudin-7 Disrupts Epithelial Cell Self-Renewal in Mouse Colon. *FASEB J.*
58. Xing TS, Stephiya Sabu, Lesley Benderman, **Chen, YH**. 2018. Critical Role of Claudin-7 in Maintaining Intestinal Crypt Stem Cell Functions. *FASEB J.*
59. Li MC, Nopparat J, Zhang J, Aguilar, B., **Chen, Y.-H**., et al. 2019. Intratumor δ-catenin heterogeneity driven by genomic rearrangement dictates growth factor dependent prostate cancer cell fate and behavior. Am. Assoc. Cancer Research, Atlanta, Georgia.
60. Xing TS and **Chen, YH**. 2019. Deletion of Claudin-7 Leads to The Loss of Intestinal Crypt Stem Cells and Disruption of Epithelial Self-Renewal in Mouse Small Intestines. Digestive Disease Week, San Diego, CA.
61. Naser A, Guiler W, Lu Q and **Chen, YH**. 2021. Nanoarchitecture and Molecular Interactions of Epithelial Cell Junction Proteins Revealed by Super-resolution Microscopy. *FASEB J.* (Experimental Biology Annual Meeting, virtual).
62. Naser A, Lu Q and **Chen, YH**. 2022. Nanoarchitecture and Molecular Interactions of Intestinal Epithelial Cell Junction Proteins Revealed by Super-resolution Microscopy. Digestive Disease Week, San Diego, CA. **Selected as a Poster of Distinction.**
63. Naser A, Lu Q and **Chen, YH**. 2022. A critical role of tight junction protein claudin-7 in controlling colonic epithelial stem cell survival, proliferation and differentiation. 2022 James W. Freston Single Topic Conference: Gastrointestinal Organoids and Engineered Organ Systems. Washington, DC.
64. Malasala S, Penwell T, Boykin C**, Chen**, **YH**, Nik Akhtar S, and Lu Q. Identification of Cdc42-ITSN Modulators as Novel Partial Agonists. American Society of Cell Biology annual meeting, December 3-7, 2022. Washington, DC.
65. Azimian F, Malasala S, **Chen YH**, Boykin C, and Lu Q. Predictive Assignment of Cdc42 Homeostatic Modulators by Computer-Aided Drug Design. American Chemical Society annual meeting, August 18-22, 2024. Denver, CO.
66. Malasala S, Azimian F, **Chen YH**, Boykin C, and Lu Q. Identification of a Spectrum of Homeostatic Modulators of Cdc42-ITSN Interactions. American Chemical Society annual meeting, August 18-22, 2024. Denver, CO.
67. Azimian F, Wang J, Tatum R, **Chen YH**, Q Lu Q. Small molecule modulators targeting the ARF1–C9ORF72:SMCR8:WDR41 interaction in ALS/FTD. Southeastern Chemical Biology and Drug Discovery Symposium, May 21, 2025. Athens, GA.
68. Malasala S, **Chen YH**, and Lu Q. Investigation of Rab10 Expression in Alzheimer's Disease Mouse Brain Models. Southeastern Chemical Biology and Drug Discovery Symposium, May 21, 2025. Athens, GA.
69. Dixon E, Tatum R, **Chen YH**, Lu Q. Determining Interactions of Homeostatic Modulators to Small GTPase Cdc42 using Surface Plasmon Resonance. Southeastern Chemical Biology and Drug Discovery Symposium, May 21, 2025. Athens, GA.
70. Hoegy P, **Chen YH**, Lu Q. The role of small GTPases in Alzheimer's disease tau pathologies. Southeastern Chemical Biology and Drug Discovery Symposium, May 21, 2025. Athens, GA.
71. Chacko AJ, **Chen YH**, Lu Q. Regional Patterns of ARF1 Dysregulation in a 3xTg-AD Alzheimer's Mouse Model. Southeastern Chemical Biology and Drug Discovery Symposium, May 21, 2025. Athens, GA.

INVITED ORAL PRESENTATIONS:

1996: International Gap Junction Conference, **France**.
- "Asymmetric Voltage-Dependence of Embryonic Cardiac Gap Junction Channels"

2000: **Keystone Symposia**. Intercellular Junction: Short-Range Interactions Fundamental to the Development, Differentiation and Homeostasis of Cellular Assemblies.
- "Occludin Tyrosine Phosphorylation and Tight Junction Barrier Function"

2000: Shanghai Institute of Cell Biology, **Chinese Academy of Sciences**, Shanghai, P.R. China.
- "Molecular Analysis of Diverse Functions of Intercellular Junctions in Vertebrates"
- "Functions of Gap Junction Channels Revealed by Targeted Disruption of Connexin Genes in Mice and Genetic Diseases in Human"

2001: Department of Biology, East Carolina University
- "Regulation of Epithelial Barrier Function"

2002: Department of Anatomy and Cell Biology, East Carolina University Brody School of Medicine.
- "Regulation of Epithelial Barrier Function by Tyrosine Kinase c-Yes and Multiple PDZ Protein"

2002: Institute of Life Sciences, **Liaoning Normal University**, Dalian, P.R. China.
- "Biological Functions of Cell Junctions"

2003: Department of Biology, East Carolina University
- "Molecular Structure and Function of Tight Junction in Epithelial Cells"

2004: **National Institute of Environmental Health Sciences.** Research Triangle Park, NC.
- "Claudins and Paracellular Ion Transport: Its Implication in Human Diseases"

2004: Department of Biochemistry and Molecular Biology, East Carolina University Brody School of Medicine.
- "The Role of Claudins in the Epithelial Barrier Function"

2005: Department of Physiology, East Carolina University Brody School of Medicine.
- "Do Tight Junction Protein Claudins Form Paracellular Ion Channels?"

2005: Department of Biology, East Carolina University.
- "Paracellular Ion Transport in Kidney"

2005: **Zhe Jiang University**, Hang Zhou, P. R. China.
- "Gene Knockout Technology and Its Application in Functional Genomics"

2007: **Shanghai Jiao Tong University** School of Medicine, Shanghai, P. R. China.
- "Claudin-7: Its Potential Role in Hypertension and Cancer"

2007: **University of North Carolina at Chapel Hill**, Chapel Hill, NC
- "Renal Tubular Dysfunction in Claudin-7 Null Mice"

2008: **University of Kentucky ,** Lexington, KY
- "Claudins: Multifunctional Players in Epithelial Barrier"

2008: **International Tight Junction Conference**: Molecular Structure and Function of the Tight Junction – From Basic Mechanism to Clinical Manifestations. Berlin, Germany
- "Renal Tubular Dysfunction in Claudin-7-deficient Mice"

2008: **Pharmacology Institution of Jiao Tong University**, Shanghai, China.
- "Claudin-7 Domain Structure and Function.

2009: **FASEB Experimental Biology Meeting Symposium:** Novel Approaches to Elucidate Claudin Function and Paracellular Permeability. New Orleans, LA
- "Kidney phenotype revealed by claudin knockout mouse model"

2009: **The American Society of Nephrology 41st Annual Meeting.** Free Communication Session: Regulation of Renal Inorganic Ion Transport. Philadelphia, PA.

- "Salt Wasting and Chronic Dehydration in Claudin-7-deficient Mice"

2009: **The Southeast University, Medical School, Najing, China.**

- *"*Claudins: Promising new targets for cancer detection, diagnosis, and therapy?*"*

2009: **Kunming Medical University, Botanic Research Institute of Academia Sinica, China.**

- "Mouse models of lung cancer research"

2009: **Leo Jenkins Cancer Center Research, Brody School of Medicine.**

- "Claudin Family Proteins: Functions and Diagnostic Potentials in Human Cancers."

2010: **Chinese Medical School, Shenyang, China.**

- "Roles of Claudin Family Proteins in Human Cancers".

2010: **Interdisciplinary Surgical Research Group Meeting, Brody School of Medicine.**

- **"**Claudin-7 functions in Lung Cancers".

2011: **Department of Anatomy and Cell Biology, Brody School of Medicine.**

- "Deletion of Claudin-7 gene leads to intestinal architecture disruption and inflammation".

2011: **Jinan General Hospital, Jinan, China.**

- **"**Cell Adhesion Molecules in Human Diseases".

2011: **2nd Would Congress of Nanomedicine, Shenzhen, China**

- "Drug-loaded Nanoparticles Induce Cancer Cell Apoptosis through Caspase-8 Pathway and Inhibit Tumor Growth *in Vivo*"

2012: **International Conference: Apical Junctional Complex in Epithelia and Endothelia, Merida, Mexico**

- "A Novel Non-Tight Junction Function of Claudin-7 in Cell-Matrix Interactions"

2012: **Kunming Medical University, China**.

- "Roles of cell junction proteins and integrin signaling in lung cancer"

2013: **University of North Carolina at Chapel Hill**, **Chapel Hill, NC**

- "Essential Role of Claudin-7 in Cell-Matrix Interactions Engaging Integrins"

2013: **The 6th World Cancer Congress**, **Xi-an, China**

- Inhibition of Human Lung Cancer Cell Migration and Invasion by Claudin-7 through ERK/ MAPK Signaling Pathway

2013: **Jinan University, Guangzhou, China.**

- Roles of Adhesion Molecules and Integrin Signaling in Intestinal and Lung Cancer

2013: **FASEB Experimental Biology Meeting, Boston, MA**

- Deletion of claudin-7 in renal collecting duct cells impairs paracellular chloride permeability. (Given by Postdoc Fellow, Junming Fan, PhD)

2014: **19th World Congress on Advances in Oncology and 17th International Symposium on Molecular Medicine, Athens, Greece**

- Dual functions of claudin-7 in human lung cancer cell growth and metastasis.

2014: **FASEB Experimental Biology Meeting, San Diego, CA**

- Necrotizing enterocolitis leads to renal dysfunction mediated through tight junction proteins (Given by Pediatric Fellow, Parvesh Garg, MD)

2015: **FASEB Experimental Biology Meeting, Boston, MA**

- Disruption of Tight Junction Barrier Function and Upregulation of Inflammatory Signaling Pathway in a Necrotizing Enterocolitis Mouse Model (Given by Pediatric Fellow, Srikanth Ravisankar, MD)

2016: **International Conference**: **Tight Junctions and Their Proteins. Berlin, Germany**

- Tight junction changes can influence inflammatory responses

2018: **FASEB Experimental Biology Meeting, San Diego, CA**

- Critical role of claudin-7 in maintaining intestinal crypt stem cell functions (Given by PhD student Tiaosi Xing)

2018: **FASEB Experimental Biology Meeting, San Diego, CA**

- Deletion of claudin-7 disrupts epithelial cell self-renewal in mouse colon (Given by PhD student Tiaosi Xing)

2019: **Digestive Disease Week® 2019, San Diego, CA**

- Deletion of claudin-7 leads to the loss of intestinal crypt stem cells and disruption of epithelial self-renewal in mouse small intestines (Given by PhD student Tiaosi Xing)

2021: **4th International Tight Junction Conference in Berlin, Germany**. September 27–29, 2021.

- The Essential Role of Claudin-7 in Intestinal Crypt Stem Cell Self-renewal and Differentiation

2023: **International Tight Junction Club.** March 22, 2023.

- Investigating the Role of Claudin-7 in Intestinal Epithelial Stem Cell Functions (Virtual)

PATENT AND LICENSING:

June 27, 2025 – Q Lu and YH Chen disclosed a technology on targeting C9Orf72/Arf1 small GTPase complex and submitted a provisional US patent application # U103822 1140US.P1 (103822.0028.0) on “Compositions and Methods of Prevention and Treatment of Neurodegenerative Diseases”

May 18, 2025 – Q Lu and YH Chen submitted another divisional US patent application # 19/190,828 on “Roles of Modulators of Intersectin-Cdc42 Signaling in Alzheimer’s Disease”.

April 29, 2025 – Q Lu and Yan-Hua Chen was awarded a divisional US patent # 12,285,393 B2 on “Roles of Modulators of Intersectin-Cdc42 Signaling in Alzheimer’s Disease”.

Method of detecting cancer using δ-catenin, U.S. Patent No 7,445,906**.** Co-inventor.

Method of Screening for Cancer by Detecting Mutations in the δ-Catenin Gene Promoter U.S. Patent pending internal reference No: 5218-170pr. Co-inventor.

Method of screening for cancer by detecting mutations in the delta-catenin gene coding region. (No. 61/468,726): Co-inventor. This is a new filing.

Method of detecting cancer using delta-catenin. (No. 12/238,539): Co-inventor. This is the existing patent U.S. Patent No 7,445,906 to expand to human lung cancer.

Cdc42 Inhibitor and Uses Thereof. U.S. Patent #. 9,725,417B2. Co-inventor.

Roles of Modulators of Intersectin-Cdc42 Signaling in Alzheimer’s disease. U.S. 62/562,816. (Patent Pending) Co-inventor.

Targeting Intratumor δ-Catenin Heterogeneity Responsible for Growth Factor Dependent Prostate Cancer Progression. US Provisional Pat Appl No. 62/951,932.

UNIVERSITY AND COMMUNITY SERVICE:

2006:	Jury Service.
2007-2010:	Board member, Greenville Chinese School.
2009-2012:	Judge for ECU Annual Research and Creative Achievement Week
2009-2011:	Judge for North Carolina Science & Engineering Fair
2011:	American Heart Association Local Heart Walk Event
2012-2016:	North Carolina Alzheimer's Walk Event
2013:	Judge for ECU Research and Creativity Achievement Week: Serve as a Judge for Graduate Oral Presentation.
2014-2017:	Judge for ECU Research and Creativity Achievement Week: Serve as a Judge for Postdoc posters.