Mount Sinai *The Tisch Cancer Institute*

Icahn School of Medicine at Mount Sinai

2023 Paul Calabresi Award in Clinical Oncology Research (PCACOR) K12 Scholars Program

Goal: The Tisch Cancer Institute (TCI) at the Icahn School of Medicine at Mount Sinai offers an NCI Paul Calabresi Award in Clinical Oncology Research (K12) for outstanding junior faculty MD, DO or MD/PhD physician scientists conducting multidisciplinary translational research. This career development program offers scholars opportunities for mentored research, curricular activities and a needs-based tailored education to prepare them to compete successfully for peer reviewed research funding and to advance their knowledge, skills and capacity for clinically impactful cancer research.

Summary of PCACOR K12 Scholars Program:
Award recipients will receive a stipend for up to three years while at Mount Sinai Icahn School of Medicine that is funded by the National Cancer Institute (NCI). The stipend will be up to $100,000 per year (plus fringe benefits) to support 75% (Non-Surgical) or 50% (surgical) effort each year. Twenty-four thousand ($24,000) dollars will be available to support research related expenses, as well as additional funds to attend scientific meetings (AACR/ASCO or ASH), participate in boot camps, visiting professorships and/or workshops. Scholars are also expected to take courses at Mount Sinai as needed to fulfill their educational development plan.

Program Requirements:

- **Leadership Support:** The leadership of the applicant's Department or Institute (Chairs, Chiefs, and Institute Directors) must commit to funding the full remainder of the K12 Scholar recipient's salary through the duration of the K12 Award. Departments, Divisions, and Institutes within Mount Sinai and its affiliated institutions are encouraged to collaborate in joint sponsorship of award recipients.

- **Transdisciplinary Mentorship:** All applicants will propose a transdisciplinary mentoring committee. The mentoring committee should include a basic research mentor and a clinical mentor (either of these may be the primary mentor, depending on the nature of the research project proposed). Mentors should have a track record of successful mentoring in clinical and translational research and be funded investigators. A list of Icahn School of Medicine senior faculty who have agreed to serve as potential basic and clinical mentors can be found in Appendix 1, although additional mentors may be identified by the scholar to serve in this capacity.

- **Curricular Activities:** In addition to their mentored cancer research project, Scholars will complete several self-paced curriculum requirements and participate in events to advance cancer specific Patient Oriented Research (POR) and career skills development.

Application Deadline, Review, and Award Notification Timeline

- Full Applications are due at Midnight on 1/15/2023
- Notification of awards will be made by 04/01/2023
- Funding will begin on 7/01/2023

Definition of Patient-Oriented, Clinical/Translational (C/T) Cancer Research

For this award, the research proposed by the applicant can span the entire translational spectrum from bench to bedside to community-engaged and population science based cancer research. This includes laboratory-based applied research as well as research performed in clinical, hospital, and community settings. Cancer research classified as clinical research, health services research, community participatory research, and basic research that is cancer focused with direct application to prevention, diagnosis, and/or treatment of cancer all qualify as patient-centered, C/T cancer research for this award.

The results of C/T research should either: 1) facilitate the application of discoveries from basic laboratory and pre-clinical research to studies in humans (e.g. clinical trials); 2) enhance translation of research findings into practice and/or policy; or 3) facilitate and evaluate the dissemination of best practices into the community.

Definition of Transdisciplinary Research Approach

A transdisciplinary approach brings experts across diverse disciplines, e.g. clinical medicine, epidemiology, genetics, artificial intelligence, statistics, exposomics, outcomes research, social science, bioengineering, data science, and basic science (among others) to collectively address a complex problem. We particularly encourage applications from the following areas of scientific strength: Cancer Immunology and Immunotherapeutics; Biomarker Discovery and Development; Omic-informed Small Molecule Drug Discovery, Development and Repositioning; and Health Disparities and Health Equity.

Successful Transition to an Individual Mentored K-Award or Independent R-Award: The PCACOR K12 is an early career development award intended to facilitate the eventual acquisition of individual extramural funding (either career development or independent research grant) by the awardee. **Applicants are expected to submit an individual mentored K proposal (or equivalent) or independent research project grant (e.g. R01), as PI, before the end of the K12 Award.** If any such awards are funded during the period of K12 support, K12 Program support will terminate when the external award begins.

Eligibility Requirements (All are needed)

A) A completed doctoral degree (MD, DO, or equivalent degrees);
B) ISMMS Instructors, Assistant Professors, or Post-Doctoral Fellows who are within six months of becoming faculty;
C) Identification of a suitable mentoring team to provide an appropriate multidisciplinary cancer research experience;
D) Demonstrated track record of excellence in research as evidenced by previous peer reviewed publications;
E) Excellent interpersonal skills and commitment to collaborative team science, including community engagement
F) Written evidence of protected time from Division Chief or Department Chair and/or TCI Institute Director;
G) Evidence of competency in biostatistics and study design is desirable.

Exclusion Criteria

A) Have received a federally funded career development award (e.g. K08, K23, K12, KL2, VA), a career transition award (K02, K99/R00) or similar federal or foundation award. Applicants who were unsuccessful in a prior application for a K-Award or equivalent ARE eligible to apply.

B) Have served as PI/MPI on a major NIH, VA, or foundation award (e.g., R01, R29, IIR, U01) or have served as project leader of a center/program project grants (e.g., P01, P50, P60, U54).

N.B.: Previous receipt of a small NIH grant such as an R03 or R21 DOES NOT disqualify an applicant. Recipients of a K12 award cannot receive any other salary support from a government sponsored grant (e.g. NIH grant) including training grants during the term of the K12 award. Applicants currently supported by such grants will need to indicate on their application that they will relinquish such support should they receive K12 funding.

PCACOR K12 Selection Criteria

- Commitment of the necessary resources and protected time from the home department/institute and commitment of research mentors and collaborators
- Likelihood that the K12 support will lead to a successful individual mentored K (or equivalent) or independent research application
- Track record and promise of the candidate for a career in C/T research
- Scientific merit, potential clinical importance, and feasibility of the translational cancer research proposal
- Qualifications and track record of the mentorship team
- Quality and appropriateness of the education and career development plan

Promoting and Supporting Diversity

Mount Sinai seeks to attract individuals of diverse backgrounds. The K12 program complies with the affirmative action policy of Icahn School of Medicine at Mount Sinai by considering all applicants to the program on the basis of their total merit. The Program does not discriminate on the basis of sex, race, color, creed, religion, age, national origin, disability, veteran status, marital status, or sexual orientation, in accordance with institutional policy and in compliance with the requirements of the Civil Rights Act, the Education Amendments, the Rehabilitation Act, the Age Discrimination Act, and the Americans with Disabilities Act. ISMMS is committed to advancing a diverse and inclusive research workforce.

Application Submission Requirements:

The complete application should include all of the following components in a single PDF file, in the order listed below and should be submitted by Midnight on December 30, 2022

- **Cover letter:** The cover letter should include the name of the applicant and a list of all the names of the recommenders providing letters of support (e.g., mentors, department chairs, and institute directors.

- **Resume:** A NIH bio-sketch must be provided in the standard NIH format outlining educational and clinical academic training if applicable (residency and fellowship), research experience, awards, honors, and publications.

- **Research Plan:** The proposal should follow the standard NIH grant format and be single-spaced in Arial 11 point font with 0.5 margins (left, right, top and bottom). **The research should be designed to be completed within the time of the Award. The work is expected to generate sufficient data to support an application for extramural career development or project award application.**

    - ***Research Abstract:*** (1 page maximum) summarize the research project and career development proposal.

    - ***Research Proposal:*** (Maximum of 6 pages for Sections A through D)
        A. Specific Aims and Hypotheses (0.5 page max)
        B. Background and Significance (1.5 pages max)
        C. Preliminary Studies (1.5 page max): Applications are not required to have significant preliminary data for the proposed plan, but supportive data justifying the design and methods should be included where appropriate.
        D. Research Design and Methods (including strengths and limitations of the proposed approach and its feasibility, together with assessments of all critical resources and specifics of the population and outcomes to be studied) (2.5 pages max)
        E. Human Subjects (not included in page limit)
        The Applicant must indicate if human materials or subjects will be involved in the proposed research.
        F. Laboratory Animals (not included in page limit.)
        The Applicant must indicate if laboratory animals will be involved in the proposed research
        G. Literature Cited (not included in page limit)

- **Research Proposal Layman's Paragraph.** Please provide a well written lay abstract for a general audience, describing your proposed research. Please highlight the potential to impact the cancer burden in our community and catchment area.

- **Career Development Plan:** (2 pages max) State reasons for pursuing a career in C/T research. Describe background, interests and experiences that prepare the candidate for the award; describe gaps in knowledge areas and skills and how the plan will reduce or eliminate those gaps specific plans (including didactic courses, where applicable) to meet the career development goals during the award; and how both the research project and career/educational plan will facilitate progress on the path to independence. Indicate how this career development plan will make the applicant a more attractive candidate for future funding.

  Applicants who have previously submitted unsuccessful career development awards (K-Award or equivalent grants) must also:

- Provide a copy of the most recent Summary Statement containing the score, percentile, and review comments.
- Include in the "Career Development" section a discussion of how the K12 proposal is related to the career award that was previously reviewed.
- If relevant, indicate resubmission plans, and briefly explain how this K12 award will help you successfully obtain an externally funded individual mentored career award or investigator initiated grant, and include a short summary of your responses to the main review criticisms. You may use an extra page (if needed) in your "Career Development" section to answer the additional questions relating to a prior external career award application (total of 3 pages max).

- **Current Grant Support:** List all current sources of grant support, including peer reviewed and non-peer reviewed funding (including role, % salary support.)

- **Timeline:** (1 page max) schedule for research and career development activity during award period, including application for an individually mentored research K (or equivalent) or independent research R award.

- **Mentor Commitment Letters:** Letter of support and commitment from the primary and secondary faculty members who will serve as the research mentors, including a description of the faculty member's mentoring experience and a discussion of the mentoring plan (frequency of meetings, expectations regarding submission of application for funding, manuscripts, etc.). Include each mentor's NIH bio-sketch. The letter from the primary mentor should indicate the feasibility of the proposal, and the availability of all critical resources needed. **The letter should include a statement regarding the probability that the K12 Award will provide sufficient resources to complete the proposed research project in combination with resources available from the mentor(s).**

- **Department Chair, Institute Director, and Division Chief Letters:** Applicants who are members of Departments that have Divisional structures will need a letter from either their Department Chair or Division Chief. Each letter should:

    - Explicitly indicate the commitment to protect the required 75% (for non-surgeons) or 50% (for surgeons) of the candidate's time for the duration of the K12 program. The effort devoted to the program will be monitored by the K12 program.
    - For individuals applying as faculty, the letter must guarantee a faculty appointment prior to the start of the K12 support. For postdoctoral applicants, the letter must guarantee a faculty appointment within 6 months of starting the K12 training program.
    - Acknowledge and accept the requirement that, in aggregate, the clinical, teaching, and administrative responsibilities of the K12 award recipient. cannot exceed 25% effort. [For surgeons with appropriate justification and prior approval of the K12 program leadership, the 75% effort may be lowered to no less than 50%.]
    - Acknowledge that the applicant will not be subjected to a reduction in total salary as a result of participating in the K12 program.

- Assess the candidate's promise as an independent C/T investigator, the quality and adequacy of the proposed transdisciplinary mentorship team, and the candidate's likelihood of success in applying for peer reviewed external research funding (K-award or equivalent) or independent research R award by the end of the K12 support.

- **Additional Letters of Support (Optional: No more than 2):** Applicants may also solicit letters of recommendation from other persons who can comment on the applicant's academic work, clinical skills, intellectual ability, research experience, and/or academic potential. It is highly encouraged that recommendation letters from previous research mentors be forwarded for review.

Please Follow All Instructions: Proposals that do not abide by this RFA may be deemed non- responsive and disqualified.

For application questions: Please contact Laura Piraino at laura.piraino@mssm.edu. If she is out of office, please contact Chan-Bene Lin at chan-bene.lin@mssm.edu.

K12 Leadership includes:

Bhardwaj, Nina MD, PhD Professor of Medicine, Division of Hematology and Medical Oncology and Urology; Ward Coleman Chair in Cancer Research; Director of Immunotherapy and Medical Director of the Vaccine and Cell Therapy Laboratory and Immunology Multi-Disciplinary Training Area faculty in the Graduate School of Biomedical Sciences)

Ferrara, James MD Professor of Medicine, Division of Hematology Oncology and Immunology; and Director, Translational Research, Hematologic Malignancies; Co-Director the Mount Sinai Acute GVHD International Consortium [MAGIC].

Parekh, Samir MBBS Professor of Medicine, Division of Hematology and Medical Oncology, and Oncological Sciences; Director of Translational Research in Myeloma and Co-leader of the Cancer Clinical Investigation Program.

Application Checklist:

- ☐ **Full application submitted by Midnight on January 15, 2023 and should include the items below**:
  - ☐ Cover letter
  - ☐ Bio-sketch
  - ☐ Research Plan
  - ☐ Research Proposal Layman's Paragraph
  - ☐ Career Development Plan
  - ☐ Copy of Summary Statement of prior unsuccessful career development award application (if applicable)
  - ☐ Current Grant Support Timeline
  - ☐ Primary mentor's and secondary mentor's commitment letters
  - ☐ Letter from department chair, Institute Director or Division Chief
  - ☐ Additional Letter of Support (optional, up to 2)

The full application must contain each component listed above as one combined PDF.

Appendix 1: K12 Mentors

Cancer Immunology and Immuno-therapeutics:

Bhardwaj, Nina MD, PhD, Ward Coleman Chair in Cancer Research; Professor of Medicine, Division of Hematology and Medical Oncology and Urology; Director of Immunotherapy and Medical Director of the Vaccine and Cell Therapy Laboratory and Immunology Multi-Disciplinary Training Area faculty in the Graduate School of Biomedical Sciences (**Basic and Translational Research)**

Blank, Stephanie MD Professor of Medicine, Division of Gynecologic Oncology **(Clinical Research)**

Brody, Joshua D. MD Director of the Lymphoma Immunotherapy Program at The Tisch Cancer Institute at Mount Sinai; Associate Prof. Medicine, Hematology and Oncology Immunotherapy; and a faculty member of the Icahn Genomics Institute. (**Translational and Clinical Research)**

Brown, Brian PhD Professor of Medicine, Division of Genetics and Genomic Sciences; Dermatology; Director of the Icahn Genomics Institute (IGI); Associate Director of Mount Sinai's Precision Immunology Institute (PrIISM) (**Basic and Translational Research)**

Galsky, Matthew MD Professor of Medicine, Division of Hematology and Medical Oncology, Director of Genitourinary Medical Oncology, Co-Director of the Center of Excellence for Bladder Cancer and Associate Director for Translational Research at the Tisch Cancer Institute. **(Clinical and Translational Research)**

Merad, Miriam MD, PhD Director of the Precision Immunology Institute at Mount Sinai School of Medicine in New York and the Director of the Mount Sinai Human Immune Monitoring Center (HIMC); Professor in the Divisions of Oncological Sciences, Medicine, Hematology and Medical Oncology and Dermatology. (**Basic and Translational Research)**

Biomarker Discovery and Development:

Cohen, Deirdre MD Director of the Gastrointestinal (GI) Oncology Program for the Mount Sinai Health System; Associate Professor of Medicine in the Division of Hematology and Medical Oncology; and Medical Director of the Cancer Clinical Trials Office at The Tisch Cancer Institute. **(Clinical Research)**

Ferrara, James MD Professor of Medicine, Division of Hematology Oncology and Immunology; and Director, Translational Research, Hematologic Malignancies; Co-Director the Mount Sinai Acute GVHD International Consortium [MAGIC]. (**Clinical and Translational Research)**

Gnjatic, Sacha PhD as Associate Director of the Human Immune Monitoring Center at Mount Sinai; Associate Professor of Medicine in the Division of Hematology and Oncology at the Tisch Cancer Institute and Immunology Institute. (**Basic and Translational Research)**

Hirsch, Fred R MD, PhD Executive Director at the Center for Thoracic Oncology; Joe Lowe and Louis Price Professor of Medicine in Division of Hematology and Medical Oncology; and Associate Director of Biomarker Discovery for TCI. **(Translational Research)**

Levine, John MD, MS Professor of Medicine, Divisions of Pediatrics, Medicine, Hematology and Oncology; Co-Director the Mount Sinai Acute GVHD International Consortium [MAGIC] **(Clinical and Translational Research)**

Powell, Charles MD Professor of Medicine and System Division Chief for Pulmonary, Critical Care and Sleep Medicine; Medical Director of Respiratory Therapy; CEO of the Mount Sinai-National Jewish Health Respiratory Institute in partnership with the The Icahn School of Medicine (**Basic and Translational Research)**

Rosenstein, Barry PhD Professor of Radiation Oncology, Genetics and Genomic Sciences, Environmental Medicine & Public Health and Dermatology (**Basic and Translational Research)**

Taouli, Bachir MD Professor of Radiology and Medicine in the Body Imaging Section (Department of Radiology) and the Translational and Molecular Imaging Institute (TMII) (**Clinical and Translational Research)**

Taioli, Emanuela MD, PhD Professor of Population Health and Science and of Thoracic Surgery; Director of the Institute for Translational Epidemiology; Director of the Center for the Study of Thoracic Diseases Outcomes; Associate Director for Population Science and a Co-Leader of the Cancer Prevention and Control Program **(Clinical Research)**

Wang, Pei PhD Professor in Division of Genetics and Genomic Sciences **(Basic and Translational Research)**

Wright, Robert O. MD, MPH Ethel H. Wise Chair of the Department of Environmental Medicine and Public Health; and Co-Director of the Institute for Exposomic Research (**Clinical and Translational Research)**

Omic-informed Small Molecule Drug Discovery, Development and Repositioning:

Bansal, Meena B. MD. Professor of Medicine in Division of Liver Diseases; Director of Translational Research in the Division of Liver Diseases; Chief Medical Officer of Mount Sinai Care LLC and Deputy Chief Medical Officer for Mount Sinai Health Partners (**Basic and Translational Research)**

Cordon, Cardo, Carlos MD, PhD, Irene Heinz Given and John LaPorte Given Professor and Chairman for the Mount Sinai Health System Department of Pathology. (**Translational Research)**

Chari, Ajai MD Director of Clinical Research in the Multiple Myeloma Program; Associate Director of Clinical Research, Mt Sinai Cancer Clinical Trials Office; Professor of Medicine, Division of Hematology and Oncology; **(Clinical Research)**

Chipuk, Jerry PhD Associate Professor of Oncological Sciences and Dermatology, Associate Director of Basic Science Shared Resources at The Tisch Cancer Institute, and Director for Cell Biology in the Graduate School of Biomedical Sciences (**Basic and Translational Research)**

Dar, Arvin PhD Professor in the Departments of Oncological Sciences and Pharmacological Sciences; and Associate Director of the Mount Sinai Center for Therapeutic Discovery (**Basic and Translational Research)**

Friedman, Scott L. MD Dean for Therapeutic Discovery and Chief of the Division of Liver Diseases, at the Icahn School of Medicine at Mount Sinai; Professor of Medicine, Division of Liver Diseases (**Basic and Translational Research)**

Goodman, Karyn MD, MS Professor and Vice Chair for Research and Quality in the Department of Radiation Oncology; Associate Director for Clinical Research at the Tisch Cancer Institute; and Co-director of the Center of Excellence for Pancreatic Cancer. **(Clinical Research)**

Hoffman, Ronald MD Albert A. and Vera G. List Professor of Medicine, Professor of Medicine in Division of Hematology and Medical Oncology; Director of the Myeloproliferative Disorders Research Program. (**Basic and Translational Research)**

Mascarenhas, John MD, MSCR Professor of Medicine Division of Hematology and Oncology; Director of the Center of Excellence for Blood Cancers and Myeloid Disorders, and Director the Adult Leukemia Program. **(Clinical Research)**

Mazumdar, Madhu PhD Director of the Institute for Healthcare Delivery Science at the Mount Sinai Health System; Professor of Biostatistics at the Center of Biostatistics, Department of Population Health Science and Policy; and Director of the Biostatistics Core of Tisch Cancer Institute. **(Clinical Research)**

Parekh, Samir MBBS Professor of Medicine, Division of Hematology and Medical Oncology, and Oncological Sciences; Faculty member of the Icahn Genomics Institute; Director of Translational Research in Myeloma and Co-leader of the Cancer Clinical Investigation Program. (**Basic and Translational Research)**

Parsons, Ramon MD, PhD Director of The Tisch Cancer Institute; Ward-Coleman Chair in Cancer Research; Director, Mount Sinai Cancer, Mount Sinai Health System, and Chair of the Department of Oncological Sciences. (**Basic and Translational Research)**

Poulikakos, Poulikos PhD Associate Professor of Oncological Sciences; Director of the Poulikakos Laboratory (**Basic and Translational Research)**

Posner, Marshall MD Professor of Medicine, Director of Head and Neck Medical Oncology; Associate Director of the Center for Personalized Cancer Therapeutics; and Co-Leader of the Cancer Clinical Investigation Program. **(Clinical Research)**

Sidi, Samuel, PhD Professor of Cell, Developmental & Regenerative Biology, Medicine, Hematology and Medical Oncology and Oncological Sciences. (**Basic and Translational Research)**

Health Disparities and Health Equity:

Bickell, Nina MD, MPH Associate Director of Community Engaged and Equity Research, Co-Leader of the Cancer Prevention and Control Program; Co-Director of the Center for Health Equity and Community Engaged Research; Professor of Medicine in the Division of Population Health Science and Policy Community Engaged Research. **(Clinical Research)**

Gabrilove, Janice MD, FACP, James F. Holland Professor of Medicine; Director of the Clinical Research Education Program (Certificate, Master of Science, and PhD in Clinical Research) at the Graduate School of Biomedical Sciences, and Co-Director of the Patient Oriented Research Training And Leadership (PORTAL) Program, a joint MD/Master of Science in Clinical Research Program; Associate Director of Education and Training at The Tisch Cancer Institute. **(Clinical Research)**

Sigel, Keith M. MD, MPH Associate Professor of Medicine, General Internal Medicine and Infectious Diseases. **(Clinical Research)**

Smith, Cardinale MD, PhD Professor of Medicine in the Division of Hematology and Medical Oncology, Geriatrics and Palliative Medicine; Chief Quality Officer for Oncology, Director of the Supportive Oncology Program, and Associate Director for Community Outreach and Engagement at The Tisch Cancer Institute. **(Clinical Research)**

Sparano, Joseph MD, FACP, Ezra M. Greenspan MD Professorship in Clinical Cancer Therapeutics; Chief of the Division of Hematology and Medical Oncology for the Mount Sinai Health System and Deputy Director of The Tisch Cancer Institute (TCI). **(Clinical Research)**

Wisnivesky, Juan P. MD, DrPH, Chief of the Division of General Internal Medicine; Professor of Medicine, General Internal Medicine. **(Clinical Research)**