Anastasia-Maria Zavitsanou, Ph.D.

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Columbia University, Department of Neuroscience
Zuckerman Mind, Brain, and Behavior Institute
Jerome L. Greene Science Center
3227 Broadway, L6, Quad 6C, New York, NY, 10032

EDUCATION & TRAINING

Columbia University, New York, USA **Sept. 2022-present**
Department of Neuroscience; Zuckerman Mind Brain Behavior Institute
Postdoctoral Fellow
Advisor: Dr. Ishmail Abdus-Saboor

New York University School of Medicine, New York, USA **2016-2022**
Department of Pathology
Ph.D., Tumor Immunology
Thesis Advisors: Dr. Sergei Koralov, Dr. Thales Papagiannakopoulos
Degree conferred: September 26 2022

Imperial College London, London, UK **2013-2016**
Department of Life Sciences
B.Sc Biochemistry (1st Class Honors)
Thesis Advisor: Dr. Nadia Guerra

RESEARCH EXPERIENCE

Columbia University, NY, USA **2022-present**
(Dr. Ishmail Abdus-Saboor Lab)
Project: Investigating how cancer alters behavior via regulating the internal sensory system.
Project: Investigating the rewarding effects of genitalia self-stimulation.

NYU School of Medicine, NY, USA **2017-2022**
(Dr. Sergei Koralov & Dr. Thales Papagiannakopoulos Labs)
Project 1: Investigating how tumor intrinsic mutations impact lung cancer immunosurveillance.
Project 2: Tracking plasma cell responses upon immunization using a plasma cell specific Cre mouse model.

Imperial College London, UK **Feb-Jun 2016**
(Dr. Nadia Guerra Lab)
Project: Investigating the tumor promoting role of NKG2D in an inflammation-based cancer model.

Whitehead Institute for Biomedical Research, MIT, Cambridge, MA **Jun-Sept 2015**
(Dr. Robert Weinberg Lab)
Project: Investigating the interdependence of neoplastic EMT flavors in breast cancer progression.

BSRC Alexander Fleming, Dep. of Molecular Oncology, Athens, Greece **Jun-Sep 2014**
(Dr. George Panayotou Lab)
Project: Investigating how the M3/6 dual-specificity phosphatase is regulated upon treatment with apoptosis-promoting cancer therapeutic agents.

National Kapodistrian University of Athens, Greece **Jun 2013**
(Dr. Ourania Tsitsilonis Lab)
Project: Investigation of the cytotoxicity of natural compounds extracted from *Marrubium thessalum*.

POSTERS & TALKS

Brain Body Physiology, Cold Spring Harbor Laboratory, NY, USA **2024**
Poster Presentation

NYC Symposium on Ras biology and Therapies, Mount Sinai, NY, USA **2023**
Oral Presentation
Mechanisms and Models of Cancer, Cold Spring Harbor Laboratory, NY, USA **2022**
Poster Presentation
Immunology & Inflammation Retreat, NYU Department of Pathology, NY, USA **2022, 2019**
Oral Presentation
Cancer Cell Biology Seminar Series, NYU Department of Pathology, NY, USA **2022**
Oral Presentation
New York Academy of Sciences (NYAS), Frontiers in Cancer Immunotherapy, NY, USA **2020**
Oral Presentation
American Association for Cancer Research (AACR), Metabolism and Cancer, NY, USA **2018**
Poster presentation

FUNDING

Junior Fellow, Simons Foundation **2024-2027**
Zavitsanou (PI)
Investigating how cancer alters behavior via regulating the internal sensory system.

MERITS AND AWARDS

Jackson Laboratory Travel Award **2023**
NYU Vilcek Travel Grant **2021**
NYU Special MacCracken Award **2019**
NYU Thesis Pitch Challenge winner **2019**
Imperial College London, Dean's List **2016**
Imperial College London, UROP Scholarship **2015**
Hellenic American Foundation Natural Sciences Award **2013**

TEACHING & MENTORING

BRAINYAC Mentor for a high school student, Columbia University **2023**
- Provided training for basic pipetting skills, immunofluorescence staining, microscopy.
- Participated in mentorship trainings.

Leadership Alliance Mentor for an undergraduate student, Columbia University **2023**
- Provided training for mouse animal work, histology, behavioral analysis using SLEAP and MoSeq platforms.

Primary mentor for an undergraduate student, Jake Kothandaraman **2020-present**
NYU School of Medicine (Jake was a high school student)
- Provided training for basic pipetting skills, tissue culture, cloning.
- Provided supervision for review writing on the topic of neuroimmunology (unpublished).
- Provided professional mentorship for undergraduate college applications.

Columbia University (Jake is currently an undergraduate student at NYU)
- Provided training for mouse animal work, head fix surgeries, histology, large scale viral preparation, immunofluorescence staining, grimace analysis.

Mentor for a graduate rotation student, Sabrina Solis **2021**
- Provided training for flow cytometry, tissue culture, dendritic cell differentiation assays.
- Supervised her rotation project at the Papagiannakopoulos Lab (NYU).

Teaching Assistant, Introduction to Immunology (taught by Dr. Alan Frey) **2018-2020**
Graduate-level course at NYU School of Medicine, Department of Pathology.

Mentor for a summer undergraduate student, Brian Robusto **2018**
- Provided training for flow cytometry, *in vitro* tumor-T cell killing assays, CD4 T cell differentiation assays.
- Supervised his summer project at the Papagiannakopoulos Lab (NYU).
- Provided professional mentorship for medical school applications.

Private Biology & Chemistry Tutor **2013-2015**
In person and online teaching of International Baccalaureate curriculum.

SCIENCE OUTREACH & OTHER ACTIVITIES

BraiNY's SciArt Workshop, Genspace (NY, USA) **2023**
Project: Candid Contrasts
Utilizing audio-reactive visuals, their project sheds light on the underexplored realm of female sexual pleasure, challenging existing taboos and knowledge gaps in the field.

Symbiosis Filmmaking Competition, Imagine Science Film Festival (NY, USA) **2023**
Project: Pinky Nacc
Symbiosis initiative brings scientists and filmmakers together for a week to create a short film.
Pinky Nacc explores female sexual pleasure as an essential experience, subject of scientific research and a multi-billion dollar industry.

Board member, NYU Doctoral Alumni Association **2023-present**

Leadership member, Zuckerman Institute Gender Inclusion Group (ZIGI) **2022-present**
ZIGI supports and advocates for people who have been historically marginalized in STEM fields due to their gender identity and expression.

World Hellenic Biomedical Association Summer School (WHBA), Mani, Greece **2018**

NYU J-term Startup Sprint, NYU **2018**

Semi-finalist at Mobile app contest, Berkley Innovation Labs, NYU **2018**

Semi-finalist at 300K Entrepreneurs Challenge, NYU Stern Business School **2018**

Advanced Science Communication Workshop, Journalism Institute, NYU **2017**

Introductory Science Communication Workshop, Journalism Institute, NYU **2016**

Leadership member, Hellenic Society, Imperial College London (UK) **2015-2016**

PROFESSIONAL MEMBERSHIPS

Member, Society for Neuroscience (SfN) **2023-present**
Member, International Association for the Study of Pain (IASP) **2023-present**
Member, New York Academy of Sciences (NYAS) **2017-present**

PUBLICATIONS

Zavitsanou AM, Abdus-Saboor I. (**2024**). Sensing the vibes in sexual organs. *Nature*.

Zavitsanou AM, Pillai R, Hao Y, Wu W, Bartnicki E, Karakousi T, Rajalingam S, Herrera A, Karatza A, Rashidfarrokhi A, Solis S, Ciampricotti M, Yeaton A, Ivanova E, Wohlhieter C, Buus T, Hayashi M, Karadal B, Pass H, Poirier J, Rudin C, Wong KK, Moreira A, Khanna K, Tsirigos A, Papagiannakopoulos T, Koralov S. (**2023**). KEAP1 mutation in lung adenocarcinoma promotes immune evasion and immunotherapy resistance. *Cell Reports*. *PMID: 37889752*

Rashidfarrokhi A, Pillai R, Hao Y, Wu L. W, Mancini CS M, Karadal B, Dimitriadoy S, Cross M, Yeaton A, Huang S, Bhutkar A, Herrera A, Rajalingam S, Hayashi M, Jun T, Wang X, Huang K, Bartnicki E, **Zavitsanou AM**, Ivanova E, Wohlhieter C, LeBoeuf SE, Chen T, Loomis C, Mezzano V, Kulicke R, Davis F, Stransky D, Smolen G, Simabuco F, Rudin C, Moreira A, Khanna K, Pass H, Wong KK, Koide S, Tsirigos A, Koralov S, Papagiannakopoulos T. (**2023**). Tumor-intrinsic LKB1 LIF signaling axis establishes a myeloid niche to promote immune evasion and tumor growth. bioRxiv. *PMID: 37502974*

Borbet T#, Zaldana K#, **Zavitsanou AM#**, Hines M, Bajwa S, Morrison T, Boehringer T, Hallisey V, Cadwell K, Koralov S. (**2023**). Tracking plasma cell responses using a J-chain-driven Cre mouse model. bioRxiv. *PMID: 38106171*
#co-first authors in alphabetical order

Pillai R, Hayashi M, **Zavitsanou AM**, Papagiannakopoulos T. (**2022**). NRF2: KEAPing tumors protected. *Cancer Discovery. PMID: 35101864*

Ciampricotti M, Karakousi T, Richards AL, Quintanal-Villalonga A, Karatza A, Caeser R, Costa EA, Allaj V, Manoj P, Spainhower KB, Kombak FE, Sanchez-Rivera FJ, Jaspers JE, **Zavitsanou AM**, Maddalo D, Ventura A, Rideout WM, Akama-Garren EH, Jacks T, Donoghue MTA, Sen T, Oliver TG, Poirier JT, Papagiannakopoulos T, Rudin CM. (**2021**). Rlf-Mycl gene fusion drives tumorigenesis and metastasis in a mouse model of small cell lung cancer. *Cancer Discovery*. PMID: 34344693

Zavitsanou AM, Papagiannakopoulos T. (**2021**). Hunger brings down the tumor fort. *Trends Cell Biol*. PMID: 34034933

Cable J, Greenbaum B, Pe'er D, Bollard CM, Bruni S, Griffin ME, Allison JP, Wu CJ, Subudhi SK, Mardis ER, Brentjens R, Sosman JA, Cemerski S, **Zavitsanou AM**, Proia T, Egeblad M, Nolan G, Goswami S, Spranger S, Mackall CL. (**2021**). Frontiers in Cancer immunotherapy-a symposium report. *Ann N Y Acad Sci*. PMID: 33184911

Tsay JJ, Wu BG, Sulaiman I, Gershner K, Schluger R, Li Y, Yie TA, Meyn P, Olsen E, Perez L, Franca B, Carpenito J, Iizumi T, El-Ashmawy M, Badri M, Morton JT, Shen N, He L, Michaud G, Rafeq S, Bessich JL, Smith RL, Sauthoff H, Felner K, Pillai R, **Zavitsanou AM**, Koralov SB, Mezzano V, Loomis CA, Moreira AL, Moore W, Tsirigos A, Heguy A, Rom WN, Sterman DH, Pass HI, Clemente JC, Li H, Bonneau R, Wong KK, Papagiannakopoulos T, Segal LN. (**2021**). Lower Airway Dysbiosis Affects Lung Cancer Progression. *Cancer Discovery*. PMID: 33177060

Sayin VI, LeBoeuf SE, Singh SX, Davidson SM, Biancur D, Guzelhan BS, Alvarez SW, Wu WL, Karakousi TR, **Zavitsanou AM**, Ubriaco J, Muir A, Karagiannis D, Morris PJ, Thomas CJ, Possemato R, Vander Heiden MG, Papagiannakopoulos T. (**2017**). Activation of the NRF2 antioxidant program generates an imbalance in central carbon metabolism in cancer. *Elife*. PMID: 28967864

Sheppard S, Guedes J, Mroz A, **Zavitsanou AM**, Kudo H, Rothery SM, Angelopoulos P, Goldin R, Guerra N. (**2017**) NKG2D promotes tumor growth in a model of hepatocellular carcinoma. *Nature Communications*. PMID: 28128200