

WILLIAM WILSON

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Curriculum Vitae

BIOMEDICAL ENGINEERING | NANOTECHNOLOGY AND BIOMATERIALS

Industrious Biomedical Engineering student with ambitions of spearheading a research team focused on immunotherapy or nano therapy in graduate school to make a real-world impact

Passionate about conducting transformative research to identify solutions to complex medical challenges and developments. Experienced in analyzing and visualizing tumor data and improving efficiency in the disease identification process.

EDUCATION AND CREDENTIALS

Bachelor of Science in Biomedical Engineering (Expected May 2023)

GPA: 3.28 / 4.00 | Dean's Honor Roll – 5 semesters | National Society of Collegiate Scholars
University of Oklahoma, Norman, OK

Courses Include:

Biotransport, Micro-/Nano-Technology Lab, Micro-/Nano-Technology, Biomaterials
Mentored Research Experience, Quantitative Physiology, Molecular, Cellular, and Tissue
Engineering, Biomechanics, Biomedical Engineering Senior Design, Biomedical Instrumentation,
Biochemistry, Organic Chemistry, Engineering Professional Development, Biomedical Engineering
Fundamentals, Biomedical Engineering Systems and Signals

– Laboratories & Projects –

Biomedical Nano-Engineering Laboratory, (August 2022-Present)

Principal Investigator (PI) – Stefan Wilhelm, Ph.D
Engineering and Design of Nanomaterials

Boosted knowledge and efficiency in synthesizing and growing gold nanoparticles
Utilized cetyltrimethylammonium chloride (CTAC) and citrate to coat gold nanoparticles by
finding new reducing agents and methods for growth, prepared gels, and gained proficiency
in how to synthesize and grow nanoparticles

Project 1: Achieved established goals by utilizing reducing agents, techniques, and
innovative methods to make things monodisperse

Project 2: Learned the fundamentals of defending the project to the Principle Investigator.
Assisted the PI in starting a new project involving magnetic nanoparticles.

Biophotonic Imaging Laboratory, (Jan 2022 to May 2022)

Principal Investigator (PI) - Qinggong Tang, Ph.D

Increased competency in developing novel optical imaging methods for biomedical applications
Calibrated and trained the computer to identify and get the "golden standard" for specific images
Scored tumor models based on a varied scoring system to support image-based classification
Created a diagram for a [Paper](#) co-written with Dr. Tang and colleagues

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PROFESSIONAL EXPERIENCE

West Cancer Clinic, Germantown, TN

INTERN (June 2022)

Improved knowledge and competency in clinical research, data management and organization, data-related protocols, and standard operating procedures (SOPs).

- Gained knowledge and expertise in oncology science by shadowing a Radiologist, Oncologist, and Clinical Research Fellow.
- Learned about different types of breast cancer, specific treatments, chemo, radiation, and therapy. Gained insight into the clinical research function, including recruiting quality candidates and gaining FDA approval.

LEADERSHIP EXPERIENCE

St. George's Independent School, Collierville, TN

LACROSSE CLINIC COACH (Jan 2019)

Planned and executed fun and interactive lessons for younger children in the game of lacrosse.

SCHOLASTIC ACTIVITIES

FALL EXECUTIVE MEMBER – Oklahoma University Dance Marathon (OUDM)

– Ambassador/Community Relations (2020- Present)

Organized fundraising efforts for the Children's Miracle Network

Consistently generate new, fresh fundraising ideas

OKLAHOMA CLUB LACROSSE PLAYER

University of Oklahoma, Norman, OK (2021- Present)

OKLAHOMA BIOMEDICAL ENGINEERING SOCIETY MEMBER

University of Oklahoma, Norman, OK (2019 - Present)

PUBLICATIONS

Feng Yan, Trisha Valerio, Mourren Sibichan, Kari Chambers, Emily Bishop, **Tyler Wilson**, Chen Wang, Yuyang Yan, Ashley Hoover, Wei Chen, Qinggong Tang, "In Vivo longitudinal monitoring of structure, texture and angiogenesis of photothermal-therapy for melanoma and pancreatic tumor using optical coherence tomography," [Spie Digital Library](#)

SIGNATURE STRENGTHS

COMPUTER SKILLS

3D Printing | Python | MATLAB | Biorender | Data Analysis | Problem Solving | Data Quality | Computer Imaging Training

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WET LAB SKILLS

Nanotechnology | Fluid Mechanics | Microprinting | Agarose Gel Electrophoresis | Dynamic Light Scattering (DLS) | Ultraviolet Visible Spectrophotometry (UV-VIS) | Centrifugation | Lab Safety | Harvard Syringe Pump | Lab Experience | Research Experience | Analytical Metabolic and Microscopy Technique | Pipetting | Materials Science | Heat Transfer | Tissue Engineering Strategy

DRY LAB SKILLS

Circuit Design | Electrical Safety | Filter Constructing | Rigid Body Mechanics | Elastic Biological Solids | Biomedical Signal Processing | Time Dependent Viscoelastic Solids | Breadboarding and Circuiting | Circuit Analysis of AC and DC Source | RC Circuitry Mechanical Testing Operational Amplifier