



Yevgeny Brudno



Assistant Professor  
Department of Biomedical  
Engineering  
CMI member  
LCCC member

B.A University of Pennsylvania,  
Ph.D. Harvard University  
Postdoc: Harvard University

**Address:**

Joint Department of  
Biomedical Engineering  
911 Oval Drive  
Mailbox 7115  
4208B, Engineering Building III  
Raleigh, NC 27695

**Email:** [ybrudno@ncsu.edu](mailto:ybrudno@ncsu.edu)  
<https://pharmaco.bme.unc.edu/>

**Title: Laboratory for Molecular Pharmacoengineering**

**Research emphasis:**

Research in the Brudno lab focuses on exploiting cutting-edge chemical, bio-material and nanomedicine technologies to understand physiological responses during disease and regeneration and fulfill critical unmet needs in the clinic. His group uses chemical prodrug therapy, controlled drug delivery and nanomedicine to enable new forms of cancer chemotherapy and immunotherapy as well as treatment of infection and other diseases.

**Application:**

- Sustained Drug Release
- Refillable Drug Depots
- Drug Delivery
- Cancer therapeutics

**Collaboration potential:**

- Controlled Local Release of Therapeutic Molecules
- Drug modification and Prodrugs
- Biomaterial systems
- Nanoparticles + Nanotechnology

**Selected publications:**

Brudno Y, Desai R, Kwee B, Aizenberg M, Mooney DJ. "In Vivo Targeting through Click Chemistry" *ChemMedChem*. 10(4): 617-620 (2015)

Brudno Y, Silva EA, Kearney CJ, Lewin S, Aizenberg M, Mooney DJ. "Refilling Drug Delivery Depots Through the Blood" *Proceedings of the National Academy of Science* 111(35): 12722-7 (2014)

Brudno Y, Ennett AB, Chen R, Aizenberg M, Mooney DJ. "Enhancing microvascular formation and vessel maturation through temporal control over multiple pro-angiogenic and pro-maturation factors." *Biomaterials* 34(36): 9201-9209 (2013)

Brudno Y, Birnbaum ME, Kleiner RE, Liu DR. "An In Vitro Translation, Selection, and Amplification System for Peptide Nucleic Acids" *Nature Chemical Biology* 6: 148-155 (2009).