

# CHARLES P. RABOLLI, PH.D.

MD Candidate | RNA Biologist | Translational Scientist | Engineer

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MD/PhD candidate trained in RNA biology, systems medicine, and innovation, focusing on how RNA mechanisms shape cardiovascular disease and leveraging engineering approaches to develop next-generation diagnostics and therapeutics. Experienced in cross-disciplinary collaboration and entrepreneurial strategy, with a strong track record of bridging science, medicine, and technology to translate bold ideas into real-world impact.

## EDUCATION

Doctor of Medicine	The Ohio State University	Exp. 2027
Biomedical Engineering Ph.D.	The Ohio State University	2025
CORE: Credential of Readiness	Harvard Business School Online	2025
Biomedical Engineering BS	Rutgers University	2018

## MEDICINE

### MD CANDIDATE, The Ohio State University, College of Medicine

- Passed USMLE Step 1. Currently completing core clinical rotations in Internal Medicine, Surgery, OB/GYN, Family Medicine, Pediatrics, Neurology, Psychiatry, and Emergency Medicine.
- Training emphasizes systems-level clinical reasoning, interdisciplinary collaboration, and evidence-based decision-making.
- Committed to bridging clinical insight with innovation and commercialization, leveraging medical experience to inform advances in biotechnology, digital health, and therapeutic design.

Sep 2019 - Present

## RESEARCH EXPERIENCE

### MD/PHD RESEARCHER, The Ohio State University, AI Lab for Pathology Research (AI4Path)

- Creating next-generation AI foundation model for pathology, leveraging large-scale histology datasets to transform diagnostic workflows.
- Curating and annotating colorectal carcinoma slides to generate the high-quality training data powering scalable, intelligent interpretation of digital pathology images.

Sep 2025 - Present

### MD/PHD RESEARCHER, Brown University, The Ohio State University

- Performed in vivo cardiac and metabolic studies using mouse models of heart failure and obesity, to dissect how RNA methylation modulates systemic energy homeostasis.
- Executed comprehensive molecular assays such as cell culture, transfection, RNA/protein isolation, qPCR, Western blotting, and immunofluorescence to investigate protein synthesis and stress adaptation in cardiomyocytes.
- Integrated molecular biology with multi-omic approaches ) to reveal RNA-driven mechanisms linking cardiac remodeling to adipose and metabolic reprogramming.

Feb 2021 - April 2025

### FULBRIGHT SCHOLAR, ICGEB, Giacca Lab, Molecular Medicine, Trieste Italy

- Utilized a high-throughput, image-based drug screening platform using FDA-approved compound libraries to identify agents that enhance cardiomyocyte regeneration.
- Integrated cell culture, histology, and molecular biology techniques to validate candidate compounds and uncover mechanisms driving cardiac repair and regeneration.

Oct 2018 - July 2019

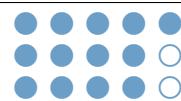
### High Throughput Screening | Immunofluorescence | Molecular Biology

## SELECT PUBLICATIONS

- Rabolli C.P.**, ... Accornero F. 2024. Nanopore Detection of METTL3-Dependent m6A-Modified mRNA Reveals a New Mechanism Regulating Cardiomyocyte Mitochondrial Metabolism [Circulation](#) [Link](#).
- Rabolli C.P.**, ... Accornero F. 2025. The m6A-binding protein YTHDF3 modulates the cardiac response to stress RNA [Link](#).
- Rabolli C.P.**, ... Accornero F. 2025. The cardiac METTL3/m6A pathway regulates the systemic response to Western diet [JCI Insight](#) [Link](#).
- All other publications are available [here](#).

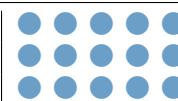
## COMPUTATIONAL

R Studio  
Python  
Matlab



## EXPERTISE

Molecular Biology  
Mouse Models  
Animal Surgery



## SOFTWARE

GraphPad Prism  
ImageJ  
Adobe Studio

