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HUMAN ONCOLOGY & PATHOGENESIS PROGRAM  
**The Ingo Mellinghoff Lab**

[Cancer Biology](#)

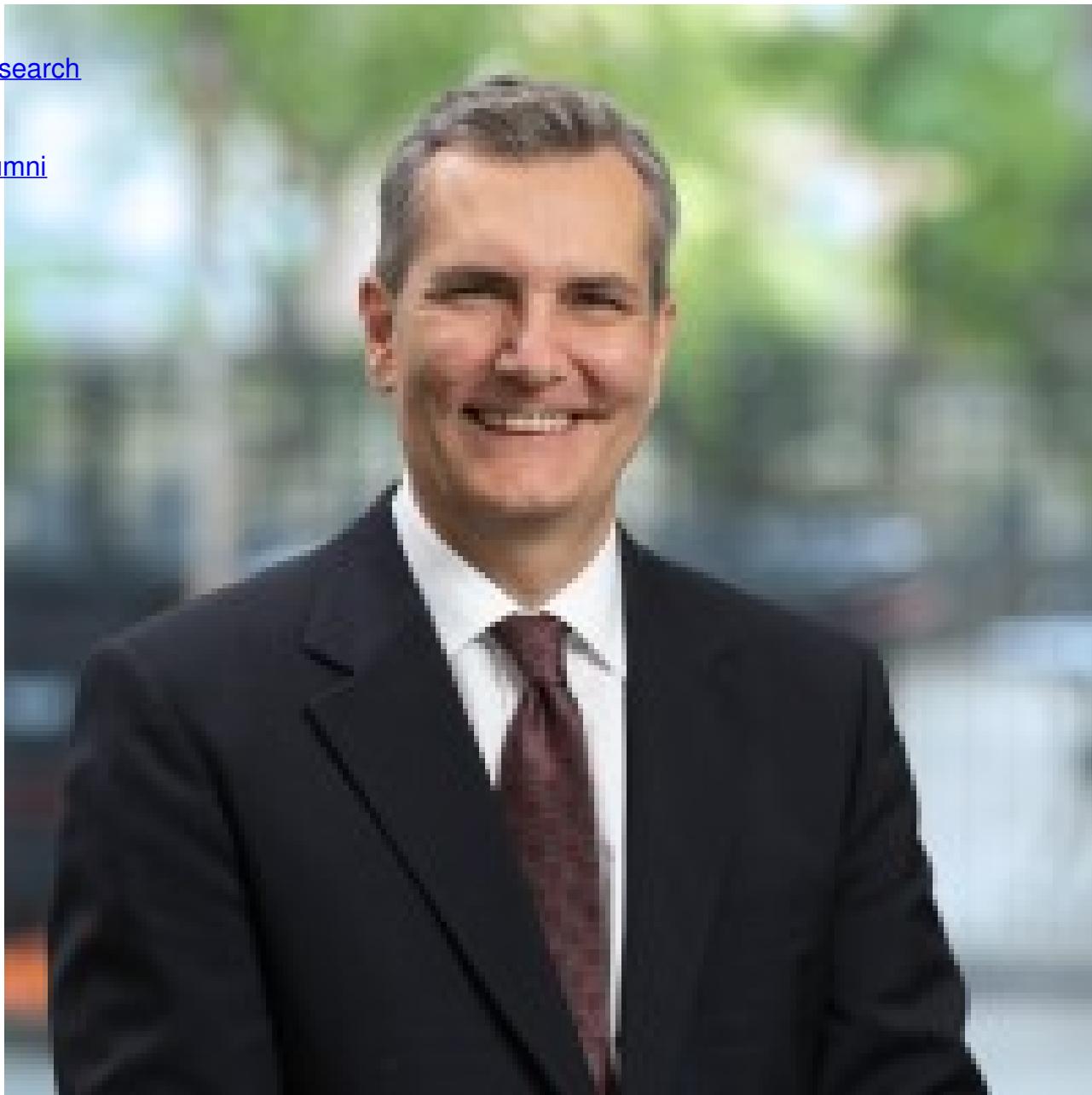
**Research**

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Ingo K. Mellinghoff, MD, FACP

Professor

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Our laboratory focuses on the study of molecular pathways that regulate brain tumor growth. Our long-term goal is to develop therapeutic paradigms that target specific properties of primary brain tumors, including genetic alterations in cancer signaling pathways, unique aspects of brain tumor metabolism, or interactions of brain tumor cells with their brain microenvironment. Our studies in experimental brain tumor models are closely linked to the evaluation of novel agents in early-phase clinical trials.



## Featured News



## [FDA Approves Drug for Low-Grade Glioma With IDH Gene Mutation](#)

A new drug could be an effective treatment for some people with low-grade glioma.



## [Treatment for Low-Grade Glioma Advances to Phase 3 Clinical Trial](#)

According to findings from a research team led by study first-author Ingo Mellinghoff, MD, Chair of MSK's Department of Neurology: vorasidenib and ivosidenib reduced concentrations of 2-HG by more than 90%, were well-tolerated, and showed encouraging tumor responses amongst 49 patients enrolled in a multisite trial between April 2019 and April 2020. Vorasidenib showed greater brain penetration than ivosidenib. Based on the phase 1 trial results, vorasidenib was advanced to a phase 3 trial.

### IN THE CLINIC



## [Analyzing Spinal Fluid Could Guide Brain Tumor Diagnosis and Treatment](#)

Cancer DNA taken from spinal fluid could serve as a liquid biopsy that provides information on brain tumor mutations.

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# Publications Highlights

Mellinghoff IK, van den Bent MJ, Blumenthal DT, Touat M, Peters KB, Clarke J, Mendez J, Yust-Katz S, Welsh L, Mason WP, Ducray F, Umemura Y, Nabors B, Holdhoff M, Hottinger AF, Arakawa Y, Sepulveda JM, Wick W, Soffietti R, Perry JR, Giglio P, de la Fuente M, Maher EA, Schoenfeld S, Zhao D, Pandya SS, Steelman L, Hassan I, Wen PY, Cloughesy TF; INDIGO Trial Investigators. Vorasidenib in IDH1- or IDH2-Mutant Low-Grade Glioma. *N Engl J Med.* 2023 Aug 17;389(7):589-601. Epub 2023 Jun 4. PMID: 37272516.  
DOI: [10.1056/NEJMoa2304194](https://doi.org/10.1056/NEJMoa2304194) .

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Mellinghoff IK, Lu M, Wen PY, Taylor JW, Maher EA, Arrillaga-Romany I, Peters KB, Ellingson BM, Rosenblum MK, Chun S, Le K, Tassinari A, Choe S, Toubouti Y, Schoenfeld S, Pandya SS, Hassan I, Steelman L, Clarke JL, Cloughesy TF. Vorasidenib and ivosidenib in IDH1-mutant low-grade glioma: a randomized, perioperative phase 1 trial. *Nat Med.* 2023 Mar;29(3):615-622. Epub 2023 Feb 23. PMID: 36823302. DOI: [10.1038/s41591-022-02141-2](https://doi.org/10.1038/s41591-022-02141-2)

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Miller AM, Shah RH, Pentsova EI, Pourmaleki M, Briggs S, Distefano N, Zheng Y, Skakodub A, Mehta SA, Campos C, Hsieh WY, Selcuklu SD, Ling L, Meng F, Jing X, Samoila A, Bale TA, Tsui DWY, Grommes C, Viale A, Souweidane MM, Tabar V, Brennan CW, Reiner AS, Rosenblum M, Panageas KS, DeAngelis LM, Young RJ, Berger MF, Mellinghoff IK. Tracking tumour evolution in glioma through liquid biopsies of cerebrospinal fluid. *Nature.* 2019 Jan; 565(7741):654-658. Epub 2019 Jan 23. PMID: 30675060.  
DOI: [10.1038/s41586-019-0882-3](https://doi.org/10.1038/s41586-019-0882-3)

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Grommes C, Pastore A, Palaskas N, Tang SS, Campos C, Schartz D, Codega P, Nichol D, Clark O, Hsieh WY, Rohle D, Rosenblum M, Viale A, Tabar VS, Brennan CW, Gavrilovic IT, Kaley TJ, Nolan CP, Omuro A, Pentsova E, Thomas AA, Tsivkin E, Noy A, Palomba ML, Hamlin P, Sauter CS, Moskowitz CH, Wolfe J, Dogan A, Won M, Glass J, Peak S, Lallana EC, Hatzoglou V, Reiner AS, Gutin PH, Huse JT, Panageas KS, Graeber TG, Schultz N, DeAngelis LM, Mellinghoff IK. [Ibrutinib unmasks critical role of Bruton Tyrosine Kinase in Primary CNS Lymphoma](#). *Cancer Discov.* 2017 Sep;7(9):1018-1029. Epub 2017 Jun 15. PMID: 28619981. DOI: [10.1158/2159-8290.CD-17-0613](https://doi.org/10.1158/2159-8290.CD-17-0613) .

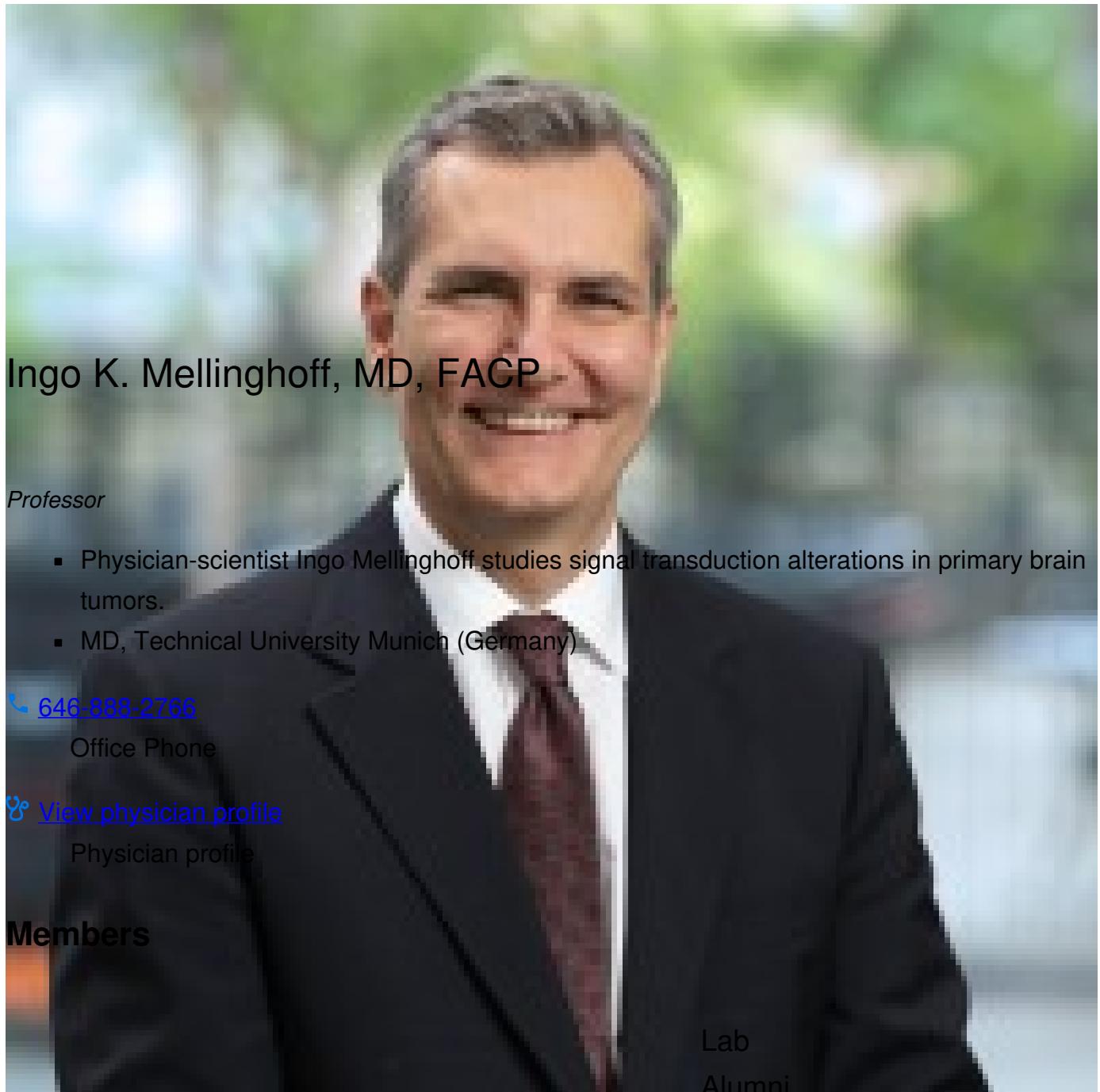
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Rohle D, Popovici-Muller J, Palaskas N, Turcan S, Grommes C, Campos C, Tsoi J, Clark

O, Oldrini B, Komisopoulou E, Kunii K, Pedraza A, Schalm S, Silverman L, Miller A, Wang F, Yang H, Chen Y, Kernytsky A, Rosenblum MK, Liu W, Biller SA, Su SM, Brennan CW, Chan TA, Graeber TG, Yen KE, Mellinghoff IK. [An inhibitor of mutant IDH1 delays growth and promotes differentiation of glioma cells.](#) Science. 2013 May 3;340(6132):626-30. Epub 2013 Apr 4. PMID: 23558169. DOI: [10.1126/science.1236062](https://doi.org/10.1126/science.1236062) .

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## People



## Ingo K. Mellinghoff, MD, FACP

*Professor*

- Physician-scientist Ingo Mellinghoff studies signal transduction alterations in primary brain tumors.
- MD, Technical University Munich (Germany)

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Office Phone

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Physician profile

## Members



Carl Campos

Lab Manager

(2023)



Christian Grommes

Associate Attending

Lab  
Alumni

Lab Affiliations

## Achievements

- Neuro-Oncology Scientific Award, American Academy of Neurology



Smrutiben Mehta  
Senior Research Assistant



Maryam Pourmaleki  
Research Fellow



Arianna Izawa-Ishiguro  
Pharmacology PhD Graduate  
Student

- Member, American Society of Clinical Investigation (2013)
- Advanced Clinical Research Award, American Society of Clinical Oncology (2009)
- Clinical Scientist Development Award, Doris Duke Charitable Foundation (2008)

Annalisa V. Ferrotta      Cinthia G. Gómez  
Graduate Student      Graduate Student  
Meaghan Grogan      Bridget Holle  
Research Technician      Research Technician  
Shereeda Perez      Timothy Pham  
Assistant to Chair      Research Technician

To learn more about compensation and benefits for postdoctoral researchers at MSK, please visit [Resources for Postdocs](#)

## Career Opportunities

## Get in Touch

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Lab Phone

## 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.

Ingo K. Mellinghoff discloses the following relationships and financial interests:

- AbbVie  
Professional Services and Activities (Uncompensated)
- Global Coalition for Adaptive Research  
Professional Services and Activities (Uncompensated)
- Katmai Pharmaceuticals  
Equity; Professional Services and Activities
- Pathos AI, Inc.  
Professional Services and Activities
- Roche  
Professional Services and Activities
- Servier  
Professional Services and Activities
- Tango Therapeutics  
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.

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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](mailto:ecoi@mskcc.org) .

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