



Genome Sciences Seminar

Wednesday, 1.27.21 | 3:30 | held remotely

<https://depts.washington.edu/gstrestrc/remote.htm>



Dr. Michael Yaffe

David H. Koch Professor of Science
and Director of Clinical Outreach
MIT

“Cell Stress and Injury Responses Determine Cancer Progression and the Responses to Treatment”

The Yaffe Lab is interested in understanding how signaling pathways are integrated at the molecular and systems level to control cellular responses. We have a long-standing interest in understanding the relationship between inflammation, cell injury, and cancer, and how this can be used to design better anti-cancer treatments. We have done this focusing on signaling pathways and networks that respond to various types of cell stress and injury in order to control cell cycle progression and DNA damage responses, as well as cross-talk between inflammation, cytokine signaling and cancer. At the most basic molecular level, our work is directed to understanding how modular protein domains and kinases work together to build molecular signaling circuits. At the clinical level, our work translates into what has been called ‘systems pharmacology’ - namely, determining how this cross-talk between pathways can be therapeutically targeted with specific drug combinations to increase the efficacy of cancer treatment, or to improve patient outcomes after tissue trauma. The research is multi-disciplinary and encompasses biochemistry, biophysics, structural and cell biology, engineering, and computation/bioinformatics.

<https://ki.mit.edu/people/faculty/yaffe>

Questions? Contact Brian Giebel at bgiebel@uw.edu or visit the Seminar website at <http://www.gs.washington.edu/news/seminars.htm>

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