Ryan Barrs, PhD

- **Phone:** 706-833-4474
- **Email:** barrsr@icloud.com
- **Web:** ryanbarrs.com

PROFILE

- Seasoned academic with over a decade of experience in biotechnology and basic science.
- Skilled in cultivating innovation and implementing impactful solutions in the healthcare sector.
- Committed to driving excellence and pushing the boundaries of scientific knowledge.

RELEVANT EXPERIENCE

01/2024 – present
Charleston, SC

NIH T32 Ruth L. Kirschstein Postdoctoral Fellow
Medical University of South Carolina

- **Conducted independent research in Bioengineering**, collaborating with faculty to push the boundaries of existing knowledge in cardiac stem cell therapy.
- **Published 9 peer-reviewed articles**, leading to 200+ citations and enhancing the lab's reputation and visibility in the academic community.
- **Secured grants for >$1M from NHLBI** to investigate heart repair, resulting in independent funding for my doctoral research as well as generous funding for the lab overall towards patent applications and clinical translation of our work.
- **Presented research findings at multiple national conferences**, facilitating discussions and recognition that led to collaborative opportunities with leaders in the field at institutions across the country.
- **Mentored 5 undergraduate and high school students as well as junior lab members**, improving their research skills and fostering a lab environment that increased student recruitment and academic success.

08/2017 – 11/2023
Charleston, SC

NIH F31 Ruth L. Kirschstein Predoctoral Fellow
Clemson/MUSC Joint Bioengineering Program

- **Developed innovative bioengineering solutions**, including a novel approach to bioprinting vascularized tissue replacements, demonstrating strategic problem-solving and creativity.
- **Led multidisciplinary research initiatives** on human cardiac organoids, exploring advanced methods to improve regenerative therapies and repair heart tissue.
- **Analyzed the impact of bioelectric technologies** on therapeutic outcomes, optimizing extracellular vesicle production and function, and driving data-informed recommendations for improvement.

01/2019 – present
Charleston, SC

Science Communications Intern
Medical University of South Carolina

- **Demonstrated exceptional writing skills**, with samples available at www.clippings.me/ryanbarrs.
- **Produced engaging and informative science blog posts and press releases** for a variety of audiences.
- **Assisted in organizing and promoting science-related events**, including workshops, lectures, and public outreach programs.
- **Conducted research and interviews for due diligence on varied scientific topics**, synthesizing complex information into easily understandable language.
- **Collaborated with team members** to develop multimedia content, such as videos and infographics, to enhance science communication efforts.

EDUCATION

08/2017 – 11/2023
Charleston, SC

Bioengineering | Doctor of Philosophy (PhD)
Clemson University

08/2012 – 05/2016
Columbia, SC

Biomedical Engineering | Bachelor of Science (BS)
University of South Carolina (Columbia)

SELECTED PUBLICATIONS

08/2023

Nanowired human cardiac organoid transplantation enables highly efficient and effective recovery of infarcted hearts
Science Advances
- **Impact Factor = 13+**. **Lead author** of multi-year heart therapy project.

09/2020

Biomaterials for Bioprinting Microvasculature
Chemical Reviews
- Impact Factor = 50+. **Lead author of authoritative review** on biomaterials used for bioprinting vascularized tissues.

12/2020

Engineering a chemically defined hydrogel bioink for direct bioprinting of microvasculature
Biomacromolecules
- **Lead author** of novel bioink development for bioprinting vascularized tissues.

Full list of publications may be found at my Google Scholar page:
https://shorturl.at/FwKnE

LEADERSHIP EXPERIENCE AND PROFESSIONAL DEVELOPMENT

- **Mentored** 5 undergraduate and high school students across summer semesters of my doctoral research.
- Secured highly competitive NIH R01 grants, including **one ranked in the top 1%** nationwide.
- **Clemson Bioengineering Organization (CBO)** Representative - August 2020 - 2021
- **Staff Editor of Humanitas** arts magazine at MUSC, August 2018 - 2019
- **Biomedical Engineering Society (BMES)**, Member, 2017 - Present
- **Society for Biomaterials (SFB)**, Member, 2017 - Present
- **American Medical Writers Association (AMWA)**, Member, 2019 - Present
- **American Association of Extracellular Vesicles (AAEV)**, Member, 2024 - Present

SKILLS

– R&D AND PROBLEM SOLVING
Technology development | Analytical modeling | Problem decomposition | Scenario planning

– ADAPTABILITY AND CREATIVITY
Navigating ambiguity | Self-starter | Change management | Agile project execution

– INDUSTRY AND DOMAIN KNOWLEDGE
Experienced insight | Market research | Regulatory knowledge | Emerging trends

– TECHNICAL SKILLS
Experimental design | Bioinformatics | Technical writing | Academic literacy

ChatGPT | Word, PPT, Excel | Python, RStudio | Six Sigma

– SOFT SKILLS
Emotional intelligence | Active listening | Time management | Conflict resolution

HOBBIES

- Roasting coffee
- Gaelic sports (Hurling)
- Hiking
- Collecting records
- Day trading
- Independent films
- Trying new restaurants
- Playing with my cats