

Gail A. Cornwall, PhD

Department of Cell Biology and Biochemistry
Texas Tech University Health Sciences Center
School of Medicine
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Email: Gail.Cornwall@ttuhsc.edu

Education

PhD, The Johns Hopkins University Bloomberg School of Public Health and The Johns Hopkins Hospital, Departments of Population Dynamics and Urology, Baltimore, Maryland, Major: Reproductive Biology, 1988.

MS, Brigham Young University, Zoology/Reproductive Biology, 1982.

BS, Brigham Young University, Zoology, 1980.

Positions

Professor, Department of Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, Lubbock, TX, 2010 - Present.

Graduate School of Biomedical Sciences, Biotechnology, Affiliate Member Appointment, Texas Tech University Health Sciences Center, June 2009 - Present.

Graduate School of Biomedical Sciences, Biochemistry, Cellular and Molecular Biology, Full Member Appointment, Texas Tech University Health Sciences Center, February 1, 1995 - Present.

Associate Professor, (Tenured), Department of Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, Texas Tech University Health Sciences Center, Lubbock, TX, 2001 - 2010.

Assistant Professor, Department of Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, Lubbock, TX, 1994 - 2001.

Research Assistant Professor, Department of Cell Biology, Vanderbilt University School of Medicine, Nashville, TN, 1991 - 1994.

Postdoctoral Fellow, Department of Cell Biology, Vanderbilt University School of Medicine, Nashville, TN, 1990-1991. Stephen R. Hann, Ph.D., advisor.

Postdoctoral Fellow, Center for Reproductive Biology Research, Vanderbilt University School of Medicine, Nashville, TN, 1988-1990. Marie-Claire Orgebin-Crist, Ph.D., advisor.

Awards and Honors

Unsung Hero Award, TTUHSC (2019)

Dean's Douglas M. Stocco Scholarship/Research Award, TTUHSC (2010)

President's Excellence in Research Award, TTUHSC (2004)

NIH/NICHD KO2 HD044669-01 Research Career Development Award. The CRES Gene in Reproduction, 2003 - 2008, Cornwall GA (Principal Investigator).

Young Andrologist Award. The American Society of Andrology. (1997).

Research Award. The American Society of Andrology. (1991).

Research Award. The American Society of Andrology. (1989).

NIH T32 Postdoctoral National Research Service Award. Department of Health and Human Services. (1988).

Research Award. The American Society of Andrology. (1987).

NIH T32, Predoctoral National Research Service Award. Department of Health and Human Services. (1985-1987).

Paul Harper Award for excellence in graduate studies. The Johns Hopkins School of Hygiene and Public Health. (1986).

Predoctoral student fellowship. The Johns Hopkins School of Hygiene and Public Health. (1983).

Professional Memberships

American Society of Andrology.

Association for the Advancement of Science.

Society for the Study of Reproduction.

Teaching

Combined Lecture and Lab

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 1995.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 1996.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 1997.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 1998.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 1999.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2000.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2001.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2002.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2003.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2004.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2005.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2006.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2007.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2008.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2009.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2010.

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GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2012.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2013.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2014.

GCMB 5611 001 Clinically Oriented Anatomy, Texas Tech University Health Sciences Center, Medical Education, Number Enrolled: 100+, Fall, 2015.

Laboratory

GBTC 7000 001, Research in Biotechnology, Texas Tech University Health Sciences Center, Number Enrolled: 3, Spring, 2015.

Laboratory (Research)

GBTC 6001003, Biotechnology Internship, Texas Tech University Health Sciences Center, Graduate Education, Number Enrolled: 1, 2009.

GBTC 6001003, Biotechnology Internship, Texas Tech University Health Sciences Center, Graduate Education, Number Enrolled: 1, 2015.

GBTC 6001003, Biotechnology Internship, Texas Tech University Health Sciences Center, Graduate Education, Number Enrolled: 1, 2016.

Lecture

GBTC 5020 001, Biotechnology Laboratory Methods, Texas Tech University Health Sciences Center, Number Enrolled: 5, Fall, 2016.

GBTC 5020 001, Biotechnology Laboratory Methods, Texas Tech University Health Sciences Center, Number Enrolled: 5, Fall, 2017.

GBTC 5020 001, Biotechnology Laboratory Methods, Texas Tech University Health Sciences Center, Number Enrolled: 5, Fall, 2019.

GBTC 5020 001, Biotechnology Laboratory Methods, Texas Tech University Health Sciences Center, Number Enrolled: 5, Fall, 2020.

GCMB 6340 Cell Structure and Function, Texas Tech University Health Sciences Center, Graduate Education, 1995.

GCMB 6340 Cell Structure and Function, Texas Tech University Health Sciences Center, Graduate Education, 1996.

GCMB 6340 Cell Structure and Function, Texas Tech University Health Sciences Center, Graduate Education, 1998.

GCMB 6340 Cell Structure and Function, Texas Tech University Health Sciences Center, Graduate Education, 1999.

GCMB 6340 Cell Structure and Function, Texas Tech University Health Sciences Center, Graduate Education, 2000.

GANM 5309 Biology of Reproduction, Texas Tech University Health Sciences Center, Graduate Education 1994.

GANM 5309 Biology of Reproduction, Texas Tech University Health Sciences Center, Graduate Education 1995.

GANM 5309 Biology of Reproduction, Texas Tech University Health Sciences Center, Graduate Education 1996.

GANM 5309 Biology of Reproduction, Texas Tech University Health Sciences Center, Graduate Education 1997.

GANM 5309 Biology of Reproduction, Texas Tech University Health Sciences Center, Graduate Education 1998.

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GANM 5309 Biology of Reproduction, Texas Tech University Health Sciences Center, Graduate Education 2001.

GANM 5309 Biology of Reproduction, Texas Tech University Health Sciences Center, Graduate Education 2002.

GANM 5309 Biology of Reproduction, Texas Tech University Health Sciences Center, Graduate Education 2003.

GANM 5309 Biology of Reproduction, Texas Tech University Health Sciences Center, Graduate Education 2004.

GANM 5309 Biology of Reproduction, Texas Tech University Health Sciences Center, Graduate Education 2005.

GBTC 5210: The Human Microbiome in Health and Disease. 2 contact hrs. 2020.

GBTC 5210: The Human Microbiome in Health and Disease. 2 contact hrs. 2021.

GBCM 7000 001, Research, Texas Tech University Health Sciences Center, Number Enrolled: 5, Fall, 2017.

GBCM 7000 001, Research, Texas Tech University Health Sciences Center, Number Enrolled: 5, Fall, 2020.

GBCM 7000 001, Research, Texas Tech University Health Sciences Center, Number Enrolled: 5, Fall, 2021.

GBCM 5130 001, Research Presentation Skills, Texas Tech University Health Sciences Center, Number Enrolled: 10, Spring 2018.

GBCM 5130 001, Research Presentation Skills, Texas Tech University Health Sciences Center, Number Enrolled: 5, Spring 2019.

GBCM 5130 001, Research Presentation Skills, Texas Tech University Health Sciences Center, Number Enrolled: 5, Spring 2020.

GBCM 7000 001, Research, Texas Tech University Health Sciences Center, Number Enrolled: 5, Spring, 2018 - 2021.

GSBS 5098 001, Techniques in Biomedical Research, Texas Tech University Health Sciences Center, Number Enrolled: 3, Spring, 2021.

GBCM 6135 001, Topics in Biochemistry, Texas Tech University Health Sciences Center, Number Enrolled: 1, Spring, 2021.

GBCM 7000 001, Research, Texas Tech University Health Sciences Center, Number Enrolled: 3, Summer, 2017.

GBCM 7000 001, Research, Texas Tech University Health Sciences Center, Number Enrolled: 3, Summer, 2018. 2020 - 2021.

GBCM 7000 001, Research, Texas Tech University Health Sciences Center, Number Enrolled: 3, Summer, 2020.

GBCM 7000 001, Research, Texas Tech University Health Sciences Center, Number Enrolled: 3, Summer, 2021.

GBCM 7000 001, Research, Texas Tech University Health Sciences Center, Graduate Education, Number Enrolled: 9, Summer, 2019.

GSBS 5098 001, Techniques in Biomedical Research, Texas Tech University Health Sciences Center, Number Enrolled: 9, Summer, 2021.

GSBS 5098 003, Techniques in Biomedical Research, Texas Tech University Health Sciences Center, Number Enrolled: 4, Summer, 2021.

Non-Credit Instruction

Seminar

Department of Internal Medicine, Texas Tech University Health Sciences Center, 2020.

Department of Microbiology and Immunology, Texas Tech University Health Sciences Center, March 2016.

Department of Physiology and Molecular Biophysics, Texas Tech University Health Sciences Center, February 2012.

Directed Student Learning**Supervisor/Advisor Graduate Students**

Alejandra Gomez, PhD Dissertation Committee Chair, Cell Biology and Biochemistry, TTUHSC, May 2021-present.

Caitlyn Myers, PhD Dissertation Committee Chair, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 2017 - Present.

Kellsie Beasley, PhD Dissertation Committee Chair, January 2015 - 2017.

Katy Basinger, Master's Thesis Committee Chair, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, MS, 2015.

Trupti Kale, Master's Thesis Committee Chair, Cell Biology and Biochemistry, Texas Tech University, MS, 2009 - 2011.

Kim Chau, PhD Dissertation Committee Chair, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 2004 - 2009.

Nelson Hsia, PhD Dissertation Committee Chair, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 1997 - 2002.

H. Gayle Sutton, MD/PhD Dissertation Committee Chair, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 1996 - 2001.

Graduate Committee Memberships

Sarah Kader, PhD Dissertation Committee Member, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 2018 - Present.

Isaac Scott, PhD Dissertation Committee Member, Cell Physiology and Molecular Biophysics, Texas Tech University Health Sciences Center, 2020 - Present.

Nazmul Khan, PhD Dissertation Defense Committee Member, Chemistry and Biochemistry, Texas Tech University, January 2020 - May 2020.

Lisa Welch, PhD Dissertation Committee Member, Animal Science, Texas Tech University, 2007 - 2009.

Nathaly Cormier, PhD Dissertation Committee Member, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 2004 - 2009.

Matthew Dyson, PhD Dissertation Committee Member, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 2003 - 2008.

Savitha Sharma, PhD Dissertation Committee Member, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 2003 - 2008.

Sundara Uppuluri, PhD Dissertation Committee Member, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 2002 - 2007.

Heather Vartorella, PhD Dissertation Committee Member, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 2002 - 2003.

Demet Nalbant, PhD Dissertation Committee Member, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 1997 - 2002.

Brinda Dass, PhD Dissertation Committee Member, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 1996 - 2001.

Danny Kainer, PhD Dissertation Committee Member, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 1994 - 1998.

Sunday Crider, PhD Dissertation Committee Member, Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, 1994 - 1997.

Other Supervised Graduate Research

Matthew Dominguez, PhD Qualifying exam committee, Cell Physiology and Molecular Biophysics, Texas Tech University Health Sciences Center, 2020 - Present.

Mentoring and Advising**Graduate Students**

Sofia Altamirano, MD/Ph.D. student, TTUHSC, June 2021-Aug 2021.

Alejandra Gomez, PhD Student, TTUHSC, May 2021-present.

Caitlyn Myers, PhD Student, TTUHSC, Lubbock, Texas, 2018 - Present.

Kellsie Beasley, PhD Student, TTUHSC, Lubbock, Texas, January 2015 - 2017.

Katy Nicholson, MS student, TTUHSC, January 2014 - 2015.

Eric Edwards, PhD student, TTUHSC, January 2012 - August 2012.

Trupti Kale, MS student, TTU, 2009 - 2011.

Souvik K., PhD student, TTUHSC, July 2011 - November 2011.

Leah Quisenberry, PhD student, TTUHSC, January 2010 - May 2010.

Sangeetha Gattam, PhD student, TTUHSC, June 2009 - September 2009.

Kim Chau, PhD student, TTUHSC, June 2004 - September 2009.

Marlyn Pachoo, PhD student, TTUHSC, August 2008 - December 2008.

Ramiya Vutukuru, PhD student, TTUHSC, August 2008 - December 2008.

Neha Kamari, PhD student, TTUHSC, March 2008 - May 2008.

Gurvinder Kaur, PhD student, TTUHSC, August 2007 - December 2007.

Jhuma Sata, PhD student, TTUHSC, October 2006 - December 2006.

Jimmy Stocks, MD/PhD student, TTUHSC, June 2006 - July 2006.

Douglas Swartz, PhD student, TTUHSC, July 2006 - October 2006.

Rachel Hirsch, PhD student, TTUHSC, 2002.

Nelson Hsia, PhD student, TTUHSC, 1997 - 2002.

H. Gayle Sutton, MD/PhD student, TTUHSC, 1996 - 2001.

Audra Day, PhD student, TTUHSC, 2000.

Malini Mansharamani, PhD student, TTUHSC, 1997.

Ming Bei, PhD student, TTUHSC, 1996.

Postdoctoral Fellows, Research Associates, Residents and Fellows

Aveline Hewetson, Ph.D., Senior Research Associate, TTUHSC, 2013 - Present.

Hoa Do Quynh, Ph.D., TTUHSC, Lubbock, Texas, 2016 - 2019.

Benoit Guyonnet, Ph.D., TTUHSC, September 2009 - 2013.

Steve Tardif, Ph.D., TTUHSC, 2009 - 2011.

Alma Sanchez, Ph.D. TTUHSC, October 2005 - July 1, 2006.

Hans Henning von Horsten, Ph.D., TTUHSC, October 2002 - March 2006.

Gaiane Serobian, Ph.D., TTUHSC, January 2004 - May 2005.

Michael Wassler, Ph.D., TTUHSC, February 2000 - February 2002.

Patrick Syntin, Ph.D., TTUHSC, 1996 - 1998.

Medical Students

Rebecca Kusko, TTUHSC, SOM, Lubbock, Texas, January 2019 - 2020.

Clinton Borchardt, TTUHSC, SOM, July 2010 - August 2010.

Mohammad Abedi, TTUHSC, SOM, June 2008 - August 2008.

Undergraduate Students and High School Students

Collin Guilbeau, TTU, 2021-present.

Georgia Ray Atkins, TTU CISR student, 2020 - 2021.

Keegan Dunn, TTU Honors College, 2019 - 2020.

Izaak Aguilar, TTU, 2018 - 2020.

Daniel Cherkowsky, TTU, 2016 - 2018.

Caitlyn Myers, TTU, June 2015 - 2018.

Vy Lan Ho, TTU, October 2016 - 2017.

Louis Simley, TTU, June 2014 - 2016.

Gregory Alberts, TTU, June 2015 - August 2016.

Gage Rowden, TTU CISR student, June 2015 - July 2016.

Maggie Cheney, Reed College, SABR student, June 2014 - August 2014.

Caitlyn Wallen, TTUHSC, 2010 - 2013.

Nathan Egge, November 2013 - July 2014.

Amy Niles, Drake University, SABR student, June 2012 - August 2012.

Nikki Polk, TTU, June 2009 - June 2011.

Nissar Vahora, SABR student, June 2008 - August 2008.

Seethal Johnson, TTU, June 2005 - May 2008.

Mattie Wilson, TTU HHMI student, June 2006 - September 2006.

Hari Bodireddy, TTU HHMI student, July 2003 - January 2005.

Ryan Foresman, TTU HHMI student, June 2003 - June 2004.

Shivawn Bilberry, TTU, SABR student, June 2002 - August 2002.

Ellen Zwank, Eastern New Mexico State University, SABR student, June 1999 - August 1999.

Rebecca Collis, SABR student, June 1998 - August 1998.

Angelina Fusco, TTU HHMI student, 1995 - 1996.

Mentoring of Faculty

Manisha Tripathi, Texas Tech University Health Sciences Center, Assistant Professor, TTUHSC, 2019 - Present.

Srinivas Nandana, Texas Tech University Health Sciences Center, Assistant Professor, TTUHSC Lubbock, 2019 - Present.

Michaela Jansen, Associate Professor, TTUHSC Lubbock, 2016 - 2019.

Jannette Dufour, Texas Tech University Health Sciences Center, Professor, TTUHSC Lubbock, 2015 - 2018.

Education Committees

Intramural

GSBS - MD/PhD, TTUHSC, Appointed, 2007 - 2008.
Committee Member, 2007 - 2008

GSBS - MD/PhD, TTUHSC, Appointed, 2001 - 2005.
Committee Member, 2001 - 2005

SERVICE

Administrative

Departmental

Faculty Search Committee, Appointed, December 2014 - 2018. Committee Chair, 2014 - 2016

Space Committee, Appointed, Committee member, 2009 - 2016.

Executive Committee, Appointed, Committee member, 2008 – 2009.

Executive Committee, Appointed, Committee chair, 2002 - 2004.

Equipment Committee, Appointed, Committee chair, 2002 - 2003.

Graduate Student Recruitment Committee, Committee member, 1994 - 2000.

Reproductive Biology Training Seminar Series, Organizer, 1996 - 1999

Faculty Recruitment Committee, Committee member, 1997 - 1998.

School of Medicine

SOM - Post Tenure Review Committee, Appointed, September 2019 - Present.
Chair, 2020-present
Vice-Chair, 2019 - 2020

SOM - Basic Science Chairs Monthly Meeting, Appointed, 2018 - 2019.
FCEC Representative

SOM - Faculty Council Executive Committee, Appointed, 2016 - 2019.
Committee Member, 2016 - 2019
Committee Chair, 2017 - 2018

SOM - Hearing Committee, Appointed, 2016 - 2019.
Committee Member

SOM - Tenure and Promotion Committee, Appointed, October 2019.
Ad hoc Committee Member

SOM - Tenure and Promotion Committee, Appointed, October 2018.
Ad hoc Committee Member

SOM - Search Committee for Department of Cell Biology and Biochemistry Chair, Appointed, 2013. Committee member.

Texas Tech University Health Sciences Center

TTUHSC - IT Basic Sciences Committee, Volunteered, 2017 - Present.
Committee Chair, 2017 - Present

TTUHSC - President's Committee for Women in Health Sciences, Appointed, 2009 - Present.
Committee Chair, 2016 - Present
Committee Member, 2009 - Present

TTUHSC - Faculty Senate, Elected, September 2017 - 2019.
SOM Senator

Presidential Lecturer Committee, Appointed, January 2015 - 2018.
Committee Chair

TTUHSC - Search Committee for TTUHSC Veterinarian, November 2015 - 2016.
Committee Member, 2015 - 2016

Preliminary Data Seed Grant Committee, September 2012 - 2014.
Committee Member, 2012 - 2014

Search Committee for Dean of the Graduate School, July 2012 - 2014.
Committee Member, 2012 - 2014

Steering Committee, Institute for Clinical and Epidemiological Health, 2011.
Committee Member, 2011

Executive Council, The Laura W. Bush Institute for Women's Health, 2008 – 2009.

Physiology Program Review, 2007 - 2008.
Committee Member, 2007 - 2008

Department of Physiology Chair Search Committee, Appointed, 2004.

TTUHSC - Radiation Safety Committee, 1995 - 2004.
Committee Member, 1995 - 2004

GSBS - Graduate Council, Elected, 1996 - 2003.
Committee Member, 1996 - 2003

TTUHSC - IACUC, Appointed, 1996 - 2003.
Committee Member, 1996 - 2003

Department of Pharmacology Chair Search Committee, Appointed, 2002.
Committee Member, 2002

TTUHSC committee to develop multidisciplinary graduate programs in the Health Sciences Center, 1998.
Committee Member, 1998

TTUHSC Fundraising, 1995 - 1998.
Committee Member, 1995 - 1998

Howard Hughes Medical Institution Sponsored Program, 1996 - 1997.

Committee Member, 1996 - 1997

Transgenic Core Facility Committee, 1995.

Public

National

American Society of Andrology, Endowment and Development Committee, 2015 - 2019.
Committee Member

American Society of Andrology, Journal Oversight Committee, 2014 - 2020.
Committee Member

American Society of Andrology, Nominating Committee, 2014 - 2016.
Committee Member

International

International Society of Andrology, 2014 - 2018.
Program Organizer, 2014 - 2018

SCHOLARSHIP

Summary of Scholarly Activities

- 1) Epididymis: Region-specific gene expression in the epididymis.
- 2) Cystatins: Identification of a new reproductive subgroup.
- 3) Proprotein convertases: Identification of the first biological inhibitor.
- 4) Functional amyloids: Established functional amyloids are in the mammalian reproductive tract.
- 5) Amyloid Assembly: Demonstrated at the atomic level how a full-length mammalian functional amyloidogenic precursor assembles from its native globular fold into a highly ordered amyloid.
First evidence of a single protein using two assembly mechanisms for amyloidogenesis.

Extramural Professional Service

Editor or Member of Editorial Boards

Andrology, Member of Editorial Board, 2014 - Present.

Andrology, Associate Editor, 2012 - 2014.

Biology of Reproduction, Member of Editorial Board, July 2009 - 2013.

Journal of Andrology, Member of Editorial Board, 1996 - 1998.

Manuscript Review

Andrology
Antioxidants and Redox Signaling
Biology of Reproduction
Cell
Cell Tissue Research
eLIFE
Endocrinology
Experimental Cell Research
FASEB J
Gene
Human Reproduction
Journal of the American Physiological Society
Journal of Andrology
Journal of Bacteriology
Journal of Biological Chemistry
Journal of Cellular Physiology

Journal of Cell Science
Journal of Cystic Fibrosis
Journal of Extracellular Vesicles
Journal of Reproduction and Fertility
Journal of Reproductive Immunology
Journal of Urology
Molecular Cellular Proteomics
Molecular Endocrinology
Molecular Reproduction and Development
Microscopy Research and Technique
PLoS One
Proceedings of the National Academy of Sciences
Reproduction
Scientific Reports
Urology

Member of Research Grant Study Sections

NIH: Special Emphasis Panel/ZRG1 BCMB-A (51)The Common Fund NIH Director's
Transformative Research Award, Grant Proposal Reviewer, External, February 2019.

NIH Special Emphasis Panel ZRG1 EMNR-P (56)R grant review, Session Chair, August 2019.

NIH/NICHD, External, 2017 - 2018.

American Heart Association, Grant Proposal Reviewer, External, February 2016.

NIH/NICHD CMIR Study Section, Reviewer, Ad Hoc Reviewer, October 2015 - 2015.

NIH/NICHD CMIR study section, Reviewer, Ad Hoc Reviewer, February 2011 - October 2011.

NIH/NICHD/CMIR study section, Reviewer, Ad Hoc Reviewer, 2006.

Department of Defense, Breast Cancer Research Program, Grant Proposal Reviewer, External,
2005.

Department of Defense, Breast Cancer Research Program, Grant Proposal Reviewer, External,
2004.

The Mellon Foundation Reproductive Biology Center program through the CONRAD foundation,
Grant Proposal Reviewer, External, 2003.

Department of Defense, Breast Cancer Research Program, Grant Proposal Reviewer, External,
2003.

Department of Defense, Breast Cancer Research Program, Grant Proposal Reviewer, External,
2002.

The Mellon Foundation Reproductive Biology Center program through the CONRAD Foundation,
Grant Proposal Reviewer, External, 2002.

The Mellon Foundation Reproductive Biology Center program through the CONRAD Foundation,
Grant Proposal Reviewer, External, 2001.

The Mellon Foundation Reproductive Biology Center program through the CONRAD Foundation,
Grant Proposal Reviewer, External, 2000.

NICHD/NIH Special Review Panel, Synthesis and Testing of Non-Steroidal and Non Hormonal
Male Contraceptive Agents. Grant Proposal Reviewer, External, 2000.

The Mellon Foundation Reproductive Biology Center program through the CONRAD Foundation,
Grant Proposal Reviewer, External, 1998

The Mellon Foundation Reproductive Biology Center program through the CONRAD Foundation,
Grant Proposal Reviewer, External, 1999.

Officer or Committee Member of Scientific or Professional Organizations or Program Organizer

American Society of Andrology, Journal Oversight Committee Member, April 2013 - 2020.

American Society of Andrology, Awards Committee Chair, April 2016 - 2018.

American Society of Andrology, Endowment and Development Committee Member 2016 - 2018.

International Congress of Andrology, Program Organizer, Copenhagen, Denmark. 2013 - 2017.

American Society of Andrology Nominations Committee Member 2013.

American Association of Andrology, President, elected, April 2011 - April 2012.

American Society of Andrology, Program Committee Member, April 2010 - March 2011.

American Society of Andrology, Vice President, elected, 2010 - 2011.

American Society of Andrology, 2008 American Society of Andrology annual meeting, Program Organizer, appointed. 2006 - 2008.

American Society of Andrology: Treasurer, elected. 2001 - 2005.

American Society of Andrology, Women in Andrology Chair, elected. 2004.

American Society of Andrology, Program Committee Member, 2002 - 2003.

American Society of Andrology, Executive Council, elected, 1998 - 2001.

American Society of Andrology, Program Committee Member, 1996-1999.

American Society of Andrology, Long Range Planning Committee Member, 1994-2000.

American Society of Andrology, Student Affairs Committee Member, 1994 - 1996.

Other Extramural Professional Service

FASEB Meeting: The Protein Aggregation Conference: From Structure to In vivo Sequelae,
Session Chair, June 2019.

Canada 150 Research Chair, Reviewer, 2017.

Gordon Research Conference : Proprotein Processing, Trafficking, and Secretion. Session Chair,
Colby Sawyer College, New London, NH, 2010.

Karolinska Institute, Department of Molecular Medicine and Surgery, Opponent, PhD dissertation
defense, March 2009.

Gordon Research Conference: Reproductive Tract Biology, Session Chair on Male Reproduction,
Plymouth, NH. 1996.

Grants and Contracts Awarded

The John Templeton Foundation. Sperm Prions: Epigenetic Carriers of Inheritance. 2021-2024. **Cornwall GA (Principal Investigator).**

The Newby Family. Functional Amyloids in the Brain and their Role in Alzheimer's disease. 2021-2023. **Cornwall GA (Principal Investigator).**

The Garrison Institute on Aging, TTUHSC. Host Defense Amyloids in the Brain. 2020-2021. **Cornwall GA (Principal Investigator).**

The Newby Family. Functional Amyloids as Tools to Develop New Therapies for Alzheimer's disease, 2017 - 2020, **Cornwall GA (Principal Investigator).**

TTUHSC 2018 -2019, **Cornwall GA (Principal Investigator).**

The Wilson Foundation. A Novel Strategy to Treat Alzheimer's Disease, 2016 - 2017, **Cornwall GA (Principal Investigator).**

TTUHSC. SOM. A Novel Strategy to Treat Alzheimer's Disease, 2016. **Cornwall GA (Principal Investigator).**

NIH/NICHD, R21HD078715. Sperm Prions: A Mechanism for Epigenetic Inheritance, 2013 - 2016, **Cornwall GA (Principal Investigator).**

CH Foundation. New Therapies for Neurodegenerative Diseases, 2014. **Cornwall GA (Principal Investigator).**

NIH/NICHD, RO1 HD56182. Protein Amyloidogenesis in the Epididymis: Mechanism and Biological Significance, 2008 -2014, **Cornwall GA (Principal Investigator).**

TTUHSC. The CRES Gene in Reproduction, 2008 - 2009, **Cornwall GA (Principal Investigator).**

TTUHSC/TTU Initiative. A New Proteomic Method and its Application to Chemical Biology. 2007-2008. **Cornwall GA (co-Investigator).**

South Plains Foundation. Novel Role of the Proprotein Processing Enzyme PC4 in Breast Cancer. **Cornwall GA (Principal Investigator).** 2006-2007.

TTUHSC. CRES Protein Regulation by Self-Aggregation. 2003-2004. **Cornwall GA (Principal Investigator).**

NIH/NICHD, KO2 HD044669-01. Research Career Development Award (Salary only). The CRES Gene in Reproduction, 2003 - 2008, **Cornwall GA (Principal Investigator).**

NIH/NICHD, RO1HD33903-11. The CRES Gene in Reproduction, 2001 - 2008, **Cornwall GA (Principal Investigator).**

South Plains Foundation. B-Myc and Prostate Cancer. 2001-2002. **Cornwall GA (Principal Investigator).**

TTUHSC, Center of Excellence in Reproductive Sciences, Effect of Environmental Toxicants on Human Sperm Function. 2000-2002, **Cornwall GA (co-Investigator).**

NIH/NICHD, 2T32 HD07271-16. Regulation of Reproductive Processes. 1999-2004, Stocco (Principal Investigator), **Cornwall GA, Participating Faculty.**

South Plains Foundation. Potential Role of B-Myc as a Growth Inhibitor. 2000-2001. **Cornwall GA (Principal Investigator).**

TTUHSC. Seed grant. Generation and Examination of Transgenic Mice Lacking the CRES Gene.

1999-2000. **Cornwall GA (Principal Investigator).**

NIH/NICHD, R29HD33903. The CRES Gene in Male Reproduction, 1994 -1999, **Cornwall GA (Principal Investigator).**

Tobacco Research Council. Transient Expression of Genes during High-Density Growth Arrest. 1992-1994. **Cornwall GA (co-Investigator).**

American Cancer Society Institutional Research Grant. Identification of Genes Expressed during High-Density Growth Arrest. 1/1/93-12/31/93. **Cornwall GA (Principal Investigator).**

NIH F32 Postdoctoral Fellowship Grant. Mechanisms of Sperm-Egg Binding. 1990-1991. **Cornwall GA (Principal Investigator).**

Publications

Articles and Case Reports

All peer reviewed, underline indicates corresponding author.

Do HQ, Hewetson A, Borcik CG, Hastert MC, Whelly SM, Wylie BJ, Sutton RB, **Cornwall GA**. Cross-seeding between the functional amyloidogenic CRES and CRES3 family members and their regulation of A β assembly. *Journal of Biological Chemistry*, 296: 100250, 2021. PubMed Central ID Number: PMC7948811

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- Books, Chapters in Books and Monographs**
Cornwall GA. Epididymis: Sperm Maturation and Motility In: Encyclopedia of Reproduction, Elsevier, 2017. (Peer reviewed)

Cornwall GA. Role of Posttranslational Protein Modifications in Epididymal Sperm Maturation and Extracellular Quality Control *In: Posttranslational Protein Modifications in the Reproductive System.*, P Sutovsky (eds), Springer, 2014. **(Peer reviewed)**

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Presentations/Exhibits/Productions

Invited papers:

Hewetson A, Do HQ, Myers C, Muthusubramanian A, Sutton Rb, Wylie BJ, **Cornwall GA.** Functional amyloids in reproduction. *Biomolecules*, 7(3): pii: E46, 2017.

Cornwall GA. New insights into epididymal biology and function. *Human Reproduction Update*, (1): 1-15, 2009.

Cornwall G, von Horsten HH, Swartz D, Johnson S, Chau K, Whelly S. Extracellular quality control in the epididymis. *Asian Journal of Andrology*, (9): 500-507, 2007.

Cornwall GA, Hsia N. A new subgroup of the family 2 cystatins. Cutting Edge Review, *Molecular and Cellular Endocrinology*, (200): 1-8, 2003.

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Cornwall G, Hann SR. Specialized gene expression in the epididymis. *Journal of Andrology*, (16): 379-383, 1995.

Invited talks:

The Epididymal Amyloid Matrix: A New Host Defense Structure, NIH/NHLBI, Bethesda, MD, October 2019.

The Functional Mammalian CRES (cystatin-related epididymal spermatogenic) Amyloid is Antiparallel β -Sheet Rich and Forms a Metastable Oligomer During Assembly. FASEB meeting on Protein Aggregation: From Structure to In vivo Sequelae. 2019. Selected from submitted abstract.

Functional Amyloid in the Epididymis: A Protective Mammalian Biofilm. Keynote symposium speaker. American Society of Andrology annual meeting, Chicago, IL 2019.

Amyloid Function in the Epididymis. 7th International Conference on the Epididymis, Montreal, Quebec 2018.

Epididymal Maturation: from Physiology to Pathology. 11th International Congress of Andrology. Copenhagen, Denmark. 2017.

Functional Amyloids in the Reproductive Tract. Keynote speaker. Reproductive Health Research Day. Baylor College of Medicine, Houston, TX 2016.

Amyloid Properties of the Mouse Zona Pellucida: Implications for Mechanism of Sperm-ZP Binding. Fertilization and Activation of Development, Gordon Research Conference, Holderness School, Plymouth, NH. 2015.

Amyloids in the Epididymis. Spermatology meeting, Newcastle, Australia. 2014.

Good amyloid and Fertility. Society for the Study of Reproduction annual meeting. Grand Rapids, MI. 2014.

Prions as Functional Scaffolds in the Male Reproductive Tract. TTUHSC, Graduate School of

Biomedical Sciences Annual Retreat Keynote Speaker. 2013.

Protein Aggregation in the Epididymis. 10th International Congress of Andrology, Melbourne, Australia. 2013.

Amyloidogenesis in the Reproductive Tract. American Society of Andrology annual meeting, San Antonio, TX 2013.

Unexpected Functions of Two Cystatin Proteins in Sperm Function and Male Fertility. Fertilization and Activation of Development. Gordon Research Conference, Holderness School, Plymouth NH 2011.

CRES Aggregation in the Epididymis: A New Functional Amyloid? 5th International meeting on the Epididymis. Sao Paulo, Brazil, 2010.

Amyloid in the Reproductive Tract: Pathology or Biological Function? American Society of Andrology annual meeting. Philadelphia, PA. 2009.

Amyloidogenesis in the Epididymis. Reproductive Tract Biology. Gordon Research Conference, Andover, NH 2008.

Extracellular Protein Quality Control and Reproductive Function. 4th International meeting on the Epididymis. Chatel-Guyon, France. 2006.

Sperm Maturation in the Epididymis: Role of Segment-Specific Microenvironments. The Utah Symposium on the Genetics of Male Infertility. Salt Lake City, UT. 2006.

The Cystatin-Related Epididymal Spermatogenic (CRES) Subgroup of Family 2 Cystatins. The 17th Annual Testis Workshop. Phoenix, AZ. 2003.

CRES Inhibits the Serine Protease PC2. Hormonal and Neural Peptide Biosynthesis. Gordon Research Conference. Colby-Sawyer College, New London, NH. 2002.

CRES Function and Regulation. 3rd International meeting on the Epididymis. Charlottesville, VA 2002.

Gene Expression in the Male Reproductive Tract. Postgraduate course, American Society of Andrology Annual meeting. 1994.

Seminars

Cornwall GA. Research seminar, Department of Internal Medicine, Texas Tech University Health Sciences Center (Lubbock, Texas), 2020.

Cornwall GA. Research seminar, Department of Microbiology, Texas Tech University Health Sciences Center (Lubbock, Texas), 2016.

Cornwall GA. Research seminar, Department of Physiology, Texas Tech University Health Sciences Center (Lubbock, Texas), 2012.

Cornwall GA. Research seminar, Texas A&M, College Station, TX, November 2010.

Cornwall GA. Research seminar. The Population Council, New York, NY, April 2009.

Cornwall GA. Research seminar. University of Laval, Quebec City, Canada, February 2009.

Cornwall GA. Research Seminar, Department of Biological Sciences, Clark Atlanta University, 2006.

Cornwall GA. Research Seminar, University of Kentucky, July 2006.

Cornwall GA. Research Seminar, Dept. Molecular Biology and Biochemistry, The Johns Hopkins University Bloomberg School of Public Health, 2005.

Cornwall GA. Research Seminar, University of Lund, Sweden, 2003.

Cornwall GA. Research seminar, University of Arkansas, 2001.

Cornwall GA. Research seminar, MD Anderson/UT Houston, School of Medicine, 2000.

Cornwall GA. Research seminar, Department of Cell Biology, University of Virginia School of Medicine, 2000.

Cornwall GA. Research Seminar, Department of Cell Biology, Texas Tech University (Lubbock, TX), 1994.

Cornwall GA. Research seminar, Department of Cell Biology, University of Minnesota School of Medicine, 1994.

Cornwall GA. Research Seminar, Department of Biology, University of Houston, 1994.

Cornwall GA. Research seminar, The Johns Hopkins University School of Public Health, 1994.

Cornwall GA. Research Seminar, Georgetown University School of Medicine, 1994.

Cornwall GA. Research Seminar, University of Southern Illinois, 1994.

Cornwall GA. Research seminar, Department of Physiology, Emory University School of Medicine, 1994.

Poster presentations:*presenter

All peer-reviewed.

Myers C*, **Cornwall GA.** Antimicrobial Functions of the Epididymal Amyloid Matrix. 46th Annual American Society of Andrology Meeting, Virtual, April 23-25, 2021. (Research Merit Award Finalist).

Atkins GR*, Myers C, Hewetson A, **Cornwall GA.** The Epididymal Amyloid Matrix Displays Key Properties of Bacterial Biofilms. 46th Annual American Society of Andrology Meeting, Virtual, April 23-25, 2021.

Myers C*, **Cornwall GA.** Antimicrobial Functions of the Epididymal Amyloid Matrix. 26th Annual Texas Forum for Reproductive Sciences, Virtual, June 17-18, 2021.

Atkins GR*, Myers C, Hewetson A, **Cornwall GA.** The Epididymal Amyloid Matrix Displays Key Properties of Bacterial Biofilms. 46th Annual American Society of Andrology Meeting. Virtual, April 23-25, 2021.

Myers C*, **Cornwall GA.** Antimicrobial Functions of the Epididymal Amyloid Matrix. The Protein Aggregation Conference: Function, Dysfunction, and Disease (FASEB) Virtual, June 23-25, 2021.

Atkins GR*, Myers C, Hewetson A, **Cornwall GA.** The Epididymal Amyloid Matrix Displays Key Properties of Bacterial Biofilms. 46th Annual American Society of Andrology Meeting, Virtual, April 23-25, 2021.

Myers C*, **Cornwall GA.** Antimicrobial Functions of the Epididymal Amyloid Matrix. Gametes meet in the time of COVID-19 (Substitute for scheduled 2021 Fertilization and Activation of Development

Gordon Research Conference), Virtual, July 25-30, 2021.

Myers C and **Cornwall GA***. The Epididymal Amyloid Matrix is a Novel Host Defense Structure, Fertilization and Activation of Development. Gordon Research Conference, Gordon Research Conference, Plymouth, New Hampshire, July 2019.

Myers C* and **Cornwall GA**. The Epididymal Amyloid Matrix is a Novel Host Defense Structure. Protein Aggregation: From Structure to In vivo Sequelae, Federation of American Societies for Experimental Biology (FASEB), Snowmass, Colorado, June 2019.

Do HQ, Hewetson A, Myers C, Khan N, Hastert MC, Harsini F, Latham M, Wylie BJ, Sutton RB and **Cornwall GA***, The Functional Mammalian CRES (cystatin-related epididymal spermatogenic) Amyloid is Antiparallel β -Sheet Rich and Forms a Metastable Oligomer During Assembly. FASEB meeting on Protein Aggregation: From Structure to In vivo Sequelae. 2019.

Guyonnet B*, Whelly S, **Cornwall G**. Amyloids are a Constituent of the Sperm Acrosomal Matrix Core XXII North American Testis Workshop, San Antonio, TX, 2013.

Guyonnet B*, Whelly S, Zabet-Moghaddam M, Sanfrancisco S. **Cornwall GA**. Isolated Acrosomal Matrices from Mouse Spermatozoa Contain Amyloid-Like Structures and CRES (Cystatin-Related Epididymal Spermatogenic) Subgroup Members. American Society of Andrology annual meeting. 2012.

Guyonnet B*, Whelly SM, **Cornwall GA**. Amyloid-like Structures are Present in the Mouse Acrosomal Matrix. Fertilization & Activation of Development, Gordon Research Conference, Holderness, July 2011.

Guyonnet B*, Whelly SM, **Cornwall GA**. CRES Protein is Associated With Amyloid-like Structures in Mouse Spermatozoa. Epididymis V, Águas de São Pedro, São Paulo Brazil, October 25, 2010.

Cornwall GA*. FASEB meeting on protein aggregation. 2009.

Chau KM* and **Cornwall GA**. Characterizing the Biological Function of Cystatin-Related Epididymal Spermatogenic (CRES) Protein using a Knockout Mouse Model. 41st Annual Meeting of the Society for the Study of Reproduction, Kailua-Kona, HI, 2008.

Johnson SS*, Swartz DJ, Chau KM, von Horsten HH, Whelly SM, Hastert MK, **Cornwall GA**. CRES (Cystatin-related epididymal spermatogenic) is amyloidogenic. 41st Annual Meeting of the Society for the Study of Reproduction, Kailua-Kona, HI, 2008.

Johnson SS*, Swartz DJ, Chau KM, von Horsten HH, Whelly SM, **Cornwall GA**. The CRES Protein. American Society of Andrology annual meeting. 2007.

Chau KM*, Kaur G, **Cornwall GA**. Sperm lacking cystatin-related epididymal spermatogenic protein (CRES) exhibit impaired capacitation. Society for the Study of Reproduction Annual meeting. 2007.

Foresman R*, Hsia N, **Cornwall GA**. CRES4: A New Member of the CRES (Cystatin-Related Epididymal Spermatogenic) Subgroup of Family 2 Cystatins. American Society of Andrology annual meeting, Baltimore MD, May 2004.

von Horsten HH*, Pena A, Whelly SM, Phelps B, Cormier N, **Cornwall GA**. TRANSGLUTAMINASE MEDIATED CROSSLINKING OF CRES PROTEIN. American Society of Andrology Annual Meeting, Baltimore, MD, May 2004.

Hsia N*, Brousal JP, Hann SR, **Cornwall GA**. Germ cell-specific expression of a cystatin-related epididymal spermatogenic (CRES) promoter-CAT transgene. American Society of Andrology Annual Meeting, 2002.

Hsia N*, **Cornwall GA**. CCAAT/enhancer binding protein beta regulates expression of the cystatin-related epididymal spermatogenic (Cres) gene. Society for the Study of Reproduction annual meeting, Madison, WI. 2000.

Sutton HG*, Fusco A, **Cornwall GA**. Cystatin-Related Epididymal Spermatogenic Protein Colocalizes with LH β Protein in Mouse Anterior Pituitary Gonadotropes. American Society of Andrology annual meeting. 1999.

Syntin P*, **Cornwall GA**. Immunolocalization of CRES protein in the acrosomes of spermatozoa from rat, mouse, and human. Society for the Study of Reproduction annual meeting, 1998.

Sutton HG*, Hsia N, **Cornwall GA**. Potential Regulation of the Novel CRES Gene by Alternative Splicing. Society for the Study of Reproduction annual meeting, 1998.