

November, 2022

Curriculum Vitae Dorottya B. Noble

Yale University
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Education

- 2010 Ph.D., Yale University (Molecular Biophysics and Biochemistry)
Thesis: "Investigating the origins of divalent cation mediated self-association of β -2 Microglobulin via mutagenesis"
Thesis advisor: Prof. Andrew Miranker
- 2003 B.A., The College of Wooster (Biochemistry, minor in Spanish; *magna cum laude*)
Thesis: "The elucidation of the reaction mechanism of the nucleophilic ring opening of an aziridinium ion at the monosubstituted center"
Thesis advisor: Prof. Ellen Burns

Positions Held

- 10/2022- present ***Assistant Dean of the Faculty of Arts and Sciences, Yale University***
Administer the Science and Social Science departments in the FAS along with associated cross-departmental programs and centers.
- 07/2015 – 10/2022 ***Associate Director of the Program in Physics, Engineering and Biology, and of the Integrated Graduate Program in Physical and Engineering Biology, Yale University***
- 01/2010 – 06/2015 ***Assistant Director of the Program in Physics, Engineering and Biology, and of the Integrated Graduate Program in Physical and Engineering Biology, Yale University***
Leading/co-leading initiatives focused on bringing together researchers from the biological and physical sciences, and engineering to enable cutting-edge convergent research and training programs. Developing, leading, and assessing a variety of research and training programs for graduate and undergraduate students. Strategic planning, budgeting, seed grant administration, organization of symposia/retreats. Graduate and summer undergraduate program admissions, monitoring student progress, and organizing and co-teaching in courses. Leading the program's recruiting and science outreach efforts. Writing and leading funded grant

proposals, which supported training and science outreach initiatives on their own or as part of a large center grant. Stewardship of grant awards and dissemination of best practices and tools developed in interdisciplinary research training.

Awards and Honors

2006	Yale Molecular Biophysics and Biochemistry Excellence in Teaching Award
2004	NSF-Graduate Research Fellowship Honorable Mention, Yale University
2003	William Byron Ross Memorial Prize in Chemistry
2003	Sisodia-Williams Prize in Biochemistry
2003	The American Chemical Society, Wooster Section Senior Award
2003	James T. McFarland Senior Independent Study Poster Award, The College of Wooster
2002	Cary R. Wagner Prize in Chemistry, The College of Wooster
2002	Inducted into <i>Phi Beta Kappa Society</i> , The College of Wooster
2002	John W. Chittum Prize in Chemistry, The College of Wooster
2000	CRC Press LLC Freshman Chemistry Achievement Award

Journal Articles

1. Shipps, C., Thrush, K.L., Reinhardt, C.R., Siwiecki, S.A., Claydon, J.L., **Noble, D.B.***, and O'Hern, C.S. *Student-led workshop strengthens perceived discussion skills and community in an interdisciplinary graduate program*. FASEB BioAdvances, 2022. 00:1-12. doi: 10.1096/fba.2021-00165 . * corresponding author
2. Walker, S.A., Pham, A., Nizzero, S., Kim, M., Riter, B., Bletz, J., Judge, S., Phillips, B., **Noble, D.**, Murray, D., Wetzel, E. Samson, S., McMahon, M., Flink, C., Couch, J., Tomlin, C., Swanson, K., Anderson, A.R.A., Odde, D., Shen, H., Hughes, S., Zahir, N., Enderling, H., and Wolfram, J. *Education and Outreach in Physical Sciences in Oncology*. Trends Cancer, 2021. 7(1): p. 3-9.
3. **Noble, D.B.**, Mochrie, S.G., O'Hern, C.S., Pollard, T.D., and Regan, L., *Promoting convergence: The integrated graduate program in physical and engineering biology at Yale University, a new model for graduate education*. Biochem Mol Biol Educ, 2016. 44(6): p. 537-549.
4. Wolfe, L.S., Calabrese, M.F., Nath, A., **Blaho, D.V.**, Miranker, A.D., and Xiong, Y., *Protein-induced photophysical changes to the amyloid indicator dye thioflavin T*. Proc Natl Acad Sci U S A, 2010. 107(39): p. 16863-8.
5. **Blaho, D.V.** and Miranker, A.D., *Delineating the conformational elements responsible for Cu(2+)-induced oligomerization of beta-2 microglobulin*. Biochemistry, 2009. 48(28): p. 6610-7.
6. Elwell, D.L., Borger, D.C., **Blaho, D.V.**, Fahrni, J.K., Keener, H.M., and Willett, L.B., *Changes in concentrations of malodorous compounds during controlled aeration composting*. Compost Science and Utilization, 2004. 12 (2): p. 102-107.
7. Crouser, E.D., Julian, M.W., **Blaho, D.V.**, and Pfeiffer, D.R. *Endotoxin-induced mitochondrial damage correlates with impaired respiratory activity*. Crit Care Med, 2002. 30(2): p. 276-84.

Presentations

Talks

1. Yale Systems Biology Institute Symposium, "Education and Outreach Outcomes in Cancer Systems Biology at Yale", online (June 8, 2021).
2. Physics of Living Systems conference, "Best practices form the Yale PoLS node to grow equity, including and diversity in PoLS" online (October 25, 2020)
3. Yale Systems Biology Institute Symposium, "Education and Outreach Outcomes in Cancer Systems Biology at Yale", online (August 24, 2020).
4. NCI Cancer Systems Biology Consortium, Education and Outreach Working Group, "A new science communications program at Yale CSB Center", online (October 8, 2019).
5. NCI Cancer Systems Biology Consortium, Education and Outreach Working Group, "Working with patient advocates on the CSBC/PSON Public Interest Pieces" online (February 12, 2019)
6. NCI Patient Advocate Working Group "Working with a patient advocate on the CSBC/PSON Working Group Public Interest Pieces" online (January 30, 2019)
7. NIH Training Grantees Meeting "Outreach and science communication" NIH, Bethesda, MD (June 22, 2018)
8. NCI Cancer Systems Biology Consortium, Education and Outreach Working Group, "Flipped Science Fair: Outcomes and lessons learned" online (June 5, 2018)
9. Systems Biology Institute Symposium, "The CaSBY education and outreach core: Engaging with the public and disseminating our research", Yale University, New Haven, CT (May 18, 2018).
10. Systems Biology meeting "Cancer systems biology outreach opportunities" Yale University, New Haven, CT (November 17, 2017).
11. Yale Summer Institute "Modifying methods section of Boot Camp Biology" Center for Teaching and Learning, Yale University, New Haven, CT (May 28, 2015)
12. Physics of Living Systems Research Network conference "Yale's Integrated Graduate Program in Physical and Engineering Biology" University of California San Diego, San Diego, CA (June 20, 2011).
13. Conference, "Women in Science at Yale: Strategies and Goals", Brown University, Providence, RI (February 9, 2008)
14. Molecular Biophysics and Biochemistry seminar "Investigating the origins of divalent cation mediated self-association of beta-2 Microglobulin via mutagenesis" Yale University, New Haven, CT (December 15, 2009)
15. Women in Science Seminar, "My experiences in graduate school" Naugatuck Valley Community College, Waterbury, CT (October 28, 2008)

16. Biophysics seminar series "Cu²⁺ as a trigger: How histidines mediate affinity, stabilization and oligomerization in beta-2 Microglobulin" Yale University, New Haven, CT (November 21, 2008).
17. Molecular Biophysics and Biochemistry seminar "Elucidating the role of histidine residues in beta-2 Microglobulin oligomerization" Woods Hole, MA (September 25, 2008)
18. Biophysics seminar series "Understanding the role of cations in amyloid fiber formation", Yale University, New Haven, CT (November 17, 2005).
19. ACS chapter meeting, "Never Say Never--From High School to Grad School" Wooster Local ACS Section, Akron, OH (May 13, 2003).
20. Research seminar series "Exploring the Minor Product Formation in the Aziridinium Carbonylation Reaction", The College of Wooster, Wooster, OH (September 26, 2002).

Posters

1. Virtual CSBC/PERSON poster session "Education and outreach efforts at Yale's CSB center and E&O working group to share science with lay audiences" online (January 8, 2021).
2. Cancer Systems Biology Consortium annual investigators meeting "Education and outreach efforts at Yale's CSB center and E&O working group to share science with lay audiences" online (September 17, 2020).
3. Physics of Living Systems Education Meeting, "Science Communication and Outreach in Yale's Integrated Graduate Program in Physical and Engineering Biology" Johns Hopkins University, Baltimore, MD (March 1, 2019).
4. NSF REU PI Meeting, "REU Site: Integrated Research at the Frontiers of the Biological, Physical and Engineering Sciences" Arlington, VA (April 7, 2014)
5. Yale-Weizmann encounter in the biological, physical, and engineering sciences meeting, "Integrated Graduate Program in Physical and Engineering Biology" Weizmann Institute of Science, Rehovot, Israel (January 8, 2014).
6. BBS recruiting weekends "Integrated Graduate Program in Physical and Engineering Biology" (January/February 2010-2022)
7. Protein Society annual meeting "Delineating the conformational elements responsible for ligand induced oligomerization of beta 2-microglobulin" Boston, MA (July 26, 2009)
8. FASEB conference "The roles of histidines in P32A β 2m Cu²⁺ mediated oligomerization", Saxtons River, VT (July 30, 2008).
9. Yale departmental retreat "The role of histidines in Cu²⁺ mediated β 2m oligomerization", Woods Hole, MA, (September 29, 2007).
10. Yale departmental retreat "Understanding conformational rearrangement in β 2m oligomerization" Woods Hole, MA (September, 2006)

11. Yale departmental retreat “Exploring the mechanism of cation-associated amyloidosis”, Woods Hole, MA (September, 2005)

Teaching

- MB&B 520 *Boot Camp Biology* (An intensive introduction to biological nomenclature, systems, processes, and techniques for graduate students with previous backgrounds in non-biological fields including physics, engineering, and computer science who wish to perform graduate research in the biological sciences). Since 2010, co-taught and organized this course each spring, introducing active learning approaches such as discussions, a real-time vocabulary sheet, and hands-on learning.
- Teaching most workshops associated with Yale’s NSF REU Site (see ‘support’), which integrate many small group activities and discussions into each workshop. These 1-2 hr workshops include: “Introduction to working in a lab”, “Careers in STEM”, “Presentation workshop Part I: Giving a research talk”, “Presentation workshop Part II: Giving a research poster”, “Presentation workshop Part III: Communicating with a lay audience”, “How to write a paper”, “How to write a personal statement”, “Ethical dilemmas faced by scientists”, “Graduate school admissions workshop”. (summers, 2010-present)
- Co-advising students in developing a student-taught discussion workshop and appropriate assessment tools. The workshop serves as a primer to the Integrated Graduate Program in Physical and Engineering Biology’s Methods and Logic in Interdisciplinary Research discussion course, which I organized. The workshop, via games and discussions, bolsters student discussion skills to help everyone follow discussions and use constructive and inclusive conversation entrances that build on prior discussion. (2018-present).
- Helping redesign and organize a Science Communication Workshop for graduate students and postdocs to help them explain their science to lay audiences. (2019)
- Co-designed and co-led the mini-DREAM Team Project, which is designed for National Cancer Institute undergraduate students to put their knowledge to practice in using computational tools in cancer systems biology. (2021-2022)
- Teaching Assistant (TA) Experiences: 1) MB&B 105 “An Issues Approach to Biology” (Fall, 2009); 2) MB&B 720 “Macromolecular Dynamics” (Spring, 2005 and 2006).

Professional and administrative activities

Panels & interviews

- Interviewee, “The Importance of Research”, Research Fair of the University of Puerto Rico, Mayagüez Campus, online (Facebook Live) (March 17, 2022)
- Panelist, Bioengineering: Graduate Programs, Career Paths, and Current Trends; NIH Graduate and Professional Fair, Bethesda, MD (July 17, 2019)
- Panelist, Academic administration panel; Office of Career Strategy, Yale University, New Haven, CT (February 19, 2019)

- Panelist, Academic administration careers; Career Network for Student scientists and Postdocs at Yale, Yale University, New Haven, CT (April 16, 2017)
- Panelist, Research and Academic Career Panel; Columbia University, New York, NY (March 25, 2014)

Reviewer

- Proposal Reviewer, CSBC/PSON inspired DREAM Challenge, Sage Bionetworks (December, 2019)
- Proposal Reviewer, Seed grant applications, Program in Physics, Engineering and Biology (2016, 2018)
- Book Reviewer, Yale Journal of Biology and Medicine, Yale University (2006-2009)

Science Outreach and Education

- Organizer, Interactive Science Talks for Middle School Students, Yale University (2012-2022, 2-3 times annually, working with graduate and undergraduate students to host the half-day event)
- Organizer, “In Conversation with...” short interviews to feature researchers and their research on YouTube (2021)
- Co-developer, Pathfinder Hopkins School Teaching Modules, Hopkins School and Yale University (2010 – 2022)
- Organizer, Program in Physics, Engineering and Biology Distinguished Speaker Series (2010 – 2022)
- Co-organizer, Microfabricated Tools for Cancer Systems Biology Summer School, Yale University (July 30 – August 2, 2019)
- Organizer, Physical and Engineering Biology lab tours for undergraduates (2014-2019)
- Organizer, Flipped Science Fair: Cancer Systems Biology, Yale University (May 17, 2018, working with graduate students and postdoc to present a research poster to high school judges)
- Co-organizer, Microfluidics in Systems Biology Workshop, Yale University (May 19, 2018)
- Advisor to student-run ‘Distilled’ magazine (2018, 2019)
- Judge, New Haven Science Fair (2015, 2016)
- President, Women in Science at Yale (2006-2009)

Committees

- Chair, NCI Cancer Systems Biology Consortium Education and Outreach Working Group (2018-2021)
- Member, BBS Executive Committee (2019-present)
- Co-organizer, Program in Physics, Engineering and Biology, and the Quantitative Biology Institute joint retreat (Fall, 2019)
- Member, Connecticut Academy of Science Advisory Committee for Science and Technology Fellowship Program (2017-present)
- Co-organize annual graduate student recruiting effort in addition to giving webinars, talks, poster. (2010-present)
- Co-organizer, Inaugural PEB Symposium, Yale University (2012)
- Member, Protein Society Symposium Planning & Events Subcommittee (2012)

Prior support (through October, 2022)

- NSF DBI 2050777 (PI: O'Hern, role: Co-PI) "REU Site: Research Training in Biomedical Science and Engineering" (3/2021 – 2/2024)
- NSF BII 2021988 (PI: Venkadesan; role: senior personnel) "BII Design: Evolutionary Morphogenesis and Biodiversity Institute (EMBody)" (9/2020 – 8/2022)
- NSF PHY-2012406 (PI: Mochrie; role: senior personnel) "Collaborative research: PoLS Student Research Network" (9/2021-8/2026)
- NIH NIGMS (PI: O'Hern; role: senior personnel) "Convergent Training in Systems Biology at Yale" (9/2022-8/2027)
- NIH NCI (subcontract, PI: O'Hern; role: senior personnel) "Multi-Consortia Coordinating Center for Cancer Biology: Building Interdisciplinary Scientific Communities, Coordinating Impactful Resource Sharing, and Advancing Cancer Research" (9/2022-8/2027)
- NIH NCI (PI: Levchenko; Education and Outreach Core PI: O'Hern; role: senior personnel) "Systems Analysis of Phenotypic Switch in Control of Cancer Invasion" (8/2016-7/2022)
- NIH NIBIB (PI: O'Hern; role: senior personnel) "Convergent graduate training in engineering, physics and biology" (4/2016-3/2021)
- NSF DBI 1755494 (PI: O'Hern; role: senior personnel) "REU Site: Interdisciplinary Research Training Across Biology, Physics, and Engineering" (3/2018 – 2/2021)
- NSF DBI-1458609 (PI: O'Hern; role: senior personnel); "REU Site: Convergence of research at the interface of the biological, physical and engineering sciences" (5/2015-3/2018)
- NSF PHY-1522467 (PI: Mochrie; role: senior personnel) "Collaborative research: PoLS Student Research Network" (10/2015 – 9/2021)

- NSF DBI-1156585 (PI: O'Hern; role: senior personnel); "REU Site: Integrated Research at the Frontiers of the Biological, Physical and Engineering Sciences" (3/2012-2/2015).
- NSF PHY-1019147 (PI: Mochrie; role: senior personnel) "Collaborative research: PoLS Student Research Network" (7/2010 – 6/2015)