

Nicole (Laschober) Day

Boulder CO • Nicole.B.Day@Colorado.edu

EDUCATION

2019 – Present **Ph.D. Bioengineering**

Advisor: Dr. C. Wyatt Shields IV
Department of Chemical and Biological Engineering
University of Colorado Boulder; Boulder, CO

2015 – 2019 **Honors B.S. Bioengineering**

Thesis: Role of P2Y₁₂ Inhibition in PAR1 Stimulated Platelet Dense Granule Release
School of Chemical, Biological, and Environmental Engineering
Oregon State University; Corvallis, OR

RESEARCH AND PROFESSIONAL EXPERIENCE

Graduate Research Assistant, University of Colorado Boulder

August 2019 – Present, Boulder CO

Advisor: Dr. C. Wyatt Shields IV

- Studying magnetically controlled particle systems for the delivery of cancer immunotherapies with a focus on immunoengineering, macrophage physiology, magnetic hyperthermia, and colloid and interface science
- Skills and techniques include mammalian cell culture, flow cytometry, photolithography, microcontact printing, hydrogel synthesis, spectroscopy, controlled release, confocal microscopy, and scanning electron microscopy
- Involved in purchasing and procuring equipment for new lab, training and onboarding new students, and maintaining biosafety standards
- Mentor for four B.S. and one M.S. researcher (see below)

Teaching Assistant, University of Colorado Boulder

August 2019 – December 2019, Boulder CO

CHEN 4810: Biological Engineering Lab

Instructor: Dr. Melissa Mahoney

- Prepared experiment equipment and supplies for 60+ students in two class sections
- Monitored student safety and laboratory equipment use and provided direction during experiments

Research Assistant, Oregon State University

November 2018 – August 2019, Corvallis OR

Public Health and Human Sciences

Advisor: Dr. Yumie Takata

- Performed literature searches and analysis, formatted figures and data, and edited and proofread articles for journal submission

Bioprocess Research Intern, SeaGen

June 2018 – September 2018, Bothell WA

Bioprocess Development

Manager: Shane Nelson

- Optimized glucose feed strategies for cell growth and antibody production in industrial cell culture setting, resulting in streamlined feeding processes, improved titer, and reduced waste

- Designed automated bioreactor protocols utilizing company software for more efficient feeding and sampling
- Screened new instrumentation for implementation in Bioprocess labs

Undergraduate Researcher, Oregon Health and Science University
 June 2016 – September 2016 & June 2017 – September 2017, Portland OR
 Department of Biomedical Engineering

Advisor: Dr. Owen McCarty

- Performed secretion assays to quantify platelet dense granule release *in vitro* and elucidate platelet activation pathways
- Utilized static adhesion assays and immunofluorescence microscopy to develop a fibrinogen tracking method in platelets

AWARDS AND HONORS

2021 – Present National Institutes of Health (NIH) Biophysics T32 Traineeship
 2021 Teets Family Endowed Doctoral Fellowship in Nanotechnology
 2020 – 21 Graduate Student Assistantship in Areas of National Need, Soft Materials
 2020 National Science Foundation Graduate Research Fellowship Honorable Mention
 2019 Oregon State University “Outstanding Student” Departmental Faculty Award
 2015 – 19 Oregon State University Honor Roll
 2015 – 19 Finley Academic Excellence Award
 2016 – 17 School of Chemical, Biological, and Environmental Engineering Johnson Scholar

PUBLICATIONS

3. Day, N. B.; Wixson, W. C.; Shields IV, C. W. “Magnetic Systems for Cancer Immunotherapy.” *Acta Pharmaceutica Sinica B* **2021**. 11(8): 2172-2196.
2. Moua, E. D.; Hu, C.; Day, N. B.; Hord, N. G.; Takata, Y. “Coffee Consumption and C-Reactive Protein Levels: A Systematic Review and Meta-Analysis.” *Nutrients* **2020**. 12(5): 1349.
1. Mitrugno, A; Rigg, R. A.; Laschober, N. B.; Ngo, A. T.; Pang, J.; Williams, C. D.; Aslan, J. E.; McCarty, O. J. “Potentiation of TRAP-6-induced platelet dense granule release by blockade of P2Y₁₂ signaling with MRS2395.” *Platelets* **2018**. 29(4): 383-394.

MENTORSHIP

Rianne Dalhuisen, University of Twente, Biomedical Engineering Master’s Student
 September 2021 – Present

- M.S. Thesis: Microneedle Application of Hydrogel System for Reduction of Tumor Stroma and Melanoma Therapy

Nichole Loomis, University of Colorado Boulder, Chemical Engineering Undergraduate
 September 2021 – Present

- Award: Biological Sciences Initiative Scholar, September 2021
- Project: Magnetically Responsive Drug Release from Elastomeric Particles

Sarah Adzema, University of Colorado Boulder, Chemical and Biological Engineering Undergraduate
 May 2021 – Present

- Award: CU Summer Program for Undergraduate Research, May 2021
- Project: Elucidating the Immunological Responses of Magnetic Microactuators

Chris Orear, University of Colorado Boulder, Biomedical Engineering Undergraduate
March 2021 – Present

- Awards: Biological Sciences Initiative Scholar, May 2021 & September 2021
- Project: Characterization of Magnetic Hyperthermia-Induced Particle Shape Change

William Wixson, University of Colorado Boulder, Chemical Engineering Undergraduate
January 2020 – May 2021

- Award: Biological Sciences Initiative Scholar, May 2020
- Senior Thesis: Shape-Changing Macrophage Backpacks for Cancer Immunotherapy

PRESENTATIONS

2. Role of P2Y₁₂ Inhibition in PAR1 Stimulated Platelet Dense Granule Release. Oregon State University Honors Thesis Defense (Corvallis, OR). May 2019. Laschober, N. B.
1. Role of Arp2/3 in Fibrinogen Binding and Distribution in Platelets. Biomedical Engineering Society National Meeting poster presentation (Phoenix, AZ). October 2017. Laschober, N. B.; Mitrugno, A.; Ngo, A. T.; McCarty, O. J.

LEADERSHIP AND COMMUNITY SERVICE

- Northglenn High School Capstone Mentor, August 2021 – Present
- CU Science Discovery K-12 STEM outreach, February 2020 – Present
- High School Young Life Leader, August 2019 – Present
- McNair Scholar Program Graduate Mentor, September 2019 – June 2020
- Society of Women Engineers (SWE) Officer and National Member, March 2017 – June 2019
- College Young Life Leader, May 2017 – June 2019
- School of Chemical, Biological, and Environmental Engineering K-12 STEM outreach, September 2015 – June 2016