Nicholas Giangreco

Email:	nick.giangreco@gmail.com
Links:	Github Linkedin ORCID
Website:	nickg.bio
Programming Languages:	Frequent: R, Python, Bash, SQL Previously: Java
Web design:	HTML, CSS, Bootstrap library
Formatting:	LaTeX, Markdown, Jupyter Notebooks, Rmarkdown, Microsoft and Apple Office Suite

EDUCATION

2021 (expected) PhD Candidate, Systems Biology; Columbia University, New York City, NY

PhD advisor: Nicholas Tatonetti

Topics: Translational Bioinformatics, Systems Biology, Systems Pharmacology

Graduate Courses: Deep Sequencing, Translational Bioinformatics, Computational Genomics, Statistical Inference, How to Make a Drug, Molecular Pharmacology

2010-2014 BS, Biochemistry; University of Rochester, Rochester, NY

Minor: Philosophy

WORK EXPERIENCE

2014-Present National Human Genome Research Institute; Bethesda, MD

Principal Investigator: Dr. Laura Elnitski

- Molecular events during tumorigenesis of murine ovarian tumor subtypes differing in deletion of tumor suppressor genes.
- RNA sequencing, DNA methylation sequencing, and their integration.

Trainee 2014-2016

Special Volunteer 2016-Present

FELLOWSHIPS AND AWARDS

- Columbia Diversity Fellowship.
- Department of Systems Biology Merit Fellowship.
- Donald Charles Award, University of Rochester Department of Biology.
- Fulbright Fellowship Alternate 2013-2014: Sweden, Molecular Modeling, "Novel Antibody-SpA Complex Modeling".
- Travel Award to 9th Student Council and ISMB/ECCB conference 2013 Berlin, Germany.

PUBLICATIONS AND POSTERS

- Castillero E., Ali Z., Akashi H., **Giangreco N.**, Wang C., Ji R., Zhang X., Kheysin N., Park J., Hegde S., Patel S., Stein S., Cuenca C., Leung D., Homma S., Tatonetti N., Topkara V., Takeda K., Colombo P., Naka Y., Sweeny L., Schulze C., George I. Structural and Functional Cardiac Profile after Prolonged Duration of Mechanical Unloading: Potential Implications for Myocardial Recovery. *(submitted, Journal of Molecular and Cellular Cardiology)*
- **Nick Giangreco**. Scan2CNV. OMICSTools
- **Giangreco N**, Zorn E, Chen E et al. Identification of novel primary graft dysfunction biomarkers using exosome proteomics [version 1; not peer reviewed]. F1000Research 2017, 6:2080 (poster) (doi: 10.7490/f1000research.1115115.1)
- Sarah Kim-Hellmuth, Matthias Bechheim, Benno Puetz, Pejman Mohammadi, Yohann Nedelec, **Nicholas Giangreco**, Jessica Becker, Vera Kaiser, Nadine Fricker, Esther Beier, Peter Boor, Stephane Castel, Markus M. Noethen, Luis B. Barreiro, Joseph K. Pickrell, Bertram Mueller-Myhsok, Tuuli Lappalainen, Johannes Schumacher, Veit Hornung. Genetic regulatory effects modified by immune activation contribute to autoimmune disease associations *Nature Communications*, 8 (266): 1-10.
- **Giangreco N.**, Petrykowska H., Scott A., Margolin G., Gotea V., Cho K. R., and Elnitski L. Inactivation of *Arid1a* drives aberrant epigenetic traits in a mouse model of *Apc/Pten* defective ovarian endometrioid tumors. *(in preparation)*
- **Giangreco N** and Lezon T. Alternative conformation prediction of Vibrio Cholerae concentrative nucleoside transporter. F1000Posters 2013, 4:776 (poster).

CONFERENCES AND HACKATHONS

- American Heart Association Scientific Sessions 2017, poster presentation *Giangreco et al. 2017*.
- NCBI Hackathon @ New York Genome Center June 2017.
- NCBI Hackathon @ NCBI March 2017.
- CSHL Biological Data Science meeting October 2016.
- JHU DaSH Hackathon September 2015.
- ISMB/ECCB conference @ Berlin, Germany July 2013, poster presentation *Giangreco et al. 2013*.

TALKS AND PANELS

- "Tools, Libraries and Analyses in Biomedical Data Science", New York Healthcare Artificial Intelligence Society, December 2017.
- "Doing Science with Big Data", Late Night Science, Columbia University Neuroscience Outreach, December 2017.
- "AI, Life Sciences, and Big Data", New York Healthcare Artificial Intelligence Society, August 2017.
- NIDDK Undergraduate Step-Up Judge, NIH, Bethesda MD, August 2015.

PROFESSIONAL MEMBERSHIPS

- American Heart Association, 2017-.
- American Medical Informatics Association, 2017-.
- International Society of Computational Biology, 2013-2014 & 2017-.

TEACHING, TUTORING, AND MENTORING

- Undergraduate Mentoring:

  - Payal Chandak, Columbia University
    - Providing guidance and instruction in biomedical data science and research training in preparation for Summer 2018 research internship in the Tatonetti Lab.
- Curiology tutor
  - Managed and co-led science experiments with NIH fellows for middle school students in Washington D.C.
- College Bound tutor
  - Facilitated completion of homework assignments in STEM for Washington D.C. high school students.
- Genetics Study Group Leader, Center for Excellence in Teaching and Learning, University of Rochester.

COMMUNITY INVOLVEMENT

- CUMC Data Science Group
  - Co-organizer of mostly wet-lab biologists learning data science topics using the R programming language.
  - Organize lession plan for biweekly meetings.
  - Lead project management for bioinformatics projects.
  - Organize and manage hackathons for biomedical scientists at CUMC.
- NYC MeetUps
  - AI @ Columbia University Medical Center
    - Attend and engage in public discourse on a wide range of topics such as AI & Society, AI & Healthcare, and economic impact by AI.
    - Facilitate group engagement and organization by consult.
  - Data Storytelling
    - Monthly lectures by data scientists and managers from private companies presenting stories and narratives using visualizations and interactive methods on diverse sources of data.
  - Statistical programming
    - Monthly seminars by data scientists, engineers and analysts using novel and statistically rigorous methods applied within academic and company research teams mainly using the R programming language.
    - Collaborate with community members producing programming solutions, such as solutions for *R for Data Science* by Hadley Wickham.