

## Noelle Victoria Antao

noelleantao@gmail.com | 564 1<sup>st</sup> Ave, New York-New York 10016 | (646) 599 1238

### EDUCATION

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Doctor of Philosophy (PhD), Cell Biology (May 2020)  
Weill Cornell Graduate School of Medical Sciences,  
Cornell University, New York, NY.

Bachelor and Master of Science (MSc) Integrated, Biotechnology (2008–2013)  
CGPA: 9.31/10  
VIT University, Vellore, India.

### RESEARCH EXPERIENCE

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#### Postdoctoral Research

NYU School of Medicine (February 2020 -present)  
Laboratory of Dr. Gira Bhabha (PhD) and Dr. Damian Ekiert (PhD)

- Led two independent projects to investigate the host-pathogen interactions that contribute to infection by an NIAID Category B pathogen, Microsporidia.
- Developed an *in vitro* intestinal organoid 3D culture system to model human microsporidiosis.

#### PhD Research

Weill Cornell Graduate School of Medical Sciences (2013–January 2020)  
Graduate research student,  
Laboratory of Dr. Prasad Jallepalli (PhD)  
Memorial Sloan Kettering Cancer Center (MSKCC)

- Research project: understanding the impact of cancer-associated misregulation of protein phosphatase 2A (PP2A) on mitosis after whole genome doubling (WGD).
- Mentored two laboratory technicians and a post-doctoral researcher.
- Assisted with successful grant submission - NIH Research Project Grant Program (R01) (May 2018) and Functional Genomics Initiative Research Award, MSKCC (2015).

### HONORS AND AWARDS

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- Gold Medal, 2013 (awarded to select Senior year students for academic honours)
- Scholarship for academic excellence 2008–2013 (awarded to students in the top 5% of their class)
- Leading Edge Fellow, HHMI (2022- present)
- Microscopy and Microanalysis Postdoctoral Fellow Award (2022)

### PUBLICATIONS

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Antao, N.V., Lam, C., Davydov, A. *et al.* 3D reconstructions of parasite development and the intracellular niche of the microsporidian pathogen *Encephalitozoon intestinalis*. *Nat Commun* **14**, 7662 (2023). <https://doi.org/10.1038/s41467-023-43215-0>

**Antao, N. V.**, Sall, J., Petzold, C., Liang, Feng-Xia., Ekiert, D. and Bhabha, G. Sample preparation and data collection for Serial Block Face Scanning Electron Microscopy of Mammalian Cell Monolayers. (Manuscript accepted at PlosOne Protocols)

**Antao, N. V.**, Usmani, Mahrukh., Ekiert, D. and Bhabha, G. An optimized method for purification of *E. intestinalis* spores from mammalian cells. (Manuscript in progress)

Robertson, A., Sall, J., Venzon, M., Olivas, J., Zheng, X., Cammer, M., **Antao, N. V.**, et al. 2023. Bacterial Contact Induces Polar Plug Disintegration to Mediate Whipworm Egg Hatching. bioRxiv. Plos Pathogens 19 (9), e1011647

Sota, S., Yao, X., **Antao, N. V.**, London, Mariya., Suthar, M. and Cadwell, K. Myeloid MDA5-MAVS sensing demarcates acute to persistent phase transition during murine norovirus infection. (manuscript under review at Journal of Virology)

Murareanu, B.M., **Antao, N.V.**, Zhao, W. et al. High-throughput small molecule screen identifies inhibitors of microsporidia invasion and proliferation in *C. elegans*. Nat Communications 13, 5653 (2022).

**Antao, N. V.**, Marcet-Ortega, M., Cifani, P., Kentsis, A. and Foley, E. A. (2019). A Cancer Associated Missense Mutation in PP2A-A $\alpha$  Increases Centrosome Clustering during Mitosis. *iScience*.

Sehgal L, Mukhopadhyay A, Rajan A, Khapare N, Sawant M, Vishal SS, Bhatt K, .Ambatipudi S, **Antao N**, Alam H, Gurjar M, Basu S, Mathur R, et al. 14-3-3 $\gamma$ -Mediated transport of plakoglobin to the cell border is required for the initiation of desmosome assembly *in vitro* and *in vivo*. J Cell Sci. 2014;127:2174–88. doi: 10.1242/jcs.125807.

## **INVITED PEER REVIEW**

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Nature Communications, eLife, Journal of Cell Science and Frontiers in Physiology.

## **MEETINGS AND PRESENTATIONS**

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**ASCB**, Poster (December 2023)

Noelle V. Antao

3D reconstructions of parasite development and the intracellular niche of the microsporidian pathogen *Encephalitozoon intestinalis*.

**Microscopy and Microanalysis**, Invited talk (July-August, 2022)

Noelle V. Antao

Visualizing the intracellular niche of a human microsporidian parasite *Encephalitozoon intestinalis* using serial blockface scanning electron microscopy.

**Leading Edge Fellows, HHMI**, Talk (June, 2022)

Noelle V. Antao

Investigating host-pathogen interactions in a human microsporidian parasite.

**Microsporidia Fest**, Talk (September 2021)

Noelle V. Antao, Cherry Lam, Damian Ekiert, Gira Bhabha

Characterizing the intracellular niche of human microsporidian parasite *Encephalitozoon intestinalis*

**ASCB**, Poster (December 2020)

Noelle V. Antao, Xiaomin Yao, Kenneth Cadwell, Damian Ekiert, Gira Bhabha., Characterizing the intracellular niche of human microsporidian parasite *Encephalitozoon intestinalis*

**Molecular Parasitology Meeting XXXI**, Poster (September 2020)

Noelle V. Antao, Xiaomin Yao, Kenneth Cadwell, Damian Ekiert, Gira Bhabha., Characterizing the intracellular niche of human microsporidian parasite *Encephalitozoon intestinalis*

**Mitotic spindle: From living and synthetic systems to theory, Split, Croatia** Poster (March 2019)

Antao, N V., Marcet-Ortega M, Cifani, P., Kentsis, A., Foley, E., Understanding the role of PP2A misregulation on spindle assembly

**ASCB, San Diego**, Poster (December 2018)

Antao, N V., Marcet-Ortega M, Cifani, P., Kentsis, A., Foley, E., Understanding the role of PP2A misregulation on spindle assembly

## **TEACHING AND OUTREACH**

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- Summer Research Immersion programme with Queensborough Community College, Team leader/ Organizer (August 2020-present)
- Volunteer at what can you be with a PhD (WCUB), NYU (November 2021)
- Invited speaker for ‘Navigating Career Challenges in Science Panel’ for WINS (women in science) at NYU (March 2021)
- Invited guest lecturer at VIT University (November 2020)
- The Health Professions Recruitment and Exposure Program (HPREP) Mentor, Weill Cornell Medicine, Trained and mentored high school students from underrepresented communities to write personal statements, resumes, and a research paper (January- March 2019).
- Mentored two lab technicians and a post-doctoral researcher at the Foley Lab (2014–2018).
- Designed lesson plans and taught high school students as part of Weill Cornell Medicine’s STEM initiative with the Young Women’s Leadership Network (2016-2018).
- Trained and educated high school students in molecular biology laboratory techniques as part of the Tri-institute RockEDU outreach program (May 2017).
- Teaching assistant, VIT University, India (2011–2012).

## **REFERENCES**

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Dr. Gira Bhabha (Post doc Mentor) – [gira.bhabha@gmail.com](mailto:gira.bhabha@gmail.com)

Dr. Damian Ekiert (Post doc Mentor) – [damian.ekiert@ekiertlab.org](mailto:damian.ekiert@ekiertlab.org)

Dr. Kenneth Cadwell - [Ken.Cadwell@nyulangone.org](http://Ken.Cadwell@nyulangone.org)

Dr. Prasad Jallepalli (PhD advisor) – [jallepap@mskcc.org](mailto:jallepap@mskcc.org)

Dr. Scott Keeney – [s-keeney@ski.mskcc.org](mailto:s-keeney@ski.mskcc.org) Tel: 212-639-5182

Dr. John Petrini – [petrinij@mskcc.org](mailto:petrinij@mskcc.org) Tel: 212-639-2927