Biotechnology research project through Sacred Heart Academy **2011-2012**

Position: Extracted, purified, and sequenced the actin gene of *Limulus polyphemus* and *Styela clava*; found correlation of actin gene to mitochondrial diseases; presented data (NEERS, MA 2012 and UMDF, MD 2012)

Community service: Lobbied Connecticut State Senator to support funding for mitochondrial disease research. A bill to fund mitochondrial disease research was ultimately passed

RELEVANT LABORATORY AND TECHNICAL SKILLS

Laboratory Skills: microencapsulation, polymer chemistry, stem cells, wound healing assay, electrical stimulation, cell culture, immunohistochemistry, biofilm culture & viability assessment, histological tissue processing techniques, Western Blot, SEM preparation, cellular assays, fluorescent microscopes, critical point drier, sputter coater, PCR equipment, Tinius Olsen

Technical Skills: Microsoft Office, Minitab, Matlab, ImageJ, QuickField, SolidWorks, 3-D modeling, principles of chemistry, biology, medicine, and engineering, protocol development, project management

ACADEMIC ACHIEVEMENT AND ACTIVITIES

Awards

Senior Design Demonstration Day Second Place	2016
Babbidge Scholar	2016
Deligeorges Family Scholarship	2015
Russell M. and Elaine F. St. John Scholarship	2015
New England Scholar	2013-2015
Dean's List, School of Engineering	2013-2016
Leadership Scholarship	2012-2016

Activities

Women in Science at Yale	2016-present
Society of Women Engineers Member (SWE and GradSWE)	2012-present
Girls Science Investigations Volunteer	2016-present
Alpha Eta Mu Beta, International Biomedical Engineering Honor Society: President 2015	2014-present
Biomedical Engineering Society Member	2012-present
Alpha Lambda Delta Honor Society Member	2012-2016

POSTER AND PODIUM PRESENTATIONS

Conferences

American Society for Artificial Internal Organs For Young Innovators (San Francisco, CA); **Poster** and **Podium**	2016
Northeast Bioengineering Conference (Binghamton University, NY); **Poster**	2016
Biomedical Engineering Society Annual Meeting (Tampa, FL): Attendee	2015
New England Estuarine Research Society's Annual Meeting (Plymouth, MA): **Poster**	2012
United Mitochondrial Diseases Foundation (Bethesda, MD): **Poster**	2012

GenBank 2012

Sequenced DNA of the following genes; published into national GenBank (BankIt1540276 Seq2 JX215257, BankIt1540338 Seq1 JX215258, BankIt1540338 Seq2 JX215259, BankIt1546810 Seq1 JX215260)

Publications

1. Manoukian, O.S., Stratton, S., **Matta, R**., Letendre, J., Arul, M.R., Rudraiah, S.*****, Kumbar S.G.* "Tissue Engineering" in "Introduction to Biomaterial Engineering" Third Edition. Editors Enderle, Blanchard and Bronzino. Elsevier Academic Press **2017** (Accepted in Press)

2. Manoukian O.S., **Matta, R.**, Letendre, J., Collins, P., Mazzocca, A.D., Kumbar, S.G.* "Electrospun Nanofiber Scaffolds and their Hydrogel Composites for the Engineering and Regeneration of Soft Tissues" in "Biomedical Nanotechnology Second Edition" Edited by Sarah Hurst Petrosko Emily S. Day, **2016**, Springer Press (Accepted-In press).

3. The Comparative Study Of Actin And Myosin Genes In *Molgula Manhattensis, Styela Clava,* And *Limulus Polyphemus:* Implication On Mitochondrial Dna Maintenance. Baker, C., Buckley, M., DeRosa, T., Hernandez, J., Hillis, E., Luciani C., **Matta**, **R.**, Novak, A., Smith, C., Xu, C., MJPaolella. Sacred Heart Academy. Mitochondrion (Impact Factor: 3.25). **2012**; 12(5):551–552. DOI: 10.1016/j.mito.2012.07.006