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The Michael Berger Lab

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Annual report

Give to MSK

FOR THE MEDIA

Michael F. Berger, PhD
Co-Director, Marie-Josée & Henry R. Kravis Center for Molecular Oncology; Chief Attending, Clinical Computational Diagnostics Service, Department of Pathology and Laboratory Medicine

The focus of the Berger laboratory is to use novel computational and experimental techniques to characterize the spectrum of genetic mutations in human tumors in order to identify biomarkers of cancer progression and drug response.

The identification of molecular drivers of cancer and the development of targeted therapies for these drivers offer hope for better outcomes for patients with cancer. Global efforts to comprehensively

characterize the genomes of all major cancer types continue to reveal new genetic alterations with implications for tumor biology, prognosis, and treatment. Using massively parallel next-generation DNA sequencing, we are developing and applying methods of profiling individual tumor specimenspatient biospecimens for somatic base mutations and other genomicand inherited alterations that may influence response to therapy. Our research falls into two main categories: technology development and biomarker discovery.

View Lab Overview (https://www.mskcc.org/research-areas/labs/michael-berger/overview)

Featured News

IN THE LAB
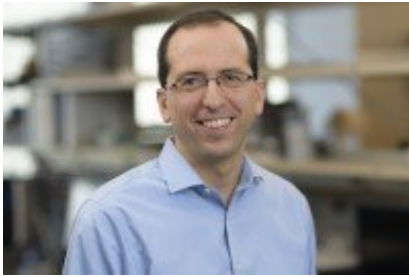
[How Do Inherited Gene Mutations Cause Cancer? A New Database Will Help Researchers Find Out](#)

In a new paper, a collaborative team of MSK experts reports how a novel tool will help researchers learn more about the role of inherited hereditary mutations.

FEATURE

[How MSK-ACCESS Blood Test for Cancer was Created](#)

MSK-ACCESS, a blood test that can detect mutations in 129 genes related to cancer, has already helped guide the treatment of more than 2,800 patients at MSK.

FINDING

[Machine Learning May Help Classify Cancers of Unknown Primary](#)

MSK investigators report a new tool that may help them determine the origin of some metastatic tumors, potentially leading to better targeted treatments.

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Publications Highlights

Genetic Ancestry Correlates with Somatic Differences in a Real-World Clinical Cancer Sequencing Cohort. Arora K, Tran TN, Kemel Y, Mehine M, Liu YL, Nandakumar S, Smith SA, Brannon AR, Ostrovnaya I, Stopsack KH, Razavi P, Safonov A, Rizvi HA, Hellmann MD, Vijai J, Reynolds TC, Fagin JA, Carrot-Zhang J, Offit K, Solit DB, Ladanyi M, Schultz N, Zehir A, Brown CL, Stadler ZK, Chakravarty D, Bandlamudi C, Berger MF. Cancer Discov. 2022 Nov 2;12(11):2552-2565. doi: 10.1158/2159-8290.CD-22-0312. PMID: 36048199; PMCID: PMC9633436.

The context-specific role of germline pathogenicity in tumorigenesis. Srinivasan P, Bandlamudi C, Jonsson P, Kemel Y, Chavan SS, Richards AL, Penson AV, Bielski CM, Fong C, Syed A, Jayakumaran G, Prasad M, Hwee J, Sumer SO, de Bruijn I, Li X, Gao J, Schultz N, Cambria R, Galle J, Mukherjee S, Vijai J, Cadoo KA, Carlo MI, Walsh MF, Mandelker D, Ceyhan-Birsoy O, Shia J, Zehir A, Ladanyi M, Hyman DM, Zhang L, Offit K, Robson ME, Solit DB, Stadler ZK, Berger MF, Taylor BS. Nat Genet. 2021 Nov;53(11):1577-1585. doi: 10.1038/s41588-021-00949-1. Epub 2021 Nov 5. PMID: 34741162; PMCID: PMC8957388.

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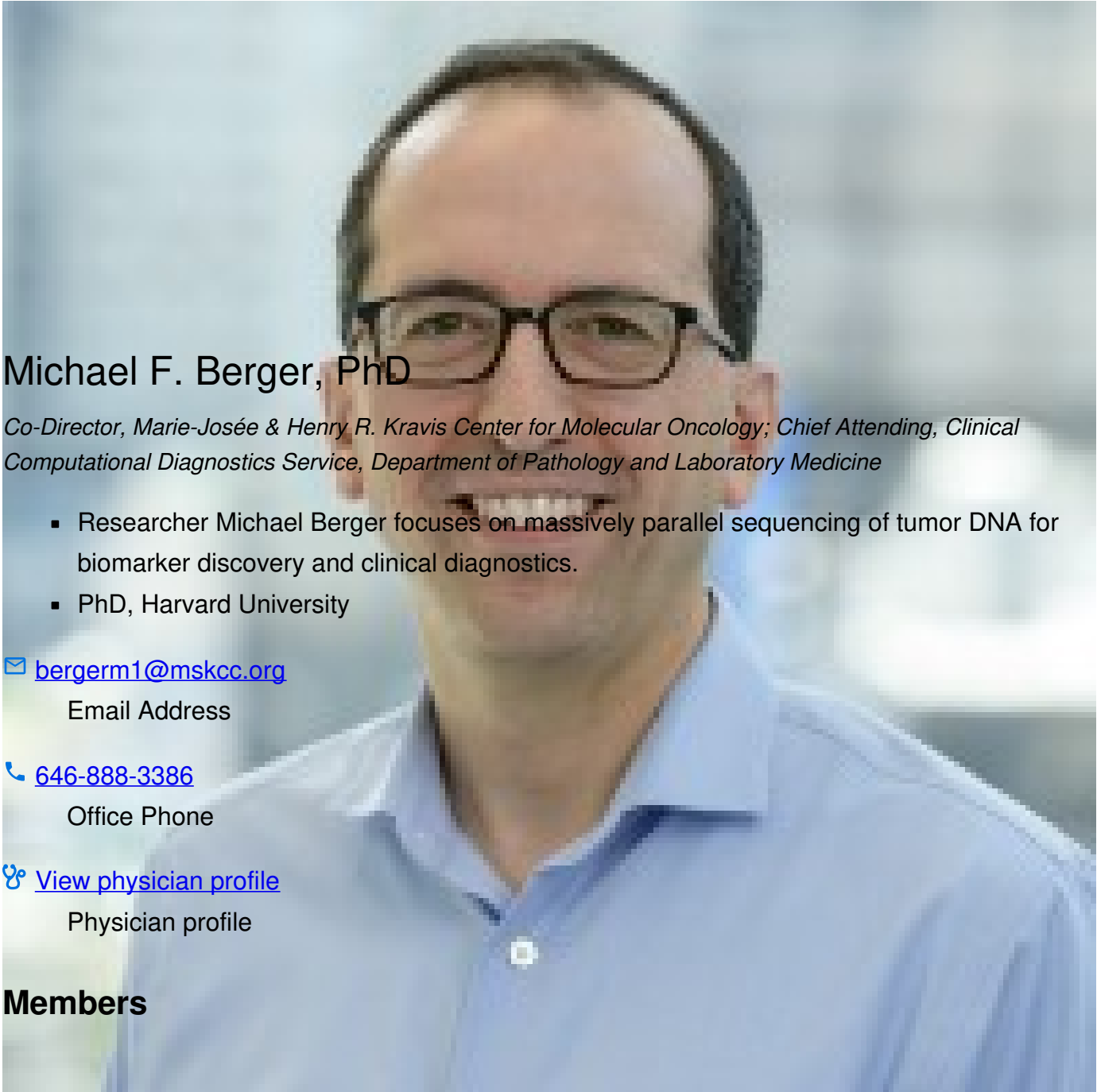
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View All Publications

People

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- Researcher Michael Berger focuses on massively parallel sequencing of tumor DNA for biomarker discovery and clinical diagnostics.
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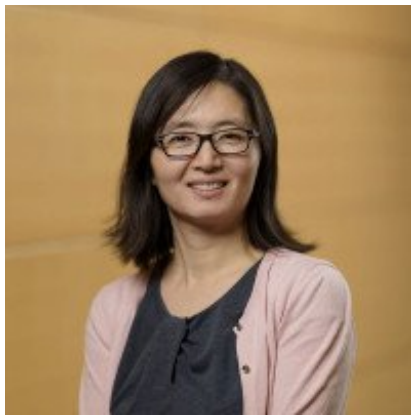
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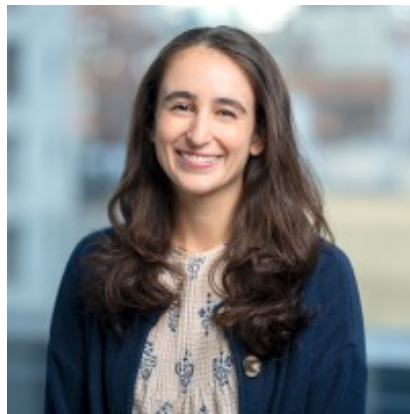now (https://www.mskcc.org/research-areas/labs/michael-berger/career-opportunities)

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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.

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Michael F. Berger discloses the following relationships and financial interests:

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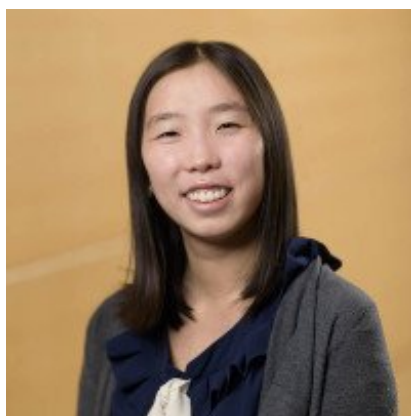 Services and Activities (Uncompensated)
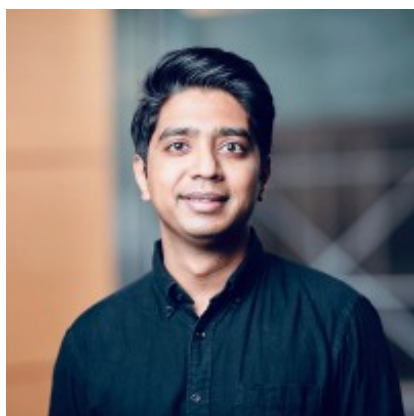
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