

**THOMAS C. TUBON, JR., Ph.D.**

*Madison College - 1701 Wright St. (E1812) Madison WI 53704*

*Office: 608-246-6875 Cell Phone: 608-469-6884 Email: tubon@madisoncollege.edu*

**A. PROFESSIONAL PREPARATION.**

<b>Institution</b>	<b>Major</b>	<b>Degree</b>	<b>Year</b>
San Diego State University	Molecular Biology	B.S.	1996
Stony Brook University	Molecular Genetics	Ph.D.	2003
University of Wisconsin-Madison		Postdoctoral	2008

**B. APPOINTMENTS.**

2009-Present	<b>Professor</b> , Applied Science Engineering and Technologies -Biotechnology, Biotechnology Program - Madison College, Madison, WI
2019-Present	<b>Co-PI, and Workforce Development Lead</b> , NSF ATE 1901985: InnovATE $BIO$ National Center for Biotechnology Education. (award: \$7,497,418)
2018-Present	<b>PI &amp; Director</b> , NSF ATE 1801123: Consortium for Advanced Manufacturing of Cell and Tissue-based Products. (award: \$570,200)
2018-Present	<b>Co-PI, and Strategic Partnerships Lead</b> , NSF IOA 1810732: National Center for Advancing the Impact of Research in Society (ARIS). (award: \$3,146,393)
2019-Present	<b>Mentor Connect Fellow</b> , NSF ATE Mentor Connect Program
2016-Present	<b>Research Mentor</b> , NSF Engineering Research Center for Cell Manufacturing Technologies (CMA $T$ ), University of Wisconsin – Madison.
2011-Present	<b>Adjunct Faculty</b> , UW Madison Masters of Science Program in Biotechnology
2018-2019	<b>Co-PI</b> , NIH STTR 1 R41 GM125489-01: A cloud-based software platform and portable file format to enhance reproducibility, collaboration and translation of stem cell research. (award: \$225,000)
2015-2019	<b>PI &amp; Project Director</b> , NSF ATE DUE 1501553: Scaling Stem Cell Technical Education - A Collaborative Proposal (award: \$660,980)
2011-2015	<b>PI &amp; Project Director</b> , NSF ATE DUE 1104210 Emerging Stem Cell Technologies grant (award: \$851,454)
2010-2013	<b>Visiting Professor</b> - University of Wisconsin-Madison Waisman Center & Wisconsin Institute for Discovery (Stem Cell & Regenerative Medicine Center). Field: Genomic Editing & Stem Cell Models for Human Neurological Diseases. Madison, WI
2009-2012	<b>Adjunct Faculty</b> - UW Madison Pre-college Enrichment Opportunity Program for Learning Excellence (PEOPLE). Field: Neuroscience. University of Wisconsin-Madison, Madison, WI
2008-2009	<b>Adjunct Faculty</b> - Biotechnology Department, Madison College, Madison, WI
2007-2010	<b>Research Fellow</b> - National Institutes of Health Institute on Aging. Field: Translational Neuroscience. University of Wisconsin-Madison Department of Medical Genetics. Madison, WI
2004-2007	<b>Postdoctoral Research Associate</b> - Field: Translational Neuroscience. University of Wisconsin-Madison Department of Medical Genetics. Madison, WI
2003-2004	<b>Postdoctoral Research Associate</b> - Field: Eukaryotic Gene Regulation. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY
1996-2003	<b>Graduate Research Associate</b> - Doctoral Program in Molecular Genetics & Microbiology. Stony Brook University / Cold Spring Harbor Laboratory, Long Island, NY.

1996

**Research Associate**- National Institutes of Health, National Institute for Neurological Disorders and Stroke. Field: Neuroscience. Bethesda, MD.

### C. PRODUCTS.

- [1] **Tubon TC, Jr.** (2017) Biologic Reagents for expression and purification of Human and Mouse Stem Cell Factors required for Specialized Media formulation and cell culturing. *De novo* cloning and development of molecular tools to support academic programming in Stem Cell Technologies. Materials distributed through NSF- educator workshops in Stem Cell Science. Supported under NSF ATE DUE 1104210.
- [2] **Tubon TC, Jr.** (2014) Course Instructional Materials: Advanced Stem Cell Concepts & Methods. Madison College Course Catalog #'s 10007119 & 10007117. (2014) Materials distributed through NSF- educator workshops in Stem Cell Science. Supported under NSF ATE DUE 1104210.
- [3] **Tubon TC, Jr.** (2012) Introduction to Mammalian Cell Culturing & Human Pluripotent Stem Cell Methods: A Laboratory Manual. Collaborative effort with Wisconsin Stem Cell Research Institute (WiCell) & Madison College. Support under NSF ATE DUE 1104210.

### PUBLICATIONS

- [1] **Tubon, T.C. Jr.** (Contributing Author). Improving patient outcomes with regenerative medicine: How Regenerative Medicine Manufacturing Society plans to move the needle forward in cell manufacturing, standards, 3D bioprinting, artificial intelligence-enabled automation, education, and training. (2020). Stem Cells and Translational Medicine.
- [2] **Tubon T.C. Jr.**, (Contributing Author). Scaling STEM Success: Nurturing and Retaining STEM Talent. 2016 March. Morgan James Publishers.
- [3] **Tubon T.C., Jr.**, (Contributing Author). Advancing a Jobs Driven Economy: Higher Education and Business Partnerships Lead the Way. 2015 February. Morgan James Publishers.
- [4] **Tubon T.C. Jr.**, Zhang J, Friedman E.L., Jin H., Gonzales E.D., Zhou H., Drier D., Gerstner J.R., Paulson E.A., Fropf R., and J.C-P. Yin. (2013) dCREB2-mediated enhancement of Memory Formation. *J Neurosci.* 33(17):7475-87
- [5] Fropf, R., **Tubon T.C. Jr.**, and J.C-P. Yin. (2013) Nuclear Gating of a Drosophila dCREB2 Activator is involved in Memory Formation. *J Neurosci.* 33(17):7475-87.
- [6] Bhattacharyya A, McMillan E, Wallace K, Capowski E., **Tubon TC, Jr.**, Svenden C. (2008) Normal Neurogenesis but Abnormal Gene Expression in Human Fragile X Cortical Progenitor Cells. *Stem Cells Dev.* 17 (1): 107-117.

### D. SYNERGISTIC ACTIVITIES.

1. As part of the NSF ARIS National Center leadership team, I serve as the lead for strategic partnerships with a focus on increasing participation and engagement of diverse communities in STEM Career Pathways. In March 2020, I chaired a national meeting that was coordinated with the National Federation of the Blind to address the needs of persons with disabilities in STEM. I am also leading the ARIS team with organizing an international meeting in partnership with Research Impact Canada to host a virtual conference: Future of Technical Workforce and Broader Impacts in Spring 2021. The overarching goal of these events is to increase diversity and inclusion relative to expanding the Skilled Technical Workforce in STEM. In January 2020, we partnered with the World Stem Cell Summit and Regenerative Medicine Foundation to serve an estimated 2400 middle school students and their families as part of the Future of Medicine Day at the Frost Museum of Science in Palm Beach Florida. This event provided STEM engagement and career pathway opportunities for underserved and underrepresented youth in the south Florida region.

2. As a Co-Principal Investigator for the NSF Advance Technological Education InnovATEBIO National Center for Biotechnology Education (DUE 1901984) , I am responsible for coordinating national workforce development efforts in the biosciences through program development, public-private partnerships, and impact on federal and state policy. The InnovATEBIO Center was funded in September 2019, and we are launching an aggressive collaborative campaign for workforce development in the biosciences.
3. I currently serve as Director and PI for the National Science Foundation Advanced Technological Education DUE 1801123 Award to develop a Coordination Network focused on Advanced Manufacturing of Cell and Tissue-based products. In this role, I lead efforts to establish and a national consortium for STEM education and workforce development in the area of cell and tissue biofabrication. This involves connecting key stakeholders in government, industry, academia, and community to identify a pathway from community to career in tissue manufacturing. Vested partners in this endeavor include the NIST/DoD Advanced Regenerative Manufacturing Institute (ARMI/BioFabUSA), the NIST/NNMI NIIMBL, Georgia Tech NSF ERC Center for Cell Manufacturing and Technology, UW Madison Center for Regenerative Medicine, National Alliance for Broader Impacts, NSF InnovATEBIO National Center, Regenerative Medicine Foundation, Regenerative Medicine Manufacturing Society and over 150 community college bioscience educators, industry partners, and numerous grass-roots community-based organizations.
4. I previously served as the Project Director and PI for the National Science Foundation Advance Technological Education DUE 1501553 Award to develop programming in human Stem Cell Technologies. We have completed this work and demonstrated unprecedented impact on career pathway development in STEM fields and contribution to the growth of our local bioeconomy. Over the last decade, I have worked to develop local, regional, and national academic partnerships that paved the way for integration of our program materials on a larger scale through existing learning communities with the NSF ATE Community, STEMconnector STEM Higher Education Council, High Impact Technology Exchange (HiTEC), and the National Network of Manufacturing Innovation Institutes. These efforts identify increasing demand for workforce training in Cell Biomanufacturing, and prime the stage for dissemination of learning materials on a broader scale. In this role, I managed the daily operations related to the grant, budget and expense reporting, purchasing, reporting functions, program marketing/advertising, curriculum development, and program implementation.
5. As a faculty member in Biotechnology Department and Faculty Advisor for the student-based Association for Biotechnology, we have leveraged resources at Madison College to create mentoring and outreach networks to promote Science, Technology, Engineering, and Math career pathways specific to our local underserved, underrepresented, and diverse communities. These efforts have led to outreach initiatives in 41 community events that served over 2400 educators, students, and parents in our learning community. We are currently working with our community centers to create mentoring networks and opportunities for STEM career pathway development for 8-12 grade, with the goal of closing the achievement gap in STEM education.
6. Since 2016, I have served as a peer reviewer for the National Science Foundation Advance Technological Education Program, the American Society for Microbiology – Journal for Microbiology and Biology Education, and more recently as a Mentor Fellow for the development of Biotechnology programs at two community colleges through the NSF ATE Mentor Connect Program. I also serve as a Mentor for the recently funded NSF Vision Project designed to provide resources and facilitate community colleges new to NSF and designed to STEM Career Technical Education Pathways.

## E. REFERENCES.

Please do not hesitate to contact the following professional references; additional references can be provided upon request.

[1] **Dr. Elaine Johnson**

Executive Director (Fmr) , NSF Bio-Link Center for Excellence in Biotechnology  
1855 Folsom Street, Suite 643  
San Francisco, CA 94103  
Email: [ejohnson@ccsf.edu](mailto:ejohnson@ccsf.edu)  
Phone: (415) 487-2472

[2] **Dr. Michael J. Stebbins**

*(former Associate Director of Biotechnology, - Office of Science Technology Policy, Executive Office of the President of the United States – Obama Administration)*  
President, Scientific Advisor LLC  
Email: [Michael.j.stebbins@gmail.com](mailto:Michael.j.stebbins@gmail.com) *(due to scheduling, email contact is preferred)*

[3] **Dr. Bruce Nash**

Cold Spring Harbor Laboratory, Dolan DNA Learning Center  
Assistant Director for Science  
334 Main Street  
Cold Spring Harbor, NY 11724  
Email: [nash@cshl.edu](mailto:nash@cshl.edu)  
Phone: (718) 662-8505

[4] **Dr. Jeanette Mowery**

Madison College Biotechnology  
Emeritus Faculty and Grants Administration  
110 Ely Place  
Madison, WI 53726  
Email: [jmowery@madisoncollege.edu](mailto:jmowery@madisoncollege.edu)  
Phone: (608) 516-0371

[5] **Bernard Siegel**

Regenerative Medicine Foundation / World Stem Cell Summit  
Executive Director  
9314 Forest Hill Blvd #2  
Wellington, FL 33411  
Email: [bernard@regmedfoundation.org](mailto:bernard@regmedfoundation.org)  
Phone: 888-238-1423