

# Leslie Ann Caromile

## **Address:**

UCONN Health  
Center for Vascular Biology  
263 Farmington Ave.  
L5007  
Farmington, CT 06030-3501  
Email: [Caromile@UCHC.edu](mailto:Caromile@UCHC.edu)  
Website: <https://health.uconn.edu/vascular-biology/caromile-lab/>

## **Education:**

2009 University of Washington, School of Medicine, Doctorate of Philosophy in Pathology, Mechanism of Disease  
2004 California State University, Los Angeles, Master of Science in Molecular Biology  
1995 University of Connecticut, Bachelor of Science in Physiology and Neurobiology

## **Research and Professional Experience:**

2016-Present Assistant Professor and Graduate School Faculty, UCONN Health, Center for Vascular Biology, Department of Cell Biology  
2011-2016 Post-Doctoral fellow, UCONN Health, Center for Vascular Biology, Department of Cell Biology, Linda H. Shapiro, PhD.  
2009-2011 Post-Doctoral fellow, National Institutes of Health, National Institute of Dental and Craniofacial Research, Oral and Infectious Immunity Branch, Div. of Experimental Medicine, Abner L. Notkins, M.D  
2004-2009 Graduate Student, University of Washington, School of Medicine, Department of Pathology, Daniel F. Bowen-Pope, PhD.

## **Previous work experience:**

2000-2004 Staff Research Associate III, Supervisor, University of California, Los Angeles, Dept. of Medicine, Div. of Cardiology, Karol Watson, M.D., PhD.  
1998-2000 Staff Research Associate II, University of California, Los Angeles, Dept. of Cellular Molecular and Developmental Biology, Luisa Iruela-Arispe, PhD  
1996-1998 Staff Research Associate I, University of California, San Diego, School of Medicine, Dept. of Neuroscience, Edward Koo, M.D.  
1995-1996 Staff Research Associate, Harvard Medical School, Dept. of Neurology and Pathology, Center for Neurologic Diseases, Brigham and Women's Hospital, Edward Koo, M.D.  
1995 Student Research Assistant, University of Connecticut, Dept. of Physiology and Neurobiology, Bruce Goldman, Ph.D.  
1994 Summer Research Assistant, University of Connecticut, Dept. of Molecular, Cellular Biology and Biophysics, Todd M. Schuster, Ph.D.  
1993-1994 Research Assistant Trainee, National Analytical Ultracentrifugation Facility, University of Connecticut, Dept. of Molecular, Cellular Biology and Biophysics, Emory Braswell, Ph.D.

## **Professional Recognition:**

### *Awards and Honors:*

2017 Mentor Award for Research Partner Faculty-Student category, NIH BUILDing SCHOLARS  
2017 ASCB FRED (Faculty Research and Education Development) Mentoring Program  
2009-2010 Intramural Research Training Award – NIH/NIDCR

2009 Corinne Leach Award for Academic Excellence in a Graduate Program – Seattle Indian Services Commission  
 2007 Woodrow Wilson National Fellowship Foundation Graduate Student Leadership  
 2005 University of Washington Top Scholar Award  
 2004 Graduate Honors California State University, Los Angeles  
 2003 – 2004 Beta Beta Beta Epsilon National Biological Honors Society

***Fellowships:***

2018 HHMI/SACNAS Advanced Leadership Institute Fellow  
 2015-2016 The Keystone Symposia Fellows Program  
 2014 SACNAS Summer Leadership Institute Fellow  
 2008-2009 Samuel and Althea Stroum Endowed Diabetes Pre-doctoral Fellowship. Project title: “Phosphatidylinositol phosphatase activity of Phogrin regulates insulin secretion”.  
 2006 IHS Native American Research Center for Health Northwest Tribal Research Center Summer Pre-doctoral Fellowship Program. Project title: “Arterial Injury Permits Insulin to Upregulate Smooth Muscle Cell Expression of the Secretory Vesicle Protein Phogrin”.  
 2004-2005 Graduate Opportunities and Minority Achievement Program Diversity Fellowship President’s Graduate Scholar - University of Washington.  
 2003-2004 NIH/NIGMS Minority Biomedical Research Support-RISE Fellowship-CalStateLA. Project title: “Oxidized Phospholipids Inhibit Angiogenesis through A Mechanism That Involves Protein Kinase B (Akt) and Mitogen-Activated Protein Kinase Phosphatase-1”.  
 1994 National Science Foundation (NSF) Research Experience for Undergraduates (REU) Fellowship (Schuster). Project title: “Biophysical Studies of a TMV Coat Protein Mutant That Elicits a Hypersensitive Response in *N. sylvestris*”.

**Research Support:**

***Current Support:***

NCI K01 Mentored Research Scientist Development Award to Promote Diversity. Project title: “PSMAs role in signal transduction pathway switching in prostate cancer”.

K01 CA188412-01

09/2014-09/2019

\$500,000/5 years

Role: PI

NCI Geographic Management of Cancer Health Disparities Program (GMaP) Region 4. Cancer Disparities Research Network (CHD). Pilot Funding in Cancer and Health Disparities for Early Stage Investigators.

Project title: “The role of PSMA in glutamate addiction and prostate cancer progression”.

Subcontractor for this grant

CA006927, NCI/Fox Chase Cancer Center

Fisher, Richard (PI)

Role: Faculty

\$10,000/1 year

5/01/2017- 4/30/2018

Role: PI

***Submitted Research Support:***

NCI R21 Exploratory Grant Award to Promote Workforce Diversity in Basic Cancer

Project title: “Prostate specific membrane antigen regulated pathways in prostate cancer”

Role: PI

\$438,625/ 2 years

07/2018 - 06/2020

Review Pending: 03/28/18

***Completed Research Support:***

NHLBI Research Supplement to Promote Diversity in Health Related Research.

5-P01-HL070694

2011-2014

Role: Postdoctoral Fellow

NIH/NIDDK Ruth L. Kirschstein National Research Service Award to Promote Diversity in Health Related Research (F31) (Caromile). Project Title: "Phosphatidylinositol phosphatase activity of Phogrin regulates insulin secretion".

F31-DK081307

04/11/08 – 06/29/09

NIH/NHLBI Experimental Pathology of Cardiovascular Disease Predoctoral Training (Schwartz)

T32 HL07312

09/01/04 – 08/31/07

Role: Pre-doctoral Student

**Publications and Abstracts:**

***In preparation:*** Salazar A, Laubenbacher R, Shapiro LH, **Caromile LA\*(corresponding author)**. Mathematical Modeling of Prostate Specific Membrane Antigen (PSMA) Signaling in Glutamate Addiction and Prostate Cancer Progression.

***Publications:*** Dimitrova E, **Caromile LA**, Laubenbacher R, Shapiro LH. The innate immune response to ischemic injury: a multiscale modeling perspective. *BMC Syst Biol*. 2018 Apr 10;12(1):50.

**Caromile LA\*(corresponding author)**, Shapiro LH. PSMA redirects MAPK to PI3K-AKT signaling to promote prostate cancer progression. *Mol Cell Oncol*. 2017;4(4):e1321168.

**Caromile LA**, Dortche K, Rahman MM, Grant CL, Stoddard C, Ferrer FA, Shapiro LH. PSMA redirects cell survival signaling from the MAPK to the PI3K-AKT pathways to promote the progression of prostate cancer. *Sci Signal*. 2017 Mar 14;10(470)

Ghosh M, Gerber C, Rahman MM, Vernier KM, Pereira FE, Subramani J, **Caromile LA**, Shapiro LH. Molecular Mechanisms Regulating CD13-Mediated Adhesion. *Immunology*. 2014 Aug;142(4):636-47.

Subramani J, Ghosh M, Rahman MM, **Caromile LA**, Gerber C, Rezaul K, Han DK, Shapiro LH. Tyrosine Phosphorylation of CD13 Regulates Inflammatory Cell-Cell Adhesion and Monocyte Trafficking. *J Immunol*. 2013 Oct 1;191(7):3905-12.

Mandemakers W, Abuhatzira L, Xu H, **Caromile LA**, Hébert SS, Snellinx A, Morais VA, Matta S, Cai T, Notkins AL, De Strooper B. Co-regulation of intragenic microRNA miR-153 and its host gene IA-2beta: identification of miR-153 target genes with functions related to IA-2beta in pancreas and brain. *Diabetologia*. 2013 Jul;56(7):1547-56.

Grant CL, **Caromile LA**, Durrani K, Rahman MM, Claffey KP, Fong GH, Shapiro LH. Prostate specific membrane antigen (PSMA) regulates angiogenesis independently of VEGF during ocular neovascularization. *PLoS One*. 2012;7(7):e41285.

**Caromile LA**, Oganessian A, Coats SA, Seifert RA, Bowen-Pope DF. The neurosecretory vesicle protein phogrin functions as a phosphatidylinositol phosphatase to regulate insulin secretion. *J Biol Chem*. 2010 Apr 2;285(14):10487-96.

C.S. Hong, **L. Caromile**, Y. Nomata, H. Mori, D.E. Breedesen and E.H. Koo. Contrasting Role of Presenilin-1 and Presenilin-2 in Neuronal Differentiation *In Vitro*. *The Journal of Neurosci*. 1999 Jan 15;19(2):637-43.

**Abstracts:**

Anisha C. Lewis, Aiyana M. Ponce, Danica Anukam, Linda H. Shapiro, **Leslie A. Caromile\***. Prostate Specific Membrane Antigen promotes prostate tumor progression and survival by conferring resistance to hypoxic stress. ASCB/EMBO National Meeting. Philadelphia, PA, December 2-6 2017.

Aiyana Ponce, BA/BS in progress, Anisha Lewis, BA/BS, Danica Anukam, BA/BS, Linda Shapiro, PhD, and **Leslie Caromile, PhD\***. The Role of Prostate Specific Membrane Antigen (PSMA) in Metastasis. SACNAS National Meeting. Salt Lake City, UT October 19-21, 2017.

Salazar A, Laubenbacher R, Shapiro LH, **Caromile LA \***. Mathematical Modeling of Prostate Specific Membrane Antigen (PSMA) and in Glutamate Addiction and Prostate Cancer Progression. Department of Cell Biology Annual Retreat. 2017, West Hartford, CT.

**Caromile LA**, Rahman MM, Grant CL, Dortche K, Ferrer FA, Shapiro LH. PSMA dictates prostate cancer signal transduction pathways to promote prostate cancer progression. The Italian Society of Pathology and Translational Medicine (SIPMET) 2015 Young Scientists Meeting. Fondazione Ferrero, Alba, Italy. September 11-12, 2015

**Caromile LA**, Rahman MM, Grant CL, Dortche K, Ferrer FA, Shapiro LH. Prostate Specific Membrane Antigen Functionally Regulates Prostate Cancer by Redirecting Survival Signals. Gordon Research Conference. Hormone-Dependent Cancers. Grand Summit Hotel at Sunday River Newry, ME. August 16-21, 2015.

**Caromile LA**, Rahman MM, Grant CL, Shapiro LH. Prostate Specific Membrane Antigen is a Functional Regulator of Prostate Cancer. Keystone Symposia PI 3-Kinase and Interplay with Other Signaling Pathways (X3). Keystone Resort, Keystone, Colorado. February 24—March 1, 2013.

**Caromile LA**, Rahman MM, Grant CL, Shapiro LH. The Transmembrane Peptidase Prostate Specific Membrane Antigen Functionally Regulates Prostate Cancer by Redirecting PTEN Survival Signals. Italian Pathology and Translational Medicine Society (SIPMET) American Society for Investigative Pathology (ASIP) Young Scientists Meeting "From general pathology to molecular and translational medicine". The Sapienza University of Rome, Rome, Italy October 23-24, 2013.

J. Tsai, N. Bhattacharyya, J. Aptaker, W.H. Chong, **L. Caromile**, A.A. Molinolo, P.G. Robey, M.T. Collins. The Role of RANKL and RANKL Inhibition in Fibrous Dysplasia. AADR Annual Meeting. Tampa, FL. March 21-24, 2012.

**Leslie Ann Caromile**, Anush Oganesian, Ron A Seifert, and Daniel F Bowen-Pope. The neurosecretory vesicle protein Phogrin is a phosphatidylinositol phosphatase whose activity regulates insulin secretion. *FASEB J.* 2009 23:LB255.

**L.A. Caromile**, A. Oganesian, R.A. Seifert, D.F. Bowen-Pope. The Neurosecretory Vesicle Protein Phogrin is a Phosphatidylinositol Phosphatase Whose Activity Regulates Insulin Secretion. *The FASEB Journal.* 2007;21:866.1

**L.A. Caromile**, R.K. Ramachandran, R.A. Seifert, D.F. Bowen-Pope. Arterial Injury Permits Insulin to Upregulate Smooth Muscle Cell Expression of the Secretory Vesicle Protein Phogrin. *ADA. Abstract 2438-PO*, 2006.

J. Chung, **L.A. Caromile** and K.E. Watson. Oxidized phospholipids disrupt endothelial proliferation and Akt phosphorylation; VEGF-A counteracts this effect. *J Investigative Medicine* 2005, **53[1]:386A**.

**L. A. Caromile**, F. Hernandez, S. Reddy, I.J. Kurland, K. E. Watson. Oxidized Phospholipids Inhibit Angiogenesis through A Mechanism That Involves Protein Kinase B (Akt) and Mitogen-Activated Protein Kinase Phosphatase-1. *J Investigative Medicine* 2004, **52 [1]:366A**.

Michelle A. Banares, **Leslie A. Caromile**, Karol E. Watson. The Effects of C-Reactive Protein on Vascular Endothelial Growth Factor-Induced Angiogenesis. UCLA Short Term Training Program (STTP). The Josiah Brown Research Fair and Poster Presentation, 2003.

K.E. Watson, **L. A. Caromile**. Oxidized Phospholipids Inhibit Angiogenesis *In Vitro* But Stimulate Angiogenesis *In Vivo*: Potential Influence Of Monocyte/Macrophages. *ATVB. Abstract P153*, 2002.

N. Brown, **L.A. Caromile**, K.E. Watson. The Effects of Mevastatin on Oxidized Phospholipid Induced Angiogenesis. *J Investigative Medicine* 2002, **50[1]:89A**.

C. A. Miller, **L. A. Caromile**, K. E. Watson. Oxidized Phospholipids Inhibit Endothelial Cell Proliferation via Induction of Apoptosis. *J Investigative Medicine* 2002, **50[1]:88A**.

#### ***Interviews and Magazine Articles:***

- 2018 “Uncharted Territory: Native American Leaders in the STEM Fields”. Diversity in Action Magazine. May/June 2018. Pg. 30. <http://www.diversityinaction.net/>
- 2017 <http://today.uconn.edu/2017/03/mark-malignancy-identified-prostate-cancer/>
- 2016 <https://www.keystonesymposia.org/index.cfm?e=Web.Diversity.NativeAmericanMonth>
- 2016 <http://today.uconn.edu/school-stories/diversity-matters-drug-trials/>
- 2015 <http://updates.uchc.edu/2015/12/09/prestigious-fellowship-grant-for-uconn-health-postdoc/>

- 2014 <file:///Users/lesliecaromile/Downloads/SACNAS%20Conference%20Program%20-%202014.pdf>
- 2014 <http://blogs.scientificamerican.com/WSS/post.php?blog=4&post=421>
- 2011 <http://www.parade.com/what-people-earn/slideshows/what-people-earn-2013.html#?slideindex=68>
- 2011 **Leslie Ann Caromile.** Building Confidence through Building Community. SACNAS News Magazine. 2011. Summer/Fall. Vol. 14, No. 1.

### **Invited Talks:**

- 2017 Emory University Laney Graduate STEM Research and Career Symposium-Keynote, October 2017
- 2017 University of Washington School of Medicine, Department of Pathology, July 2017.
- 2017 Prostate Cancer Foundation Tumorigenesis working group, April 17, 2017
- 2016 NIH/NCI Laboratory of Human Carcinogenesis, September 2016
- 2016 Keystone Symposia Scientific Advisory Board Talks June 2016
- 2015 CNR - Istituto per l'Endocrinologia e Oncologia Sperimentale, Naples, Italy, September 2015
- 2015 ASIP Young Scientist meeting, Alba, Italy, September 2015
- 2013 ASIP Young Scientist meeting, Rome, Italy, October 23-24 2013
- 2012 National Institutes of Health – NIDCR, November 16, 2012 Bethesda, MD
- 2012 SACNAS National Conference, October 11-14 2012 Seattle, WA.
- 2008 Keystone Symposium Islet and Beta Cell Biology, Apr 6 - Apr 11, 2008, Snowbird, Utah.
- 2006 University of Washington Diversity Fellows Dinner. Keynote Speaker: Gloria Steinem.

### **Teaching:**

#### ***Classroom Teaching:***

- 2018 BIOL 497 UCONN/USJ Research Collaborative
- 2017 BIOL 485 UCONN/USJ Research Collaborative
- 2017 - Present Tool Kit for Scientific Communication MEDS 6447 UCONN Health School of Medicine
- 2017 Case Studies in Oncology-UCONN Health School of Medicine
- 2010-2011 Introduction to the Biology of Cancer MEDI 339 Foundation for Advanced Education in the Sciences at the NIH.
- 2007-2009 Native Education Program-University of Washington School of Medicine
- 2003-2004 Minority Biomedical Research Support Workshop Series-CalStateLA
- 2003-2005 Short Term Training Program (STTP) - UCLA School of Medicine

#### ***Continuing Education Certifications and Training:***

- 2017 NIH/NIBIB Big Data Training for Translational Omics Research. Purdue University. 5-R25-EB022368
- 2017 You, Too, Can Peer Review: A Guide for Contributing to the Peer Review Process. New York Academy of Sciences.
- 2016 Case Study in Personalized Medicine – Vanderbilt University Medical Center
- 2016 Specialization in Data Science – Johns Hopkins Medical Center
- 2004 Clinical Trails Coordinator Training- UCLA

#### ***Mentoring Programs:***

- 2018 Co-Director of UCONN Health Undergraduate Summer Research Internship Program in Biological and Biomedical Sciences
- 2017-2018 NSF/ASCB FRED (Faculty Research and Education Development) Mentoring Program
- 2017 - Present BUILDing Scholars University of Texas El Paso (UTEP)
- 2016 - Present Minority Post-Baccalaureate Program UCONN Health – Co-founder
- 2016 - 2017 New York Academy of Science/Science Alliance – 1000 Girls/1000 Futures

2012-2015 UCHC Health Career Opportunity Program for undergraduates  
 2010-2011 HHMI/NIH Research Scholar Program for high school students  
 2007 Graduate Horizons advisor, University of Washington  
 2007 - 2009 University of Washington, School of Medicine, Pathology, Native Education Program for elementary school children grades 7-8.  
 2004 University of Washington Bioscience Experience  
 2003-2004 CSULA Minority Biomedical Research Support Workshop Series  
 2002-2004 UCLA School of Medicine Short Term Training Program (STTP) molecular biology

***Mentoring of Research Students:***

***Graduate Research Students:*** 6 students: 4 minorities including 3 African American and 1 Latina

Anisha Lewis B.S. 2018

Current position: Graduate Student, Young Innovative Investigator Program, UCONN Health

Claire Gerber PhD 2016

Current position: Postdoctoral Fellow, Northwestern University

Jiyeon Kim MD/PhD 2016

Current position: Postdoctoral Fellow, Ohio State University

Michelle A. Banares, MD 2002

Current position: Obstetrician / Gynecologist- Van Nuys, CA

Nanita Brown, MD/PhD 2002

Current position; Glaucoma and General Ophthalmology, Monroe, NC

C.A. Miller, MD 2003

***Postgraduate Research Students:*** 4 students; 4 minorities including 3 African-Americans and 1 Latino

Anisha Lewis B.S. 2016 - 2018

Current position: UCONN Health Young Innovative Investigator Program (YIIP)

Albin Salazar B.S. 2016 -2017

Current position: MS student at Paris Descartes University, Paris, France, Bioinformatics

Danica Anukam B.S. 2016

Current position: MS student at University of Iowa, Public Health

Kristina Dortche B.S. 2016

Current position: MD student at University of Pennsylvania Medical School

***Undergraduate Research Students:*** 6 students; 1 African-American and 2 Latino

Sakinah Abdulsalam, Junior, University of St. Joseph, Hartford, CT

2017-2018 BIOL 485/497 UCONN/USJ Research Collaborative

Luisa Castillo, Senior, University of Texas, El Paso

Summer 2018 – BUILDing Scholars

Ana López Santa, Junior, University of Puerto Rico

Summer 2017 - UCONN Health HCOP

Aiyana Ponce, Junior, University of Texas, El Paso

Summer 2017 – BUILDing Scholars

Kristina Dortche B.S. 2016 UCONN

Current position: MD student at University of Pennsylvania Medical School

Brannen Liang B.S. 2014

Current position: MD from Quinnipiac University Medical School

Johnathan Kent B.S. 2014

Current position: MD from Georgetown Medical School

***High School Research Students:*** 2 students; 1 Latino

Bronwyn Woods 2017 High School student at Alton School, Hampshire, England.

New York Academy of Science/Science Alliance – 1000 Girls/1000 Futures

Talmo D. Pereira B.S. 2016

Current position: PhD Princeton University

## **Service:**

### ***Membership in Professional Societies and Organizations:***

American Society for Cell Biology (ASCB)  
International Society on Aptamers (Member)  
European Association on Cancer Research (EACR) (Member and Ambassador)  
Association for Cancer Research (AACR) (Member)  
Association for Women in Science (AWIS) (Member)  
New York Academy of Sciences (Member)  
National Italian American Foundation (Member)  
American Society for Investigative Pathology (ASIP) (Member)  
American Association for the Advancement of Science (Member)  
Society for the Advancement of Chicanos and Native Americans (SACNAS)

### ***Professional Service – Committees, Panels and Elected Positions:***

2018-2019 Prostate Cancer Foundation Tumorigenesis Working Group Leader.  
2018 Network Member of National Academies of Science, Engineering, Medicine New Voices Program  
2017 – present UCONN Health MD/PhD Thesis Committee – Sara Pan  
2107 – present UCONN Health MD/PhD Thesis Committee – Bandita Adhakari  
2017 Biomedical Science Service Award Panel, UCONN Health  
2017 Graduate Student Research Day, Poster and Presentation Judge, UCONN Health  
2015-present Graduate student interviewer, UCONN Health.  
2011-present Minority Recruitment in the Biomedical Sciences Committee, UCONN  
2015-2016 Keystone Symposia Scientific Advisory Board Member  
2011-2016 Postdoctoral Advisory Committee, UCONN Health  
2010 – 2011 NIH American Indian and Alaska Native Committee (AIANC)  
2007-2008 Faculty Council on Educational Outreach, University of Washington  
2006-2009 Graduate & Professional Student Senate, University of Washington  
2005-2007 South Lake Union Group (co-director), University of Washington  
2005 University of Washington Bioscience Experience Panel Member  
2005 University of Washington Graduate and Professional Student Senate Leadership Summit  
2005 Minority Recruitment in the Biomedical Sciences, University of Washington  
2004 – 2008 Native American Students in Advanced Academia (NASAA) – (Executive Member)  
2002 - 2004 Student Advisory Committee for MBRS – RISE to PhD. at CSULA  
1994 - 1995 University of Connecticut Native American Cultural Society (Secretary)

### ***Meeting and Symposium Organizer:***

2018-2019 Prostate Cancer Foundation Tumorigenesis Working Group - Monthly.  
2018 UCONN Health Undergraduate Summer Research Internship Program in Biological and Biomedical Sciences and BUILDing Scholars Summer Presentation  
2008 7<sup>th</sup> Annual Showcase of Native Scholarship at the University of Washington – “Celebrating Indigenous Empowerment: New Directions in Graduate Research and Scholarship”.  
2007 Second Annual South Lake Union Group Poster Show at the University of Washington – Keynote Speaker: Leland Hartwell, 2001 Nobel Laureate in Physiology/Medicine  
2007 6<sup>th</sup> Annual Showcase of Native Scholarship at the University of Washington – “Indigenous Environments: Weaving Together Native Perspectives in Research”.  
2006 5<sup>th</sup> Annual Showcase of Native Scholarship at the University of Washington - “Transcending Boundaries: Implications of Indigenous Graduate Research”.  
2005 – 2007 South Lake Union Group Journal Club Co-directors



- 2005 4<sup>th</sup> Annual Showcase of Native Scholarship at the University of Washington - “Being Native in the Academy”.
- Invited Peer Review:***
- 2018 Experimental and Molecular Medicine - Nature
- 2017 BMC International Journal
- 2017 Theranostics Journal
- 2017 Science Signaling Journal
- 2015- Present SACNAS abstract review for National Conference