IMMUNOLOGY PROGRAM

The Alexander Rudensky Lab

Research

Alexander Rudensky, PhD

Chair, Immunology Program, SKI; Director, Ludwig Center at MSK; Lloyd J. Old Chair for Clinical Investigation

Professor

Our research is focused on understanding the molecular mechanisms governing the differentiation and function of CD4 T lymphocytes and their role in immunity and tolerance.

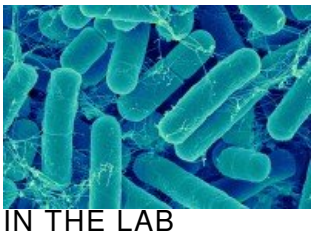
Major areas of interest include: the molecular and cellular mechanisms governing the differentiation and function of regulatory T cells; the roles these cells play in control of autoimmunity, tumor immunity, and immunity to infections, and in the maintenance of immune homeostasis at environmental interfaces. We are particularly interested in understanding the role of the forkhead family transcription factor Foxp3 in establishing and maintaining immune homeostasis; and in the plasticity of regulatory T cell transcriptional and functional programs and the molecular mechanisms of regulatory T cell lineage stability.

View Lab Overview (https://www.sloankettering.edu/research-areas/labs/alexander-rudensky/overview)

Featured News

[At Work: Immunology Program Chair Alexander Rudensky]

A Moscow native, immunologist Alexander Rudensky has had a lifelong interest in scientific discovery.



IN THE LAB

[Research Uncovers Details about How Gut Microbes Influence the Immune System]

Investigators have shown how gut microbes promote the formation of a type of immune cell called regulatory T cells.

FEATURE

The Convergence: Scientists Move toward a New Understanding of Metastatic Cancer

Through converging lines of research in stem cell biology, tissue regeneration, and immunity, Sloan Kettering Institute scientists are learning what makes metastatic cancer cells tick.

View All Featured News

Publications Highlights

Jacobsen JT, Hu W, R Castro TB, Solem S, Galante A, Lin Z, Allon SJ, Mesin L, Bilate AM, Schiepers A, Shalek AK, Rudensky AY, Victora GD. (2021) Expression of Foxp3 by T follicular helper cells in end-stage germinal centers. Science. 373(6552):eabe5146.

Campbell C, McKenney PT, Konstantinovsky D, Isaeva OI, Schizas M, Verter J, Mai C, Jin WB, Guo CJ, Violante S, Ramos RJ, Cross JR, Kadaveru K, Hambor J, Rudensky AY. (2020) Bacterial metabolism of bile acids promotes generation of peripheral regulatory T cells. Nature. 581(7809):475-479.

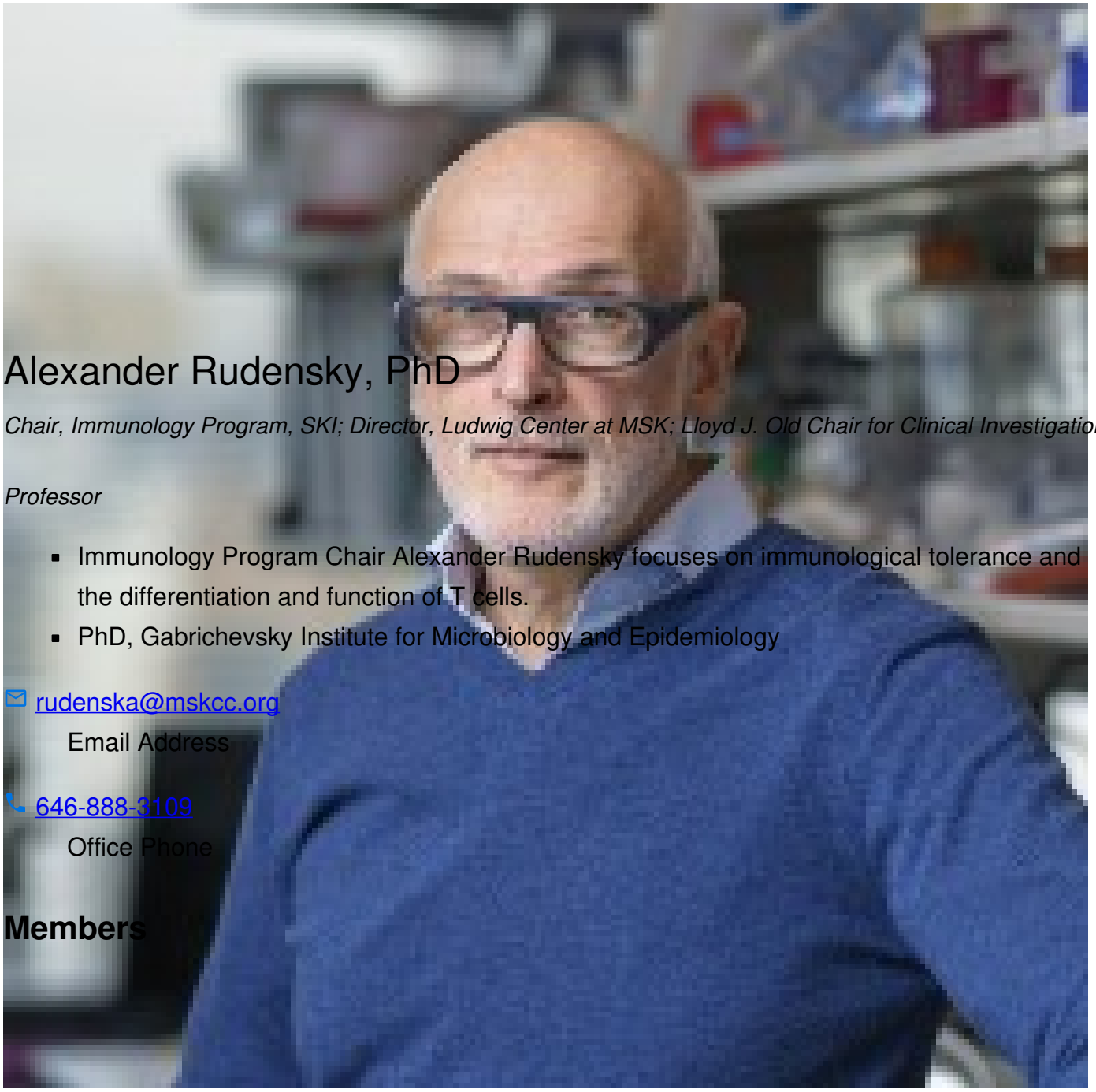
Brown CC, Gudjonson H, Pritykin Y, Deep D, Lavallée VP, Mendoza A, Fromme R, Mazutis L, Ariyan C, Leslie C, Pe'er D, Rudensky AY. (2019) Transcriptional Basis of Mouse and Human Dendritic Cell Heterogeneity. Cell. 179(4):846-863.

Levine AG, Mendoza A, Hemmers S, Moltedo B, Niec RE, Schizas M, Hoyos BE, Putintseva EV, Chaudhry A, Dikiy S, Fujisawa S, Chudakov DM, Treuting PM,Rudensky AY. (2017) Stability and function of regulatory T cells expressing the transcription factor T-bet. Nature. 546:421-425.

van der Veeken J, Gonzalez AJ, Cho H, Arvey A, Hemmers S, Leslie CS, Rudensky AY. (2016) Memory of Inflammation in Regulatory T Cells. Cell.166:977-990.

View All Publications

People



Alexander Rudensky, PhD

Chair, Immunology Program, SKI; Director, Ludwig Center at MSK; Lloyd J. Old Chair for Clinical Investigation

Professor

- Immunology Program Chair Alexander Rudensky focuses on immunological tolerance and the differentiation and function of T cells.
- PhD, Gabrichevsky Institute for Microbiology and Epidemiology

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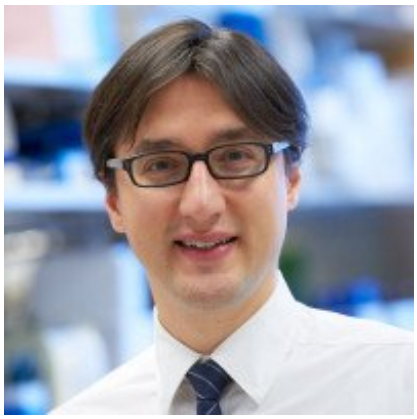
Members



George Plitas

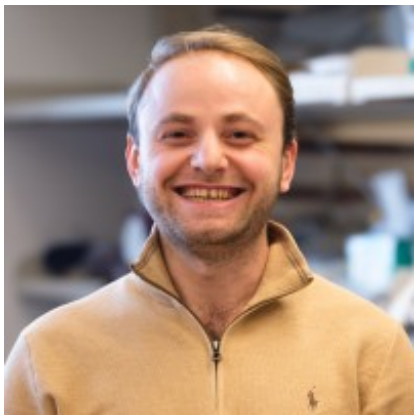
Assistant Attending, Breast Service

Emma Andretta

Technician

Charlotte Ariyan

Associate Attending, Gastric & Mixed Tumor Service

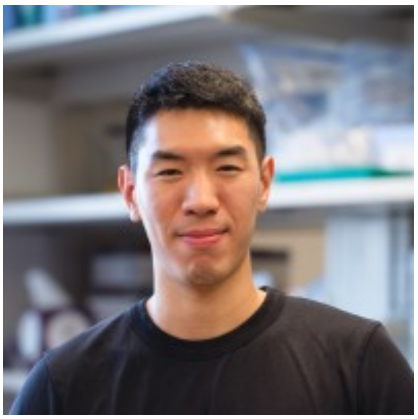


Giorgi Beroshvili

Graduate Student

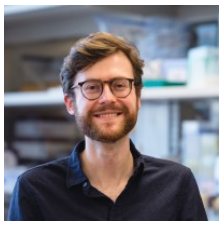
Regina Bou Puerto

Graduate Student



Spencer Chen

Research Fellow



Aazam Ghelani

Graduate Student

Joe N. Frost

Research Fellow

Lab Alumni

Lab Affiliations

Achievements

- Investigator, Howard Hughes Medical Institute
- Vilcek Prize in Biomedical Science, New York, NY (2018)
- Crafoord Prize, the Royal Swedish Academy of Sciences, Stockholm Sweden (2017)
- Member, National Academy of Medicine (2015)
- Member, American Academy of Arts and Sciences (2015)

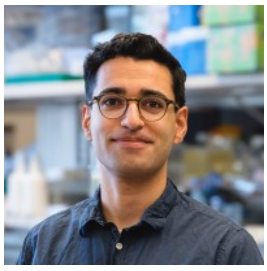
Open Positions

To learn more about available postdoctoral opportunities, please visit our Career Center

To learn more about compensation and benefits for postdoctoral researchers at MSK, please visit Resources for Postdocs

Get in Touch

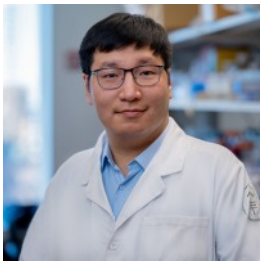
Paolo Giovanelli
Graduate Student



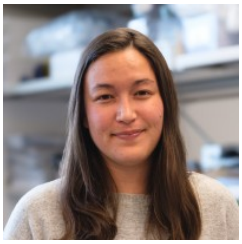
Nima Hooshdaran
Graduate Student

Beatrice Hoyos
Visiting Investigator

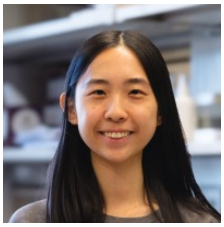
Jian Hu
Senior Research Scientist



Xiao Huang
Research Associate



Ainsley Lockhart
Research Fellow

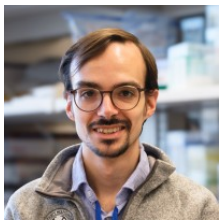


Cheryl Mai
MD-PhD Student

Anthony Michaels
Graduate Student

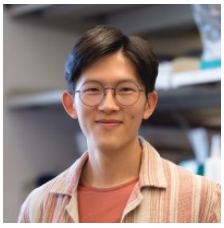
Fatima Salman
Technician

Ariën Schiepers
Research Fellow



Lion Uhl
Research Fellow

Aparna Vancheswaran
Research Fellow



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Disclosures

Members of the MSK Community often work with pharmaceutical, device, biotechnology, and life sciences companies, and other organizations outside of MSK, to find safe and effective cancer treatments, to improve patient care, and to educate the health care community. These activities outside of MSK further our mission, provide productive collaborations, and promote the practical application of scientific discoveries.

MSK requires doctors, faculty members, and leaders to report (“disclose”) the relationships and financial interests they have with external entities. As a commitment to transparency with our community, we make that information available to the public. Not all disclosed interests and relationships present conflicts of interest. MSK reviews all disclosed interests and relationships to assess whether a conflict of interest exists and whether formal COI management is needed.

Alexander Rudensky discloses the following relationships and financial interests:

- Amgen
  Professional Services and Activities
- BioInvent International AB
  Professional Services and Activities
- Coherus BioSciences, Inc.
  Equity; Professional Services and Activities
- NILO Therapeutics, Inc.
  Equity; Professional Services and Activities
- Odyssey Therapeutics, Inc.
  Equity; Professional Services and Activities
- RAPT Therapeutics
  Equity; Professional Services and Activities
- Santa Ana Bio, Inc.
  Equity; Professional Services and Activities
- Sonoma Biotherapeutics, Inc.
  Equity; Professional Services and Activities
- Vedanta
  Equity; Professional Services and Activities

The information published here is a complement to other publicly reported data and is for a specific annual disclosure period. There may be differences between information on this and other public sites as a result of different reporting periods and/or the various ways relationships and financial interests are categorized by organizations that publish such data.

This page and data include information for a specific MSK annual disclosure period (January 1, 2024 through disclosure submission in spring 2025). This data reflects interests that may or may not still exist. This data is updated annually.

Learn more about MSK’s COI policies here . For questions regarding MSK’s COI-related policies

and procedures, email MSK's Compliance Office at ecoi@mskcc.org .

View all disclosures (https://www.sloankettering.edu/disclosures)