

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Education

Northeastern University, Boston, MA

Masters of Engineering in Bioengineering	GPA 3.614	May 2013
Professional Science Master's in Bioinformatics	GPA 3.667	May 2010
Post-baccalaureate B.S. in Physics		May 2007
B.S. in Biology and Mathematics, with a minor in Chemistry		May 2004

Work Experience

Eternum Biotechnologies, Huntington, Long Island, NY

June 2019 – Present

Scientific Manager for Research & Development

- Prepare new dietary supplement compounds
- Perform molecular modeling simulations
- Write research proposals and marketing papers
- Direct team to investigate new areas for product development

SUNY Farmingdale, Farmingdale, Long Island, NY

Jan 2016 – June 2019

Research Supervisor for CSTEP & STEP Programs

- Preparing research proposals and budgets
- Research Supervisor for Bioinformatics students, CSTEP, STEP students.
- Performing molecular modeling research for Polycythemia Vera.
- Designing Dentin tissue engineering scaffolds in AutoCAD for research at Brookhaven National Laboratory and Stony Brook University

SUNY Farmingdale, Farmingdale, Long Island, NY

Jan 2016 – May 2018

Adjunct Assistant Professor of the Biology Department

- Teaching students Advanced Bioinformatics & Introductory Biology
- Research Supervisor for Bioinformatics students and CSTEP students.
- Performing and teaching research techniques on Polycythemia Vera & Dentin repair in my laboratory.

Stony Brook University, Stony Brook, Long Island, NY

August 2014 – August 2018

Research Scientist with Distinguished Professor Miriam Rafailovich in Material Science

- Lecturer and Research Supervisor for Garcia Center for Summer 2015
- Prepare protocols and prepare plastic scaffolds to culture dental pulp stem cells on.
- Prepare proposals for working at Brookhaven National Laboratory.
- Prepare structures to be 3D printed in the Python based program Blender.
- Molecular Modeling of Polylactic Acid (PLA) and protein interactions.
- Performed experiments with spincasting, micro-nano 3D printing, confocal, SEM & EDX, AFM, and fluorescence microscopy

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Work Experience

Stony Brook University, Stony Brook, Long Island, NY August 2014 – August 2018
Research Scientist with Professor Marcia Simon at the Dental School

- Prepare protocols for culturing dental pulp stem cells and scaffolds.
- Prepared research plan for my research studies at Stony Brook University
- Performed experiments with dental pulp stem cells

Quantum, Design, & Safety, Flushing, Queens, NY

Research Engineer for Kishowar Parvez May 2018 – March 2020

- Visualization and collection of data from the Department of Business using Cytoscape and Python
- Design of site safety plans in AutoCAD for sites in NYC for facade repair and building construction
- Visiting sites in NYC to take photos, measurements, and speak with clients about placement of sidewalk sheds, pipe scaffolding, outrigger scaffolds, roof protection, & roof protection

SUNY Old Westbury, Old Westbury, Long Island, NY

Jan 2018 – May 2018

Adjunct Professor of the Biological Sciences Department

- Teaching students Introductory Biology Laboratory: spectrophotometry, gel electrophoresis, basic microscopy, dialysis bag diffusion, BLAST on NCBI, pH and enzyme analysis, meiosis, mitosis, mendelian genetics, phage mapping and digestion
- Research Supervisor for students.

Stony Brook University, Stony Brook, Long Island, NY

Jan 2015 – May 2015

Head Teaching Assistant with Professor Danny Bluestein

- Taught students important concepts and equation in Biofluids (Basic continuity equations, Bernoulli's equation, Navier–Stokes, and Reynold's Transport Theorem)

Stony Brook University, Stony Brook, Long Island, NY

Sept 2014 – Dec 2014

Teaching Assistant with Professor Lilianne Mujica-Parodi

- Taught students how to use SPSS for Biostatistical Analysis of measurements taken with electrodes (ECG, EEG, EDA, EMG) and Transducers on the human body.
- Trained students on how to prepare independent research projects, choose proper statistical tests, write final papers, and prepare presentations.
- Taught independently several lab lectures

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Work Experience

US Army NSRDEC/Natick Labs, Natick MA

June 2014 – August 2014

Engineer in Pathways Program in Systems Equipment Engineering Team Combat Feeding Directorate for Team Leader Bob Bernazzani at the Natick Labs

- Conduct experiments to test food service equipment and prepare synthetic food from hydroxypropyl methylcellulose using equipment k-type thermocouples, omega OM-EL-USB data logger, extech power analyzer, and OM-EL-datapad.
- Wrote test plans for Big Dipper W-500-IS, Randell FX-1RE & Traulsen TE060HR
- Award of Certificate for The Future Workforce Poster Presentation
- Prepared Continuous Product Improvement grant for Heat Ailment Recovery Pack (HARP)

University Tutor, Boston MA

August 2013 – August 2014

Independent Tutor for University Tutor

- Tutored students for the GRE and helped them achieve over the 90th percentile in both the quantitative and English sections of the GRE
- Helped students prepare the whole graduate school application and they were accepted into Ivy League Schools
- Prepared students for their courses, exams, homework assignments in Python, Bioinformatics, Molecular Biology, Pathophysiology, GRE, Calculus, and Physics.
- Mentored highschool students for the Massachusetts State Science Fair Competition at MIT in a study on 500 books published on Amazon. The students won an MIT award, a Biogen Idec award, and the distinguished Harvard Book Club award.

Northeastern University, Boston, MA

July 2011 – May 2014

Research Scientist with Professor Rebecca Carrier of the Chemical Engineering Department

- Conduct experiments to observe substrates: to quantify and qualify results of stem cell development and delivery of the retina using techniques such as: lyophilization, surgical dissection of Bovine, Salmon, Pig, and *Xenopus laevis* eyes, crosslinking, fluorescent staining, *in vitro* studies, SEM, BCA, Mammalian Cell Culture, and Confocal Microscopy
- Train postdocs, graduate students, master students, undergraduates, and high school students in proper cell techniques, safety, hazardous waste handling, and proper use of laboratory equipment
- Maintain stock and equipment in the lab, order new equipment, change gas tanks for incubators, clean filters on biological safety cabinet and -80°C freezer, maintenance of water volume within water jacketed incubators
- Preparation of stock, working solutions, protocols, experimental setup, sterilization, and lab cleanup, and responsible for transport of materials from one lab to another
- Develop novel extracellular matrix substrates such as such as: crosslinked Interphotoreceptor Matrix (IPM) scaffolds, biopolymer IPM-PCL scaffolds, and decellularized retina from the retina for stem cell development and delivery
- Management of website and proteomics analysis

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Work Experience

Harvard University, Boston, MA

July 2011 – May 2014

Research Scientist with Dr. Petr Baranov, Dr. Caio Regatieri, and Professor Michael Young at the Schepens Eye Research Institute

- Develop novel extracellular matrix substrates for stem cell development and delivery
- Conduct experiments to observe substrates: to quantify and qualify results of stem cell development and delivery using techniques such as, Contact Angle Measurement in a Class 1000 cleanroom, Fluorescent Microscopy, immunofluorescent staining, and explant studies

Northeastern University, Boston, MA

June 2009 – Sept 2011

Research Scientist with Professor Slava Epstein of the Biology Department

- Developed novel methods for 16s rRNA hereditary comparison using secondary and tertiary modeling, compared fasta sequences of primary level 16s rRNA

Northeastern University, Boston, MA

Aug 2010 – Jun 2011

Research Scientist with Professor Albert-László Barabási of the Physics Department

- Developed new methods of comparison for topological and functional analysis of proteomic databases for disease identification using Python, statistical analysis, and visualization of networks with Cytoscape
- Developed concepts in controllability of networks

Northeastern University, Boston, MA

Dec 2008 – Sept 2010

Research Scientist with Professor Mary Jo Ondrechen of the Chemistry Department

- Identified secondary and allosteric active sites with Yasara and simulated molecular dynamics, and charges of residues on proteins
- Found catalytic sites within proteins using Thematics, and defined active sites with Qhull

Northeastern University, Boston, MA

Feb 2008 – Jan 2010

Research Scientist with Professor Mikhail Malioutov of the Mathematics Department

- Prepared novel normalization techniques for microarray analysis
- Performed work for statistical studies of manuscripts to determine authorship

National Naval Medical Center, Bethesda, MD

May 2008 – Aug 2008

Research Scientist with Professor Michael Daly at USUHS in the Environmental Biology and Pathology Departments

- Discovered how to achieve survival of *Shewanella putrefaciens* under acute and chronic levels of radiation without genetic engineering
- Cultured antibiotic free bacteria
- Tested bacteria growth and survival under conditions of radiation and media change

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Work Experience

MIT, Cambridge, MA

Jan 2007 – Jun 2008

Research Scientist with Dr. Maksym Kryvohuz in the Chemistry Department

- Developed protein interaction networks using kinetic models to describe the evolution of networks

Northeastern University, Boston, MA &

Children's Hospital Medical Research, Boston, MA

Jan 2004 – Jan 2007

Research Assistant with Dr. Judah Folkman, Dr. Sui Huang, Professor Thomas Sherman and Mikhail Malioutov at Children's Hospital Medical Research and the Mathematics Department at Northeastern University

- Modeled the growth of protein interaction networks with differential equations

Children's Hospital Medical Research, Boston, MA

Jun 2003 – Aug 2003

Research Assistant with Dr. Judah Folkman and Dr. Sui Huang at Children's Hospital Medical Research

- Developed in the language of C a program to find clusters within protein interaction networks

Achievements

Brookhaven National Laboratory

Spring 2018

Won Grant Proposal to use the Center for Nanofabrication facility for 2 years for the proposal titled Cellular response to the topography of dentin mimicking scaffolds

NNMC/USUHS

Discovered how to achieve survival of *Shewanella putrefaciens* under acute and chronic levels of radiation without genetic engineering

Summer 2008

SUNY Farmingdale

The only adjunct professor with the distinction of having my own laboratory to perform independent investigation (with my students) into new treatments for Polycythemia Vera and nerve conduction studies for repair of nerve damage.

Jan 2016 - Present

Research Proposals

Cellular response to the topography of dentin mimicking scaffolds

Accepted Spring 2018

A Targeted Molecular Modeling Approach to Find Novel Treatments for Polycythemia Vera

Submitted Spring 2017

Cellular Response to substrates that are 3D printed or casted

Submitted Spring 2015

Development and analysis of decellularized intestinal scaffolds and stem cells in Crohn's disease

Submitted Spring 2013

The "James" Bond of Sticky Corneas

Submitted Fall 2011

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Publications

Stony Brook University

Cunlai Pu, Siyuan Li, **Andrew Michaelson**, Jian Yang

Iterative path attacks on networks. Physics Letters A (published)

Spring 2015

Northeastern University

Joydip Kundu, **Andrew Michaelson**, Petr Baranov, Marco Chiumiento, Tom Nigl, Michael J.

Young, Rebecca L. Carrier: Interphotoreceptor matrix based biomaterial: Impact on human retinal progenitor cell attachment and differentiation. Journal of Biomedical Materials Research Part B: Applied Biomaterials. (published)

Joydip Kundu, **Andrew Michaelson**, Kristen Talbot, Petr Baranov, Michael J Young, Rebecca L Carrier: Decellularized retinal matrix: natural platforms for human retinal progenitor cell culture. Acta Biomaterialia, 1742-7061(published)

Joydip Kundu, **Andrew Michaelson**, Kristen Talbot, Petr Baranov, Michael J Young, Rebecca L Carrier: Decellularized retinal extracellular matrix (D-REM) based hydrogel for retinal tissue engineering. (submitted)

Petr Baranov, **Andrew Michaelson**, Joydip Kundu, Michael J Young, Rebecca L Carrier: Interphotoreceptor matrix-grafted poly (ϵ -caprolactone) scaffolds for human photoreceptor differentiation. Journal of Tissue Engineering 5, 2041731414554139 (published) Spring 2014

Joydip Kundu, **Andrew Michaelson**, Petr Baranov, Michael J Young, Rebecca L Carrier: Decellularized Retinal Matrix: Biomimetic Substrate for Human Retinal Progenitor Cells. Tissue Engineering Part A 20, S21-S21 (published) Winter 2014

Joydip Kundu, **Andrew Michaelson**, Petr Baranov, Michael J Young, Rebecca L Carrier: Chapter 10 Approaches to Cell Delivery: Substrates and Scaffolds for Cell Therapy in the book "Cell-Based Therapy for Retinal Degenerative Disease" Developments in Ophthalmology, DOI: 10.1159/000357369 S. Karger AG | Medical and Scientific Publishers (Published) Spring 2014

Cun-Lai Pu, Wen-Jiang Pei, **Andrew Michaelson**: Robustness analysis of network controllability. Physica A: Stat. Mechanics Appl. 391, 4420–4425 (2012). (Published) Fall 2012

Posters

Amelia Tisk, Amber Palmer, Nathalie Larin | **Professor Andrew Michaelson** - Ms. Charles | Amityville Memorial High School/E. W. Miles Middle School, Treatment of Polycythemia Vera with Resveratrol and other small molecules. LISEF – Long Island Science and Engineering Fair at the Crest Hollow Country Club in New York (Poster) Spring 2018

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Posters

Andrew Michaelson, Bernard Essuman, Kristoffer Kaiser, Simon Lin, Kuan-Che Feng, Christopher Corbo, Katherine Cao, Alice Wu, William Hu, John Mikhail, Indeeep Singh, Nara Michaelson, Marcia Simon, Miriam Rafailovich, Cellular response to the topography of dentin mimicking scaffolds, Presented at SUNY Brentwood, NY (Poster) Spring 2018

Andrew Michaelson, Bernard Essuman, Kellon Belfon, Christopher Corbo, John Mikhail, Nara Michaelson, Marcia Simon, Miriam Rafailovich, Fibrinogen folding on Polylactic Acid (PLA) sheet, Presented at SUNY Brentwood, NY (Poster) Spring 2018

Andrew Michaelson†, Nathalie Larin, Jazmin Ruiz Marcello, Amelia Tisk, Z'Dhanne Williams, Alexa Victor: A Targeted Molecular Modeling Approach to Find Novel Treatments for Polycythemia Vera. 19th Annual STEP Statewide Student Conference (poster) Spring 2017

Chris Corbo, Laurie Nussbaum, Elaina Vessella, Jessica Molina, Matthew Brutus, Nick Brutus, Bernard Essuman, Juan Maldonado, John Mikhail, Jeenali Shah, Conrad Dobrowolski, Nara Michaelson, & **Andrew Michaelson PI**: Discovering small molecules as Alternative Treatments to Polycythemia Vera. The SUNY Undergraduate Research Conference (SURC) in Brentwood, New York (poster) Spring 2017

Andrew Michaelson, Joydip Kundu, Petr Baranov, Michael Young, Rebecca L Carrier: Interphotoreceptor Matrix based Biomaterial for Retinal Repair Presented at the American Institute of Chemical Engineers (AIChE), poster) in Florida Spring 2013

Joydip Kundu, **Andrew Michaelson**, Kristen Talbot, Petr Baranov, Michael J. Young, Rebecca L. Carrier (2013) Biomimetic substrates based on decellularized retinal extra-cellular matrix. 1st International Translational Nanomedicine Conference (ITNANO2013), July 26-28 in Boston, Massachusetts (abstract accepted, poster). Summer 2013

Joydip Kundu, **Andrew Michaelson**, Kristen Talbot, Petr Baranov, Michael J. Young, Rebecca L. Carrier (2013) Decellularized retina as cell delivery vehicle for treatment of retinal diseases. Abstract submitted to The Biomedical Engineering Society (BMES) Annual Meeting, September 25-28, 2013 in Seattle, Washington (abstract accepted, poster). Fall 2013

Joydip Kundu, **Andrew Michaelson**, Kristen Talbot, Petr Baranov, Michael J. Young, Rebecca L. Carrier (2013) Decellularized retinal matrix as substrates for delivery of human retinal progenitor cells. TERMIS-Americas Conference, November 10-13 in Atlanta, GA (abstract accepted, poster). Winter 2013

Andrew Michaelson, Yujing Wang, Dana Brooks, Slava Epstein: Uncovering the Hidden Relationship Between Biological Organisms by Comparing Shapes of Ribosomal RNA” for work done with Professor Epstein, Presented at the Northeastern University Expo Spring 2010

Yujing Wang, **Andrew Michaelson**, Srinivas Somarowthu, Mary Jo Ondrechen: Software for Finding the Geometric Potential, Presented at the Northeastern University Expo Spring 2010

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Papers in preparation

Andrew Michaelson, Nara Michaelson, Katie Donnelly, Bernard Essuman, Gabriela Apparicio, Wendy Escobar, Jeenali Shah, Austin Replogle, & and a Foreword by Nara Michaelson: Inside the Professor's Notebook: Research Protocols and Notes
(Book in Preparation)

Andrew Michaelson*, Nara Michaelson, Melody Hermel, David Hermel, Ira Michaelson, John Mikhail, Ly Quoc Trung, Luis Espinoza: Resveratrol Treatment of Polycythemia Vera

Andrew Michaelson, Joydip Kundu, Petr Baranov, Michael J Young, Rebecca L Carrier: Interphotoreceptor Matrix Based Biomaterial for Retinal Repair. (Manuscript in preparation)

Qiwei Li, **Andrew Michaelson**
Predicting the Next Amazon Bestseller (Manuscript in preparation)

Andrew Michaelson, Qiwei Li, David Feder, Marcia Simon, Miriam Rafailovich
Spincasting porous PMMA scaffolds for Dentin mineralization (Manuscript in preparation)

Certifications

Advanced Science Research Center (CUNY), Manhattan NY Expired June 2019
Supervising non-production chemical laboratories

OSHA 10-Hour General Industry (Healthcare) Course Received Feb 5th, 2019
Digital Badge, CareerSafe
(<https://campus.careersafeonline.com/badges/user/349912393F92DCC1148F61224BDF041F>)

Awards

Awarded Certificate of Recognition for my contribution to the Collegiate Science and Technology Entry Program (CSTEP) and for my dedication to my students Spring 2018

Awarded Certificate of Recognition for my contribution to the Collegiate Science and Technology Entry Program (CSTEP) and for my dedication to my students Spring 2017

Won \$500.00 Travel Grant to the International Conference on Biomolecular Engineering and AICHE Spring 2013

Received the Graduate Professional Student Association Community Enhancement Award for Excellence in Use of Media Spring 2009

Received the Faculty Undergraduate Research Institute Scholarship Spring 2004

Received the Faculty Undergraduate Research Institute Scholarship Fall 2004

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Social Activities in the Community

SUNY Farmingdale, Farmingdale, NY

July 21st, 2016

Gave a lecture on the importance of doing research and directions research can take to incoming freshman

Long Island Science & Engineering Fair (LISEF), Woodbury, NY

March 10th, 2016 & March 15th, 2018

Judge for the Bioinformatics & botanical component of the LISEF

- Judge of the botanical science fair posters
- Judge of the botanical presentations and explanations of highschool students

Queens College, Queens, NY Jan 6th 2016, Jan 5th 2017, Jan 11th 2018, Jan 4th 2019

Instructor for the Annual Science Open House for High School Students

- Demonstrated hands on experiment of lemon and tangerine batteries to power LED
- Checked current level of batteries using voltmeter

Extracurricular Activities

- Founder of NUBOTS in 2001, a new extracurricular activity, approved by the Student Government Association at Northeastern University. NUBOTS comprised 162 students from different majors whose goal is to build combat robots. As President, I added an academic component to NUBOTS to work with Capstone groups of senior-level students in Electrical and Computer Engineering where we designed our robot components in Solidworks before implementation.
- NU Hillel: Served on the Social and Religious Committees for three years.
- Music: Studied classical and concert piano for nearly 20 years.
- Member of New York Academy of Sciences professional society
- Member of the American Association of Physicists in Medicine.
- Member of the Division of Medical Ethics through Harvard Medical School's Department of Social Medicine.
- Member of the New York Academy of Sciences
- Member of the American Association for the Advancement of Science

Languages

English, Hebrew

Additional Techniques, Databases, and Methods Used in the Classroom or Laboratory

Listed by Subject Area:

Biology

ELISA

PCR

RT-PCR

Bacteria plating in liquid and agar media

Spectroscopy

Centrifugation

Gel-electrophoresis

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Additional Techniques, Databases, and Methods Used in the Classroom or Laboratory Listed by Subject Area:

Biology

- Light Microscopy (oil microscopy under high magnification)
- Quantum Dots
- Yeast two hybrid
- DNA repair technology
- Protein Repair technology
- Sterilization

Mathematics

- n-dimensional calculus
- spherical coordinate system
- cylindrical coordinate system
- polar coordinate system
- derivatives
- partial derivatives
- cross product
- dot product
- Monte Carlo Method
- Queuing Theory
- Statistics
 - stemplots
 - histograms
 - boxplots
 - Binomial Theorem
 - Standard Deviation
 - Correlation
 - Normal Distributions

Physics

- Atomic Force Microscopy
- NMR
- Optical Tweezers
- Logic Gates
- Soldering
- Differential geometry
- Lagrangian
- Hamiltonian
- Calculus of variations
- Equations of Motion
- Optics
- Maxwell's Equations
- Tensors

Chemistry

- Spectroscopy
- High Pressure Liquid Chromatography

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Additional Techniques, Databases, and Methods Used in the Classroom or Laboratory Listed by Subject Area:

Chemistry

Gas Chromatography
Thin Layer chromatography
Liquid chromatography
Mass-Spectroscopy
Titration
Sand bath
Water bath
Distillation
Steam Distillation
Vacuum Distillation & Sublimation
Crystallization

Bioinformatics

mysql
perl
c
Python
HTML
CSS
MATLAB
Mathematica
Cytoscape
Pairwise Sequence Analysis
Multiple Sequence Analysis
Yasara
Unix
Linux
Friend
Hidden Markov Model
Rasmol
BLAST
Fasta
PDBsum
PDB
SCOP
CATH
NCBI/Pubmed
Protein Structural Alignment
Modeller
Swiss-Model
Stanford Microarray Database
Blosum62
Pam250

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Additional Techniques, Databases, and Methods Used in the Classroom or Laboratory Listed by Subject Area:

Bioinformatics

SWISS-PROT

Chimera

Autodock

Chems sketch

All Microsoft Office applications.

Working knowledge of Macintosh, Unix, Linux, and Windows operating systems.

Phylogenetic tree construction methods

UPGMA

Neighbor Joining

Maximum Parsimony

Maximum likelihood

Bioengineering

Systems Biology

Interaction Networks (PINs, GINs, ...)

Scale Free Networks

Vacuum Dehydration

Centrifugation

Dissecting Microscope

Autoclaving

Spectroscopy

Sterile work under a Biohood

Fluorescent Microscopy

Preparation of Zero Length Crosslinkers (EDC/Sulfo-NHS)

Preparation of Fluorescent Probes

Rhodamine Wheat Germ Agglutinin

Fluorescein Peanut Agglutinin

Hoechst

Phalloidin

Preparation of Silane Compounds (APTS)

Bicinchoninic Acid (BCA) Assay

Mammalian Cell Culturing

Hemocytometer

Tissue Engineering of Extracellular Matrix (ECM)

Decellularization

Lyophilization

Solubilization

Coating of Culture Plates

Scanning Electron Microscope

Sample Preparation and usage of the machine

Image Capture

Media Preparation for Mammalian Cell Culturing

Explant Studies

Andrew Michaelson

<https://www.linkedin.com/in/andrew-michaelson/>

Andrew.D.Michaelson@gmail.com

[1320 York Ave, Manhattan, NY](#)

617-719-2156 cell

Additional Techniques, Databases, and Methods Used in the Classroom or Laboratory Listed by Subject Area:

Bioengineering

Confocal Microscopy

Tests for content within extracellular matrices

Hydroxyproline Assay

Collagen Assay

BCA Assay

Glycosaminoglycan Assay

Biomedical Engineering

Spincasting

Blender

AutoCAD

Micro-Nano 3D Printing

Deep Learning using Keras

SEO, Videography, & Marketing

Procreate

Google Adwords

AWS Polly

YouTube Analytics

DaVinci Resolve 16

Logic Pro X

YouTube Channel

Ahrefs

Google Trends

Headline Analyzer