OMB No. 0925-0001 and 0925-0002 (Rev. 03/2020 Approved Through 02/28/2023)

BIOGRAPHICAL SKETCH

NAME: **Paula E. Gregory**

eRA COMMONS USER NAME (credential, e.g., agency login): **PGREGO**

POSITION TITLE: **Professor**

EDUCATION/TRAINING:

| INSTITUTION AND LOCATION | DEGREE | Completion Date | FIELD OF STUDY |
| --- | --- | --- | --- |
| University of Southern Mississippi | B.S. | 1977 | Biology |
| University of Southern Mississippi | M.S. | 1979 | Cell Biol & Genetics |
| Tulane University | Ph.D. | 1988 | Cancer Cytogenetics |
| University of Alabama at Birmingham | Post doc | 1986-1990 | Cell & Molec Bio |
| University of Michigan | Post doc | 1990-1991 | Genetics |

**A. PERSONAL STATEMENT**

**My research expertise is in the area of hereditary cancer predisposition. I have worked in the area of cancer genetics my entire career. For nearly 30 years I have been involved in training and education programs directed at high school students and teachers, undergraduate and medical student research experiences and junior faculty career development.**

**At NHGRI I was the first Director of the Genetics Education Office and oversaw a variety of training programs there, including the Summer Internship Program for the NHGRI Intramural labs. That program received well over 2,000 application/year. After my move to the Ohio State University, I was awarded an R25 from the NCI that funded summer cancer research experiences for medical students. As the PI, I was responsible for recruitment, placement of students and coordination of all programmatic aspects of the program. Another R25 from the NCI supported a high school cancer education program.**

**I have been Co-Director of the Tulane MSCR program for over ten years and am the Co-Director of the LACaTS Professional Development Core. Based on my expertise, I was named the first Assistant Dean for Medical Student Research. I have been awarded NIH T35 funding from NHLBI, NIDDK and NIAAA to support medical student summer research internships; these students are placed with junior faculty mentors and assist them in their research. Our NCI P20 award created a Cancer Research Education Program for summer internships focused on URM undergraduate and medical students at LSUHSC. My current position as the UNTHSC Associate Dean for Faculty and Educational Development expands on my previous work. With 30 years of experience establishing, coordinating and evaluating research training programs, I am uniquely qualified to work on this mentored research training project.**

**B. POSITIONS AND HONORS**

**Employment**

* 1. Cytogenetic Technologist, Clinical Pathology, M.D. Anderson Hosp., Houston, TX
  2. Research Assistant, Anatomy Dept., Univ. of Mississippi Med Ctr., Jackson, MS

1987-1990 Research Instructor, Anatomy & Cell Biology, Univ. of Alabama, Birmingham, AL

1991-1993 Education Director, Human Genome Center, Univ. of Michigan, Ann Arbor, MI

1991-1993 Research Scientist, Dept. Internal Medicine, Univ. of Michigan, Ann Arbor, MI

1993-1997 **Chief**, Genetics Education Office, NHGRI, NIH, Bethesda, MD

1997-2000 Adjunct Assistant Professor, Medical Microbiology and Immunology Dept., the Ohio State University, Columbus, OH

1998-2002 Member, Comprehensive Cancer Center, Ohio State University, Columbus, OH

2000-2002 **Assistant Professor**, Dept of Molecular Virology, Immunology & Medical Genetics, Ohio State University, Columbus, OH

2002-2007 Associate Professor, Dept. of Genetics, LSUHSC, New Orleans, LA

2002-2020 Member, Stanley Scott Cancer Center, LSUHSC, New Orleans, LA

2007-2015 **Associate Professor (tenured),** Dept. of Genetics, LSUHSC, New Orleans

2009-2015 **Director** of Faculty Development, LSUHSC School of Medicine, New Orleans, LA

2012-2020 **Professor**, Dept. of Genetics, LSUHSC, New Orleans, LA

2015-2020 **Assistant Dean** for Medical Student Research, LSUHSC School of Medicine

2020- **Associate Dean** for Faculty & Educational Development, UNTHSC Graduate School of Biomedical Science, Fort Worth, TX

**Professional Memberships**

1. American Society for Human Genetics
   1. Chair, Information and Education Committee, Am. Soc. Hum. Gen.
2. American Society for Gene Therapy
3. Member, Education Committee, Am Soc. Gene Ther.

2000-2002 Coordinator of Minority Recruitment, Integrated Biomed Grad Program, OSU

2001-2002 Admissions Committee, College of Medicine, OSU

2003-2008 LSUHSC Faculty Assembly Delegate

**Honors**

1. NHGRI Award of Merit
2. NIH Director’s Award
3. NIH Award of Merit
4. “Champions of the James” Award of Excellence, James Cancer Hospital, OSU
5. Commendation from the Ohio House of Representatives for public education

2013 Copping Award for Excellence in Teaching, LSUHSC Sch. Of Medicine

2019 Commendation from the Louisiana House of Representatives for STEM education programs

**Study Sections:**

**NHLBI** - Programs in Genomic Applications Centers Grants; August, 2000 Study Section

**NHGRI** - ELSI program grants; November, 2000 Study Section

**NIH/NHLBI** - External Scientific Panel for Programs in Genomic Analysis grantees

**NIH/NHGRI** - *Ad hoc* SBIR/STTRStudy Section 2002 – present

**NIH/NHLBI** - Special Emphasis Panel: NRSA proposals (T32s) and Conference Grants (R13s)

**NIH/SBIR** - Special Emphasis Panel: SBIRs for NCI

**Canadian Institutes of Health Research** - *Gene-Environment Interaction IHRT*- Ext.Advis.Com.

**NIH/NHLBI** Special Emphasis Panel T35 proposal reviewer

**NYSTEM** Pre-college teacher program grant reviewer

**NICHD** Special Emphasis Panel T35 proposal reviewer (2016 and 2017)

**NIGMS** Special Emphasis panel INBRE reviewer (2018 & 2019)

**C. CONTRIBUTIONS TO SCIENCE**

**1.Master’s Degree Research: My first research project combined my interests in cytogenetics with cell biology. I worked out the technique for preparing and analyzing fish chromosomes. My Master’s thesis was based on characterizing the chromosomal complement of the sheepshead fish using a newly created cell line.**

* 1. **Gregory PE, Howard-Peebles PN, Ellender RD, Martin BJ. C-banding of chromosomes from three established marine fish cell lines. Coepia 3:545-547, 1980.**
  2. **Gregory PE, Howard-Peebles PN, Ellender RD, Martin BJ. Analysis of a marine fish cell line from a male sheepshead. J Hered 71:209-211, 1980.**

**2.Doctoral Research: My PhD research was focused on characterizing the activity of X chromosomes when multiple copies are present. The samples I analyzed included cells from a Klinefelter patient as well as from tumor cell lines. In addition, I was able to determine whether X inactivation in marsupials is different because it is preferentially paternal, these data predate modern epigenetic studies but confirmed previous findings. It was this project that solidified my interest in chromosomal aberrations in cancer. My postdoctoral research focused on the genetics and cell biology characterization of neurofibromatosis 1.**

* 1. **Gregory PE, Greene C, Shapira E, Wang N. Changes in the X chromosome replication pattern induced by 5-azacytidine in a patient with Klinefelter syndrome. Cytogenet Cell Genet 39:234-236, 1985.**
  2. **Gregory PE, Wang NW, Howard-Peebles PN. Analysis of sister chromatid exchanges in Fra(X) individuals. Am J Med Genet 23:563-566, 1985.**
  3. **Gregory PE, Wang NW. Analysis of X-chromosome replication pattern induced by 5-azacytidine in a human tumor line. Cancer Genet Cytogenet 20:263-267, 1986.**

**3.Post-doctoral Research: At the University of Michigan my research focused on the identification of the gene for Neurofibromatosis-1 and characterization of the neurofibromin protein.**

1. **Wallace MR, Anderson LB, Saulino A, Brereton A, Gregory PE, Glover TW, Collins FS. A de novo Alu**

**insertion results in neurofibromatosis type 1. Nature 353:864, 1991.**

1. **Gutmann DH, Basu TN, Gregory PE, Wood DL, Downward J, Collins FS. The Role of the neurofibromatosis type 1 (NF1) gene product in growth factor-mediated signal transduction. Neurology 42:A183, 1992.**
2. **Gutmann DH, Gregory PE, Wood DL, Collins FS. The neurofibromatosis type 1 gene product encodes a signal transduction protein which associated with microtubules. J Cell Biochem 16B:A143, 1992.**
3. **Gregory PE, Guttmann DH, Mitchell AL, Park S, Jacks T, Wood DL, Boguski M, Jove R, Collins FS. The neurofibromatosis type gene product co-localizes with microtubules. Somat Cell Mol Genet 3:265-274, 1993.**

**4.Faculty Research: As a faculty member, I became interested in genetics education and working with high school students and their teachers. I also began conducting summer workshops about genomics for a variety of audiences. Summer research experiences for undergraduates and medical students became an area of expertise when I joined the NHGRI at the NIH.**

* + - * 1. **ASHG Information and Education Committee. Report from the ASHG Information and Education Committee: Medical School Core Curriculum. Am J Hum Genet 56:535-537, 1995. PMC1801130**
        2. **Munn M, Skinner PO, Conn L, Horsma HG, Gregory PE. The involvement of genome researchers in high school science education. Genome Res 9(7):597-607, 1999.**
        3. **Gregory PE, The Human Genome Project and the Future of Medicine. The Scapel.71 (2):11, 2001.**

**My Bibliography:** <http://www.ncbi.nlm.nih.gov/myncbi/collections/bibliography/47516581/>

**D. RESEARCH SUPPORT**

**Completed Research Support**

UL1MD009607 Gregory (Co-I) 09/26/2014 – 06/30/2019               NIH/NIMHD

“Building Integrated Pathways to Independence for Diverse Biomedical Researchers”

This program is designed to facilitate undergraduate biomedical research opportunities and increase diversity within the field.  My role on the project is to work with Xavier students in matching them with research mentors at LSUHSC as well as helping them navigate placement in the NIH Summer Internship Program.

Role: Co-I

P20GM121288 Reiss (PI) 08/14/2017 – 05/30/2021 NIH/NIGMS

“Center for Translational Viral Oncology (CTVO)”

CTVO at the LSUHSC will advance basic and translational approaches to address virus-related cancers that are responsible for the disproportionate rate of these diseases in Louisiana. The thematic multidisciplinary research focused on understanding virus-host interactions.

Role: Co-I (Admin Core: Mentoring)

1P20CA202922-01A1 Gregory (Co-PI) 09/01/2017 – 08/31/2021 NIH/NCI

“Southeast Partnership for Improving Research & Training in Cancer Health Disparities” is a collaboration between LSUHSC Cancer Center and Moffitt Cancer Center. Plan a cancer research education program for medical students that includes a hands-on summer research experience.

Role: Co-PI

T35AA021097 Gregory/Molina (Co-PI) 07/01/2018 – 06/31/2023 NIH/NIAAA

“Medical Student Alcohol Research Internship”

This Summer Internship Program (SIP) will support five students and is designed to cultivate their interest in research careers. We have identified faculty mentors at LSUHSC-NO working in the area of alcohol research. Students will conduct intensive hands on clinical or basic science research during the summer.

Role: Co-PI

U54GM033568 Kirwan (PI) 07/01/2017 - 06/30/2023 NIH/NIGMS

“Louisiana Clinical and Translational Science Center” Professional Development Core Director

The Louisiana Clinical and Translational Science (LACaTS) Center involves 8 major academic, research and health care delivery institutions of Louisiana to provide a unified research infrastructure with an overall theme of “prevention, care and research of chronic diseases in the underserved population”.

Role: Co-I

R25AA021304 Gregory/Molina (Co-PI) 04/05/2012 – 03/31/2017 NIH/NIAAA

“Louisiana SURE Program”

The Summer Undergraduate Research Experience (SURE) program will train the next generation of scientists by supporting students to work with researchers within the Comprehensive Alcohol Research Center (CARC) and is designed to cultivate their interest in research careers.

Role: Co-PI

R25OD010515 Alam/Gregory (Co-PI) 07/17/2012 – 06/30/2018 NIH/OD

“BEST Science!”

The major goal of this project is to provide teachers within the greater New Orleans area with training and support to conduct hands on activities with NIH curriculum supplements. This program will help to rebuild the school system that was devastated by Hurricane Katrina.

Role: Co-PI

T35DK093428 Gregory/Brantley (Co-PI) 04/01/2012 - 03/31/2017 NIH/NIDDK

“Short Term Research Training for Medical Students”

This Summer Internship Program (SIP) will support twelve students and is designed to cultivate their interest in research careers. We have identified faculty mentors within at LSUHSC-NO and Pennington Biomedical Research Center in Baton Rouge working in the areas of diabetes, obesity and metabolic disorders. Students will conduct intensive hands on clinical or basic science research with LSU faculty.

Role: Co-PI

P60AA202922 Molina (PI) NIH/NIAAA

Pilot Project Core

The LSUHSC Comprehensive Alcohol-HIV/AIDS Research Center (CARC) Pilot Project Core provides a flexible means to develop and explore new research activities or directions, and unique scientific opportunities that have the potential to evolve into independently funded research projects.

Role: PI (Core Director)

P20RR020152 Deininger (PI) NIH/NCRR

“Tulane Cancer Genetics COBRE”

The administrative Core will be responsible for implementing the Mentoring Plans described throughout this proposal. This Core provided a course covering grant writing, budgeting, and written and oral scientific presentations as well as training in the Responsible Conduct of Research.

Role: Co-I (Core Director)

**R25CA082351 Gregory (PI) 08/31/1999 – 07/30/2006 NIH/NCI**

**“Cancer Research Summer Internship”**

This program provided short research experiences for Ohio State University medical students. It is designed to provide 30 students with an 8-week, summer cancer research experience.

Role: PI

R25CA087994 Gregory (PI) 08/19/2002 – 07/30/2005 NIH/NCI

“Science for the New Millennium: HS Cancer Research Partnership”

This program is designed to incorporate the latest in cancer genetics theory and research into current high school biology curriculum. High school is the last time many people will have any formal training in science; it affords an ideal opportunity to reach large segments of the population. Hands on, inquiry-based learning has been shown to be the most effective method to introduce new scientific information into the curriculum.

Role: PI