

# NINA MASTERS

## CURRICULUM VITAE

mastersn@umich.edu | | (646) 354 - 3687

### EDUCATION

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- The University of Michigan**, Ann Arbor, MI Expected May 2021  
PhD Pre-Candidate in Epidemiologic Science
- The University of Michigan**, Ann Arbor, MI May 2018  
*Phi Kappa Phi*  
MPH in Global Health Epidemiology. GPA 4.00
- Princeton University**, Princeton, NJ June 2014  
*Summa Cum Laude, Phi Beta Kappa, Sigma Xi*  
A.B. in Chemistry, Certificate in Materials Science and Engineering. GPA 3.97  
*Thesis: Plasmonic Colloidosomes: Photothermally Activated Core-shell Particles for Stimulated Release of Biomolecules*
- The University of Queensland**, Brisbane, Queensland, Australia Spring 2013  
Princeton Semester Abroad, GPA 4.00, Dean's List  
*Research: Synthesis of Octapeptin C4 Fluorescent Probes: Investigation into a Novel Antibiotic to Treat NDM 1 Bacteria*

### RESEARCH EXPERIENCE

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- University of Michigan**, Ann Arbor, MI September 2016 – Present  
*Graduate Student Research Assistant*, Lab of Professor Matthew Boulton
- Conduct vaccine research and statistical analysis on vaccine inequity and predictors of differential coverage
  - Investigate timeliness and impacts of vaccine co-administration on populations in Kenya and Ethiopia
- St. Paul's Hospital Millennium Medical College**, Addis Ababa, Ethiopia May – July 2017  
*Summer Research Intern*, Public Health Department
- Designed and conducted multistage pilot study of 350 caregivers of infants aged 3-12 months of age on perceptions of vaccine necessity and timeliness of government-provided vaccinations
  - Developed instructional design materials and conducted training for reference management software
- Princeton University, Mechanical & Aerospace Engineering**, Princeton, NJ July 2013 – June 2014  
*Researcher*, Nanotechnology and Materials Science Lab of Professor Michael McAlpine
- Created stable, 3D-printed, double emulsions encapsulated by photosensitive gold nanorods to assist in biomolecule gradient creation to accurately mimic biological systems for tissue generation (in vitro and in vivo)
- University of Queensland, Institute for Molecular Bioscience**, Brisbane, Australia Spring 2013  
*Researcher*, Drug Discovery Lab of Professor Matthew Cooper
- Synthesized two de novo octapeptin antibiotics using solid phase peptide chemistry techniques with potential use against multidrug resistant Gram-negative bacteria
- Ecole Polytechnique, Laboratoire Hétéroéléments et Coordination**, Palaiseau, France Summer 2012  
*Researcher*, Organometallic Synthesis Lab of Professor Audrey Auffrant
- Synthesized four organic ligands, coordinated three of them to Cobalt (II), and fully characterized them using catalytic and electrochemical tests as well as X-ray crystallization and diffraction
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## PROFESSIONAL EXPERIENCE

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**MaidaByNina: Muralist**, New York, NY Fall 2015 – Present

- Design and paint large-scale geometric murals for private and corporate clients
- Built and maintain website to showcase design work and orchestrate new commissions at maidabynina.com

**Recombine**, New York, NY August 2015 – July 2016

*Bioinformatics Research Analyst* for growth-stage clinical genomic testing company

- Conducted literature review and mutation curation for existing pathogenic variants for genetic disease, identified novel variants and assess their pathogenicity, and validated database containing all mutation information

**Huron Consulting Group**, New York, NY September 2014 - July 2015

*Life Sciences Strategy Analyst* for pharmaceutical and biotechnology clients

- Provided strategy consulting services, including data and epidemiological analysis, disease landscape research, clinical trial assessments, and client-facing project management

**Private Tutor: Science, Math, and French**, New York, NY 2011 – 2016

- Tutored college and high school students in Chemistry, Biology, Math, and French
- Employed by Princeton Tutoring during four years at Princeton and worked as a freelance tutor in NYC

**Center for New Community**, Chicago, IL 2010 – 2012

*Researcher* for social justice organization working on anti-immigrant and nativist policy

- Worked as a remote researcher for 2 years part time authoring reports on nativism in the United States
- Went to Arizona to interview Sheriff Joe Arpaio for a documentary film on nativism in America as part of a student delegation led by Howard and American Universities

## LEADERSHIP & VOLUNTEER ACTIVITIES

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**Undergraduate Public Health Mentor**, Ann Arbor, MI 2018 - Present

- Mentor to undergraduate students matched on interests and career goals to facilitate decision making and research planning for public health

**Innovation in Action, University of Michigan**, Ann Arbor, MI 2016 – 2017

- Worked with an interdisciplinary team of engineers and public health students to develop innovative ways to identify clean water sources and detect unsafe water in the Michigan area for innovation competition in the wake of the Flint water crisis

**New York Cares: Volunteer**, New York, NY 2014 – 2016

- Volunteered with Lego Mindstorms robotics program in the outer boroughs to help underserved children in STEM

**Forbes Residential College, Princeton University**, Princeton, NJ

- *Major Choices Peer Advisor*: Mentored underclassmen regarding course selection 2011 – 2014
- *Peer Tutor*: Tutored students in Organic Chemistry, Multivariable Calculus, & Linear Algebra 2011 – 2014
- *Graphic Design Chair*: designed logos, t-shirts, and websites for athletic teams and student clubs 2011 – 2014

## HONORS & AWARDS

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University of Michigan Dean's Award August 2016

*Awarded full tuition scholarship for two-year MPH program in Global Epidemiology*

The Merck Index Prize June 2014

*Awarded to top senior for outstanding work in Chemistry, Princeton University*

Finalist for Marshall Scholarship, New York Region Fall 2013

The William Foster Memorial Prize June 2013

*Awarded to top junior for outstanding academic and research ability in Chemistry, Princeton University*

## **PUBLICATIONS & PRESENTATIONS**

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### **Published Manuscripts**

- **Masters NB**, Abeje Y, Wagner AL, Boulton ML. Vaccine Hesitancy Among Caregivers and Association with Childhood Vaccination Timeliness in Addis Ababa, Ethiopia. *Human Vaccines & Immunotherapeutics*. 2018. doi:10.1080/21645515.2018.1480242.
- Brouwer AF, **Masters NB**, Eisenberg JNS. Quantitative microbial risk assessment and transmission modeling of waterborne pathogens. *CEHR*. Apr 20, 2018. doi: 10.1007/s40572-018-0196-x. [Epub ahead of print].
- **Masters NB**, Wagner AL, Carlson BF, Boulton ML. Vaccination timeliness and co-administration among Kenyan Children. *Vaccine*. 2018;36(11): 1353-1360.
- Shenton LM, Wagner, AL, Bettampadi D, **Masters NB**, Carlson B, Boulton ML. Factors Associated with Vaccination Status of Children Aged 12-48 Months in India, 2012-2013. *Maternal and Child Health Journal*. December 2017. doi:10.1007/s10995-017-2409-6
- Joseph E, Manoharan A, Kania K, **Masters N**, Shraga R, Patel B, Pollock A, Wisotzkey R, Jaremko M, Parets S, Fox R, Kumar N, Bisignano A., Puig O. Comprehensive Next Generation Sequencing Assay for Identifying Pathogenic Variants Associated with Cardiovascular Diseases. *Journal of the American College of Cardiology*. 2017;69(11):929. doi:10.1016/S0735-1097(17)34318-8
- Gupta MK, Meng F, Johnson BN, Kong YL, Tian L, Yeh Y, **Masters N**, Singamaneni S, McAlpine M. 3D Printed Programmable Release Capsules. *Nano Letters*. 2015;15(8): 5321-5329. doi:10.1021/acs.nanolett.5b01688

### **Conference Presentations**

- **Masters N.** & Abeje Y. (July, 2017). *Evaluating Perceptions of Vaccine Necessity in Health Centers in Addis Ababa*. Presentation at Ethiopian Futures Symposium, Addis Ababa, Ethiopia.

### **Manuscripts under Review**

- **Masters NB**, Wagner AL, Carlson BF, Muuo SW, Mutua MK, Boulton ML. Childhood Vaccination in Kenya: Socio-Economic Determinants and Disparities Among the Somali Ethnic Minority. *IJPH*. 2018 (*under review*)
- **Masters NB**, Wagner AL, Boulton ML. Brief Report: Measles Cases in Tianjin, China, 2009 – 2013. *Vaccine*. 2018 (*under review*)

### **Manuscripts in Preparation**

- Wagner AL, **Masters NB**, Carlson BF, Boulton ML. Systematic review of vaccine timeliness, 2005 – 2017 (*in preparation*)

## **SKILLS**

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Proficient in Microsoft Office, Adobe Photoshop and Illustrator, LaTeX, Python, SQL, Github, SAS, R, & Matlab  
Proficient in French  
Conservatory-trained clarinetist