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Cancer Center

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Genome Editing & Screening

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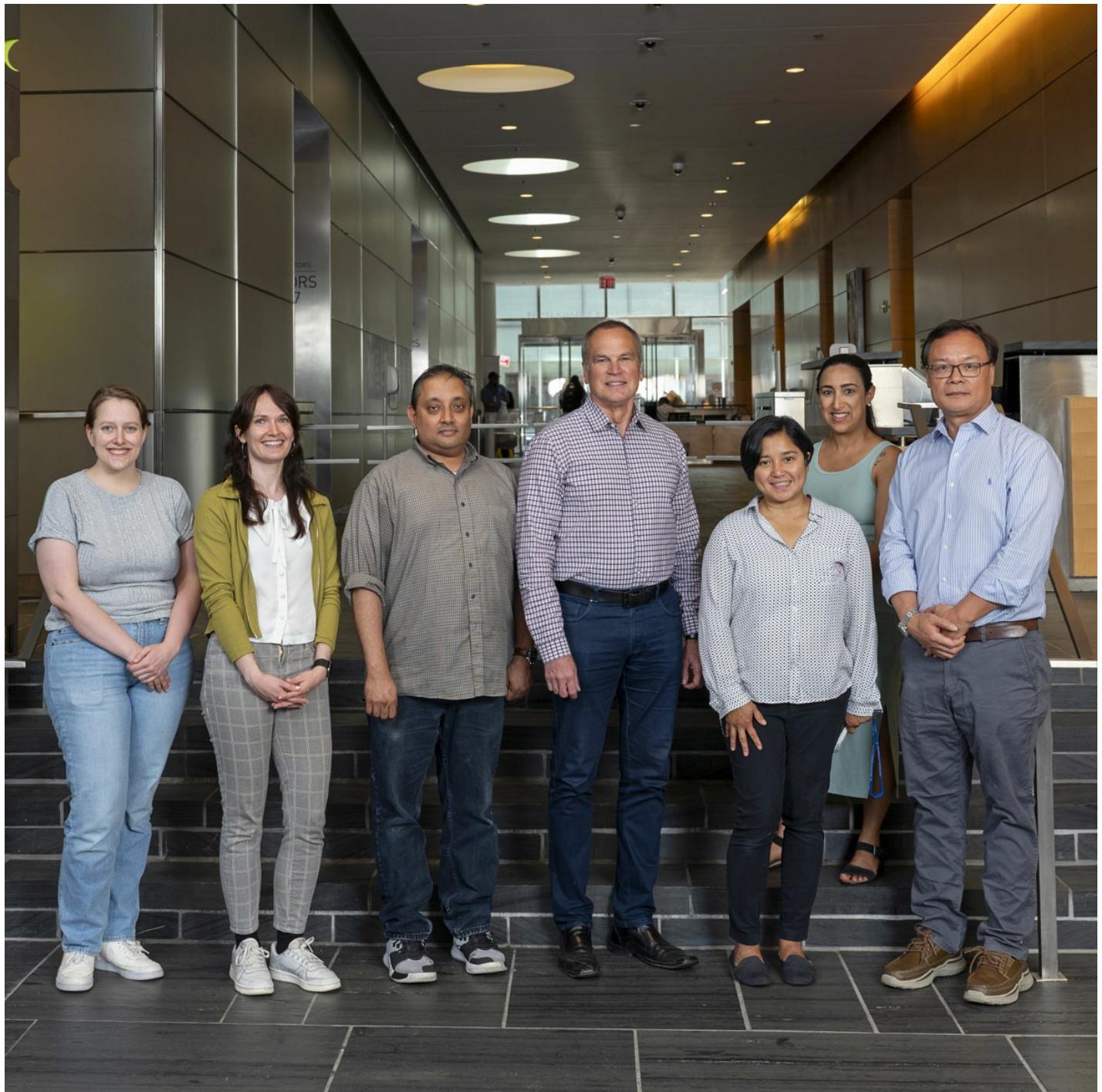
Ralph Garippa

Director

The Genome Editing and Screening (GES) Core Facility provides cutting-edge functional genomics, highthroughput screening (HTS), and high-content screening (HCS) services toward the discovery of novel cancer targets and elucidation of complex, aberrant cellular pathways in support of Cancer Center research. The complexities of reagent and assay development for customized screening experiments can be time- and costprohibitive for individual labs to undertake; the Core offers assistance and training in a range of cloning, customized library design, lentivirus production, assay development, screening, and image analysis considerations to assist researchers in harnessing

these powerful target identification tools and drug screening methodologies. The GES Core offers CRISPR-mediated transcriptional activation/interference (CRISPRa/CRISPRi) technologies combined with the highly efficient lentivirus delivery systems. Such workflows provide the underpinnings of powerful applications in large-scale gain-of-function/loss-of-function genome-wide screens and the engineering of cell-based models, including both cancer cell lines and PDX. Further, with the Core's expertise in CRISPR-Cas9 technologies, the GES provides customized stable isogenic cell line generation (knockout, HDR-directed knock-in, knockdown, base editing, and prime editing) toward the generation of unique cancer cell line models. Through production of pooled (full genome or custom) targeted CRISPR guide and shRNA libraries, the curation of an extensive collection of small-molecule drug libraries, and the use of cutting edge HTS/HCS platforms for high-speed confocal such as the GE InCell 6000 and Yokogawa CellVoyager CV8000, and live-cell imaging with the Sartorius IncuCyte S3 systems, the GES Core is uniquely positioned to assist investigators in identifying cancer type-specific targets through comprehensive functional genomics and subsequently testing of identified factors of interest via chemical-based and high speed imaging screening approaches.

[View More \(<https://www.mskcc.org/research-advantage/core-facilities/genome-editing-screening/overview>\)](https://www.mskcc.org/research-advantage/core-facilities/genome-editing-screening/overview)



People



Ralph Garippa

Director

Members

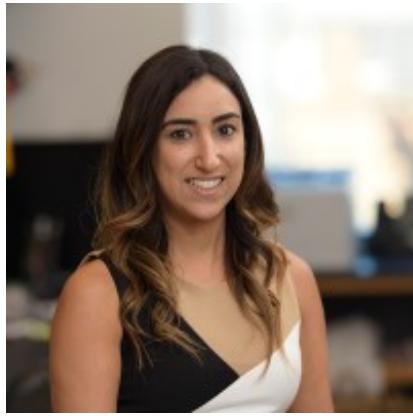


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To learn more about available postdoctoral opportunities, please visit our [Career Center](#)

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Cancer Center



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