

MAROUSSIA WALCKIERS

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EDUCATION

Stanford University

M.S. Mechanical Engineering (Mechatronics) | B.S. Biomechanical Engineering

Palo Alto, CA

Sept 2023 – Present

- **Graduate Coursework:** Programming Abstractions, Smart Product Design, Circuits
- **Undergraduate Coursework:** Differential Equations, Mechanics of Materials, Thermodynamics, Product Realization, Failure Prediction, Biochemistry, Tissue Engineering, Biotransport

Longwood University

B.S. Biology

Farmville, VA

Sept 2021 – Dec 2022

- **Relevant Coursework:** General and Organic Chemistry, Cell Biology, Statistics, Psychology

EXPERIENCE

Undergraduate Entrepreneurship Program, ChEM-H

Co-founder

Palo Alto, CA

June 2024 – Dec 2024

- Co-founded Halos Therapeutics (selected as 1 of 7 teams); secured 2nd place in the final pitch
- Pioneered a non-invasive regenerative solution for Stromal Corneal Scars by designing a nanoparticle able to penetrate the cornea, addressing the third leading cause of blindness

ModelHealth

Intern

Brussels, BE

May 2025 – Aug 2025

- Researched key biomechanical metrics such as muscle strength imbalance and injury probability for athletes
- Collected and analyzed sports data for model training and development
- Translated 10+ health report codebases, enhancing broader patient accessibility

Neuroscience Lab

Research Assistant

Farmville, VA

Jan 2022 – Dec 2022

- Conducted experiments using nurturing paradigms and brain staining to evaluate neural and behavioral differences in mouse models
- Performed statistical analysis and data visualization in R Studio, identifying significant inter-group differences

PROJECTS

Pediatric Heart Surgery Gut Motility Stimulator

Palo Alto, CA

- Designed a novel stimulator to accelerate enteral feeding for preterm infants using Biodesign principles, prototyping, and patient-centered innovation

Smart Pinball Machine (ME218a)

Palo Alto, CA

- Designed, built, and programmed a functional electronic pinball machine with microcontroller programming, sensor integration, and actuator control for real-time game logic and scoring

ATHLETICS & LEADERSHIP

ACC Division I Varsity Women's Field Hockey

Captain

Palo Alto, CA

Aug 2021 – Nov 2025

- Elected captain by teammates and coaching staff; balanced 25+ hours/week of training and competition
- Received the Empower Award and named MAC Freshman of the Year

Belgian National Team

Team Member

Brussels, BE

Sept 2018 – Aug 2023

- Selected to represent Belgium on multiple global stages
- Contributed to multiple Belgian championships (U16-U21)

ADDITIONAL

- **Technical Skills:** R Studio, MATLAB, Python, C/C++, CAD (SolidWorks/Fusion 360/OnShape), Laser Cutting, 3D Printing, Microcontrollers, PCBs, Circuits
- **Languages:** French (Fluent), Dutch (Fluent), English (Fluent), Spanish (Beginner)