

**TRYGVE TOLLEFSBOL, Ph.D., D.O.****CURRICULUM VITAE****CONTACT INFORMATION:**

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**PERSONAL:**

*Married to Dr. Lucy G. Andrews; Born in Cincinnati, Ohio*

**PERSONAL STATEMENT:**

Among my positions are Distinguished Professor of Biology and Senior Scientist in the UAB O'Neal Comprehensive Cancer Center, the Integrative Center for Aging Research, the Nutrition Obesity Research Center, and the Comprehensive Diabetes Center. I hold doctorate degrees in molecular biology and osteopathic medicine, trained with *National Academy of Science* members and a Nobel Laureate at Duke University and the University of North Carolina and have over 200 peer-reviewed papers, many of which have appeared in leading journals. The Tollefsbol lab focuses on epigenetics, cancer prevention, and nutrition (<http://www.uab.edu/uabmagazine/2011/september/epigenetics>). News reports highlighting the translatability to the lay public of the discoveries made in the Tollefsbol laboratory have appeared in international media such as *Newsweek*, *London's Daily Mail*, the *Scottish Daily Record*, the *American Institute for Cancer Research Newsletter*, *Women's Health*, NIH's *Nutrition Frontiers*, *Nutrition Action HealthLetter*, *AARP-The Magazine* and *Reader's Digest* among many others collectively representing >50 million readers. Our laboratory has been featured as an *Investigator in the Spotlight* by the NIH (*Nutrition Frontiers*) on two occasions as well as a *Scientist in the Spotlight* by *ScienceNow*. Currently I am an Associate Editor for *Frontiers in Genetics*, a contributing Editor of *Lewin's GENES* classic textbook and Lead Editor for Elsevier's *Translational Epigenetics Series*. Over 40 of the Tollefsbol lab publications have received accolades such as best paper, press releases and featured on journal homepages. Dr. Tollefsbol was awarded "Highly Ranked Scholar" internationally (2<sup>nd</sup> in cancer cell research as well as epigenetics—past 5 years; 3<sup>rd</sup> in epigenetics—lifetime) ([ScholarGPS](#)). He has been invited for numerous endowed keynote presentations worldwide, his research has been highlighted in *eScience News* and *ScienceDaily* and he has published 20 scholarly books on topics related to his research. The Tollefsbol lab has trained >60 scientists including 8 PhD or MD/PhD junior faculty, 13 postdoctoral fellows and >40 graduate students. Dr. Tollefsbol is currently mentoring 7 Ph.D. students (2 underrepresented; 7 female predoctoral students).

**POSITIONS:**

2021-Present	Distinguished Professor
2008-Present	Professor, UAB Department of Biology
2008-Present	Senior Scientist: O'Neal Comprehensive Cancer Center, Integrative Center for Aging Research, Nutrition Obesity Research Center, UAB University Wide Microbiome Center, and Comprehensive Diabetes Center
2006-2008	Scientist, UAB Clinical Nutrition Research Center
2004-2008	Associate Professor with tenure, UAB Department of Biology
2004-Present	Advisory Board Member, Cancer Prevention and Control Center
2003-Present	Scientist, UAB Arthritis and Musculoskeletal Center
2003-Present	GRECC Affiliated Investigator, Geriatric Research Education and Clinical Center, Veterans' Administration, Birmingham, AL
2002-Present	Scientist, UAB Vision Science Research Center
2000-Present	Director, UAB Cell Senescence Culture Facility
2000-2008	Scientist, UAB Comprehensive Cancer Center
2000-2003	Preceptor, UAB Center for Research in Clinical and Applied Gerontology
2000-2006	Preceptor, UAB Dental School
1999-2008	Scientist, UAB Center for Aging
1998-2004	Assistant Professor, UAB Department of Biology

**EDUCATION:**

Doctor of Philosophy (*Molecular Biology*; 3.85 GPA) and Doctor of Osteopathic Medicine: University of North Texas Health Sciences Center, Denton and Fort Worth, TX (1982 for Ph.D., 1979 for D.O.).  
Master of Science (*joint degree program in first two years of medical school*; 4.0 GPA): Department of Biochemistry/Basic Health Sciences, University of North Texas Health Sciences Center, Denton and Fort Worth, TX (1977)  
Bachelor of Science (*cum laude*; 3.6 Science GPA): Department of Biological Sciences, University of Houston, Houston, TX (1974)

**PROFESSIONAL EXPERIENCE:**

Assistant Research Professor: Dept. of Medicine, Duke Univ. Medical Center, Durham, NC (1985-1988)  
 Senior Fellow: Duke University Center for the Study of Aging and Human Development, Duke University Medical Center, Durham, NC (1985-1988)  
 Research Biologist: Geriatric Research, Education, and Clinical Center, VAMC, Durham, NC (1985-1988)  
 Assistant Professor: Department of Community Health Science, Michigan State University, East Lansing, MI (1984-1985) (Early appointment based on medical credentials)

**ACADEMIC RESEARCH TRAINING:**

Fellow, Department of Microbiology and Immunology, University of North Carolina, Chapel Hill, NC (1990-1998)  
 DNA-protein Interactions training, Dept. of Biochemistry, Duke University Medical Center, Durham, NC (1987-1988)  
 Postdoctoral Fellow, Duke University Medical Center, Durham, NC (1982-1984)

**OTHER TRAINING OR EXPERIENCE:**

Surgical Internship: Medical Center of Central Georgia, Macon, GA (1988-1989)  
 Physician (*joint position while Ph.D. candidate*): University of North Texas Health Center, Denton, TX (1979-1982)

**UNIVERSITY COMMITTEE MEMBERSHIPS:**

College of Arts and Sciences Inaugural Promotion and Tenure Committee, 2012-2014  
 Council for Postdoctoral Education, 2006-2011  
 Development and Senescence Workgroup, 2005-2006  
 Ovarian Cancer SPORE (Specialized Program of Research Excellence) Committee, 2004-2006  
 Center for Nutrient-Gene Interactions Committee, 2003-2010  
 Breast Cancer SPORE (Specialized Program of Research Excellence) Committee, 2001-2006  
 Tumor Biology Program Committee, 2002-present  
 AAMC Interdisciplinary Committee (Geriatric Teaching), 2001-2002  
 Basic Biology of Aging Committee, 2000-2014  
 Center for Aging Steering Committee, 2000-2014

**CERTIFICATIONS:**

Surgical Residency Certification; 1989  
 Advanced Cardiac Life Support Certification; 1989  
 Medical Board Examinations (Clinical); 1979  
 Federal Licensing Examination (Basic Science, Clinical Science, Patient Management, Medical Jurisprudence) (passed for unlimited license to practice medicine; currently inactive); 1979  
 Medical Board Examinations (Basic Sciences); 1977

**AWARDS, HONORS AND RECOGNITIONS:**

- Wu et al awarded Top View Papers of 2023 in *International Journal of Molecular Sciences*.
- Awarded "Highly Ranked Scholar": Third internationally in epigenetics and second in cancer cell research. ScholarGPS. <https://scholargps.com/scholars/42678301008418/trygve-o-tollefsbol>
- Mentored student Mohammad Mijanur Rahman received the "Department of Biology Outstanding PhD Student Award", 2024.
- Mentored student Brittany Witt received the "Harold Martin Outstanding Student Research Development Award", 2024.
- Mentored student Sebanti Ganguly received the "Harold Martin Outstanding Student Research Development Award", 2024.
- Mentored student Andrew Brane received the "Department of Biology Outstanding PhD Student Award", 2023.
- Wu et. al received a "highly cited paper" certificate for the 2022 first-authored publication in *Microorganisms* entitled "Modulating Microbiota as a New Strategy for Breast Cancer Prevention and Treatment" (<https://www.mdpi.com/2076-2607/10/9/1727>). 2023.
- "Get to know cruciferous vegetables; they can help prevent cancer, UAB scientist says". Alabama News Center, 2023: <https://alabamaneewscenter.com/2023/05/20/uab-expert-explains-the-science-behind-how-cruciferous-vegetables-can-help-prevent-cancer/> 2023.
- Arora et al, 2020, selected as the highly cited papers in the *International Journal of Molecular Sciences*. 2023.
- Certificate of Recognition in Appreciation of 25 Years of Service to UAB, 2023.
- News article on UAB Homepage: "Eat your veggies! UAB expert explains the science behind how cruciferous vegetables can help prevent cancer". 2023.
- Proclamation Approving Establishment of the Dr. Trygve Tollefsbol Best Paper Endowed Award. UAB Biology Spring 2022 Awards Ceremony. 2022.
- Publication in *Microorganisms* (2022) was selected as the Cover Story by the editors of this journal out of ~200 publications in the same issue.

- Arora et al certified as one of the Highly Cited Papers of *IJMS* in 2019, 2022.
- Served as Co-Chair of the NIH Cancer Prevention Study Section, February, June, October, 2022.
- Publication in *Journal of Nutrition* (2021) featured in the National Cancer Institute's *Nutrition Frontiers* (Vol. 12, Issue 4). Chosen based on scientific merit, innovation, and potential public health impact.
- Elevated to Distinguished Professor, 2021
- Served as Co-Chair of the NIH Cancer Prevention Study Section, February, June and October, 2021.
- Publication in *Journal of Nutrition* (2021) was selected as the Cover Story and Editor's Choice.
- Awarded the **Frontiers in Genetics 2021 Outstanding Associate Editor Award – Specialty Section Epigenomics and Epigenetics.**
- Publication in AACR's *Cancer Prevention Research* (2020) featured on the homepage of the journal.
- Award of NIH renewal grant appeared on UAB Homepage. <https://www.uab.edu/news/people/item/11794-uab-awarded-1-7-million-nih-grant-to-continue-cancer-prevention-research>
- Publication in *Anticancer Research* (2020) was selected to be featured in the National Cancer Institute's *Nutrition Frontiers*, 11 (22), 2020. Chosen based on scientific merit, innovation, and potential public health impact.
- Publication in *Cancers* (2019) was selected as an "Editor's Choice Article" because of readers' interest and high citation.
- Publication in *Clinical Epigenetics* (2019) featured on the home webpage of the journal and also in BMC's "On Biology" which reaches ~25,000 readers.
- Invited by a Search Firm to apply for director of a major research institute at the University of Cambridge in the United Kingdom. 2019.
- Notified by *PLoS One* journal that two papers from the Tollesbol lab, Kala and Tollesbol, 2016 and Paul et. al., 2017, were among the top 10% most cited *PLoS One* papers published in 2016 and 2017, respectively.
- Chair of the *NIH Molecular Profiles of Food and Nutrient Intake and Dietary Exposure* Study Section, Center for Scientific Review, 2018, 2019.
- Endowed plenary speaker at Harvard Medical School (5<sup>th</sup> Biennial Symposium on AMD), 2018.
- "Biology Professor Shows Benefit of Broccoli-Sprout Consumption by Pregnant Women". Featured in Fall 2018 *College of Arts and Sciences*, Vol 16, 1, p. 11.
- Publication in *Cancer Prevention Research* (2018) was selected to be featured in the National Cancer Institute's *Nutrition Frontiers*, Vol 9, Issue 3, 2018. Chosen based on scientific merit, innovation, and potential public health impact. <https://prevention.cancer.gov/news-and-events/nutrition-frontiers-summer-1>. Also covered by *London's Daily Mail* and the *Scottish Daily Record*. 2018.
- News articles of research findings appeared in *Newsweek*, *Reader's Digest*, *Seeker*, *Newsmax* and many others. Li, Y., Meeran, S.M. and Tollesbol, T.O. Combinatorial bioactive botanicals re-sensitize tamoxifen treatment in ER-negative breast cancer via epigenetic reactivation of ER $\alpha$  expression. *Scientific Reports* 7(1):9345, 2017. Ranked in the top percentile of papers published on oncology in *Scientific Reports* from 2017.
- PROSE Award (Honorable Mention in Clinical Medicine category) by the *American Publishers Awards for Professional and Scholarly Excellence* for the book "Medical Epigenetics" edited and published in 2016. Awards are for "the very best in professional and scholarly publishing". 2017.
- Nominated for *Director of the Linus Pauling Institute*, 2017.
- "Medical Epigenetics" book won "Highly Commended" award in the category of Basic and Clinical Sciences by the *British Medical Association Medical Book Awards* ceremony in London. 2017.
- Featured article: "3 Pioneering Epigenetic Labs: Exploring the People and Discoveries that Transcend the Lab Walls". Article features the Tollesbol lab along with two other labs (Johns Hopkins University and Harvard University) that contributed pioneering work in epigenetics (<http://www.whatisepigenetics.com/3-pioneering-epigenetic-labs-exploring-the-people-and-discoveries-that-transcend-the-lab-walls/>), 2016.
- Ranked among the top three authors in the field of cancer epigenetics for idea exchange. (Ha Jin Kim, Juyoung An, Yoo Kyung Jeong, Min Song: Exploring the leading authors and journals in major topics by citation sentences and topic modeling. BIRNDL 2016 Joint Workshop on Bibliometric-enhanced Information Retrieval and NLP for Digital Libraries, p. 42-50, 2016).
- Medical Epigenetics* book press release picked up on 19 major local, national, international, vertical and business media including Ask.com, BioSpace, Canadian Business Journal, Knowledgespeak.com, and Market Intelligence according to Elsevier.
- Paul et al paper ranked among "Top 10" papers published in 2015 in *Clinical Epigenetics*, 2016.
- Krakawski et al paper was the topic of a feature article in *Popular Science (Italy)* "Smart Magazine" entitled "Dieta epigenetica. Una nuova strada per la prevenzione del cancro al seno?" in the *Clinical Leader* section of the magazine, 2016.
- Ireland Prize for Scholarly Distinction Selection Committee, 2016.

- Chen et al (2011) paper in *Frontiers in Genetics* received >3,000 hits as of March, 2015 and was referred to as “among the best performing articles at *Frontiers*”. 2015.
- Invited guest lecture (“Epigenetic Diet”) for the *University Honors Program Interdisciplinary Course*. 2015.
- Dr. Trygve Tollefsbol Best Paper Award* established with proceeds from his being awarded the *Ireland Prize for Scholarly Distinction*, 2015.
- Awarded the *Caroline P. and Charles W. Ireland Prize for Scholarly Distinction*, (\$5,000 cash award, seminar/dinner). 2015.
- Associate Editor appointment to *Clinical Epigenetics*, 2014.
- NIH Investigator Spotlight: *Nutrition Frontiers* 5, 3, 2014. Biography of Dr. Tollefsbol featured in NIH Newsletter.
- UAB News Article: “The immortality enzyme? Telomerase fights aging, fuels cancer”, *The Mix*, 2014.
- UAB News Article: “Superfoods and breast cancer: Study takes a closer look at broccoli and green tea”, *The Mix*, 2014.
- PLoS One* Associate Editor invitation (declined).
- Research featured in *AARP The Magazine* (largest circulation magazine in the United States of ~22 million readers), “Eat to beat cancer”. 2014.
- Research featured in *Chemistry & Industry*, June 2014; “You are what you eat” discussing the emerging field of nutritional epigenetics.
- Invited seminar speaker at *Center for Molecular Medicine, Karolinska Institute*, Stockholm, Sweden, 2014.
- Baker and Associates LLC (search firm) invitation to apply for Chair of the Department of Biology at Baylor University, 2014.
- Article “The New Science of Living Longer” discussing in part Dr. Tollefsbol’s research appeared in *More Magazine* (circulation ~1.8 million) in November, 2013.
- Editor-in-Chief invitation for the *World Journal of Biological Chemistry*, 2014.
- Honorable Speaker Invitation at the *3<sup>rd</sup> International Conference on Biometric*, Baltimore, MD, 2014.
- Research highlighted in Nutrition Action HealthLetter (Center for Science in the Public Interest—Readership >900,000). “Epigenetics: It’s what turns you on...and off”. July/August 2013, pp. 8-11.
- Hardy, T. M. and Tollefsbol, T.O. *Epigenomics* 2011 paper highlighted in *Oncology Central*, 2013.
- “Highly Accessed” status assigned to Kala et al paper published in the *Journal of Clinical Epigenetics*, 2013.
- Appointed by *Elsevier* (publisher of the *Methods in Enzymology* Series) as Series Editor of a new Academic Press Series entitled *Translational Epigenetics*. Dr. Tollefsbol creates and manages many new books each year to be edited and authored by distinguished scientists, 2013-present.
- Article in *Insight on Aging* (vol. 19) entitled “Update From the Basic Biology of Aging Program: Epigenetics of Aging and Cancer Prevention” discussing Dr. Tollefsbol’s research, April, 2013.
- UAB eReporter* article and podcast: “UAB expert discusses how choices shape our genetics”, Feb. 5, 2013.
- THE MIX AT UAB*: Article on Dr. Tollefsbol recent research entitled “Epigenetics, Aging and Cancer”, Feb. 4, 2013.
- Article in *UAB Kaleidoscope* (readership >30,000) entitled “Environment can rewrite DNA sequence” highlighted Dr. Tollefsbol’s recent research, 2013.
- Oxford Round Table speaker invitation at the *10<sup>th</sup> Annual Conference on Health, Nutrition, Nursing and Aging*, Oxford University (declined), 2013.
- Li et al 2013 publication in *Molecular Cancer* featured in MDLinx, the world’s most current index of articles that matter in the daily lives of physicians and other healthcare professions.
- Notified by *Frontiers in Genetics* that our 2011 paper is “among the highest-performing articles in all of the *Frontiers* series of publications”. 2012.
- Interviewed by *The Scientist* for comments regarding a paper on DNA methylation effects on memory. 2012.
- Distinguished Speaker at *4<sup>th</sup> Annual Epigenetics World Congress (Genomics Research-2012)*: presentation subject of news article by *Epigenetics Headlines and Features*: “Conference Trends: Nutrition in Epigenetics”; “Letting Food Be the Best Epigenetic Medicine”. 2012.
- National live radio interview (*Survive and Live Well Program*) invitation with W4CS.com to discuss the recent research from my lab on gene expression and health (declined due to scheduling conflicts), 2012.
- Interviewed by *Women’s Health* magazine (circulation of ~1.5 million readers) on research involving the “epigenetics diet” (<http://www.womenshealthmag.com/nutrition/diet-and-disease-risks>), 2012.
- Appointed by the Dean of The Colleges of Arts and Sciences to serve on the Inaugural Promotion and Tenure Committee, 2012-2014.
- Appointed to the Editorial Advisory Board of *Epigenetics of Diabetes and Obesity*, 2012.

- Best paper award by the *Science Unbound Foundation* for UAB-based investigators in the area of obesity or nutrition jointly to Drs. Yuanyuan Li and Trygve O. Tollefsbol ("Glucose restriction can extend normal cell lifespan and impair precancerous cell growth through epigenetic control of hTERT and p16 expression" published in the May 2010 issue of *FASEB Journal*), 2011.
- UAB Magazine* (Fall/Winter, 2011): On the Record—"A Conversation with Trygve Tollefsbol" regarding new book, *Handbook of Epigenetics: The New Molecular and Medical Genetics*, 2011.
- Research featured on front and back cover in *American Institute for Cancer Research Newsletter* (circulation of ~1 million readers) entitled "How Plant Foods May Protect Your Chromosomes" (AICR Newsletter, Fall, 2011, Issue 113), 2011. Article focused on Dr. Tollefsbol's research on telomerase/telomeres.
- UAB Magazine*. Research featured in an article entitled "Express Yourself: Epigenetics Shapes the Future of Health". 2011.
- Invited plenary speaker at the *Advanced Clinical Nutrition* conference in The Hague, Netherlands, 2011.
- Li et al 2011 top featured article on *BMC Medicine* web site, September, 2011. This paper also received "highly accessed" status and was the subject of a news article in *The Australian*, a national newspaper in Australia.
- Featured Speaker and Session Chair (Epigenesis and Human Diseases) at *BIT's First Annual World Congress of Molecular & Cell Biology*, Beijing, China, 2011.
- UAB Magazine*: Research on epigenetics of health foods featured in "*Ideas and Innovations*" section (p. 3), Spring, 2011.
- Appointed as Associate Editor of *Frontiers in Epigenomics*, 2011.
- Interviewed by *Shape* magazine (paid circulation of ~1.7 million) on research involving the "epigenetics diet". 2011.
- Featured plenary speaker and Session Chair at the *International Clinical Epigenetics Conference*, Homberg, Germany, 2011.
- Radio interview (live, one hour) by Carl Lanore entitled "Finally The Link Between Glucose And Longevity Has Been Illuminated". The show was broadcast live to listeners in Kentucky, Tennessee and Las Vegas, 2011.
- Listed among 5 other investigators of 210 investigators affiliated with the UAB Center for Aging for "Trend-Setting Accomplishments (2005-2010)", 2011.
- Nominated by the *Council of Center Directors* to serve in an advisory capacity to the *Council of Core Directors* and the *Office of the Vice-President for Research and Economic Development*, University of Alabama at Birmingham, 2011.
- Nominated for the *University of Alabama at Birmingham Exceptional Innovation Award*, 2011.
- News article in "*Epigenetics News and Headlines*" entitled "Take a Bite Out of Cancer with the Epigenetics Diet" focused on the paper Meeran et al (*Cancer Epigenetics*, 2011). This paper was also the subject of hundreds of online news articles and featured on the UAB Main Web Page.
- Featured as "Scientist in the Spotlight", *ScienceNow* 34, 4, 2010.
- Invited plenary speaker at the *Global Arthritis Research Network*, Zurich, Switzerland, 2010.
- News article in *Birmingham News Examiner* on featured presentation at the *American Institute for Cancer Research Annual Conference* entitled "UAB Expert Featured in AICR Research Meeting", 2010.
- Featured plenary speaker at the *American Association for Cancer Research*, Washington, D.C., 2010.
- Li et al (*Molecular Cancer*, 2010) listed as a "Highly Accessed" article. Also, subject of news story in *MDLinx*, 2010.
- "*Epigenetics of Aging*" book reviewed in *Nature* (464, 1130-1131, April 22, 2010). Title of *Nature* article: "Why twins age differently." Also appeared on UAB Main Page as news item "*Nature* Reviews Groundbreaking Book on Research of Aging Edited by Professor". Also reviewed by the international journal *Biogerontology* (D01 10.1007/s10522-010-9303-6, October, 2010).
- Meeran et al (*PLoS ONE*, 2010) subject of news story in *Birmingham Science News Examiner*, July 9, 2010.
- UAB Magazine* story (Spring 2010); "Two by Tollefsbol: Cancer Epigenetics/Epigenetics of Aging". News item on two edited and contributed books, 2010.
- Li et al (*FASEB Journal*, 2009) selected by the editors of *FASEB Journal* for press release. Received several hundred news stories online and also appeared on the UAB main page and the front page of *Birmingham News*. 2010.
- Liu et al (*Current Issues in Molecular Biology*) was selected for interview by *LiveScience RSS* and cited in the news article: "Epigenetics: A Revolutionary Look at How Humans Work". 2009.
- Finalist for the *Ellison Medical Foundation Senior Scholar Award in Aging* full application, 2008.
- Paid editorial contributor for the classic textbook, *Genes* by Benjamin Lewin, to revise and update the chapter entitled "Epigenetic Effects are Inherited", 2008-present.
- Leader of reviewing of scientific contest entries for Center for Aging Annual Meeting, 2008.

- Liu et al (2008) publication in *Neurobiology of Aging* listed among the top 8 hottest articles published in this journal by *ScienceDirect's Top25 Hottest Articles*, 2008.
- Featured in a cover story of *UAB Magazine* in an article on aging research in Dr. Tollefsbol's laboratory ("In the End: The Building Blocks of Death"), *UAB Magazine*, Spring, 2008, pp. 16-17, 2008.
- Selected for *Who's Who Among Executives and Professionals*, 2008.
- Reviewer for the classic textbook, Lewin's *GENES X*, 2008.
- Invited by the NIH to attend a NCI, DCP & NIH, ODS sponsored Symposium "*Diet, epigenetic events, and cancer progression*" at the NIH, 2007.
- Cover story of *UAB Arts & Sciences* focusing on Dr. Tollefsbol's laboratory and research (Spring/Summer, 2007; pp. 4-7).
- Recipient of an *unsolicited* two-year award from the Glenn Foundation of Medical Research for \$50,000 (*Glenn Award for Research in Biological Mechanisms of Aging*). 2007-2009.
- Ulrey et al (2005) listed among the top 25 most frequently read articles published in *Human Molecular Genetics*, 2006.
- Finalist for the *Ellison Medical Foundation Senior Scholar Award in Aging*. 2006.
- Selected and highlighted as part of the 25<sup>th</sup> anniversary of the *American Association for Aging Research* as one who has "made significant contributions to aging research". 2006.
- UAB Magazine*: Books, "Epigenetics Protocols" (2004) and "Biological Aging: Methods and Protocols" (2007), featured in *Shelf Life* section.
- Nominated for *The William and Joy Harbert Endowed Chair in Cancer Genetics*, Department of Genetics and Comprehensive Cancer Center, UAB, 2006.
- UAB Synopsis* story entitled "UAB Breast Cancer Researchers Receive Komen Foundation Awards", July 19, 2006.
- Research featured in a story entitled "The latest research on factors that promote or inhibit telomerase" in the *Telomeres Information Center* at the *American Federation for Aging Research* web site, June, 2006.
- Selected for inclusion in *Who's Who in America* ("fewer than four in 10,000" are selected for inclusion according to *Who's Who in America*), 2005, 2006.
- Nominated for the position of Director of Basic Science, Department of Medicine, Division of Gerontology and Geriatrics, UAB, 2005.
- Liu et al (*Gene* 340, 1-10, 2004) listed among the top 4 hottest articles published in this journal over the past 10 years by *ScienceDirect's Top25 Hottest Articles* (2005).
- Liu et al (2003) publication in *Mechanisms of Ageing and Development* listed among the top 8 hottest articles published in this journal by *ScienceDirect's Top25 Hottest Articles*, 2004.
- Liu et al (2003) publication in *Mechanisms of Ageing and Development* was cited among the most important scientific papers in cancer and aging by *Rejuvenation Research* (vol. 7, p. 77, 2004).
- Casillas et al (*Gene* 316, 57-65) listed among the most "important or provocative articles by noted experts" in the field of cellular senescence (*J. Anti-aging Medicine* 6, 341, 2003).
- Saldanha et al (*Eur. J. Biochem.* 270, 389-403, 2003) listed on the homepage of this journal as the 4<sup>th</sup> most accessed publication of 2003 of the *European Journal of Biochemistry*.
- Saldanha et al (*Analytical Biochemistry* 315, 1-21, 2003) listed among the most downloaded articles of 2003 for *Analytical Biochemistry*.
- Liu et al (2003) publication in *Mechanisms of Ageing and Development* was the subject of news stories in *Genetics & Environmental Health Week* (March 3, 2004, p. 60-61) and *Managed Care Business Week* (March 2, 2004, p. 73-74). Title of news story: "Nutrition contributes to aging and cancer development".
- Casillas et al (*Molecular and Cellular Biochemistry* 252, 33-43, 2003) listed among the most "important or provocative articles by noted experts" in the field of gene expression and gene therapy (*J. Anti-aging Medicine* 6, 344, 2003).
- Lopatina, *et al* publication cited among the most important papers of 2002 by the *Faculty of 1000*.
- Poole *et al* (2001) publication listed among the top downloaded articles from *ScienceDirect*.
- Ahmed and Tollefsbol (2001) publication cited among the best papers of 2001 in *Geriatric Pathology*.
- Listed in *Who's Who in Science and Technology* (1995).
- NIH Postdoctoral Research Fellowship through University of North Carolina (1990-1998).
- Listed in *Men of Achievement* (1989).
- American Federation for Aging Research Awardee (Consecutive Awards) (1986-1988).
- National Institutes of Health Postdoctoral Fellowship through Duke University (1982-1984).
- Burroughs Wellcome Research Fellowship (Graduate School) (1979-1980).

- ☐ Texas Osteopathic Medical Association Scholarship (Medical School) (1975-1976).
- ☐ *Cum Laude* graduate (Bachelor of Science) (1974).

### **Contributions to Science:**

Recent papers from >200 have appeared in leading journals such as *Cancers*, *Journal of Nutrition*, *Scientific Reports*, *PLoS ONE*, *Molecular Cancer*, *Cells*, *Frontiers in Genetics*, *Clinical Epigenetics*, *Current Medicinal Chemistry* and *Cancer Prevention Research*. I have also published 20 books on our research areas.

**1. Contributions to pioneering ideas on the role of epigenetics in cancer, aging and nutrition.** Early in my career I became fascinated with the role of epigenetics in cancer, aging and nutrition. I have contributed a number of publications that helped pioneer the role of epigenetic mechanisms in these processes and was awarded the ***Ireland Prize for Scholarly Distinction*** for leadership in the field of epigenetics. In 1993 I was the lead author of a theoretical paper that proposed mechanisms for an important role of *de novo* methylation-mediated gene silencing in cancer and aging **(a)**. This was later documented experimentally (*Nat. Genet.* 7, 536-540). Thousands of articles have since confirmed the importance of gene silencing by *de novo* methylation in cancer, aging and nutrition. My laboratory also provided a key paper on mechanisms for epigenetic changes in cancer and aging. We showed that the *de novo* methyltransferases (DNMTs) increase in immortalized precancerous cells contributing to gene silencing in cancer. We also found that a decline in DNMT1 plays a major role in the loss of DNA methylation in aging **(b)**. Further, we developed the idea that an important mechanism for changes in the DNMTs during cancer and aging may be due to DNMTs transcription and showed that this has a key role in neoplastically transformed and aging cells **(c)**. One of the most important genes in cancer and aging is telomerase reverse transcriptase (*hTERT*) which was the topic of the *2009 Nobel Prize in Physiology or Medicine*. We published a theoretical paper in 2001 where we proposed mechanisms for epigenetic control of the *hTERT* gene in these processes **(d)**. Many laboratories worldwide have since shown that epigenetic mechanisms play a key role in the regulation of telomerase in cancer, aging and nutrition. These as well as other early publications from my work have contributed to pioneering idea development for the role of epigenetics in cancer and aging.

**a.** Tollefsbol TO, Andrews LG. (1993) Mechanisms for methylation-mediated gene silencing and aging. *Medical Hypotheses*, 41(1), 83-92.

**b.** Lopatina N, Haskell J, Andrews L, Poole J, Saldanha S, Tollefsbol T. (2002) Differential maintenance and *de novo* methylating activity by three DNA methyltransferases in aging and immortalized fibroblasts. *Journal of Cellular Biochemistry*, 84(2), 324-34. **Faculty of 1000 recognition.**

**c.** Casillas MA Jr, Lopatina N, Andrews LG, Tollefsbol TO. (2003) Transcriptional control of the DNA methyltransferases is altered in aging and neoplastically-transformed human fibroblasts. *Molecular and Cellular Biochemistry*, 252(1-2), 33-43. **Among the most "important or provocative articles by noted experts" in the field of gene expression and gene therapy (J. Anti-aging Med 6, 344, 2003).**

**d.** Tollefsbol TO, Andrews LG. (2001) Mechanisms for telomerase gene control in aging cells and tumorigenesis. *Medical Hypotheses*, 56(6), 630-7.

**2. Innovative methodology development in epigenetics, nutrition, cancer and aging.** Since the early 1990s I have been involved in the development of innovative technology and have contributed many publications as well as 5 *Methods in Molecular Biology* books devoted to technological innovations. Early in the field of epigenetics we performed the first expression of *Dnmt1* in *E. coli* **(a)**. This innovation also introduced the concept of potential applications for preserving methylation patterns of cloned DNA in *E. coli*. In addition, in a joint first-authored paper in PNAS, we provided the first report of gene resurrection through a novel epigenetic phylogenetic analysis. Using rate of loss of CpG methylation through deamination and replacement of these defects, we revived an extinct *LINES1* gene **(b)**. More recently, my laboratory has invented a technique referred to as chromatin immunoprecipitation-genomic bisulfite sequencing (ChIP-GBS). This novel technique allows for analyses of histone modifications and DNA methylation in one experiment that increases accuracy, decreases labor, and facilitates interpretations of cross-talk between epigenetic processes **(c)**. My lab also developed a novel approach to analyzing the impact of caloric restriction on aging and precancerous mammalian cells and the epigenetic role in this process. Using human cultured cells we discovered that glucose restriction impacts epigenetic processes in human cells which extends the lifespan of normal cells and induces apoptosis of precancerous cells **(d)**. These novel techniques stimulated the concept that sugar reduction may be important for increased health by influencing epigenetic processes.

**a.** Tollefsbol TO, Hutchison CA 3rd. (1995) Mammalian DNA (cytosine-5-)-methyltransferase expressed in *Escherichia coli*, purified and characterized. *Journal of Biological Chemistry*, 270(31), 18543-50.

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**c.** Li Y, Tollefsbol TO. (2011) Combined chromatin immunoprecipitation and bisulfite methylation sequencing analysis. *Methods in Molecular Biology*, 791, 239-51. PMID: PMC3233221.

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**3. Leadership in discoveries in dietary epigenetics of gut microbiome, cancer prevention and therapy.** For almost two decades my laboratory has extensively published on the epigenetics and epigenomics of dietary prevention of cancer and in 2011 in *Epigenomics*, we coined the term "epigenetics diet". We discovered that

sulforaphane (SFN) from cruciferous vegetables leads to the down-regulation of the *hTERT* gene through epigenetic mechanisms in cancer cells causing apoptosis. SFN was found to modify the epigenetic expression of *hTERT* in cancer cells that silences this gene. This study suggested that consumption of cruciferous vegetables may prevent cancer through epigenetic control of telomerase **(a)**. We have also shown that key bioactive compounds comprising the epigenetics diet can reactivate ER $\alpha$  in ER-negative [ER(-)] breast cancer which is the most fatal of the breast cancers. Some components of the epigenetics diet reactivate ER expression in ER(-) breast cancer that renders these cells susceptible to tamoxifen (TAM) **(b)**. In addition, our findings on the epigenetics diet have indicated that the gut microbial composition is significantly changed in response to soy genistein which is a DNA methyltransferase inhibitor **(c)**. An epigenetic combinatorial diet was discovered to impact the gut microbiota and plasma short-chain fatty acids to prevent ER(-) breast cancer **(d)**. The combinatorial studies are important as they confer less toxicity risk and higher compliance due to lower dosages.

**a.** Meeran SM, Patel SN, Tollefsbol TO. (2010) Sulforaphane causes epigenetic repression of *hTERT* expression in human breast cancer cell lines. *PLoS One* 5(7):e11457. **News article in AICR ScienceNow, 34, 4, 2010, "Finding the Cruciferous Cancer-Prevention Link"**. PMID: PMC2897894. **b.** Li Y, Meeran SM and Tollefsbol TO. (2017) Combinatorial bioactive botanicals re-sensitize tamoxifen treatment in ER-negative breast cancer via epigenetic reactivation of ER $\alpha$  expression. **Scientific Reports** 7(1):9345. PMID: PMC5570897. **Press coverage in Newsweek, Reader's Digest. Among "Top 100 Read Articles in Oncology" in Nature's Scientific Reports, 2017.**

**c.** Paul B, Royston KJ, Li Y., Stoll ML, Skibola CF, Wilson LS, Barnes S, Morrow CD, **Tollefsbol TO.** Impact of genistein on the gut microbiome of humanized mice and its role in breast tumor inhibition. *PLoS One* 12(12):e0189756, 2017. PMID: PMC5739415. **Among the top 10% most cited PLoS One papers published in 2017.**

**d.** Sharma M, Arora I, Stoll ML, Li Y, Morrow CD, Barnes S, Berryhill TF, Li S, Tollefsbol TO. Nutritional combinatorial impact on the gut microbiota and plasma short-chain fatty acids levels in the prevention of mammary cancer in Her2/neu estrogen receptor-negative transgenic mice. *PLoS One*. 2020 Dec 31;15(12):e0234893. doi: 10.1371/journal.pone.0234893. PMID: PMC7774855.

**5. Scholarly leadership in epigenetics, cancer, aging and telomerase.** Since 2004 I have created (edited and co-authored) 20 books on epigenetics, cancer, aging and telomerase which have contributed significantly to the scholarship in these fields. It is my belief that scholarly contributions such as these facilitate discoveries especially by those newer to these areas of study.

## **BIBLIOGRAPHY (SCIENTIFIC PUBLICATIONS):**

### **Textbooks/Books (designed for college level and/or scholars) (co-authored and edited):**

1. Epigenetics Protocols. **Tollefsbol, T.O.** (ed.) Humana Press (ISBN 1-58829-336-X), 2004. **Translated in Chinese.** 302 pages. **Listed by Amazon.com in March, 2005 as the bestselling book in the field of epigenetics over the past 10 years.**  
**"Comprehensive and easy to use...offers investigators readily reproducible techniques that will further promote progress in this critically important field"—review by Tumori (an international Journal of Experimental and Clinical Oncology).**  
**"Tollefsbol (U. of Alabama) and contributors offer a wide array of leading-edge analytical methods and techniques suitable for studying fundamental biological processes and therapeutic interventions"—review by Powell's Books.**
2. Biological Aging: Methods and Protocols. **Tollefsbol, T.O.** (ed.) Humana Press (ISBN 1-58829-658-X), 2007. **Translated in Chinese.** 414 pages.  
**"The range and variety of experimental model systems and the cellular and molecular methods employed to address questions in basic and applied aging research require a book like this where one can access practical information and advice. ...a welcome source of useful information for researchers intending to find their way into descriptive, analytical and interventive research in biogerontology."** Suresh Rattan, *Biogerontology* 9, 137, 2008.  
**"Reminiscent of the excellent books on organic chemistry techniques...this book is written with deep understanding and a sense of sharing. For research gerontologists, this book is a boon."** David O. Staats, M.D. (University of Oklahoma Health Sciences Center), *Doody Review Services, Barnes & Nobel*, 2008.
3. Telomerase Inhibition: Strategies and Protocols. Andrews, L.G. and **Tollefsbol, T.O.** (eds.) Humana Press (ISBN 978-1-58829-683-2), 2007. 220 pages.  
**"In this text, 30 international academics and researchers contribute 14 chapters providing researchers with a diverse and comprehensive set of tools with which to study telomerase inhibition."** *SciTech Book News, June, 2008.*  
**"Given the thousands of articles published each year with the keyword "telomerase", this summary of the methods related to the analysis of telomerase is welcome. Overall this book will be a useful resource for researchers performing telomerase-related experiments. This book features a compendium of methods and provides the researcher with a set of practical tools, as all protocols are described in a very clear and accurate fashion."** *Current Medicinal Chemistry*, 3, 1135-1140, 2008.
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*“Tollefsbol (U. of Alabama at Birmingham) and 50 contributors—many of them pioneering researchers—provide a variety of topics ranging from the role of epigenetics in the basic mechanisms of tumorigenesis to the most current epigenetic drugs being produced for cancer therapy. The volume...would serve as a reference for researchers and practitioners interested in tumor biology and cancer therapy and as a textbook for advanced courses in disciplines such as genetic diseases, molecular biology and cancer.”*

*SciTech Book News, March, 2009.*

*“Edited and partly written by Dr. Tollefsbol, this book aims to provide a comprehensive and up-to-date coverage of all aspects of cancer epigenetics... Overall this book represents an aggressive aim, with endeavor to summarize the vast amount of information from a very rapidly developing field. ...a valuable tool for those who wish to conduct research on epigenetics and hope to grasp the key concepts instantly. This is an excellent book on cancer epigenetics that will be of value to clinical scientists, postgraduate students, postdoctoral fellows,, and basic scientists who wish to conduct basic or translational cancer research... The exhaustive source of references in this book will allow researchers to rapidly locate key references and grasp key concepts essential to the rapidly evolving field.”* Suet Yi Leung, *Gastroenterology* 137, 2177-2178, 2009.

5. Epigenetics of Aging. **Tollefsbol, T.O.** (ed.) Springer, (ISBN 978-1-4419-0638-0; e-ISBN 978-4419-0639-7), 2010. 469 pages. Selected for Book Review by Nature: *“Why Twins Age Differently”*. *“Epigenetics of Aging”*, a collection of articles assembled by molecular biologist Trygve Tollefsbol, gives us a contemporary view of the epigenetic processes involved in ageing. *“Epigenetics of Aging”* reminds us that mysterious and fascinating processes govern the last phase of life in all organisms.” Review in *Nature*, 2010.  
Also reviewed in *Biogerontology* by Suresh Rattan: *“The editor, Trygve Tollefsbol, deserves to be given credit...this nearly 500-pages thick book covers almost everything around the topic of how aging and age-related diseases might be affected by epigenetic processes. There is an abundance of information...generally well written...and quite up to date. I surely recommend this book which will open up many doors.”*
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*“The Handbook of Epigenetics contains an impressive collection of 37 articles, mainly dealing with the biology of epigenetics. Covered topics range from molecular marks and mechanism, other model systems, epidemiology, aging and the brain to diseases.... In summary, the Handbook of Epigenetics provides a unique and useful combination of information and it is a valuable addition to the bookshelf of scientists with experience in the field.”*—CHEMBIOCHEM, 2011.  
*“This book is wonderful—I read it right through in a week...there are several general and theoretical articles allowing the reader to appreciate how antiquated gene-based thinking has become. Human-oriented articles towards the end emphasize how many abnormalities, and even diseases, are epigenetically-based, completing a most impressive tome.”*---*BIOLOGIST*, 2011.
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*“This book covers a huge range of topics, from early life effects on adult disease to epigenetic changes occurring with aging and senescence. Especially pertinent are the several chapters on epigenetic treatments for disease including drugs, miRNA/siRNA, natural substances and foods. With up to date coverage of an ever expanding field, Epigenetics in Human Disease will be a great resource for clinicians, researchers and students.”* Craig Cooney, Investigator, Research Service, Veteran's Affairs Medical Center, Little Rock, AR & Affiliate Scientist, Nanotechnology Center, University of Arkansas, Little Rock, AR.
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*“Transgenerational Epigenetics provides a comprehensive analysis of the inheritance of epigenetic phenomena between generations. There are many ongoing debates surround organismal inheritance of epigenetic phenomena and this seminal book ...not only confronts these controversies, but also illuminates many other aspects of transgenerational epigenetics.”* *Anticancer Research*; January, 2015.
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**"...a range of translational researchers, clinical geneticists, and non-geneticist clinicians (such as oncologists, cardiologists, neuropsychiatrists, haematologists, and reproductive genetic counsellors) can understand the epigenetic basis of their particular disease focus and develop pathways for implementing treatment, drug discovery, and new clinical trials... This is an excellent book." British Medical Association Awards Programme, BMA House, London, 2017.**

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2. Mitchell, N., DeAngelis, J.T., and **Tollefsbol, T.O.** DNA methylation analysis of the maspin gene in the MCF10 breast cancer progression model. *Inquiro* 4, 47-50, 2011.
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6. Williams, A., Lai, S., Woodfin, W.F., Wylie, R., and Tollefsbol, T.O. Expression of retinoic acid receptors in differentiating human leukemia cells. *McNair Chronicle* 5, 82-84, 2004.
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9. Bryant, R. and **Tollefsbol, T.O.** The effects of all-trans 9-cis and UAB30 retinoic acids on human breast cancer cells. *McNair Chronicle* 3, 24-26, 2002.

#### Scientific Publications Submitted for Peer-review:

Ongoing.

#### Published Abstracts (From 2015):

Brane, A. and Tollefsbol, T.O. (2023) Abstract 6022: The importance of DNA methylation to breast cancer cell phenotype and its role in the anticancer activity of withaferin-A. *Cancer Research* 83(7\_Supplement):6022-6022.

Li, Shizhao & Wu, Huixin & **Tollefsbol, Trygve**. (2021). Abstract 2571: Paternal epigenetic regulation contributes to the prevention of estrogen receptor-negative mammary cancer with combined broccoli sprouts and green tea polyphenols consumption in transgenic mice. 2571-2571. *AACR Annual Meeting 2021*, 10.1158/1538-7445.AM2021-2571.

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Li, Y., Chen, M., Li, S. and **Tollefsbol, T.O.** Time-dependent maternal soybean genistein exposure leads to later-life breast cancer chemoprevention in mice. *Conference: Proceedings: AACR Annual Meeting 2019; March 29-April 3, 2019; Atlanta, GA, 2019.*

Royston, K.J. and **Tollefsbol, T.O.** The epigenetic effects of combinatorial withaferin A and sulforaphane on breast cancer cells. *Journal of the Alabama Academy of Sciences*, 2016.

**Tollefsbol, T.O.**, Meeran, S and Li, Y. Epigenetic targets of sulforaphane and epigallocatechin gallate in cancer prevention. *Cancer Prevention Research (Proceedings from the Thirteenth Annual AACR International Conference on Frontiers in Cancer Prevention Research)*, 2015.

Cases, M. G., Daniel, M., Kala, R., **Tollefsbol, T. O.**, Locher, J. L., De Los Santos, J. F., Smith, K. P., Demark-Wahnefried, W. (2015, Jul). *Gardening intervention increases telomerase levels in breast cancer survivors*. Poster presented at the Meeting of the International Psycho-Oncology Society and American Psychosocial Oncology Society: World Congress of Psycho-Oncology, Washington, DC., 2015.

#### Scientific Publications In Preparation for Peer-review:

Ongoing.

**BOOKS PUBLISHED AS TRANSLATIONAL EPIGENETICS SERIES EDITOR (Dr. Tollefsbol creates a book concept and title, recruits editors, and guides progress of the edited book through to publication):**

1. Transgenerational Epigenetics: Edited by Trygve O. Tollefsbol, 2014
2. Personalized Epigenetics: Edited by Trygve O. Tollefsbol, 2015
3. Epigenetic Technological Applications: Edited by Y. George Zheng, 2015
4. Epigenetic Cancer Therapy: Edited by Steven G. Gray, 2015.
5. DNA Methylation and Complex Human Disease: By Michel Neidhart, 2015.
6. Epigenetic Gene Expression and Regulation: Edited by Suming Huang, Michael D. Litt, and C. Ann Blakey, 2016.
7. Epigenomics in Health and Disease: Edited by Mario Fraga and Agustin F. Fernandez, 2016.
8. Epigenetic Biomarkers and Diagnostics: Edited by Jose Luis Garcia-Gimenez, 2016.
9. Drug Discovery in Cancer Epigenetics: Edited by Gerda Egger and Paola Arimondo, 2016.
10. Medical Epigenetics: Edited by Trygve Tollefsbol, 2016.
11. Chromatin Signaling and Diseases: Edited by Olivier Binda and Martin Ernesto Fernandez-Zapico, 2016.
12. Genome Stability: Edited by Igor Kovalchuk and Olga Kovalchuk, 2016.
13. Neuropsychiatric Disorders and Epigenetics: Edited by Dag Yasui, Jacob Peedicayil, and Dennis Grayson, 2017.
14. Polycomb Group Proteins: Edited by Vincenzo Pirrotta, 2017.
15. Chromatin Regulation and Dynamics: Edited by Anita Gondor, 2017.
16. Epigenetics and Systems Biology: Edited by Leonie Ringrose, 2017.
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18. Epigenetic Mechanisms in Cancer: Edited by Sabita Saldanha, 2017.
19. Nuclear Architecture and Dynamics: Edited by Lavelle and Victor, 2017.
20. Epigenetics of Longevity and Aging: Edited by Moskalev and Vaiserman, 2017.
21. The Epigenetics of Autoimmunity: Edited by Zhang, 2018.
22. Epigenetics in Human Disease, Second Edition: Edited by Tollefsbol, 2018.
23. Epigenetics of Chronic Pain: Edited by Bai and Ren, 2018.
24. Epigenetics of Cancer Prevention. Edited by Bishayee and Bhatia, 2018.
25. Nutritional Epigenomics. Edited by Bradley Ferguson, 2019.
26. Chromatin Signaling and Neurological Disorders, Edited by Oliver Binda, 2019.
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30. Computational Epigenetics, Edited by Loo Keat Wei, 2019.
31. Prognostic Epigenetics, Edited by Shilpy Sharma, 2019.
32. Histone Modifications in Therapy: Edited by Castelo-Branco and Jeronimo, 2020.
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34. Stem Cell Epigenetics: Edited by Moshorer and Testa, 2020.
35. Epigenetics of the Immune System: Edited by Kabelitz and Bhat, 2020.
36. RNA-Based Regulation in Human Health and Diseases: Edited by Pandey, 2020.
37. Epigenetics and Reproductive Health: Edited by Balasinor, Parte and Singh, 2020.
38. Environmental Epigenetics in Toxicology and Public Health: Edited by Rebecca Fry, 2020.
39. Developmental Human Behavioral Epigenetics: Principles, Methods, Evidence, and Future Directions: Edited by Livio Provezi, 2020.
40. Epigenetics of Cardiovascular Disease: Edited by Yvan Devaux and Emma Robinson, 2021.
41. Medical Epigenetics, Second Edition: Edited by Tollefsbol, 2021.
42. Epigenetics and Metabolomics: Edited by Agrawal and Rana, 2021.
43. Genome Stability, Second Edition: Edited by Igor Kovalchuk and Olga Kovalchuk, 2021.
44. Epigenetics of Exercise and Sports: Edited by Raleigh, 2021.
45. Twin and Family Studies of Epigenetics: Edited by Li and Hopper, 2021.
46. Epigenetics in Organ Specific Disorders: Edited by Chandra S. Boosani, 2022.
47. Perinatal and Developmental Epigenetics: Edited by Garima Singh, 2022.
48. Epigenetics and DNA Damage: Edited by Miriam Galvonas Jasiulionis, 2022.
49. Epigenetics of Stress and Stress Disorders: Edited by Nagy Youssef, 2022.
50. Post-transcriptional Gene Regulation in Human Disease: Edited by Buddhi Prakash Jain, 2022.
51. MicroRNAs and Epigenetic Regulation: Edited by Emma Beckett, 2022.
52. Epigenetics Cancer Therapy: Edited by Stephen G. Gray, 2023.
53. Chromatin Readers in Health and Development. Edited by Oliver Binda, 2023.
54. Neuropsychiatric Disorders and Epigenetics. Edited by Jacob Peedicayil and Dennis R. Grayson, 2023.
54. Site Specific and Global Epigenomic Editing: Principles and Applications: Edited by Feng C. Zhou, 2024.
55. Early Life Epigenetics: Edited by Vanessa Lux, 2024.
56. Personalized Epigenetics: Edited by Trygve Tollefsbol, 2024.
57. Lifestyle Epigenetics: Edited by Ana B Crujeiras, 2024.
58. On Epigenetics and Evolution: Edited by Carlos M. Guerrero-Bosagna, 2024.
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60. Pharmacoepigenomics, Edited by Ramón Cacabelos, 2024.

61. Nutritional Epigenomics, Edited by Bradley S. Ferguson, 2025.
62. Epigenetics of Metabolism, Edited by Yuan-Xiang and Shasha Zheng, 2025.

### **SCIENTIFIC POSTERS PRESENTED AT CONFERENCES (Of over 250; listed are those since 2013)**

1. Fatima, N and Tollefsbol, T.O. Combinatorial treatment of phytochemical compounds on breast cancer epigenetics. *Graduate Biomedical Sciences Conference*, Birmingham, AL, 2024.
2. Brane, A., Sutko, M, and Tollefsbol, T.O. p21 promoter methylation is vital for the anticancer activity of Withaferin A. *O'Neal Comprehensive Cancer Center Annual Research Conference*, Birmingham, Al, 2023.
3. Brane, A. and Tollefsbol, T.O. The importance of DNA methylation in breast cancer phenotype and its role in the anticancer activity of withaferin A. *Annual American Association for Cancer Research Conference*, Orlando, Florida, 2023.
4. Eren, E, Rahman, M, and Tollefsbol, T.O. Dietary Combinatorial Prevention of Estrogen Receptor – Negative Breast Cancer. *EXPO*, Birmingham, AL, June, 2023.
5. Wu, H. and Tollefsbol, T.O. Dietary supplementation of inulin contributes to the prevention of estrogen receptor-negative mammary cancer by gut microbiota alteration and epigenetic regulations. *American Institute for Cancer Research Annual Conference*, Washington, DC, 2022.
6. Rahman, M. and Tollefsbol, T.O. Epigenetic editing of histone acetylation enables transcriptional alteration of crucial breast cancer genes *in vitro*. *O'Neal Comprehensive Cancer Center Annual Research Conference*, Birmingham, Al, 2022.
7. Brane, A. and Tollefsbol, T.O. Effects of epigenetically active phytochemical administration during the critical period of puberty on breast cancer development *in vivo* and the importance of DNA methylation to breast cancer cell phenotype *in vitro*. *O'Neal Comprehensive Cancer Center Annual Research Conference*, Birmingham, Al, 2022.
8. Sutko, M., Brane, A., Tollefsbol, T.O. Investigating the epigenetic mechanisms of breast cancer and how they are affected by dietary modifications during puberty. *UAB Spring 2022 Research Expo*. 2022.
9. Brown, E., Tollefsbol T.O. Botanical Epigenetic-based Combinatorial Prevention of Estrogen Receptor-negative Breast Cancer. *O'Neal Comprehensive Cancer Center Senior Leaders Meeting*. 2022.
10. Li, S., Wu, H., Tollefsbol, T.O. Paternal epigenetic regulation contributes to the prevention of estrogen receptor-negative mammary cancer with combined broccoli sprouts and green tea polyphenols consumption in transgenic mice. *AACR Annual Meeting* (virtual), 2021.
11. Brane, A., Arora, I, Tollefsbol, T.O. Role of sulforaphane administered during puberty in breast cancer initiation and progression as well as its lifelong effects on gene expression and DNA methylation. *American Institute for Cancer Research Annual Meeting* (virtual), 2021.
12. Sharma, M., Arora, I., Stoll, M.L., Li, Y., Morrow, C.D., Barnes, S., Berryhill, T.F., Li, S., Tollefsbol, T.O. Nutritional combinatorial impact on the gut microbiota and plasma short-chain fatty acids levels in the prevention of mammary cancer in Her2/neu estrogen receptor-negative transgenic mice. *98th Annual Meeting of the Alabama Academy of Science* - March 17-19, University of South Alabama, 2021.
13. Steed, K.L. and Tollefsbol, T.O. SAHA and EGCG reduce metastatic potential in TNBC through the apoptotic pathway. *APSA Conference*, Birmingham, AL, 2019.
14. Wu, H., Paul, B. and Tollefsbol, T.O. Novel basis for the impact of sulforaphane on the gut microbiome and epigenetic mediation of cancer prevention. *GBS Symposium*, Birmingham, AL, 2019.
15. Jordan, H.R, Lewis, K.A. and Tollefsbol, T.O. Combinatorial SAHA and EGCG restore p27 and modulate the cell cycle in triple-negative breast cancer. *UAB Expo*, Birmingham, AL, 2018.
16. Lewis, K.A. and Tollefsbol, T.O. SAHA and EGCG reduce breast cancer cell migration, possibly through modulation of *ciAP2*. *11th AACR Conference on The Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved*. New Orleans, LA., 2018.
17. Li Y, Tollefsbol T.O., Barnes S, Morrow C, Yi N. A novel efficacy test for bioactive soybean genistein leads to an optimized personalized treatment in triple-negative breast cancer patients. *Nutrition 2018*, Boston, MA, 2018.
18. Lewis, K.A. and Tollefsbol, T.O. SAHA and EGCG reduce breast cancer cell migration, possibly through modulation of *ciAP2*. *UAB Comprehensive Cancer Center Retreat*, Birmingham, AL, 2018.
19. Jordan, H.R., Lewis, K.A. and Tollefsbol, T.O. SAHA and EGCG promote apoptosis in triple-negative breast cancer cells by stimulating the cleavage of caspase 7 through the inhibition of *ciAP2*. *UAB Expo*, Birmingham, AL, 2018.
20. Lewis, K.A. and Tollefsbol, T.O. SAHA and EGCG reduce breast cancer cell migration, possibly through modulation of *ciAP2*. *Susan G. Komen Graduate Traineeship in Disparities Research Annual Meeting*, Birmingham, AL, 2018.
21. Royston, K.J. and Tollefsbol, T.O. Impact of combinatorial sulforaphane and Withaferin A on breast cancer cells. *Annual Komen GTDR Trainee Meeting*, Atlanta, Georgia, 2017.
22. Lewis, KA and Tollefsbol, T.O. The effects of SAHA and EGCG on metastatic potential in triple-negative breast cancer. *Tenth AACR Conference on The Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved*, Atlanta, Georgia, 2017.
23. Lewis, KA and Tollefsbol, T.O. The effects of SAHA and EGCG on metastatic potential in triple-negative breast cancer. *Annual Komen GTDR Trainee Meeting*, Atlanta, Georgia, 2017.

24. Royston, K.J., Paul, B. and Tollefsbol, T.O. Epigenetic impact of combinatorial sulforaphane and Withaferin A on breast cancer cells. *SCREP Cancer Research Symposium 2017*. Tuskegee University, 2017.
25. Paul, B., Royston, K, Stoll, M, Morrow, CD and Tollefsbol, T.O. Diet-microbiota interactions in cancer prevention in mouse models humanized with gut microbiome of breast cancer patients. *3rd Annual Microbiome Conference*, Boston, MS, 2017.
26. Lewis, KA and Tollefsbol, T.O. The effects of SAHA and EGCG on metastatic potential in triple-negative breast cancer. *Comprehensive Cancer Center Annual Conference*, Birmingham, Alabama, 2017.
27. Royston, K.J. and Tollefsbol, T.O. Impact of combinatorial sulforaphane and Withaferin A on breast cancer cells. *Comprehensive Cancer Center Annual Conference*, Birmingham, Alabama, 2017.
28. Royston, K.J. and Tollefsbol, T.O. The epigenetic impact of combinatorial withaferin A and sulforaphane on breast cancer cells. *The 25<sup>th</sup> American Institute for Cancer Research Conference*. Washington, DC, 2016.
29. Lewis, K.A. and Tollefsbol, T.O. The effects of SAHA and EGCG on the expression of miR-221/222 in triple-negative breast cancer. *The 25<sup>th</sup> American Institute for Cancer Research Conference*. Washington, DC, 2016.
30. Li, Y. and Tollefsbol, T.O. Soybean genistein in transgenerational breast cancer prevention. *A battle in utero. 18<sup>th</sup> Annual Comprehensive Cancer Center Research Retreat*. Birmingham, AL. 2016.
31. Royston, K.J. and Tollefsbol, T.O. Epigenetic impact of combinatorial withaferin A and sulforaphane on breast cancer cells. *93<sup>rd</sup> Annual Meeting of the Alabama Academy of Science*. University of North Alabama. 2016.
32. Tollefsbol, T.O. Cell Senescence Culture Facility. *UAB Core Day*, Birmingham, AL. 2015.
33. Royston, K.J. and Tollefsbol, T.O. Effects of WA and SFN in combination on the treatment and prevention of breast cancer. *UAB Bridge to the Doctorate Annual Graduate Winter Research Conference*. Birmingham, AL. 2015.
34. Daniel, M. and Tollefsbol, T.O. Effects of pterostilbene in breast cancer cells, *in vitro*. American Society of Preventive Oncology (ASPO) Conference, Birmingham, AL. 2015.
35. Cases, M., Daniel, M., Kala, R., Tollefsbol, T., Locher, J., De Los Santos, JI, Smith, K., Demark-Wahnefried, W. Gardening intervention increases telomerase levels in breast cancer survivors. *2015 World Congress of Psycho-Oncology*. Washington, DC, 2015.
36. Daniell, R., Paul, B. and Tollefsbol, T.O. Epigenetic reactivation of estrogen receptor- $\alpha$  (ER $\alpha$ ) by erucin and induction of apoptosis in MDA-MB-231 breast carcinoma cells. *Annual UAB Expo*, Birmingham, AL, 2015.
37. Royston, K.J. and Tollefsbol, T.O. Effects of dietary compounds sulforaphane and withaferin A on MCF-7 breast cancer cells. *Alabama Academy of Science*. West Alabama, AL. 2015.
38. Patel, M. and Tollefsbol, T.O. Effects of natural compounds, EGCG and SFN, on the metastasis of ovarian cancer cells. *7<sup>th</sup> Annual UAB Expo*, Birmingham, AL, 2014.
39. Shaw, H. and Tollefsbol, T.O. The efficacy of a novel resveratrol—pterostilbene treatment against breast cancer. *7<sup>th</sup> Annual UAB Expo*, Birmingham, AL, 2014.
40. Kennedy, L. and Tollefsbol, T.O. In vitro effects of sulforaphane on p21 expression and proliferation of breast cancer cells. *7<sup>th</sup> Annual UAB Expo*, Birmingham, AL, 2014.
41. Coghlan, A., Peek, G., and Tollefsbol, T.O. hTERT and cancer. *UAB Summer Research Expo*, Birmingham, AL, 2013.
42. Kala, R., Martin, S., and Tollefsbol, T.O. Resveratrol and Pterostilbene: A new class of biomolecule which mimics caloric restriction at molecular level and inhibits breast cancer via its effects on SIRT1. *Comprehensive Center for Healthy Aging Annual Research Conference*, Birmingham, AL, 2013.
43. Paul, B. and Tollefsbol, T.O. The effects of the phytochemical Anacardic acid on colon cancer cells. *SCTRP Program - Morehouse School of Medicine/Tuskegee University/UAB Comprehensive Cancer Center Partnership. Summer Institute hosted by Morehouse School of Medicine at the Emory Hotel and Conference Center*, Atlanta, Georgia. 2013.
44. Babatunde, O., Hardy, T.M. and Tollefsbol, T.O. Effects of dietary compound sulforaphane on hTERT expression in breast cancer cells. *UAB EXPO*, Birmingham, Alabama. 2013.
45. Patel, M., Chen, H. and Tollefsbol, T.O. Effects of natural compounds, EGCG and SFN, on the metastasis of Ovarian Cancer Cells. *12<sup>th</sup> Annual University of Alabama System Honors Research Conference*, University of Alabama at Huntsville, Alabama. 2013.
46. Babatunde, O., Hardy, T.M. and Tollefsbol, T.O. Effects of dietary compound sulforaphane on hTERT expression in breast cancer cells. *12<sup>th</sup> Annual University of Alabama System Honors Research Conference*, University of Alabama at Huntsville, Alabama. 2013.

#### **GRANT AWARDS\*:**

***\*Dr. Tollefsbol has received >20 million dollars in extramural grant funds while at UAB. Most of this funding has been awarded by the NIH.***

#### **Current Grant Support:**

1. **Title:** 2R01CA178441 “Combinatorial epigenetic-based prevention of breast cancer” (R01 Renewal)  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Laborators:** Drs. Douglas Hurst, Stephen Barnes, Nengjun Yi, David Crossman, Michael Crowley  
**Grant Period:** 1/1/2021-12/31/2025  
**Grant Amount:** \$1,811,390 (25% salary support for Dr. Tollefsbol)  
**Grant Agency:** National Institutes of Health (NCI) (**scored in the 4<sup>th</sup> percentile**)

2. **Title:** 1R01AR079178-01 “Epigenomic and gene expression signatures of racial differences in chronic low back pain”  
**Investigators:** PI: Dr. Edwin Aroke  
**Collaborators:** Drs. Burel Goodin, **Trygve Tollefsbol** (Co-investigator), Nengjun Li, David Crossman  
**Grant Period:** 4/1/2021-3/31/2025  
**Grant Amount:** \$1,698,483  
**Grant Agency:** National Institutes of Health
3. **Title:** 1 R01 MD016044 “Early life stress, DNA methylation and health disparities across ages”  
**Investigators:** PI: Sylvie Mrug  
**Collaborators:** Drs. **Trygve Tollefsbol** (Co-Investigator), Hemant Tiwari, Catheryn Orihuela, Marguerite Ryan  
**Grant Period:** 4/1/2021-3/31/2026  
**Grant Amount:** \$3,615,521  
**Grant Agency:** National Institutes of Health

#### **Grant Proposals Pending:**

4. **Title:** “Interrogating Epigenetic Mechanisms for ER-Negative Breast Cancer Prevention”  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Drs. Matthew Stoll, David Crossman, Stephen Barnes, Michael Crowley, Casey Morrow, Nengjun Yi  
**Grant Period:** 7/01/2024-6/30/2028  
**Grant Amount:** \$3,429,574 (25% salary support requested for Dr. Tollefsbol)  
**Grant Agency:** National Institutes of Health (NCI)
5. **Title:** “Prenatal Prevention of Estrogen Receptor-Negative Breast Cancer”  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Drs. David Crossman, Stephen Barnes, Michael Crowley, Nengjun Yi  
**Grant Period:** 4/01/2024-3/31/2029  
**Grant Amount:** \$3,048,669  
**Grant Agency:** National Institutes of Health

#### **Completed Research Grants**

6. **Title:** R01CA204346 “Early life prevention of breast cancer with combined epigenetic botanicals”  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Drs. Stephen Barnes, Michael Crowley, Xiangqin Cui, Andra Frost, Yuanyuan Li  
**Grant Period:** 1/01/2017-12/31/2022  
**Grant Amount:** \$1,671,720 (25% salary support for Dr. Tollefsbol)  
**Grant Agency:** National Institutes of Health (NCI) (**scored in the 2<sup>nd</sup> percentile**)
7. **Title:** R01CA178441 “Combinatorial epigenetic-based prevention of breast cancer”  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Drs. Michael Crowley, Xiangqin Cui, Andra Frost, Yuanyuan Li  
**Grant Period:** 2/01/2014-1/31/2020  
**Grant Amount:** \$1,489,040 (25% salary support for Dr. Tollefsbol)
8. **Grant Agency:** National Institutes of Health (NCI) (**scored in the 4<sup>th</sup> percentile; renewal also scored in the 4<sup>th</sup> percentile**) **Title:** “Cell Senescence Culture Facility.”  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Grant Period:** 10/1/2000-present  
**Grant Amount:** \$5,000/yr (all funds applied to the CSCF that Dr. Tollefsbol directs)  
**Grant Agency:** Comprehensive Center for Healthy Aging
9. **Title:** “Epigenetics of early life exposure to cancer preventive cruciferous vegetables”  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Drs. Xiangqin Cui, Michael Crowley, Yuanyuan Li  
**Grant Period:** 1/1/2015-12/31/2017 (NCE)  
**Grant Amount:** \$165,000 (5% salary support for Dr. Tollefsbol)  
**Grant Agency:** American Institute for Cancer Research (**Score of 1.38**)
10. **Title:** 1R01AG050567 “Histone H4 Lysine 16 Acetylation in Aging and Lung Fibrosis”  
**Investigators:** PI: Dr. Yan Sanders  
**Collaborators:** **Dr. Trygve Tollefsbol** and others  
**Grant Period:** 6/1/2016 - 5/31/2021  
**Grant Amount:** ~\$1,400,000  
**Grant Agency:** National Institutes of Health
11. **Title:** 1 K01 AT009373 “Epigenetic mechanisms of maternal diets in human health and disease prevention”  
**Investigators:** PI: Dr. Yuanyuan Li. **Dr. Trygve Tollefsbol** is the primary mentor.

- Grant Period:** 3/1/2017-2/28/2022  
**Grant Amount:** \$569,385  
**Grant Agency:** NIH (NCCIH)
12. **Title:** 1 K01 TW010271-01A1 “Metabolic Syndrome and Epigenetic Markers of Breast Cancer in Nigerian Women”  
**Investigators:** PIs: Dr. Omotomilayo Akinyemiju. Dr. **Trygve Tollefsbol** served as the primary mentor on this Grant when it was awarded by the NIH. He is now a mentor on this grant since Dr. Akinyemiju relocated for an Assoc. Prof. position.  
**Grant Period:** 12/1/2016-11/30/2021  
**Grant Amount:** ~ \$600,000  
**Grant Agency:** NIH (NCI) (grant transferred to Univ. Kentucky after first year due to relocation of Dr. Akinyemiju).
13. **Title:** “Molecular and epigenetic characterization of aggressive breast cancer”  
**Investigators:** PIs: Drs. Omotomilayo Akinyemiju, Sabita Saldanha, **Trygve Tollefsbol**  
**Grant Period:** 12/1/2015-11/30/2016  
**Grant Amount:** \$50,000  
**Grant Agency:** Comprehensive Cancer Center
14. **Title:** “UAB Pre-doctoral Training Program in Obesity-Related Research.”  
**Investigators:** PI: Dr. David Allison (UAB Department of Nutritional Sciences)  
**Collaborators:** Dr. **Trygve Tollefsbol** and many others  
**Grant Period:** 9/22/10-8/31/2015  
**Grant Amount:** \$1,070,597
15. **Title:** “Epigenetics of tea polyphenols in cancer prevention.” (1 R01 CA129415)  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Drs. Stephen Barnes, S. Katiyar, L. Liu, A. Frost, Y. Li  
**Grant Period:** 4/1/08-1/31/2013  
**Grant Amount:** \$962,800 (funds applied to Dr. Tollefsbol’s laboratory; 20% salary support for Dr. Tollefsbol)  
**Grant Agency:** National Institutes of Health (NCI)
16. **Title:** “Beckman Scholars Program Award.”  
**Investigators:** PI: Michael Sloane  
**Collaborators:** Mentors: Nabiha Yusuf; Charles D Amsler; Rita Cowell; David E Graves; Ho-Wook Jun; Farah Lubin; James B McClintock; Vladimir Parpura; Jamil S Saad; Yuhua Song; Eric J Sorscher; David Sweatt; Robert Wesley Thacker; **Trygve Tollefsbol**; Sadanandan Velu  
**Grant Period:** Summer, 2012-Summer 2015  
**Grant Amount:** \$115,800  
**Grant Agency:** Arnold and Mabel Beckman Foundation
17. **Title:** “Maternal epigenetic dietary effects in transgenerational breast cancer prevention”  
**Investigators:** PI: Dr. Yuanyuan Li  
**Collaborators:** Drs. **Trygve Tollefsbol**, Michael Crowley, Xiangqin Cui  
**Grant Period:** 9/20/13-9/19/2015  
**Grant Amount:** \$146,500  
**Grant Agency:** National Institutes of Health (NCI)
18. **Title:** “Effect of doxorubicin and dietary supplements on epigenetics in mouse models humanized with the gut microbiome of breast cancer patients”  
**Investigator:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Drs. Michael Crowley, Xiangqin Cui, C. Weaver, Steve Barnes, Cassey Morrow, Trenton Schoeb  
**Grant Period:** 12/1/13-11/30/2014  
**Grant Amount:** \$50,000  
**Grant Agency:** Comprehensive Cancer Center (Project 2 of “Mechanisms linking doxorubicin, polyphenols and the microbiome in breast cancer”—Steven Barnes and Wendy Demark-Wahnefried, PIs)
19. **Title:** “Green tea polyphenols in the prevention of breast cancer initiation”  
**Investigators:** PI: Trygve Tollefsbol  
**Collaborators:** Drs. Santosh Katiyar, Michael Crowley and Xiangqin Cui  
**Grant Period:** 1/1/11-12/31/13  
**Grant Amount:** \$165,000 (10% salary support for Dr. Tollefsbol)  
**Grant Agency:** American Institute for Cancer Research
20. **Title:** “Chemosensitization of Ovarian Cancer by Exploiting Novel and Safe Epigenetic Compounds”  
**Investigators:** PI: Drs. **Trygve Tollefsbol**, Charles Landen (UAB Department of Obstetrics and Gynecology, SOM), Michael Crowley (UAB Department of Genetics, SOM), Xiangqin Cui (UAB Department of Statistics (UAB School of Public Health)  
**Collaborators:** Dr. Yuanyuan Li  
**Grant Period:** 10/01/2012-9/30/2013  
**Grant Amount:** \$30,000  
**Grant Agency:** CAS Interdisciplinary Innovation Team Proposal
21. **Title:** “Epigenetic effects and mechanisms of histone deacetylase inhibitors on fibrotic lung fibroblasts survival and apoptosis”  
**Investigators:** PIs: Drs. Yan Sanders and James Hagood (UAB Department of Pediatrics)



- Collaborators:** Dr. Trygve Tollefsbol (consultant)  
**Grant Period:** 7/1/09-6/30/13  
**Grant Amount:** \$308,000 (Dr. Tollefsbol serves as a consultant on this award)  
**Grant Agency:** American Heart Association (National Scientist Development Grant)
22. **Title:** "Epigenetic Modulation by Green Tea in Prevention of Photocarcinogenesis." (1 R21 CA140832)  
**Investigators:** PI: Dr. S. Katiyar  
**Collaborators:** Dr. Trygve Tollefsbol  
**Grant Period:** 4/1/10-3/31/2012  
**Grant Amount:** \$395,000 (5% salary support for Dr. Tollefsbol)  
**Grant Agency:** National Institutes of Health (NCI)
23. **Title:** "Epigenetics of genistein and/or soy isoflavone in breast cancer prevention"  
**Investigators:** PI: Dr. Yuanyuan Li  
**Collaborators:** Dr. Trygve Tollefsbol (Mentor)  
**Grant Period:** 1/1/2010-12/31/2011  
**Grant Amount:** \$76,000  
**Grant Agency:** American Institute for Cancer Research
24. **Title:** "Regulation of fibroblast phenotype in lung fibrosis" (1 RO1 HL082818-01A2)  
**Investigators:** PI: James Hagood (UAB Pediatrics/Cell Biology/Pathology)  
**Collaborators:** Dr. Trygve Tollefsbol, Dr. M. Selman (Instituto Nacional de Enfermedades Respiratorias, Mexico City, Mexico), Dr. G. Nuovo (Ohio State University Department of Pathology), Dr. J. Cisneros (Instituto Nacional de Enfermedades Respiratorias, Mexico City, Mexico)  
**Grant Period:** 8/15/2007-7/31/2012  
**Grant Amount:** \$1,807,053 (~\$150,000 applied to Dr. Tollefsbol's laboratory; 5% salary for Dr. Tollefsbol)  
**Grant Agency:** National Institutes of Health (NHLBI)
25. **Title:** "Transcriptional regulation of metabolism in schizophrenia" (K01 MH077955-01)  
**Investigators:** PI: Rita Cowell (UAB Department of Psychiatry)  
**Collaborators:** Dr. James Meador-Woodruff, Dr. Trygve Tollefsbol, Dr. Ety Benveniste, Dr. Jayne Ness, Dr. N. Ambalavanan, Dr. V. Haroutunian.  
**Grant Period:** 8/1/2007-7/31/2012  
**Grant Amount:** \$887,119 (Dr. Tollefsbol serves as a consultant on this award)  
**Grant Agency:** National Institute of Mental Health
26. **Title:** "Novel Combination Epigenetic and Chemotherapeutic Approaches to Ovarian Cancer"  
**Investigators:** PI: Dr. Trygve Tollefsbol  
**Collaborators:** Drs. Syed Meeran and Yuanyuan Li  
**Grant Period:** 12/1/10-11/30/11  
**Grant Amount:** \$50,000  
**Grant Agency:** Norma Livingston Foundation
27. **Title:** "Pre-doctoral Training Support in Cancer"  
**Investigators:** J. Tyson DeAngelis, Dr. Trygve Tollefsbol (mentor)  
**Grant Period:** 9/1/2007-8/31/2010  
**Grant Amount:** ~\$100,000 (funds applied to Tollefsbol Lab for training of pre-doctoral student)  
**Grant Agency:** National Cancer Institute (Cancer Prevention and Control Training Program)
28. **Title:** "Elucidating the cause for the increase in telomerase in human breast cancer." (BCTR 060082)  
**Investigators:** PI: Dr. Trygve Tollefsbol  
**Collaborators:** Drs. Xu Cao, Lucy Andrews, Liang Liu  
**Grant Period:** 5/2006-4/2009  
**Grant Amount:** \$250,000 (all funds applied to Dr. Tollefsbol's laboratory; 20% salary support for Dr. Tollefsbol)  
**Grant Agency:** Susan G. Komen for the Cure (formerly Susan G. Komen Breast Cancer Foundation)
29. **Title:** "Epigenetics of BRMS1 Suppression of Breast Metastasis."  
**Investigators:** PIs: Dr. Trygve Tollefsbol and Dr. Danny Welch  
**Grant Period:** 4/1/09-3/31/10  
**Grant Amount:** \$50,000 (\$25,000 applied to Dr. Tollefsbol's laboratory)  
**Grant Agency:** NCI UAB Comprehensive Cancer Center Collaborative Programmatic Development Grant Program
30. **Title:** "Glenn Award for Research in Biological Mechanisms in Aging" (**unsolicited award**)  
**Investigators:** PI: Dr. Trygve Tollefsbol  
**Collaborators:** None  
**Grant Period:** 9/1/2007-8/31/2009  
**Grant Amount:** \$50,000 (all funds applied to Dr. Tollefsbol's laboratory; 2% salary support for Dr. Tollefsbol)  
**Grant Agency:** Glenn Foundation for Medical Research
31. **Title:** "Epigenetics of dietary EGCG in cancer prevention." (1 R21 CA114019-01A1)  
**Investigators:** PI: Dr. Trygve Tollefsbol  
**Collaborators:** Drs. Lucy Andrews, Liang Liu, C.S. Yang, S. Katiyar, J. Lambert  
**Grant Period:** 3/15/2006-2/29/2008  
**Grant Amount:** \$300,481 (all funds applied to Dr. Tollefsbol's laboratory; 20% salary support for Dr. Tollefsbol)  
**Grant Agency:** National Institutes of Health (NCI)

32. **Title:** “Novel epigenetic approaches in drug- and hormone-resistant ovarian cancer therapy.” U54 CA118948-01  
**Investigators:** Co-PIs: Dr. Oi Wah Stephanie Yap (Dept. of Obstetrics and Gynecology, Morehouse School of Medicine), **Dr. Trygve Tollefsbol**  
**Collaborators:** Drs. Roland Matthews and Liang Liu  
**Grant Period:** 12/1/2005-9/30/2007  
**Grant Amount:** \$360,000 (~\$100,000 applied to Dr. Tollefsbol's laboratory; 10% salary support for Dr. Tollefsbol)  
**Grant Agency:** NCI (U54 MI/CCP) *This is Project #1 of the Morehouse School of Medicine/Tuskegee University/UAB Comprehensive Cancer Center Partnership Grant for \$1,156,277 for the year 2006. UAB investigators on the grant are Edward Partridge (PI), C. Holt, W. Huh, H. Kincaid, P. Lee, M. Martin, S. Meleth, C. Piyathilake, D. Satcher, I. Scarinci-Searles, J. Shikany, S. Soong, T. Tollefsbol, S. Vickers, and D. Wang.*
33. **Title:** “Center for nutrient-gene interaction in cancer prevention.”  
**Investigators:** PI: Dr. Stephen Barnes  
**Collaborators:** **Dr. Trygve Tollefsbol** and 28 other investigators  
**Grant Period:** 5/2003-4/2008  
**Grant Amount:** \$10,400,000 (funds applied to the Center for Nutrient-Gene Interactions)  
**Grant Agency:** National Institutes of Health (National Cancer Institute)
34. **Title:** “Epigenetics of dietary and body fat on prostate cancer.”  
**Investigators:** Co-PIs: Dr. Douglas Ruden and **Dr. Trygve Tollefsbol**  
**Collaborators:** Drs. David Allison, Maria De Luca, Ada Elgavish, Islam Eltoum, Mark Garfinkel, Xiangyi Lu, Tim Nagy, Sarki Abduk-Kadir.  
**Grant Period:** 1/01/04-12/31/07  
**Grant Amount:** \$652,500 (funds applied to work in Dr. Ruden's laboratory)  
**Grant Agency:** National Institutes of Health (National Cancer Institute)
35. **Title:** “Role of green tea extracts on chromatin remodeling of telomerase gene in cancer cells.”  
**Investigators:** **Dr. Trygve Tollefsbol** (PI)  
**Collaborators:** Dr. Liang Liu  
**Grant Period:** 1/31/2005-1/30/2007  
**Grant Amount:** \$55,000 (All funds applied to work in Dr. Tollefsbol's laboratory)  
**Grant Agency:** American Institute for Cancer Research
36. **Title:** “Aging studies in a DNA methyltransferase mouse model.”  
**Investigators:** Dr. Liang Liu, PI  
**Collaborators:** **Dr. Trygve Tollefsbol**,  
**Grant Period:** 4/1/2006-3/31/2007  
**Grant Amount:** \$20,000 (all funds applied for work in Dr. Tollefsbol's laboratory)  
**Grant Agency:** Center for Aging (Intramural)
37. **Title:** “Functions and mechanisms of DNA methylation in age-related decline of long-term memory formation.”  
**Investigators:** **PI: Dr. Trygve Tollefsbol**  
**Collaborators:** Dr. Liang Liu; Dr. Thomas van Groen (Dept. of Cell Biology, UAB)  
**Grant Period:** 3/2005-2/2007  
**Grant Amount:** \$80,000 (all funds applied to work in Dr. Tollefsbol's laboratory)  
**Grant Agency:** Evelyn F. McKnight Brain Institute (Intramural)
38. **Title:** “Pre-doctoral Training Support in Cancer”  
**Investigators:** J. Berletch, **Dr. Trygve Tollefsbol** (mentor)  
**Grant Period:** 9/1/2004-8/31/2007  
**Grant Amount:** ~\$100,000 (funds applied to training of pre-doctoral student)  
**Grant Agency:** National Cancer Institute (Cancer Prevention and Control Training Program)
39. **Title:** “Novel approaches to ovarian cancer therapy: Inhibition of hTERT.”  
**Investigators:** **PI: Trygve Tollefsbol**  
**Collaborators:** Dr. Lucy Andrews, and Dr. Liang Liu  
**Grant Period:** 2/2006-10/2006  
**Grant Amount:** \$50,000 (all funds applied to work in Dr. Tollefsbol's laboratory)  
**Grant Agency:** National Institutes of Health (National Cancer Institute) (administered out of UAB Ovarian SPORE Program—NIH funds distributed competitively to UAB investigators).
40. **Title:** “Postdoctoral Training Support.”  
**Investigators:** PI: Dr. Michael Reddy  
**Collaborators:** **Dr. Trygve Tollefsbol** as preceptor mentoring Dr. Canhui Liu  
**Grant Period:** 9/05 - 6/06  
**Grant Amount:** \$50,000 (approx. salary for Dr. C. Liu to Dr. Tollefsbol's laboratory over a 10 month period).  
**Grant Agency:** National Institutes of Health
41. **Title:** “RNA interference of telomerase in ovarian cancer therapy.”  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Dr. Lucy Andrews  
**Grant Period:** 2/2004-9/2006  
**Grant Amount:** \$150,000 (\$150,000 in direct funds applied to work in Dr. Tollefsbol's laboratory)

- Grant Agency:** National Institutes of Health (National Cancer Institute) (administered out of UAB Ovarian SPORE Program—NIH funds distributed competitively to UAB investigators).
42. **Title:** “Career Enhancement Award.”  
**Investigators:** Dr. Liang Liu, **Dr. Trygve Tollefsbol** (mentor)  
**Grant Period:** 7/2004  
**Grant Amount:** \$2,000  
**Grant Agency:** UAB Department of Postdoctoral Education
43. **Title:** “Effects of EGCG on methylation of the androgen receptor in prostate cancer.”  
**Investigators:** PI: Ada Elgavish  
**Collaborators:** **Dr. Trygve Tollefsbol**  
**Grant Period:** 2/2005-1/2006  
**Grant Amount:** \$40,000 (\$20,000 in direct funds applied to work in Dr. Tollefsbol’s laboratory)  
**Grant Agency:** National Institutes of Health (National Cancer Institute) (administered out of UAB Center for Nutrient-Gene Interaction Program—NIH funds distributed competitively to UAB investigators).
44. **Title:** “The role of telomerase in leukemia.”  
**Investigators:** W. Woodfin, **Dr. Trygve Tollefsbol** (mentor)  
**Grant Period:** 8/2004-5/2005  
**Grant Amount:** \$10,000  
**Grant Agency:** National Science Foundation (GK-12 Program)
45. **Title:** “Role of telomerase in aging and cancer.”  
**Investigators:** J. Green, **Dr. Trygve Tollefsbol** (mentor)  
**Grant Period:** 7/2004-9/2004  
**Grant Amount:** \$500  
**Grant Agency:** American Foundation for Aging Research
46. **Title:** “DNA methylation and cancer.”  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Adam Pruett, Scott Kane, Inyung Kim, Amanda Darty, Ann Ardovino, Sarah Williamson, Janei Arun, J. Michael Coleman (Interns in Dr. Tollefsbol’s laboratory)  
**Grant Period:** 5/2002-8/2002; 5/2003-8/2003; 5/2005-8/2005; 5/2006-8/2006; 5/2007-8/2007)  
**Grant Amount:** ~\$70,000  
**Grant Agency:** CaRES Program (Comprehensive Cancer Center)
47. **Title:** “Telomerase regulation in terminally differentiating human leukemia cells.”  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Dr. Lucy Andrews, Dr. Michael Ruppert  
**Grant Period:** 6/2002-5/2003  
**Grant Amount:** \$75,000 (funds applied to work in Dr. Tollefsbol’s laboratory; 5% salary support for Dr. Andrews)  
**(application ranked 6<sup>th</sup> of 70 nationally)**  
**Grant Agency:** Leukemia Research Foundation
48. **Title:** “Therapeutic potential of telomerase suppression in breast cancer.” (P50 CA73844)  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Dr. Lucy Andrews, UAB Department of Biology; Dr. William Grizzle, Dr. Donald Muccio, UAB Department of Chemistry, Dr. Wayne Brouillette, UAB Department of Chemistry  
**Grant Period:** 11/2001-10/2004  
**Grant Amount:** \$145,500 total (includes renewal; all funds applied to work in Dr. Tollefsbol’s laboratory)  
**Grant Agency:** National Institutes of Health (National Cancer Institute) (administered out of UAB Breast SPORE Program—NIH funds distributed competitively to UAB investigators).
49. **Title:** “Basic Biology of Aging Program.”  
**Investigators:** Co-PIs: Dr. John Mountz and Dr. Jeffrey Kudlow  
**Collaborators:** **Dr. Trygve Tollefsbol**; Dr. William Grizzle; Dr. Richard Allman; Dr. J. Baker; Dr. Jeffrey Engler  
**Grant Period:** 3/2000-2/2002  
**Grant Amount:** \$125,000 (approximately \$65,000 applied to work in Dr. Tollefsbol’s laboratory)  
**Grant Agency:** Health Services Foundation
50. **Title:** “Evaluation of telomerase mechanisms in human breast cancer cells after treatment with the anticancer polyphenol EGCG.” (P50 AT00477)  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Dr. Lucy Andrews  
**Grant Period:** 11/2003-10/2004  
**Grant Amount:** \$23,000 (all funds applied to work in Dr. Tollefsbol’s laboratory)  
**Grant Agency:** National Institutes of Health (National Cancer Institute) (administered out of Purdue-UAB Botanicals Center for Age-related Diseases at Purdue University)
51. **Title:** “Development of the UAB Cell Senescence Culture Facility.”  
**Investigators:** Co-PIs: Dr. Michael Bertram and **Dr. Trygve Tollefsbol**.  
**Collaborators:** Dr. John Mountz, UAB Dept. of Rheumatology; Dr. William Grizzle, UAB Dept. of Pathology.  
**Grant Period:** 3/1/2002-2/27/2005

- Grant Amount:** \$128,405 (\$118,405 applied to work in Dr. Tollefsbol's laboratory; includes a total of \$42,000 in matching funds from UAB Comprehensive Cancer Center, Vision Sciences Center, Center for Aging and Departments of Biology, Cell Biology and Medicine).  
**Grant Agency:** Health Services Foundation
52. **Title:** "Telomerase gene regulation in breast cancer."  
**Investigators:** Sharla Phipps, **Dr. Trygve Tollefsbol** (mentor)  
**Grant Period:** 9/2003-8/2005  
**Grant Amount:** \$60,000  
**Grant Agency:** National Science Foundation (GK-12 Program)
53. **Title:** "Analysis of MRG family and hTERT null phenotypes by RNAi."  
**Investigators:** Co-PIs: Dr. Michael Bertram and **Dr. Trygve Tollefsbol**  
**Collaborators:** None  
**Grant Period:** 9/2002-8/2003  
**Grant Amount:** \$72,500 (~\$20,000 applied to Dr. Tollefsbol's research; 10% salary support for Dr. Tollefsbol)  
**Grant Agency:** National Institutes of Health
54. **Title:** "Telomerase gene regulation in aging muscle."  
**Investigators:** PI: Dr. John Mountz  
**Collaborators:** **Dr. Trygve Tollefsbol**; Dr. Marcas Bamman, UAB Department of Physiology and Biophysics  
**Grant Period:** 11/2002-10/2004  
**Grant Amount:** \$50,000 (all funds applied to work in Dr. Tollefsbol's laboratory)  
**Grant Agency:** Veterans' Administration
55. **Title:** "Postdoctoral Training Support."  
**Investigators:** PI: Dr. John Baker; Dr. Page Caufield; Dr. Karlene Ball (combined PIs)  
**Collaborators:** **Dr. Trygve Tollefsbol** as preceptor mentoring Dr. Nadejda Lopatina  
**Grant Period:** 10/1999-7/2002  
**Grant Amount:** \$119,404 (total salary for Dr. Lopatina to work in Dr. Tollefsbol's laboratory over a 3-year period)  
**Grant Agency:** National Institutes of Health (NIH funds distributed competitively to UAB investigators).
56. **Title:** "Control of hTERT in initiation and progression of aging."  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Dr. Lucy Andrews  
**Grant Period:** 9/2002-8/2003  
**Grant Amount:** \$72,479 (funds applied to work in Dr. Tollefsbol's laboratory; 35% salary support for Dr. Tollefsbol, 5% salary support for Dr. Andrews)  
**Grant Agency:** *National Institutes of Health*
57. **Title:** "Cancer and aging: The methyltransferases and telomerase" and "Geriatric cancer: Role of telomerase and methylation." (consecutive awards)  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Dr. Elizabeth Eklund, UAB Dept. of Hematology/Oncology; Dr. Lucy Andrews; J. M. Ruppert  
**Grant Period:** 6/2000-5/2002  
**Grant Amount:** \$100,000 total (funds applied to work in Dr. Tollefsbol's laboratory and 50% of his salary)  
**Grant Agency:** John A. Hartford Foundation (Southeast Center for Excellence in Geriatric Medicine) (External funds distributed competitively to Emory University and UAB investigators).
58. **Title:** "cMyc/Mad 1 regulation of telomerase in tumorigenesis."  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Dr. Lucy Andrews  
**Grant Period:** 8/2000-7/2002  
**Grant Amount:** \$20,000  
**Grant Agency:** American Cancer Society (Institutional Grant) (American Cancer Society funds administered competitively to UAB investigators).
59. **Title:** "RNA Interference of the telomerase gene: Novel application to cancer therapy" (Postdoctoral Scholar Research Development Award)  
**Investigators:** PI: Dr. Liang Liu (**Dr. Trygve Tollefsbol**, mentor)  
**Grant Period:** 1/2004-12/2004  
**Grant Amount:** \$8,000 (all funds applied to work in Dr. Tollefsbol's laboratory)  
**Grant Agency:** UAB Office of Postdoctoral Education
60. **Title:** "Regulation of mammalian DNA methylation during development."  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Dr. Lucy Andrews  
**Grant Period:** 12/1998-11/2000  
**Grant Amount:** \$8,000 (combined consecutive grants)  
**Grant Agency:** Faculty Research Grant (Graduate School)
61. **Title:** "Telomerase promoter methylation during the aging process."  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Dr. Lucy Andrews  
**Grant Period:** 6/1999-5/2000  
**Grant Amount:** \$20,000

- Grant Agency:** UAB Center for Aging
62. **Title:** "Regulation of telomerase in aging."  
**Investigators:** PI: **Dr. Trygve Tollefsbol**  
**Collaborators:** Dr. Donald Miller; Dr. Lucy Andrews  
**Grant Period:** 6/1999-5/2000  
**Grant Amount:** \$17,000  
**Grant Agency:** Southeast Center for Excellence in Geriatric Medicine Intramural Grants
63. National Institutes of Health. Clyde Hutchison and Marshall Edgell, Co-P.I.s. LINES-1 regulation and transposition (funds for postdoctoral support) 1990-1998. **\$300,000.**
64. Walter Inman Memorial Fund (Duke University Medical Center). Trygve Tollefsbol, P.I. (Harvey Cohen, Co-investigator) RNA polymerase and gene expression in senescence. 1987-1988. **\$10,000.**
65. American Federation for Aging Research. Trygve Tollefsbol, P.I. RNA processing and enzyme induction in aging using cloned cDNA probes. 1987-1988. **\$25,000.**
66. American Federation for Aging Research. Trygve Tollefsbol, P.I. (Harvey Cohen, Co-investigator). Expression of enzyme inductive defects in impaired immunity of the aged. 1986-1987. **\$25,000.**
67. Geriatric Research, Education, and Clinical Center. Studies of lymphocyte aging. Trygve Tollefsbol and Harvey Cohen, Co-P.I.s. 1985-1988. **\$50,000.**
68. National Institutes of Health. Harvey Cohen, P.I. Studies on aging and development (postdoctoral training participant) 1982-1984. **\$32,000.**
69. National Institutes of Health. Robert Gracy, P.I. Molecular basis of lymphocyte activation in aging (graduate training participant) 1979-1982. **\$21,000.**
70. Burroughs Wellcome Research Fellowship. Trygve Tollefsbol, P.I. Enzyme regulation in aging lymphocytes. 1980-1982. **\$5,000.**

#### **NATIONAL AND INTERNATIONAL RECOGNITION AND SCHOLARLY ACTIVITIES:**

##### **A. MEMBERSHIPS IN PROFESSIONAL SOCIETIES:**

- *American Society for Nutrition* (2016-present)
- *American Association for Cancer Research* (2003-present)
- *Epigenetics Society* (1995-present)
- *Alabama Academy of Sciences* (2001-present)
- *Science Advisory Board* (2002-2011)
- *American Chemical Society, Division of Biological Chemistry* (1996-2001)
- *New York Academy of Sciences* (Fellow) (1985-1991)
- *Southeast Regional Genetics Group* (1988-1990)
- *American Federation for Aging Research* (Fellow) (1985-1990)
- *American Federation for Clinical Research* (Fellow) (1985-1990)
- *American Osteopathic Association* (1980-1987)

##### **B. INTERNATIONAL RECOGNITION OF SCIENTIFIC PUBLICATIONS [See BIBLIOGRAPHY (SCIENTIFIC PUBLICATIONS)].**

##### **C. JOURNAL EDITORIAL BOARD MEMBERSHIPS:**

- Issue Editor, Metabolism, Gut Microbiome and Cancer, *Frontiers in Oncology*, 2023-present
- Associate Editor of *Clinical Epigenetics*, 2014-2018
- Series Editor (creator and lead of the series) *Translational Epigenetics*, 2013-present
- *Epigenetics of Diabetes and Obesity* (Editorial Advisory Member), 2012-2014
- Associate Editor: *Frontiers in Epigenomics*, 2011-present
- *Molecular Biotechnology* (Editorial Board Member), 2007-2017
- *Open Longevity Science* (Editorial Board Member), 2007-2014
- *Clinical Epigenetics* (Editorial Board Member), 2009-2014

##### **D. PEER-REVIEWER OF MANUSCRIPTS FOR THE FOLLOWING JOURNALS** (reviewer for ~100 different scientific international journals):

Journal	Number of Manuscripts Reviewed
1. AGE	1
2. Aging Cell	3
3. American Journal of Clinical Nutrition	1
4. American Journal of Epidemiology	1
5. American Journal of Medical Genetics	1
6. Annals of Neurology	1
7. Analytical Biochemistry	1
8. Archives of Medical Research	1
9. Arteriosclerosis, Thrombosis, and Vascular Biology	1
10. Biochemistry	6
11. Biochemistry and Cell Biology	1
12. BioFactors	1
13. Biological Procedures Online	1
14. Biomarkers in Medicine	1
15. BioTechniques	4
16. BMC Cancer	1
17. BMC Medicine	1
18. British Journal of Cancer	3
19. British Journal of Ophthalmology	1
20. Cancer	1
21. Cancer Cell International	1
22. Cancer Letters	1
23. Cancer Research	3
24. Carcinogenesis	5
25. Cell Cycle	1
26. Cell Proliferation	2
27. Cellular and Molecular Life Sciences	1
28. Chemical Research in Toxicology	1
29. Clinical Cancer Research	2
30. Clinical Epigenetics	5
31. Clinical Nutrition	1
32. Current Cancer Drug Targets	1
33. Current Genomics	2
34. Current Medicinal Chemistry	1
35. Current Nutrition & Food Science	1
36. DNA and Cell Biology	1
37. Endocrine	1
38. Epigenetics	1
39. Epigenomics	1
40. European Journal of Nutrition	1
41. Experimental Cell Research	3
42. Experimental Biology and Medicine	1
43. European Journal of Biochemistry	1
44. European Journal of Cell Biology	1
45. FASEB Journal	6
46. FEBS Journal	3
47. FEBS Letters	1
48. Free Radical Biology & Medicine	1
49. Frontiers in Bioscience	3
50. Gene	4
51. Genes, Chromosomes and Cancer	1
52. Genomics	1
53. Glia	1
54. Human Molecular Genetics	1
55. Indian Journal of Cancer	1
56. International Journal of Biochemistry & Cell Biology	1
57. International Journal of Cancer	3
58. Journal of Alzheimer's Disease	1
59. Journal of Biological Chemistry	1
60. Journal of Cellular Biochemistry	3
61. Journal of Cellular and Molecular Medicine	1
62. Journals of Gerontology: Biological Sciences	2
63. Journal of Molecular Biology	1
64. Journal of Pathology	1
65. Lancet	2
66. Leukemia	2
67. Life Sciences	1
68. Mechanisms of Ageing and Development	3
69. Methods in Molecular Biology	2
70. Molecular Aspects of Medicine	1
71. Molecular Biology of the Cell	2
72. Molecular Biology International	1
73. Molecular Biotechnology	13
74. Molecular Cancer	2
75. Molecular Cancer Therapeutics	1
76. Molecular Carcinogenesis	3
77. Molecular and Cellular Biochemistry	1
78. Molecular Nutrition and Food Research	2

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79. <i>Mutation Research</i>	2
80. <i>Nature Communications</i>	1
81. <i>Nature Nanotechnology</i>	1
82. <i>Nature Methods</i>	2
83. <i>New Journal of Chemistry</i>	1
84. <i>Neurobiology of Aging</i>	5
85. <i>Neuroscience</i>	1
86. <i>Nucleic Acids Research</i>	5
87. <i>Nutrition and Cancer</i>	1
88. <i>Obesity</i>	1
89. <i>Oncogene</i>	10
90. <i>Oncotarget</i>	2
91. <i>Philosophical Transactions B</i>	1
92. <i>PLoS ONE</i>	2
93. <i>Proceedings of the National Academy of Sciences, USA</i>	2
94. <i>Regenerative Medicine</i>	1
95. <i>Reproductive Biomedicine Online</i>	1
96. <i>Scientific Reports</i>	1
97. <i>Transgenic Research</i>	1
98. <i>Tumor Biology</i>	1

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#### **E. REVIEWER FOR THE FOLLOWING TEXTBOOK PUBLISHERS:**

1. Academic Press (one textbook)
2. Oxford University Press (2 textbooks; one on Molecular Embryology)
3. Elsevier; Reviewer of book proposal on “Personalizing Medicine: Uncertainties in the Age of Genomics”, 2012.
4. Reviewer of book proposal on Epigenetics in Psychiatry for Elsevier, 2012.

#### **F. PEER-REVIEWER OF RESEARCH GRANTS FOR THE FOLLOWING GRANTING AGENCIES:**

- 2024 Served as **Co-Chair** of the *NIH Cancer Prevention Study Section*, June, 2024.
- 2024 Served as panelist of the *NIH Cancer Prevention Study Section*, February, 2024.
- 2023 Served as **Co-Chair** of the *NIH Cancer Prevention Study Section*, October, 2023.
- 2023 Served as **Co-Chair** of the *NIH Cancer Prevention Study Section*, June, 2023.
- 2022 Served as **Co-Chair** of the *NIH Cancer Prevention Study Section*, February, 2022.
- 2022 Served as **Co-Chair** of the *NIH Cancer Prevention Study Section*, October, 2022.
- 2022 Served as **Co-Chair** of the *NIH Cancer Prevention Study Section*, June, 2022.
- 2021 Served as **Co-Chair** of the *NIH Cancer Prevention Study Section*, October, 2021.
- 2021 Served as **Co-Chair** of the *NIH Cancer Prevention Study Section*, June, 2021.
- 2021 Served as **Co-Chair** of the *NIH Cancer Prevention Study Section*, February, 2021.
- 2020 Member of the Center for Scientific Review, Special Emphasis Panel, ZCA1 RPRB-L (J1), NCI Program Project 1. **Discussion Leader (Invited Chair—declined)**. September, 2020.
- 2020 Appointed by the NIH Director’s Office to four years as a **Chartered Member of the NIH Cancer Prevention Study Section (CPSS)** (July, 2020-2024).
- 2020 Panelist of the *NIH Cancer Prevention Study Section (CPSS)*, February, 2020)
- 2019 **Chair** of the *NIH Molecular Profiles of Food and Nutrient Intake and Dietary Exposure*, Center for Scientific Review, Special Emphasis Panel 2019/05 ZRG1 EMNR-P (07) S, March, 2019.
- 2019 Member of the *NIH Molecular Profiles of Food and Nutrient Intake and Dietary Exposure*, Center for Scientific Review, Special Emphasis Panel, 2019/05 ZRG1 EMNR-V (55) R, March, 2019.
- 2019 Member (Ad Hoc) of the *Oak Ridge Associated Universities Review Panel* for the Pennsylvania Department of Health, 2019.
- 2018 **Chair** of the *NIH Molecular Profiles of Food and Nutrient Intake and Dietary Exposure*, Center for Scientific Review, Special Emphasis Panel, November, 2018.
- 2018 Member (Ad Hoc) of the *Oak Ridge Associated Universities Review Panel* for the Pennsylvania Department of Health.
- 2018 Panelist of the *NIH Molecular Profiles of Food and Nutrient Intake and Dietary Exposure*, Center for Scientific Review, Special Emphasis Panel, March, 2018.
- 2017 Panelist of the *NIH SEP; Microbiome and Related Sciences Review Committee* [ZRG1 DKUS-J 91 S], Center for Scientific Review, October, 2017.
- 2017 Panelist of the *NIH Chemo/Dietary Prevention Study Section*, Center for Scientific Rev., June, 2017.
- 2017 Panelist of the *NIH Member Conflict SEP for Chemo/Dietary Prevention Study Section (OTC K04)*, Center for Scientific Review, March, 2017.
- 2017 Member of the *NIH SEP; Microbiome and Related Sciences Review Committee* [ZRG1 DKUS-J 91 S], Center for Scientific Review, February, 2017.
- 2016 Member (Ad Hoc) of the *James and Esther King Biomedical Research Program Review Panel*.
- 2016 Member (Ad Hoc) of the *Bankhead-Coley Cancer Research Program Review Panel*.
- 2016 Panelist of the *NIH P01 SEP-1 Review Committee* [ZCA1 RPPB-F (01)], Center for Scientific Review, October 2016.
- 2016 Panelist of the *NIH P01 SEP-1 Review Committee* [ZCA1 RPRB-O (O1)], Center for Scientific Review, March 2016.

- 2016 Panelist of the *NIH Omnibus Review Panel*, Center for Scientific Review, July, 2016.
- 2016 Member (Ad Hoc) of the *Oak Ridge Associated Universities Review Panel* for the Pennsylvania Department of Health.
- 2015 Member (Ad Hoc) of the *James and Esther King Biomedical Research Program Review Panel*.
- 2015 Member (Ad Hoc) of the *Bankhead-Coley Cancer Research Program Review Panel*.
- 2015 Member (Ad Hoc) of the *Oak Ridge Associated Universities Review Panel* for the Pennsylvania Department of Health.
- 2015 Member (Ad Hoc) of the *French National Cancer Institute Epigenome and Cancer Program Review Panel*, 2015 (**on two occasions in 2015**)
- 2015 Panelist of the *NIH Center for Excellence for Research on CAM (CERC) Study Section* (March 2015) [ZAT1 HS (19)].
- 2015 Member (Ad Hoc) of the *Michigan Diabetes Center/University of Michigan Review Panel*, 2015
- 2014 Member (Ad Hoc) of the *Oak Ridge Associated Universities Review Panel* for the Pennsylvania Department of Health.
- 2014 Member (Ad Hoc) of the *Luxembourg National Research Fund Review Panel*.
- 2014 Member (Ad Hoc) of the *Associazione Italiana per la Ricerca sul Cancro (AIRC) Review Panel*.
- 2013 Member (Ad Hoc) of the *Oak Ridge Associated Universities Review Panel* for the Pennsylvania Department of Health.
- 2013 Member (Ad Hoc) of the *French National Cancer Institute* for the call for proposals on *The Role of Epigenetics at the Environment–Cancer Interface--An Alternative Perspective*, 2013.
- 2012 Panelist of the *NIH Special Emphasis Panel (SEP)*, Chemo Prevention Center for Scientific Review (September, 2012) [ZRG1 OTC-C (03)].
- 2012 Panelist of the *NIH Special Emphasis Omnibus Review Panel*, Center for Scientific Review (November, 2012).
- 2012 Comprehensive Cancer Center Junior Investigator Award reviewing
- 2012 Member (Ad Hoc) of the *Dr. Joseph Steiner Cancer Foundation Cancer Research Award Review Panel* (Switzerland).
- 2012 Member (Ad Hoc) of the *Oak Ridge Associated Universities Review Panel* for the Pennsylvania Department of Health.
- 2012 Member (Ad Hoc) of the *Genetics/Genomics section of the British Medical Research Council (MRC) Review Panel*.
- 2012 Member (Ad Hoc) of the *French National Cancer Institute Review Panel*.
- 2012 Member (Ad Hoc) of the *Portugal Fundacao para a Ciencia e a Tecnologia Lisboa Review Panel*.
- 2012 Member (Ad Hoc) of the *Associazione Italiana per la Ricerca sul Cancro (AIRC) Review Panel*.
- 2012 University of Kansas Medical Center Ad Hoc reviewer for breast cancer grant.
- 2011 Member of the *NIH Scientific Review Committee, Chemo-Dietary Prevention (CDP)*, Center for Scientific Review (**February and October, 2011**)
- 2011 Member (Ad Hoc) of the *Associazione Italiana per la Ricerca sul Cancro (AIRC) Review Panel*
- 2011 Member (Ad Hoc) of the *L'OREAL Austria Review Panel*
- 2010 Panelist of the *NIH Scientific Review Committee, "Epigenetic Factors Associated with Symptoms and Complications of Chronic Disorders, NINR*
- 2010 Panelist of the *NIH Scientific Review Committee, Centers for Excellence for Research on Complementary and Alternative Medicine (supplement), NCCAM*
- 2010 Member (Ad Hoc) of the *NSF Scientific Review Committee, "Transformative Research"*
- 2010 Member (Ad Hoc) of the *Swiss National Science Foundation Review Panel*
- 2009 Member (Ad Hoc) of the *Medical Research Council (MRC) Funding Agency Review Panel*
- 2009 Panelist of the *NIH Scientific Review Committee, "Epigenomics of Human Health and Disease", Center for Scientific Review*
- 2009 Panelist of the *NIH Scientific Review Committee, Chemo-Dietary Prevention (CDP), Challenge Grants*
- 2009 Member (Ad Hoc) of the *Oak Ridge Institute for Science and Education Review Panel*
- 2009 Member (Ad Hoc) of the *Luxembourg National Research Fund Review Panel*
- 2008 Panelist of the *EPA Scientific Review Committee—STAR Program*.
- 2008 Member (Ad Hoc) of the *Swiss National Science Foundation Review Panel*
- 2008 Member (Ad Hoc) of the *FDA Office of Women's Health (OHW) Review Panel*
- 2008 Member (Ad Hoc) of the *Medical Research Council (MRC) Review Panel*
- 2008 Panelist of the *EPA Graduate Fellowship Molecular Biology Review Panel*
- 1999-2007 Ad Hoc Reviewer for the *NSF (Molecular Biology)*
- 2007 Member (Ad Hoc) of the *Nathan Shock Center Review Panel*
- 2007 Member (Ad Hoc) of the *Luxembourg National Research Fund (FNR) Review Panel*
- 2006 Panelist of the *NIH Scientific Review Committee, Chemo-Dietary Prevention (CDP)*, Center for Scientific Review



- 2006 Panelist of the NIH Special Emphasis Scientific Review Committee, “Alcohol Metabolism and Epigenetic Effects on Tissue Injury”, Center for Scientific Review
- 2005-2006 Ad Hoc reviewer for the American Association for the Advancement of Science
- 2005 Panelist of the NIH Special Emphasis Scientific Review Committee, “Cellular and Genetic Discovery Toward Curative Therapy in Myelodysplastic Disorders”, CSR
- 2005 Panelist of the NIH Special Emphasis Scientific Review Committee, “Myeloproliferative Syndrome”, Center for Scientific Review
- 2005 Member (Ad Hoc) of the Singapore Agency for Science, Technology and Research Panel
- 2005 Member (Ad Hoc) of the Nathan Shock Center for Excellence Review Panel
- 2005 Member (Ad Hoc) of the Arthritis Research Campaign Project Review Panel

#### G. Selected INVITED TALKS/PRESENTATIONS (Of over 200; only those since 2010 are listed):

1. Tollefsbol, T.O. **Invited Speaker**, Contribution of maternal epigenetic regulation to the prevention of estrogen receptor-negative breast cancer. *13th Edition of Webinar on Breast Cancer*, Sept., 2023.
2. Tollefsbol, T.O. **Invited Keynote Speaker**. 2<sup>nd</sup> Global Meet on Animal Science and Veterinary Medicine. Munich, Germany, 2024.
3. Tollefsbol, T.O. **Invited Distinguished Talk**. *The 13<sup>th</sup> World Gene Convention*. Nagoya, Japan, 2024.
4. Tollefsbol, T.O. **Invited Honorable Speaker Presentation**. *European Congress on Human Genetics*. Paris, France, 2023.
5. Tollefsbol, T.O. **Invited Honorable Speaker Presentation**. *2<sup>nd</sup> World Congress on Gynecology & Obstetrics-2023*. Bangkok, Thailand, 2023.
6. Tollefsbol, T.O. **Invited Distinguished Speaker Presentation**. *Cancer Care, 2023: Exchanging Ideas in Cancer Prevention*. Rome, Italy.
7. Tollefsbol, T.O. **Invited Distinguished Presentation**. *18th Annual Congress of International Drug Discovery Science & Technology -2023 (IDDST-2023)*. Amsterdam, the Netherlands.
8. Tollefsbol, T.O. **Invited Distinguished Talk**, *IDDST-2023 (Europe)*, 2023.
9. Tollefsbol, T.O. **Invited Distinguished Talk**, *Global Congress on Pharmaceutical Sciences and Clinical Research*, Tokyo, Japan, 2023.
10. Tollefsbol, T.O. **Invited Speaker**, *3rd World Pharma 2023*, 2023.
11. Tollefsbol, T.O. **Invited Speaker**, *3rd Global Virtual Congress on Cancer Research and Drug Development*, 2023.
12. Tollefsbol, T.O. **Invited Keynote Speaker**, *World Conference on Cancer and Clinical Oncology*, Barcelona, Spain, 2023.
13. Tollefsbol, T.O. **Invited Endowed Keynote Speaker**, *American Association for Pharmaceutical Scientists (AAPS)*, Boston, MA, 2022.
14. Tollefsbol, T.O. **Invited Honourable Speaker**, *Virtual 6th World Congress on Frontiers in Cancer Research and Therapy*, 2022.
15. Tollefsbol, T.O. **Invited Honorable Presence**, *International Conference and Expo on Medical Toxicology and Applied Pharmacology*, Zurich, Switzerland, 2022.
16. Tollefsbol, T.O. **Invited Keynote Speaker**, *2nd International Conference on Diabetes, Endocrinology and Metabolism*, 2022.
17. Tollefsbol, T.O. **Invited Keynote Speaker**, *3rd Edition of Scholars International Webinar on Cancer Research and Therapeutics*, 2022.
18. Tollefsbol, T.O. **Invited Keynote Speaker**, *Personalized Medicine*, Zurich, Switzerland, 2022.
19. Tollefsbol, T.O. **Seminar Speaker**, Phytochemical epigenetic nutrition in preventing cancer and slowing aging. *Human Nutrition Graduate Seminar Series*. *The University of British Columbia, Vancouver, BC, Canada*, 2022.
20. Tollefsbol, T.O. **Invited Honorable Keynote Speaker** for *Scholars international Webinar on Cancer Research and Therapeutics (2nd Edition)*. *Cancer Research Webinar 2022*.
21. Tollefsbol, T.O. **Invited Session Chair for Methyloomics**, World OMICS Week, Sapporo, Japan, 2022.
22. Tollefsbol, T.O. **Distinguished Speaker Invitation**, 4<sup>th</sup> World Aging and Rejuvenation Conference, Rome, Italy, 2022.
23. Tollefsbol, T.O. **Honorable Speaker Invitation**, 2<sup>nd</sup> International Conference on Medical Health Science, Pharmacology & Biotechnology, Zurich, Switzerland, 2022.
24. Tollefsbol, T.O. **Plenary Speaker**, Early-life combinatorial polyphenol-based prevention of estrogen receptor-negative breast cancer. *14<sup>th</sup> World Congress on Polyphenols Applications 2021—Virtual Congress*, 2021.
25. Tollefsbol, T.O. **Invited Honorable Keynote Speaker**, *Scholars International Webinar on Cancer Research and Therapeutics*. *Cancer Research Webinar 2021*.
26. Tollefsbol, T.O. **Inaugural Series Speaker**, Your mother said “eat your vegetables” and she was right: How a diet rich in vegetables can help prevent cancer. *UAB National Alumni Society Seminar Series on The Science of Food*, Birmingham, Alabama, 2021.
27. Tollefsbol, T.O. **Invited Keynote Speaker**, *International Conference on Food Science and Nutrition*, Vienna, Austria, 2021,
28. Tollefsbol, T. O. **Invited Keynote Speaker**, *Epigenetics Symposium*, Salzburg, Austria, 2021.
29. Tollefsbol, T.O. **Seminar Speaker**, Epigenetics of phytochemicals in cancer and aging. *Department of Microbiology and Immunology, Montana State University*, 2021.

30. Sharma, M. (Tollefsbol, T.O., mentor). Impact of dietary compounds on epigenetic modulations in prevention of breast cancer. UAB, Birmingham, AL. 2021.
31. Tollefsbol, T.O. **Keynote Speaker**, Epigenetic linkage of aging, cancer and nutrition. NIH Conference on *Age-dependent Changes in Cancer Biology*, Bethesda, MD, 2020.
32. Tollefsbol, T.O. **Invited Keynote Speaker**, *ACMAP Annual Conference*, Rutgers University, 2020.
33. Tollefsbol, T.O. **Invited Keynote Speaker**, *3<sup>rd</sup> Annual Conference on Epigenetics and Chromatin*, Berlin, Germany, 2020.
34. Tollefsbol, T.O. **Invited Keynote Speaker**, *10<sup>th</sup> World Congress on Chemistry and Medicinal Chemistry*, Rome, Italy, 2020.
35. Arora, I (Tollefsbol, T.O., mentor). Systematic integrated analyses of methylomic and transcriptomic impacts of early combined botanicals on estrogen receptor-negative mammary cancer. UAB, Birmingham, AL. 2020.
36. Tollefsbol, T.O. **Keynote Speaker**. Epigenetic-based phytochemical prevention of breast cancer. *EuroSciCon Conference on Biosciences*, Oslo, Norway. 2019.
37. Tollefsbol, T.O. **Invited Keynote Speaker**. *4<sup>th</sup> World Cancer Conference (Cancer 2019)*, Rome Italy, 2019.
38. Tollefsbol, T.O. Cancer prevention; nutrition and cancer epigenetics. Invited Plenary Speaker; *IASGO, ICUR & KSGC (IJK) Joint Symposium 2018*, Seoul, Korea, 2018. **Session Co-Chair**.
39. Tollefsbol, T.O. The epigenetics diet in cancer chemoprevention. Cancer Chemoprevention Program. University of Alabama at Birmingham, Birmingham, AL, 2018.
40. Tollefsbol, T.O. Epigenetics of aging and cancer: A nutritional perspective. Invited Plenary Speaker; Harvard Medical School's 5<sup>th</sup> Biennial International Symposium on AMD. Boston, MA, 2018.
41. Tollefsbol, T.O. Epigenetics of phytochemicals in modulating telomerase, cancer and aging. Department of Biochemistry and Molecular Genetics, University of Alabama at Birmingham, Birmingham, AL. 2018.
42. Tollefsbol, T.O. Epigenetics and human health. UAB School of Nursing, Birmingham, AL. 2018.
43. Tollefsbol, T.O. Can an epigenetics diet prevent cancer? Invited Plenary Speaker; *Linus Pauling Institute, Diet and Optimum Health Conference 2017*, Corvallis, Oregon, 2017.
44. Tollefsbol, T.O. Mechanistic similarities between cancer and aging. *Invited Keynote Webinar for the NIH Cancer and Aging Interest Group*, Bethesda, MD. 2017.
45. Yuanyuan Li and Tollefsbol, T.O. Epigenetics-mediated phenotypic plasticity attenuation with aging and prevention of age-related diseases. *First Annual Nathan Shock Symposium*, UAB, Birmingham, Alabama, 2017.
46. Royston, KJ, Paul, B and Tollefsbol, T.O. (mentor). Epigenetic impact of combinatorial sulfaphane and withaferin A on breast cancer cells. *Cancer Research Symposium*, Opelika, Alabama, 2017.
47. Invited Plenary Speaker, *Experimental Biology Conference: 2016 PhenHRIG Symposium Flavonoids/Polyphenols and Epigenetics: Is There a Connection?:* Tollefsbol, T.O., Epigenetics of Combinatorial Phytochemicals in Cancer. San Diego, CA. 2016.
48. Tollefsbol, T.O. Invited Seminar Speaker. The epigenetics diet, cancer prevention and aging. Department of Nutritional Science, *Purdue University*, West Lafayette, Indiana, 2016.
49. Invited Plenary Speaker, *Ageing 2016*: Tollefsbol, T.O., The epigenetic diet and its role in aging. London, England. 2016.
50. Tollefsbol, T.O. Invited Seminar Speaker, Aging, epigenetics and oncogenesis. *Department of Hematology/Oncology*, University of Alabama at Birmingham, AL, 2016.
51. Plenary Speaker, *Mitochondria, Metabolism and Epigenetics Symposium*: Tollefsbol, T.O., Dietary epigenetics and cancer. Double Tree, Birmingham, AL, 2015.
52. Tollefsbol, T.O. The epigenetic diet: Mechanisms for telomerase, cancer and aging control. Invited seminar at *National Center for Toxicological Research*, Jefferson, Arkansas, 2015.
53. Tollefsbol, T.O. Dietary epigenetics in cancer and aging. *Caroline P. and Charles W. Ireland Prize Seminar*, The Club, Birmingham, AL, 2015.
54. Tollefsbol, T.O. Epigenetic diet in cancer prevention. *PRSTP Seminar Series*, Birmingham, AL, 2015.
55. Tollefsbol, T.O. Epigenetics of aging and cancer: The telomerase and dietary connection. *Department of Biology Seminar Series*, Birmingham, AL, 2015.
56. Tollefsbol, T.O. Epigenetic targets of sulforaphane and epigallocatechin gallate in cancer prevention. Invited Plenary Speaker at the *Thirteenth Annual AACR International Conference on Frontiers in Cancer Prevention Research*. New Orleans, LA, 2014.
57. Tollefsbol T.O. The effects of sugar restriction on cellular aging. *UAB Basic Biology of Aging and the Future of Human Health Symposium*, Birmingham, AL. 2014.
58. Tollefsbol, T.O. Epigenetics of aging and cancer: The telomerase and nutrition connection. Invited seminar speaker at *Center for Molecular Medicine, Karolinska Institute*, Stockholm, Sweden, 2014.
59. Tollefsbol, T.O. Epigenetics in diet, aging and cancer. Invited Plenary Speaker at the *Journal of Experimental Biology Symposium: Epigenetics in Comparative Physiology*. Banff National Park, Canada. 2014.
60. Tollefsbol, T.O. Dietary control of aging and cancer. Comprehensive Center for Healthy Aging, invited seminar, Birmingham, AL. 2014.
61. Invited to speak at Harvard Medical School at the *Epigenomics, Sequencing & SNiPs—2013 Meeting on Chromatin Methylation to Disease Biology and Theranostics*, 2013.
62. Invited plenary speaker at the University of Massachusetts for the “The American Council for Medicinally Active Plants (ACMAP) 4th Annual Conference”, Amherst, Mass., 2013 (invitation accepted).
63. Invited speaker at the *CAS Interdisciplinary Research Forum*, April, 2013.

64. Invited to speak to the Department of Hematology-Oncology and Urology at Emory University, 2013.
65. Invited Plenary Speaker at the *International Conference: Advances in Nutrition and Cancer*, Naples, Italy, 2012.
66. **Distinguished Speaker** at the *Genomics Research-2012 Conference*, Boston, MA, 2012.
67. Plenary speaker at the *Epigenetics Symposium*, Birmingham, AL, 2012.
68. Invited seminar, Center on Aging, *University of Hawaii*, Honolulu, HI, 2012.
69. Moderator and plenary speaker: UAB Epigenetics Symposium, Birmingham, AL
70. **Tabitha Hardy** and Trygve O. Tollefsbol (mentor). Presentation by Dr. Hardy at the *Postdoctoral Research Day* entitled ER- $\alpha$  reactivation occurs later in African American breast cancer cell lines treated with chemopreventive dietary phytochemicals EGCG and sulforaphane, UAB, 2012 (won third place).
71. **Invited Featured Speaker and Session Chair** (Epigenesis and Human Diseases) at *BIT's First Annual World Congress of Molecular & Cell Biology*, Beijing, China, 2011.
72. **Tollefsbol, T.O.** Invited to speak at the *13<sup>th</sup> International Symposium on Natural Products Chemistry* in Karachi, Pakistan, 2011 (declined).
73. **Tollefsbol, T.O.** Epigenetics of diet in aging and cancer. *Advanced Clinical Nutrition* conference. The Hague, Netherlands, 2011 (invited plenary speaker).
74. **Tollefsbol, T.O.** Epigenetics of aging and cancer. *Center for Aging Seminar Series*. Birmingham, AL, 2011.
75. **Tollefsbol, T.O.** Invited Speaker. Nutrient epigenetics: Aging and cancer prevention. *University of California at San Francisco*, San Francisco, CA, 2011.
76. **Tollefsbol, T.O.** Epigenetics, aging and cancer prevention: The nutrient connection. Invited Plenary Speaker at the *Human Nutrition Research Center on Aging*, Tufts University, Boston, MA. 2011.
77. **Patel, S.N.**, Meeran, S.M., Li, Y., Tollefsbol, T.O. (mentor). Presentation by S. Patel at the *10<sup>th</sup> Annual University of Alabama System Honors Research Conference*, Birmingham, AL, 2011.
78. **Tollefsbol, T.O.** Epigenetics as a clinical dietary-based intervention in aging and cancer prevention. Invited Plenary Speaker at the *International Clinical Epigenetics Conference*, Homberg, Germany, 2011 (**invited Keynote Speaker**).
79. **Patel, S.N.**, Meeran, S.M., Li, Y., Waltman, D., **Tollefsbol, T.O.** (mentor). Epigenetic reactivation of estrogen receptor- $\alpha$  (ER $\alpha$ ) by bioactive dietary compounds in an ER $\alpha$ -negative breast tumor xenograft in vivo model. Presentation by S. Patel at the *UAB Expo*, Birmingham, AL, 2011.
80. **Tollefsbol, T.O.** Molecular biology of aging. *Global Arthritis Research Network*, Zurich, Switzerland, 2010 (invited plenary speaker).
81. **Tollefsbol, T.O.** Dietary epigenetics in aging and cancer prevention. American Association for Cancer Research, Washington, D.C., 2010 (**invited featured speaker**).
82. Li, Y., Liu, L., and **Tollefsbol, T.O.** Caloric restriction-induced longevity and cancer prevention through impacting epigenetic processes. Dr. Tollefsbol was invited to give the seminar which he deferred to Dr. Yuanyuan Li. *Cancer Research Seminar Series, Southern Research Institute*, Birmingham, AL, 2010.
83. **Tollefsbol, T.O.** "Epigenetics, telomerase and cancer. Presented to the *Cell Biology Comprehensive Cancer Center Group*, Birmingham, AL, 2010.

#### **PROFESSIONAL SERVICES FOR THE DEPARTMENT, SCHOOL, AND COMMUNITY:**

- Ireland Prize for Scholarly Distinction Selection Committee, 2024.
- Search committee for Chair position in the Department of Biology, 2024.
- Served as Judge for the O'Neal Comprehensive Cancer Center Annual Research Retreat, Birmingham, AL, 2023.
- Hosted Biology Seminar Speaker, Joel Berletch, University of Washington: "Genome-wide effects of sex chromosome dosage in development and disease. 2023.
- Search committee for two tenure track faculty positions in the Department of Biology, 2023-2024.
- Ireland Prize for Scholarly Distinction Selection Committee, 2022
- Ongoing panel member for *Center for Clinical and Translational Science* grant assistance program.
- Ireland Prize for Scholarly Distinction Selection Committee, 2021
- Grant reviewer for the Center for Clinical and Translational Science (CCTS) Panels Program, UAB, 2019.
- Judge for the *2019 Integrated Aging Symposium*, Birmingham, AL, 2019.
- Judge for the *Annual Comprehensive Cancer Center Conference*, Birmingham, AL, 2017-present.
- Judge for the *2016 Annual Comprehensive Cancer Center Conference*, Birmingham, AL, 2016.
- Aging Cell Biologist Search Committee, 2014-2015
- Judge for the *2014 Annual Comprehensive Cancer Center Conference*, Birmingham, AL, 2014.
- Biology Library Liaison, 2013-present
- Biology Graduate Advisory Committee, 2012-2013.
- Member of the Biology Chair Search Committee, 2012-2013.
- Judge at the *2012 Annual Comprehensive Cancer Center Conference*, Birmingham, AL, 2012.
- Member of the Inaugural Tenure and Promotion Committee of the College of Arts and Sciences, 2012-2013.
- Judge for the *Junior Faculty Competition Award* at the *2011 Annual Comprehensive Cancer Center Conference*, Birmingham, AL, 2011.
- Reviewer for the journal *Inquiro*, 2009.

- Participant in the *Faculty Development Workshop (Tenure and Promotion Theater Presentation)*, Birmingham, AL, 2009.
- Invited Judge for Graduate Student Presentations. *Annual Comprehensive Cancer Center Research Conference (John R. Durant Award—Graduate Student Category)*, 2009.
- Service on the Search Committee for the *Cell and Molecular Biology* position in the Department of Biology, 2009-2010.
- Invited Judge for the *Tandra Chaudhuri Award for Cancer Research by a Postdoctoral Fellow* and the *Tamasa Rani Award for Excellence in Breast Cancer*. *Annual Comprehensive Cancer Center Research Conference*, 2008.
- Appointed by the Dean as the *NSM Representative* for the *UAB Council of Postdoctoral Education (COPE)* for a three-year term, 2007-2010.
- Invited Judge for the *Tandra Chaudhuri Award for Cancer Research by a Postdoctoral Fellow* and the *Tamasa Rani Award for Excellence in Breast Cancer*. *Annual Comprehensive Cancer Center Research Conference*, 2007.
- Participant as faculty expert at the *5<sup>th</sup> Annual Center for Aging Board of Counselors Reception* (“A Celebration of Life”), Alys Robinson Stephens Performing Arts Center, Birmingham, AL, 2006.
- Invited Judge for Graduate Student Presentations. *Annual Comprehensive Cancer Center Research Conference (John R. Durant Award—Graduate Student Category)*, 2006.
- Appointed by the Dean to serve on the *Department of Biology Chair Search Committee*, 2006.
- Invited Judge for Student Presentations. *Center for Aging Annual Research Conference*, 2006.
- Invited Judge for Graduate Student Presentations. *Annual Comprehensive Cancer Center Research Conference*, 2005.
- Grant Proposal Reviewer: Annual Purdue/UAB Botanicals Center Grants
- Invited Faculty Participant: UAB Breast SPORE Executive Committee Council, 2004.
- Invited Faculty Participant: Center for Nutrient-Gene Interactions, 2003
- Invited Faculty Participant: Breast SPORE Program, 2002-2006
- Invited Faculty Participant: John A. Hartford Southeast Center for Excellence in Geriatric Medicine, Quarterly, 2000-2002
- Invited Faculty Participant: UAB Center for Aging Mini-Retreat, October, 2000
- Invited Faculty Participant: UAB Center for Aging Steering Committee Meetings, Quarterly, 2000-present
- Grant Proposal Reviewer: Annual UAB Center for Aging Intramural Grants
- Invited Faculty Participant: External Advisory Committee Evaluation of the Southeast Center for Excellence in Geriatric Medicine, February, 2000; February, 2002; February 2004
- Grant Proposal Reviewer, Dan Jones Scholarship Fund (since 2003)
- Developed and maintain web-site of the UAB Cell Senescence Culture Facility, 2000-present
- Invited Faculty Participant (Core Group Member): Basic Biology of Aging; February, 2000, April 2000; May, 2001; August, 2002
- Invited Faculty Participant: John A. Hartford Site Visit of the Southeast Center for Excellence in Geriatric Medicine, January, 2000; February 2001, January 2002
- Director, Cell Senescence Culture Facility, 2000-present
- Invited Faculty Participant, UAB Center for Aging Annual Faculty Meetings, 1998-present
- Invited Faculty Participant: UAB Center for Aging External Advisory Meetings, December, 1999; Oct., 2001
- Judge, Central Alabama Regional Science & Engineering Fair, April, 1999
- Biology Department Committee Memberships:
  - Strategic Hiring Plan Committee, 2011
  - Biology Chair Search Committee, 2006-2007
  - Biology Honors Committee, 2004-present
  - Faculty Affairs Committee, 2004-present
  - Graduate Affairs Committee, 2000-2010
  - Chairman, Seminar Committee, 1999-2004
  - Strategic Planning Initiatives (Graduate Focus Group), 2001
  - Seminar Committee, 1998-2004
  - Dissertation/Thesis Committees, 1998-present
- Natural Sciences and Mathematics Committee Memberships:
  - NSM Faculty Affairs Committee (Dept. of Biology Elected Representative), 2004-2006
  - NSM Representative for the Council for Postdoctoral Education, 2006-2010

#### **DEVELOPMENT OF CELL SENESCENCE CULTURE FACILITY:**

The Cell Senescence Culture Facility was originally developed by Drs. Trygve Tollefsbol and William Grizzle in 1999. The facility provides university-wide services for age-related biological research.

**Director; Dr. Trygve Tollefsbol**

#### **Aim**

Develop a nationally recognized Cell Senescence Culture Facility (CSCF) to ensure rapid development of basic biological aging and cancer research at UAB.

#### **Cell Senescence Culture Facility (CSCF)**

Core Director: Trygve Tollefsbol, PhD, DO

Department/Center Association: UAB Department of Biology; UAB Center for Aging; UAB Comprehensive Cancer Center

Established: 1999

### Mission

The mission of the CSCF is to facilitate understanding of the basis of aging and to encourage the study of age-related diseases such as cancer using senescent and cancer cell lines. The single most important determinant for developing cancer is the aging process. The purpose of the CSCF is to provide various types of aging or cancer cells to investigators interested in the aging process or age-related cancer. A prime goal of the CSCF is to develop a research focus on the basic phenotypic changes in senescent cells as well as the prevention of senescent pathways leading to diseases such as cancer.

One of a few such facilities in the country, the CSCF is designed to not only facilitate studies of aging and cancer, but to also participate in new investigations in the mechanism of cellular aging and age-related diseases such as cancer. The CSCF is available to investigators who are actively involved in studies of cellular aging and cancer as well as those who are considering aging studies. In addition to basic scientists, clinical faculty with ongoing studies related to aging and cancer research are invited as collaborators.

### Facility Description

The Core is located on the UAB campus in Campbell Hall room 175. There are two independent tissue culture rooms with inverted phase microscopes. Digital photography of living cells is performed using the Nikon triocular phase contrast light microscope and Nikon 990 digital camera. The facility has several incubators that can be used to control culture conditions for special studies. Cells are passaged to a pre-determined population doubling or to senescence as identified by morphological standards. Cell storage service is provided in liquid nitrogen. Harvested cell pellets for protein or DNA purification are processed and/or may be stored in liquid nitrogen. The facility also provides services for immunocytochemical analysis using specific antibodies, examination of telomerase activity and analysis of biomarkers of aging such as the senescence-associated beta-galactosidase assay.

### Research Information

Services include growing and supplying various cell lines to investigators who have an interest in cell senescence or age-related diseases such as cancer, Alzheimer's disease, osteoporosis and bone and metabolic diseases, degenerative joint disease as well as many other age-related conditions. The Core also collects and maintains an aging cell line repository for the storage of cell lines that provides ready access of cells to all interested investigators. The Core supports the conduct of research into the fundamental and clinical aspects of cell senescence using specific cell lines to probe the cell culture characteristics, phenotypic changes and underlying molecular or metabolic changes of aging and cancer cells. Additionally, the Core personnel offer a consultation service in growing various cancer cell lines for experimental projects. Aging-related and cancer project design and planning services are also offered.

## GRADUATE THESIS/DISSERTATION STUDY COMMITTEES SERVED ON:

### *Completed:*

Edlue Tabengwa (Ph.D., Biology)  
Michael Vickery (Ph.D. Biology)  
Kimberly Hale (M.S. and Ph.D., Biology)  
Joseph Poole (M.S., Biology)  
Sabita Saldanha (M.S., Biology)  
Kate Hansen Shows (Ph.D., Physiological Optics)

Mark Casillas (M.S., Biology)  
Nathan Hansen (M.S., Biology)  
Rebecca Wylie (B.S./M.S., Biology)  
Kliph Woodfin (B.S./M.S., Biology)  
Serene Lai (M.S., Biology)  
April White (M.S., Biology)  
Amanda Cunningham (M.S., Biology)  
Travis Ptacek (B.S./M.S., Biology)  
Sharla Phipps (Ph.D., Biology)  
Joel Berletch (Ph.D., Biology)  
Elizabeth Rayburn (Ph.D., Pharmacology and Toxicology)  
Derek Hoffman (Ph.D., Nutrition Sciences)  
Viji Nandakumar (M.S., Co-mentor-Biology)  
Joseph DeAngelis (Ph.D., Biology)  
Shweta Patel (M.S., Biology)  
Huaping Chen (Ph.D., Biology)  
Sabita Saldanha (Ph.D., Biology)  
Katherine Savell (Ph.D., Genetics)  
Zoya Anderson (Co-mentor; Ph.D., Biology)

### *Current:*

Manvi Sharma (Ph.D., Biology)  
Brittany Witt (Ph.D.), Biology  
Alex Dawson (Ph.D., Biology)  
Oluwatoni (Tomi) Akinduro (Ph.D., Biology)  
Sebanti Ganguly (Ph.D., Biology)  
Mijarur Rahman (Ph.D., Biology)

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### *Completed (continued):*

Faraz Sultan (MD,Ph.D., Neurobiology)  
Frankie Heyward (Ph.D., Neurobiology)  
William Webb (MD, PhD, Neurobiology)  
Natalie Mitchell (M.S., Biology)  
Gregory Peek (Ph.D., Biology)  
Rishabh Kala (Ph.D., Biology)  
Chelsae McCoy (Ph.D., Psychiatry; Co-Chair)  
Samantha Martin (Ph.D., Biology)  
Michael Daniel (Ph.D., Biology)  
Kendra Royston (Ph.D., Biology)  
Benjamin Mills (M.S., Biology)  
Louis Watanabe (Ph.D., Biology)  
Trevor Carden (Ph.D., Genetics)  
Yifeng Gao (Ph.D., Biology)  
Bidisha Paul (Ph.D., Biology)  
Kayla Lewis (Ph.D., Biology)  
Huixin Wu (Ph.D., Biology)  
Itika Arora (Ph.D., Biology)  
John (Jack) Schoelz (Ph.D., Biology)  
Andrew Brane (Ph.D., Biology)

## JUNIOR FACULTY (ASSISTANT PROFESSORS) TRAINED:

Dr. Edwin Asoke, Ph.D., School of Nursing, UAB.  
Dr. Syed Meeran, Department of Biology, UAB.  
Dr. Nicole Riddle, Department of Biology, UAB.  
Dr. Omotomilayo (Tomi) Akinyemiju, Department of Epidemiology, UAB.

Dr. Yuanyuan Li, Department of Biology, UAB.

Dr. Liang Liu, Ph.D., Department of Biology, UAB.

Dr. Stephanie Yap, M.D., Assistant Professor, Department of Obstetrics and Gynecology, Morehouse University, Atlanta, GA.

NIH training for Rita Cowell, Ph.D. (K01 award, UAB Assistant Professor of Psychiatry) (Dr. Tollefsbol is a NIH training consultant).

#### POST-DOCTORAL RESEARCH ASSOCIATES/RESEARCH TECHNICIANS TRAINED:

1. Dr. Liang Liu, Ph.D. (Post-doc)
2. Dr. Nihal DeSilva, Ph.D. (Res. Technician)
3. Dr. Nadejda Lopatina, Ph.D. (Post-doc)
4. Dr. Joyce Haskell, Ph.D. (Research Associate)
5. Dr. Mitchell Pate, Ph.D. (Research Associate)
6. Dr. Canhui Liu (Post-doc)
7. Dr. Maria Nelson, Ph.D. (Res. Technician)
8. John Boswell (Res. Technician)
9. Carolina Goodman (Res. Technician)
10. Christine Wood (Res. Technician)
11. Dr. Sabrina Walthall (Post-doc)
12. Dr. Yuanyuan Li (Post-doc)
13. Angela Fitzgerald (Res. Technician)
14. Dr. Syed Meeran, Ph.D. (Research Associate)
15. Dr. Tabitha Hardy, Ph.D. (Merit Scholar)
16. Dr. Shizhao Li (Post-doc)

#### RESEARCH ASSISTANTS/ROTATING AND WORK-STUDY STUDENTS TRAINED:

1. Jonathan Matlock (Res. Assistant)
2. Reny Joseph (Res. Assistant)
3. Laura Brockway (Rotating Graduate Student)
4. Rosaline Rhoden (Rotating Graduate Student)
5. Carmen Hinton (Work-study)
6. Kerri Greer (Work-study)
7. Latoya Armstrong (Work-study)
8. Dyas Holley (Work-study)
9. Nakema Glanton (Work-study)
10. Troy Mott (Res. Assistant)
11. Nandan Katiyar (Res. Assistant)
12. Carolina Goodman (Res. Assistant)
13. Shaneka Stewart (Work-study)
14. Christine Wood (Res. Assistant)
15. Dyas Holley (Laboratory Assist.)
16. Santana Sanders (Work-study)
17. Russell Harbison (Work-study)
18. Lorren Rice (Work-study)
19. Henry Li (Work Study)
20. Huixin Wu (GBS Rotating Graduate Student)
21. Nusrat Fatima (GBS Rotating Graduate Student)

#### GRADUATE STUDENTS TAUGHT:

Since joining the UAB faculty in 1998, Dr. Tollefsbol has supervised the following M.S. or Ph.D. graduate students who either completed the program or a currently seeking a degree in Dr. Tollefsbol's laboratory:

Name	Degree	Year of Graduation	Title of Thesis/Dissertation
1. Joseph Poole	M.S.	2001	"Epigenetic modulation of the telomerase gene promoter."
2. Sabita Saldanha	M.S.	2002	"Analysis of the promoter regulation of the catalytic subunit of telomerase (hTERT)."
3. Mark Casillas, Jr.	M.S.	2002	"Neoplastic transformation of human lung fibroblasts: Regulation of hTERT and DNA methyltransferase activity."
4. Nathaniel Hansen	M.S.	2003	"Epigenetic regulation of the human telomerase reverse transcriptase (hTERT) gene in cancer cells."
5. Rebecca Wylie	5 <sup>th</sup> yr. (BS/MS)	2005	"9cUAB30 retinoic acid as a potential treatment for human breast cancer."
6. Amanda Cunningham	M.S.	2005	"Inhibition of hTERT in human cancer cells using RNA interference"
7. Serene Lai	M.S.	2005	"Evidence of extra-telomeric effects of hTERT and its regulation involving a positive feedback loop"
8. Sharla Phipps	Ph.D.	2007	"Genetic and epigenetic modulation of telomerase activity in development and disease."
9. William Love	5 <sup>th</sup> yr. (BS/MS)	2007	"Inhibition of telomerase in human leukemia cells".
10. Joel Berletch	Ph.D.	2007	"Green tea polyphenols are associated with changes in genetic and epigenetic anti-cancer mechanisms <i>in vitro</i> and <i>in vivo</i> ."
11. Vijayalakshmi Nandakumar	M.S.	2008 (Co-mentor)	"DNA methylation patterns in the ultraviolet radiation-exposed skin and tumors: Chemoprevention role of phytochemicals"
12. Sabita Saldanha	Ph.D.	2014	"Genetic and epigenetic changes regulated by bioactive molecules in cancer therapeutics"
13. Joseph DeAngelis	Ph.D.	2010	"An investigation into the molecular mechanisms involved in the generation and metastasis of breast cancer."
14. Brannon Queen	M.S. (Plan II)	2009	"Polyphenols and Aging"
15. Clayton Ulrey	M.S. (Plan II)	2009	"Impact of DNA methylation on metabolism"
16. Gregory Peek	Ph.D.	2016	"Joint intervention in opposing pathways, PI3K/Akt and TGF- $\beta$ , with PX-866 and raloxifene, to alter gene expression and suppress estrogen receptor-positive

17. Michael Daniel	Ph.D.	2017	breast cancer cell proliferation” “Pterostilbene inhibits the progression of breast cancer through the down-regulation of hTERT and the Akt/mTOR/p70S6K pathway”
18. Anna (Caroline) Watkins	M.S. (Plan II)	2011	“Timing of maternal folic acid intake during embryogenesis influences transgenerational epigenetic effects.”
19. Shweta N. Patel	5 <sup>th</sup> yr. (BS/MS)	2011	“Reactivation of estrogen receptor- $\alpha$ (ER $\alpha$ ) by bioactive dietary compounds through epigenetic mechanisms in ER $\alpha$ -negative breast cancer cells.”
20. Natalie Mitchell	5 <sup>th</sup> yr. (BS/MS)	2012	“Genome-wide DNA methylation changes during breast tumorigenesis.”
21. Yifeng Gao	Ph.D.	2018	“The effects of proanthocyanidins in combination with resveratrol and sulforaphane respectively on human breast cancer cells.”
22. Huaping Chen	Ph.D.	2013	“Targeting ovarian cancer through epigallocatechin gallate and sulforaphane combinational treatment.”
23. Rishabh Kala	Ph.D.	2016	“Resveratrol and pterostilbene: a novel combinatorial epigenetic therapy in targeting triple-negative breast cancer”
24. Samantha Martin	Ph.D.	2017	“A multi-modal approach to sulforaphane-mediated chemoprevention using the epigenetic network”
25. Bidisha Paul	Ph.D.	2018	“Effect of Dietary Compounds in Epigenetic Modulation and Microbial Alteration and their Roles in Breast Tumor Initiation”
26. Kendra Royston	Ph.D.	2018	“Combinatorial Withaferin A and Sulforaphane and Their Potential Roles in Cancer Prevention and Therapy”
27. Kayla Lewis	Ph.D.	2019	“The effects of SAHA and EGCG on metastatic potential in triple-negative breast cancer cells”
28. Rosanna Krakovsky	Exchange Student; University of Leipzig	2015	Exchange Program completed.
29. Manvi Sharma	Ph.D.	2022	“Role of Dietary Compounds on Modulation of Epigenetic Mechanisms and Gut Microbiota in Prevention of Breast Cancer”
30. Andrew Brane	Ph.D.	2024	“Temporal and epigenetic mechanisms Underlying Dietary Phytochemicals in Breast Cancer Prevention”
31. Mijanur Rahman	Ph.D.	2024	“Investigation on the Epigenetic Mechanisms Modified by Dietary Phytochemicals in Inhibiting Mammary Cancer”
32. Itika Arora	Ph.D.	2022	“The Potential Roles of Broccoli Sprouts (BSp) and Green Tea Polyphenols (GTPs) in Prevention and inhibition of Mammary Cancer”
33. Zoya Anderson	Co-mentor, Ph.D.	2021	“The Pathomechanistic Role of Neuropeptide Y in the Skin: Overexpression of NPY Induces Chronic Inflammation and Skin Pathology”
34. Huixin Wu	Ph.D.	2023	“The Role and Mechanisms of Dietary Bioactive Compounds in Gut Microbiota Modulation and Epigenetic Regulation in the Prevention of Breast Cancer”
35. Sebanti Ganguly	Ph.D.	Current	Title of dissertation yet to be determined.
36. Joshua Bishop	Co-mentor, M.S. (Plan II)	2020	No Thesis required.
37. Brittany Witt	Ph. D.	Current	Title of dissertation yet to be determined.
38. Esmanur Eren	Ph.D.	Current	Title of dissertation yet to be determined.
39. Titilayomi Juliet Durojaye	Ph.D.	Current	Title of dissertation yet to be determined.
40. Jyotirmoyee Das	Ph.D.	Current	Title of dissertation yet to be determined.

		Current	Title of dissertation yet to be determined.
41. Nusrat Fatima	Ph.D.	Current	Title of dissertation yet to be determined.
42. Shu Hui Lye	Ph.D.	Current	Title of dissertation yet to be determined.

### **COMPREHENSIVE CANCER CENTER CaRES (Cancer Research) STUDENTS SUPERVISED:**

- |  |                                       |
|--|---------------------------------------|
| 1. Amanda Darty (Graduate student)     | 5. Scott Kane (Undergraduate student) |
| 2. Inkyung Kim (Graduate student)      | 6. Ann Ardovino (Dental student)      |
| 3. Sarah Williamson (Dental student)   | 7. Janani Arun (Public Health)        |
| 4. Adam Pruett (Undergraduate student) | 8. James Coleman (UAB SOM)            |
|  | 9. Laura Gray (Public Health)         |

### **BIOLOGY RESEARCH UNDERGRADUATE STUDENTS SUPERVISED:**

Arian Sadeghi	Bao Quynh N. Huynh	Justin Parish	Mohammad Islam
Prakash Prasai	Payal Patel	Marilia Paiva	Helen Hunter
John Hurt	Johnny Dias	Yih Tsao	Alexandra Hector
Kimberly Adams	Jina Patel	Anna Duong	Derian Gooden
John Boswell	Brian Bowman	Woodrow Farrington	Jessica Green
Ryan Aaron	Samira Shahnez	Anna Pendleton	Anjali Sree
Jiger Patel	Aisha Dickerson	Yih-Ying (Eva) Yuan	Lana Grinberg
John Benson	Dimitri Sychev	Brooke Robinson	Jason Gray
Vintee Narang	Jason Jimerson	Christina Wolchok	Carmen Hinton
Krisen Chappell	Bryan McAllister	Natalie Mitchell	Su Nguyen
Mobola Kukoyi	Nasser Samuy	Emily Mills	Shane Parker
Carter Ross	Merera Natarajan	Raymond Oldham	Robert Wu
Melissa Gottemoeller	Micah Howard	Hahn Vu	MacKenzie Wilson
Lindsay Smith	Sherry Levio	Ashley Ellis	Christophe Jackson
Kristen Lunn	Joel Berletch	Ashley Gholston	Yasuko Musashi
Quang Huyng	Troy Mott	Donald (Trey) Waltman	Meghana Kukkamall
Matthew Hicks	Melissa Roberts	MacKenzie Wilson	Teresa White
Anna Bomar	Leah Strickland	Lorren Rice	David Kallman
M. Thor Christianson	Amina Coghlan	Lacy Kennedy	Harrison Jordan
Nick Burt	Amy Lowther	Neha Udayakumar	John Rodriguez
Rachel Daniels	Hunter Brown	Maya Lopez	Emil Kurian
Madeline Sutko	Catherine Smith	Wesley Lamberson	

### **BIOLOGY HONORS RESEARCH STUDENTS SUPERVISED:**

Jared Dunaway	Mark Pita	Lana Grinberg	Hahn Vu
Saba Rizvi	Rebecca Wylie	Natalie Mitchell	William (Kliph) Woodfin
Jason Key	Jonathan Matlock	Su Nguyen	Richardo Ochinang
Urvi Desai	Derek Patterson	Donald (Trey) Waltman	Meghana Kukkamall
Tracey Warden	Melissa Roberts	Maghan Ange	Teresa White
Layla Smith	Matthew Hicks	MacKenzie Wilson	Patrick Tapia
Warren Jones	Leah Strickland	Lorren Rice	Woodrow Farrington
Sefali Parikh	Justin Parish	Christina Wolchok	Troy Mott
James Jerkins	Marila Paiva	Emily Mills	Ashley Ellis
Anna Pendleton	Cynthia Wolchok	Sweta Patel	Sadhvi Batra
Scott Brotherton	Yih-Ying (Eva) Yuan	Donald Waltman	Richard Tanner
Rachel Daniels	Nick Burt	John Rodriguez	Madeline Sutko
Kendrick Yu (Sci Tech)			

### **ADVANCED DIRECTED READING STUDENTS SUPERVISED:**

- |                      |                            |
|----------------------|----------------------------|
| 1. Christi Edmondson | 5. Rebecca Bell            |
| 2. Su Kaishang       | 6. Ashley Ellis            |
| 3. Nasser Samuy      | 7. Robert (Will) Lightfoot |
| 4. Mohammad Islam    | 8. Amina Coghlan           |

### **NSF ALABAMA ALLIANCE FOR MINORITY PROGRAM (AAMP) STUDENTS SUPERVISED:**

- |                    |                    |
|--------------------|--------------------|
| 1. Jameka Bryant   | 4. Melissa Rudolph |
| 2. Summer Nettles  | 5. Carla Reese     |
| 3. Catishia Mosley | 6. Sharina Richard |
|                    | 7. Keysa Bailey    |

### **MCNAIR SCHOLARS/CORD/SUMMER-SCIENCE/BRIDGES/NSF RES/NSF RET/NCRR PROGRAMS STUDENTS SUPERVISED:**

Barkha Manne (NCRR Program)	Veronica Green (CORD Program)
Jo Tisha Fisher (Science Institute Program)	Reginald Bryant (McNair Program)
Masheika James (Bridges Program)	Jacquiece Hollis (CORD Program)
William Woodfin (McNair Program)	Amit Shah (NSF RES Program)



Alexandrina Williams (McNair Program)  
 Robert Kadish (Rotating Undergrad)  
 Amiya Ahmed (CORD Program)  
 Maghan Ange (Univ. Honors)  
 Olayade Babatunde (Sci Tech Honors)  
 Mira Patel (Sci Tech Honors)  
 Lindsey Rice (CCC Partnership Program)

Sonya Priget (NSF RET Program)  
 Rannell Jones (McNair Program)  
 Natalie Mitchell (Sci. Tech. Honors)  
 Lorren Rice (McNair Program)  
 Queen Denise Okeke (MERIT Program)  
 Harsh Shah (Sci Tech Honors)  
 Kendrick Yu (Sci Tech Honors)

### EARLY MEDICAL SCHOOL ADMISSIONS PROGRAM (EMSAP):

Neha Singaravelan

### AWARDS, HONORS AND RECOGNITIONS BY STUDENTS/POSTDOCTORAL FELLOWS/JUNIOR FACULTY WHILE RECEIVING DR. TOLLEFSBOL'S MENTORSHIP:

- Mentored student Mohammad Mijanur Rahman received the "Department of Biology Outstanding PhD Student Award", 2024.
- Mentored student Brittany Witt received the "Harold Martin Outstanding Student Research Development Award", 2024.
- Huixin Wu (mentored graduate student) received second place for *Trygve Tollefsbol Best Paper Endowed Award* for her paper published in *International Journal of Molecular Sciences* (Impact factor = 5.6). Chosen by a committee of 3 faculty members. \$500 award to Huixin. 2024.
- Mentored student Sebanti Ganguly received the "Harold Martin Outstanding Student Research Development Award", 2024.
- Brittany Witt, mentored PhD student, honored with Student Leadership Award, Department of Biology Honors Day, 2024.
- Mentored PhD student, Sebanti Ganguly, inducted into the Sigma Xi Scientific Honor Society, 2024.
- Mentored PhD student Esmanur Eren awarded full PhD scholarship (4 years) from the *Turkish Consulate Education Attache Office* (~\$120,000), 2023.
- Blazer Fellowship awarded to mentored PhD student Jyotirmoyee Das, 2023.
- "Outstanding Ph.D. Student Award" to mentored graduate student, Andrew Brane, 2023.
- "Outstanding Ph.D. Student Award" to mentored graduate student, Manvi Sharma, 2022.
- Manvi Sharma (mentored graduate student) received first place for *Trygve Tollefsbol Best Paper Endowed Award* for her paper published in *Nutrients* (Impact factor = 5.7). Chosen by a committee of 3 faculty members. \$1,000 award to Manvi. 2022.
- Itika Arora (mentored graduate student) won \$1000 Travel Award to present her work at the 15<sup>th</sup> Annual CounterACT Network Research Symposium in New Orleans, 2022.
- Manvi Sharma (mentored graduate student) chosen for Department Seminar in Department of Biology on Graduate Student Presentation Day. 2021.
- Manvi Sharma (mentored graduate student) chosen for Department Seminar in Department of Biology on Graduate Student Presentation Day. 2021.
- Manvi Sharma (mentored graduate student) awarded 2<sup>nd</sup> place for graduate students in *Biological Sciences at the 98<sup>th</sup> Annual Meeting of The Alabama Academy of Science*, University of South Alabama, 2021.
- Itika Arora (mentored graduate student) chosen for Department Seminar in Department of Biology on Graduate Student Presentation Day. 2020.
- NIH Fellowship in "Cancer Prevention and Control" [National Cancer Institute Cancer Prevention and Control Training Program (CPCTP)]* awarded to Ph.D. candidate (Andrew Brane) (~\$100,000 total) (2020-2023).
- Dr. Shizhao Li in Dr. Tollefsbol's lab was awarded the *UAB Dory Award*. This university-wide award is for the postdoctoral fellow or trainee who, despite setbacks and obstacles in their project, kept pushing and persevered until they successfully finished the work.
- Spring Expo winner (third place) in Biological and Life Sciences for mentored undergraduate student Harrison Jordan, 2019.
- Former mentored Science and Technology student Olayode Babatunde selected as a "Distinguished Alumnus" of the UAB Science and Technology Program, 2019.
- "Most Outstanding Doctoral Student" in the Biology Department for mentored graduate student, Kayla Lewis Steed, 2019.
- Mentored graduate student, Mijanur Rahman, awarded a UAB Blazer Graduate Research Fellowship, 2019.
- Mentored graduate student, Kayla Lewis, selected as a finalist for a Fulbright Scholarship, 2018.
- Mentored graduate student, Kendra Royston, featured on the homepage of UAB. "Music Keeps 'Artsy Scientist' Grounded". 2018.
- Attendance of Dr. Shizhao Li, Postdoctoral Fellow, to *The John Milner Nutrition and Cancer Prevention Research Practicum* sponsored by the Nutritional Science Research Group, National Cancer Institute & the Department of Nutrition at the Clinical Center, National Institutes of Health, Rockville, Maryland, 2018.
- Attendance of Manvi Sharma, graduate student, to the *The John Milner Nutrition and Cancer Prevention Research Practicum* sponsored by the Nutritional Science Research Group, National Cancer Institute & the Department of Nutrition at the Clinical Center, National Institutes of Health, Rockville, Maryland, 2018.
- Online articles on mentored student, Kendra Royston: <https://www.uab.edu/news/student-experience/item/8799-graduate-student-continues-breast-cancer-research-with-new-grant>. 2017.
- Susan G. Komen Graduate Training in Disparities Research Fellowship* (\$30,000/yr) for mentored Ph.D. student Kendra Royston. 2017.

- First Place Award for Poster and Abstract to Kendra Royston. *SCREP Cancer Research Symposium 2017*. Tuskegee University, 2017.
- Susan G. Komen Graduate Training in Disparities Research Fellowship (\$30,000/yr) for mentored Ph.D. student Kayla Lewis. 2017.
- Acceptance to the *ASCB and Keck Graduate Institute's "Managing Science in the Biotech Industry: An Intensive Course for PhD Students and Postdocs."* for mentored Ph.D. student Kendra Royston, 2017.
- Mentored Ph.D. student accepted into the *MSM/TU/UAB Cancer Partnership - Summer Cancer Research Education Program (SCREP)*. 2017.
- Caroline and Charles W. Ireland International Scholar Award* to mentored Ph.D. student, Yifeng Gao, 2017.
- CIRTL Associate Certificate awarded to graduate student Bidisha Paul, 2016.
- American Institute for Cancer Research travel scholarship awarded to Ph.D. student Samantha Martin, 2016.
- NIH Fellowship in "CMFSDP (Comprehensive Minority Faculty and Student Development Program)"* awarded to Ph.D. candidate (Samantha Martin), 2016.
- Most Outstanding Doctoral Graduate Student Award to mentored student Rishabh Kala, 2016.
- Most Outstanding Master's Graduate Student Award to mentored student Kayla Lewis, 2016.
- Mentored Assistant Professor, Dr. Nicole Riddle, awarded National Science Foundation Career Development Award. 2016.
- CIRTL Associate Certificate awarded to graduate student Kendra Royston, 2016.
- Travel Award from the Alabama Academy of Sciences for mentored graduate student, Kendra Royston, 2016.
- Kayla Lewis, graduate student, awarded Second Place (Session 1), UAB Graduate Student Research Day, 2016.
- Yuanyuan Li, MD, Ph.D., selected as a participant in *The John Milner Nutrition and Cancer Prevention Research Practicum* at the NIH. 2016.
- Rishabh Kala, Ph.D. candidate, selected as a participant in *The John Milner Nutrition and Cancer Prevention Research Practicum* at the NIH. 2016.
- CIRTL Associate Certificate awarded to graduate student Kayla Lewis, 2016.
- Center for the Integration of Research, Teaching and Learning (CIRTL) certificate to Ph.D. candidate, Greg Peek, 2015.
- Rishabh Kala, Ph.D. candidate, awarded the *Dan Jones Travel Scholarship*, 2015.
- NIH Fellowship in "Cancer Prevention and Control" [National Cancer Institute Cancer Prevention and Control Training Program (CPCTP)]* awarded to Ph.D. candidate (Kendra Royston) (~\$100,000 total) (2015-2017), 2015.
- Dr. Centrika Dates, mentored Post Doctoral Fellow, awarded 4-year *NIH Merit Scholar* funding paying 75% of her salary, 2015.
- Sabita Saldanha, Tollefsbol Lab doctoral graduate, awarded the *2015 Summer Cancer Research Training Program Award*, 2015 (Dr. Tollefsbol as mentor).
- NIH Fellowship in "Cancer Prevention and Control" [National Cancer Institute Cancer Prevention and Control Training Program (CPCTP)]* awarded to Ph.D. candidate (Michael Daniel) (~\$100,000 total) (2007-2010), 2014.
- Graduate Research Assistantship (stipend-level funding with no teaching requirements) awarded to Predoctoral student Rishabh Kala by the UAB Department of Biology, 2014.
- Predoctoral student, Kendra Royston, received the *2014 Summer Cancer Research Training Program Award*, 2014.
- Dr. Yuanyuan Li awarded the *2014 Mary Swartz Rose Young Investigator Award* from the *American Society for Nutrition*, 2014.
- Bidisha Paul, Tollefsbol Lab predoctoral student, awarded the *2013 Summer Cancer Research Training Program Award*, 2013.
- Olayode Babatunde, third place prize for "Effects of Dietary Compound Sulforaphane on hTERT Expression in Breast Cancer Cells". *12th Annual University of Alabama System Honors Research Conference* hosted by UAH, Alabama. 2013.
- Harsh Shah, Science and Technology honors student, awarded a NIH STEP-UP internship. 2013.
- 2013 AACR Minority Scholar in Cancer Research Award to Postdoctoral Fellow, Dr. Tabitha Hardy, for \$1,800 to present at the AACR Annual Meeting 2013, Washington, DC, 2013.
- Science and Technology honors student, Olayode Babatunde, awarded the prestigious UNCF-Merck Undergraduate Fellow for the 2013-2014 academic year (~\$30,000). 2013.
- Science and Technology honors student, Mira Patel, awarded a *Harvard Catalyst Internship* to train at Harvard Medical School for the summer of 2013.
- NIH Health Disparities Loan Repayment Program award granted to Dr. Tabitha Hardy, 2012.
- Merit Scholar Postdoctoral Fellow, Dr. Tabitha Hardy, spotlighted on the home page of the UAB Postdoctoral Education web site, 2012.
- Michael Daniel, a mentored Ph.D. student, was awarded a 2-year NSF Alabama Louis Stokes Alliance for Minority Participation (LSAMP) Bridge to the Doctorate (BD) fellowship. The fellowship provides a generous annual stipend plus full tuition, fees and health insurance. The award extends through July 31, 2014.
- "Outstanding Masters Graduate student" awarded to Natalie Mitchell, a Tollefsbol Lab 5<sup>th</sup> Year MS student, 2012.
- Harsh Shah, a mentored honors student, selected as a finalist for the prestigious Beckman Scholarship, 2012.
- Second place award in Life Sciences at the UAB EXPO for MacKenzie Wilson, a mentored undergraduate student, 2012.

- ABRCMS Judges' Travel Award to Dr. Tabitha Hardy (\$1,500) to serve as a judge at the 2012 Annual Biomedical Research Conference for Minority Students, San Jose, CA, 2012.
- Susan G. Komen for the Cure Travel Award for Tabitha Hardy (\$1,999) to attend the *RCMI International Symposium on Health Disparities* in San Juan, Puerto Rico, 2012.
- Research presentation award (3<sup>rd</sup> place) to mentored Postdoctoral Fellow (Dr. Tabitha Hardy) at the *Postdoctoral Research Day*, UAB, 2012.
- AACR Minority Scholar in Cancer Research Award to Postdoctoral Fellow, Dr. Tabitha Hardy, for \$1,800 to present at the Fourth AACR Conference on the Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved, Washington, DC, 2011.
- Travel Award for Dr. Yuanyuan Li, Assistant Research Professor in the Tollefsbol lab, by Susan G. Komen for the Cure in the amount of \$1,999 to attend the 1<sup>st</sup> Annual World Congress of Molecular and Cellular Biology, Beijing, China, 2011.
- NCAA Postgraduate Scholarship awarded to Natalie Mitchell, mentored 5<sup>th</sup> year graduate student, 2011.
- First place award for mentored student, QueenDenise Okeke, at the *Undergraduate Summer Research Expo*, Birmingham, AL, 2011.
- NSF Alabama Louis Stokes Alliance for Minority Participation (LSAMP) Bridge to the Doctorate (BD) fellowship awarded to mentored student, Samantha Martin, 2011.
- Third place award for mentored student, Lorren Rice, at the *Undergraduate Summer Research Expo*, Birmingham, AL, 2011.
- Shweta Patel, 5<sup>th</sup> Year M.S. Graduate Student, received the prestigious *College of Arts and Sciences Dean's Award*, 2011.
- Award (3<sup>rd</sup> Place of 44 entries) to mentored honors student, Sadhvi Batra, at the *Expo Conference*, Birmingham, AL, 2011.
- Shweta Patel, mentored 5<sup>th</sup> Year M.S. Graduate Student, chosen by the President of UAB to speak at the UAB Graduation Commencement, 2011.
- C-USA Postgraduate Scholarship awarded to mentored 5<sup>th</sup> year graduate student, Natalie Mitchell, 2011.
- Award (3<sup>rd</sup> Place) to mentored 5<sup>th</sup> Year M.S. Graduate Student, Shweta Patel, at the *University of Alabama System Honors Research Conference*, Birmingham, AL, 2011.
- Mentored Research Associate Dr. Syed Meeran awarded \$999 by Susan G. Komen for the Cure to attend a 2-day conference sponsored by the *American Institute for Cancer Research* in Washington, DC, 2010.
- 5<sup>th</sup> Year M.S. Graduate Student, Shweta Patel, received the prestigious *Goldwater Scholar* award, 2010.
- Mentored Research Associate, Dr. Syed Meeran has been awarded a grant from the Susan G. Komen Foundation in the amount of \$999 to make two presentations at the *American Association for Cancer Research 101<sup>st</sup> Annual Meeting* in Washington, D.C., 2010.
- Mentored High School student, Amiya Ahmed, won first place for a poster presentation at the *Central Alabama Regional Science and Engineering Fair*, Birmingham, AL, 2010.
- Mentored Research Associate, Dr. Yuanyuan Li, awarded \$1,000 by the Susan G. Komen for the Cure to present her results at the *American Association for Cancer Research* conference on "*Cancer Epigenetics*" in San Juan, Puerto Rico, 2009.
- Pre-doctoral student, J. Tyson DeAngelis, awarded by the Evelyn M. and Harold C. Martin Endowed Fund for up to \$1,200 to attend the *American Association for Cancer Research* conference on "*Cancer Epigenetics*" in San Juan, Puerto Rico, 2009.
- Mentored Research Associate Dr. Syed Meeran awarded \$1,500 by the National Institutes of Health to attend a 5-day workshop entitled "*Dietary Supplement Research Practicum*" held at the NIH in Bethesda, Maryland, 2009.
- Mentored student Joseph Tyson DeAngelis awarded by the National Cancer Institute to attend a workshop entitled "*NCI Summer Curriculum in Cancer Prevention*" in Rockville, Maryland, 2008.
- Dr. Joel Berletch, who received a Ph.D. in Dr. Tollefsbol's laboratory in 2007 and is a Postdoctoral Fellow at the University of Washington, received a NRSA (NIH) grant to fund his research. 2008.
- "The Outstanding Doctoral Graduate Student" awarded to mentored student, Joseph Tyson DeAngelis, 2008.
- NIH Fellowship in "Cancer Prevention and Control"* [*National Cancer Institute Cancer Prevention and Control Training Program (CPCTP)*] awarded to Ph.D. candidate (Joseph Tyson DeAngelis) (~\$100,000 total) (2007-2010).
- "The Outstanding Doctoral Graduate Student" awarded to mentored student, Joel Berletch, 2007.
- Susan G. Komen for the Cure Travel Award* for J. Tyson DeAngelis (mentored doctoral student) to attend the *American Association for Cancer Research special conference on Telomeres and Telomerase in Cancer Research*, San Francisco, CA, 2007.
- NIH Fellowship in "Glucose restriction and aging"* awarded to Postdoctoral Fellow (Sabrina Walthall) (~\$100,000 total) (2007-2009) (declined).
- Dr. Liang Liu, mentored Assistant Research Professor, appointed as Assistant Professor of Medicine at UAB, 2007.
- Mentored student (Teresa White) selected as *Most Outstanding Undergraduate Student of 2007* in the Department of Biology.
- Susan G. Komen for the Cure Travel Award* for Dr. Yuanyuan Li (mentored postdoctoral fellow) to attend the *American Association for Cancer Research Special Conference on Telomeres and Telomerase in Cancer Research*, San Francisco, CA, 2007.
- Daniel Jones Endowed Student Research Support Fund in Biology* awarded to mentored Ph.D. graduate student, Sharla Phipps, 2006.
- First Place. Mentor of Student (Sharla Phipps) Poster Award. *Center for Aging Annual Conference*, 2006.

- Martin Endowed Student Research Award* for Joel Berletch, mentored Ph.D. graduate student, 2006.
- “The Outstanding Doctoral Graduate Student” awarded to mentored student, Sharla Phipps, 2006.
- Mentored Assistant Research Professor, Dr. Liang Liu, awarded a training grant for the *14<sup>th</sup> Annual Summer Training Course in Experimental Aging Research* in Novato, California, 2006.
- Mentored Post-doctoral Fellow (Dr. Liang Liu) awarded *UAB Post-doctoral Career Enhancement Award* (2005).
- First Place, Mentor of Student (William Woodfin) Poster Award, *McNair Scholars Program* (2005).
- “Academic Excellence Award” to mentored graduate student, Serene Lai, from the UAB International Scholar and Student Services (2005).
- “The Outstanding Visiting Scholar” award for UAB given to Dr. Liang Liu, a mentored Postdoctoral Fellow in Dr. Tollefsbol’s laboratory (2005).
- American Association for Cancer Research Scholar-in-Training Award* for M.S. graduate student, Amanda Cunningham (2004).
- First Place, Mentor of Student (William Woodfin) Poster Award, *McNair Scholars Program* (2004).
- NIH Fellowship in “Cancer Prevention and Control” [National Cancer Institute Cancer Prevention and Control Training Program (CPCTP)]* awarded to Ph.D. candidate (Joel Berletch) (~\$100,000 total) (2004-2007).
- American Association for Cancer Research Minority Scholar Award* for Ph.D. graduate student, Sharla Phipps (2004).
- NSF GK-12 Fellowship* awarded to B.S./M.S. candidate (William Woodfin) (\$10,000/year) (2004).
- Mentored student (Jessica Green; 5<sup>th</sup> year program) awarded a fellowship from the American Foundation for Aging Research (2004).
- Mentored student (Rebecca Wylie; 5<sup>th</sup> year program) selected as *Most Outstanding Undergraduate Student of 2004* in the Department of Biology.
- Second Place, Mentor of Student (Jessica Green) Poster Award, *University of Alabama System Honors Research Day*, Huntsville, AL (2004).
- Mentored student (Jessica Green) awarded Center for Aging Honors Scholarship (2004).
- Mentored Post-doctoral Fellow (Dr. Liang Liu) awarded *UAB Post-doctoral Career Enhancement Award* (2003).
- NSF GK-12 Fellowship* awarded to Ph.D. candidate (Sharla Phipps) (\$27,500/year); (2003-2005).
- Second Place, Mentor of Student (William Woodfin) Poster Award, *Sigma Xi 2003 Student Research Conference*, Los Angeles, CA.
- Two mentored students (Rebecca Wylie and William Woodfin) awarded scholarships through the *Graduate School Professional Development Program* (Preparing Future Faculty) (2003-2004).
- Third Place, Mentor of Student Poster Award, *McNair Program* (2003).
- Mentored Student (William Woodfin) awarded honors scholarship through *the UAB Center for Aging* (2003-2004).
- Mentored Post-doctoral Fellow (Dr. Liang Liu) awarded *UAB Post-doctoral Career Development Award* (2003).
- Second Place, Mentor of Student Poster Award, *First Annual UAB System Honors Research Competition* (2002).
- Two mentored students (Scott Brotherton and Mark Pita) awarded honors scholarships through the *UAB Center for Aging*.
- Honorable Mention, Mentor of Student Poster Presentation, *NSF AAMP Competition* (1999).
- Third Place, Mentor of Student Poster Presentation, *NSF AAMP Competition* (1999).

#### Lecture Courses:

1. BY314; *Embryology* (Course Director; junior/senior level): [average teaching evaluation of ~4.3 on a 5.0 scale]. Taught annually since 1998.
2. BY433, BY633; *Advanced Molecular Genetics* (Course Director; senior and graduate level): [average teaching evaluation of ~4.3 on a 5.0 scale]. Taught annually since 1999.
3. MGE-701; *Advanced Human Genetics* (Team-taught course in Department of Genetics; graduate level; teach one two-hour session on epigenetics); Taught 2005-2007.
4. IBS 700 (PCN-II) *Principles of Neuroscience* (Team-taught course in Department of Neurobiology; graduate level; teach one two-hour session on epigenetics); Taught in 2007.

#### Lecture/Laboratory Course:

5. BY646, BY746 *Techniques in Biological Research* (Team Member; graduate level): Taught 1999-2001.
6. *Science and Technology Honors Program Research Approaches* course: teach one three-hour session on laboratory techniques; (2006-2010)

#### Seminar Courses:

7. BY787, BY687, BY499; *Seminar in Molecular Genetics* (senior and graduate level)
8. BY693, BY793; *Seminar in Embryology* (senior and graduate level)
9. BY499A; Seminar in Biology

#### Other Courses:

10. BY695; Special Topics in Biology--Development (graduate)
11. BY 696; Special Topics in Biology II—Development (graduate)
12. BY398; Undergraduate Research
13. BY698; Thesis Research (graduate)

14. BY699; Thesis (graduate)
15. BY796; Special Topics BYII--Development
16. BY399 (currently BY498); Honors Research (undergraduate)
17. BY795; Special Topics in Biology--Development (graduate)
18. VIS748; Vision Science Research (graduate)
19. BY397; Advanced Directed Reading (undergraduate)
20. BY795; Special Topics BYI--Development (graduate)
21. BY798; Independent Research (graduate)
22. BY 799; Dissertation Research (graduate)
23. BY595; Special Topics--Development (graduate)
24. BY596; Special Topics in Biology-Development (graduate)

*Summer Internship/Work-study Programs:*

NSF Research Projects (AAMP Program); NCRR Science Education Research; Bridges Program; Summer Science Institute Program; CORD (Summer Intern) Program; CaRES (Comprehensive Cancer Center) Intern Program; McNair Program; Work-study Program; NSF RES Program; NSF RET Program; University Honors Program; Science and Technology Program.

*Teaching Experience Prior to Coming to UAB (Courses Taught)*

1. Principles of Biochemistry for Medical Students (Laboratory Instructor at University of North Texas Health Sciences Center)
2. Biology of Aging (Team-taught course at University of North Texas)
3. Principles of Gerontology for Medical Students (Course Coordinator at Michigan State University)
4. Michigan Geriatric Education Center (Development of educational programs; Core Group Member)