

Grants from foundations and professional societies

Kim Margolin, MD, FACP, FASCO

Professor, City of Hope National Medical Center

SITC Grant-writing Workshop 11/10/17

Disclosures/qualifications

- I am not on an NCI study section (no R-01s or equivalent, although I have been a co-PI for the Cancer Immunotherapy Trials Network)
- I have reviewed for Melanoma Research Alliance, Melanoma Research Foundation, Department of Defense, SU2C/AACR, Pfizer/EMD Immuno-Oncology Capacity Award, and Fred Hutchinson's Immunotherapy Steering Committee (internal grants)
- My participation in pharmaceutical/biotech ad boards and monitoring committees has no relationship to this talk

This talk will attempt to cover or touch on

- A selected list of organizations providing grant funding
 - Disease-focused
 - Modality and society, independent of disease
- Examples of grant types and criteria
- Similarities and differences among funding sources and applications
- Tips from a reviewer's standpoint
- Relationships between funding success and job
 - Getting hired
 - Getting promoted

Disease-independent grants— society-based

- American Association of Cancer Research aacr.org
- ASCO's Conquer Cancer Foundation conquer.org
- American Cancer Society cancer.org
- Stand Up to Cancer standuptocancer.org
- National Comprehensive Cancer Network nccn.org



ADVANCING CANCER IMMUNOTHERAPY WORLDWIDE

Disease-independent grants, modality-based

- Society for Immunotherapy of Cancer Forward Fund sitcancer.org
- Cancer Research Institute cancerresearch.org
- College of American Pathologists cap.org
- American Association of Immunologists aai.org
- St Baldrick's Foundation stbaldricks.org





someday
is today®



Grants by disease

- Leukemia & Lymphoma Society lls.org
- Multiple Myeloma Research Foundation theMMRF.org
- Prostate Cancer Foundation pcf.org and Movember
- Kidney Cancer Association kidneycancer.org
- Lung Cancer Research Foundation lungcancerresearchfoundation.org
- Susan G Komen komen.org
- PanCan pancan.org
- Melanoma—will focus on these as examples
 - MRF melanoma.org
 - MRA curemelanoma.org



Kidney ~~Cancer~~ Association



Melanoma
Research Alliance

ADVANCING CANCER IMMUNOTHERAPY WORLDWIDE



Other considerations

- RFAs don't come regularly and vary depending on surges of \$ as well as donors' requirements and interests
- Single RFAs for unique grants: individualized RFAs with input from the grant reviewers themselves (example: recent Pfizer/EMD "Improving Healthcare Capacity in Immuno-Oncology")
- Foundation and society funding has particular importance in setting of increased competition for limited government grant funding, which also varies
- Caveat: Foundation and society grants may not count towards career advancement to the same degree as government grants
 - Some organizations do not pay indirect fees
 - Appointment and promotion committees may consider them less competitive, thus less prestigious; maybe also because they do not follow same criteria as specific NIH grants?

Considerations from Prof Barrett—worth repeating

Get up to date with your field and pursue a novel idea

Select the right grants for your career situation

Plan research for the next 3 years, and find collaborators, materials

Allow 8 months for grant planning and writing—a rushed grant is likely to fail*

Address all grant components—LOS, budget, etc

The grant is more than the idea—it's a complete plan

Think like the reviewer!

*although sometimes there is no choice, as opportunities with shorter timeline appear

READ THE RFA!!!

READ THE RFA

READ THE RFA

And don't forget the pitfalls and alternatives!—they must be adequate, feasible, and address real possibilities
Worst examples are reiteration of the hypothesis and why the research plan will prove it—that's arrogant!

Grant review committees

- Similar composition as NIH study sections but may be more flexible
 - Numbers of members
 - Inclusion of lay and patient advocate members*
 - Longterm members versus ad hoc reviewers
 - Committee roster generally public; reviewer assignment confidential
- The mismatch between applicant and reviewer re: dedication to different parts of grant (Barrett) depends on project, applicant and reviewer
 - Finished product should reflect adequate attention to each element.
 - Repurposed grants—if you must—should be carefully revised and cleaned
 - Similar criteria for grant review as for NIH grants, with some specificities by funder

*Applicant may actually be required to have a pt advocate on the grant/on the scientific team!

Practicalities of submission and review

- Many foundations now use Proposal Central, a well-organized and user-friendly system for submission and review.
- Others may use their own organization's customized system.
- Scoring, discussions and decisions are analogous but not identical to NIH's system of study sections.
- There may or may not be “pink sheets”—review comments that facilitate the next submission to same or different funding source.
- Final budget decisions may be entirely separate from grant review committee's deliberations and votes.

Society Grants—ASCO Conquer Cancer Foundation

ASCO's Conquer Cancer Foundation

- Many different grant types—e.g. 2018 Advanced Clinical Research Award in breast cancer, in partnership with Breast Cancer Research Foundation
- Transparency in membership identity, although confidentiality in reviewer assignment—like journals and other committees.

⊕ 2016-2017 Grants Selection Committee

⊕ 2016-2017 Advanced Clinical Research Award in Breast Cancer Subcommittee

⊕ 2016-2017 Long-term International Fellowship Subcommittee

⊕ 2016-2017 Diversity in Oncology Initiative Subcommittee

ASCO's Conquer Cancer Foundation



“Speeding the pace of discovery. Your gift to the Conquer Cancer Foundation supports research grants to the brightest scientific minds in your community and around the world. The Conquer Cancer Foundation has provided more than \$100 million in research funding to over 1,000 researchers. Many work in areas that are not often funded by other organizations, such as palliative care and rare cancers. This pipeline of talent and results will enrich cancer care and research for years to come”.



\$105 MILLION
in research funds
since **1984**

Conquer Cancer Foundation Grants

Advanced Clinical Research Award

The Advanced Clinical Research Award (ACRA) is a topic-specific competition designed to support physician-scientists committed to performing original, clinical cancer **research in an area not currently funded**. This research must have a patient-oriented focus, including a **clinical research study and/or translational research involving human subjects**. The ACRA is a three-year grant totaling \$450,000 to pay for personnel and/or research expenses, and travel to attend the CCF Grants and Awards Ceremony at the ASCO Annual Meeting.

Young Investigator Award

The Young Investigator Award (YIA) provides funding to promising investigators to encourage and promote quality research in clinical oncology. The purpose of this grant is to **fund physicians during the transition from a fellowship program to a faculty appointment**.

Career Development Award

The Career Development Award (CDA) provides research funding to **clinical investigators** who have **received their initial faculty appointment**, as they work to **establish an independent clinical cancer research program**. This research must have a **patient-oriented** focus, including a **clinical research study and/or translational research involving human subjects**. Proposals with a predominant focus on in vitro or animal studies (even if clinically relevant) are not allowed.

Society (Professional Organization) Grants—National Comprehensive Cancer Network

The NCCN Foundation® is pleased to announce the 2018 Young Investigator Award (YIA) Request for Proposals (RFP). Through the YIA Program, the NCCN Foundation invites **proposals from young investigators with innovative ideas and an interest in improving the quality, effectiveness, and efficiency of care provided to cancer patients.** The NCCN Oncology Research Program will be managing this program.

Attached, please find the following documents:

- **RFP**
- Frequently Asked Questions (FAQ)
- Budget Template

NCCN Young Investigator Award

The Project Timeline is as follows:

- NCCN Member Institutions may nominate two candidates by November 22, 2017.
- The YIA Proposal submission deadline is **January 17, 2018** by 5:00PM (ET).
- Grant Committee Review will take place late February 2018.
- YIA Awards will be announced at the NCCN Annual Conference, March 2018.
- The Award period starts July 1, 2018 and ends on June 30, 2020. Eighteen months for the implementation of the scope of work (July 1, 2018- January 31, 2020) and six months to compile and finalize the study data and comply with all reporting requirements (February 1, 2020- June 30, 2020).
- Presentation of research results at the NCCN Annual Conference to occur March 2019.



Society/Collaborative Grants— Stand Up to Cancer

SU2C-collaborative grants—disease-directed teams

- Pancreatic cancer: transcriptional control—D von Hoff; immuno—E Jaffe; anti-vascular—C Thompson
- Brain, cancer stem cell, epigenetics—P Dirks
- Prostate cancer precision therapy—A Chinnaiyan; prostate adaptive pathways—E Small
- Breast cancer—Tak Mak; breast cancer, molecular—D Slamon
- BRAFw.t. melanoma—J Trent
- Ovarian, DNA repair—A D'Andrea
- Lung, KRASmutant—Engelman
- Colorectal genomic, metabolic, immunologic—L Diaz; early detection—G Meijer



SU2C-collaborative grants—modality or multi-disease teams

- Immune checkpoint blockade—J Allison
- Tumor cell chip—D Haber
- Tumor Organoids—H Clevers
- PI3K targeting, women's cancers—L Cantley
- Epigenetics w/Van Andel—P Jones; epigenetics—S Baylin
- Pediatric tumors w/St Baldrick's—J Maris

Modality Grants—Cancer Research Institute (Immunotherapy)

Cancer Research Institute Impact Grants with collaborative funding



The **Cancer Research Institute Technology Impact Award** provides seed funding of up to \$200,000 to be used over 12-24 months to address the gap between technology development and clinical application of cancer immunotherapies. These grants aim to encourage collaboration between technology developers and clinical cancer immunologists and to generate the proof-of-principle of a novel platform technology in bioinformatics, *ex vivo* or *in silico* modeling systems, immunological or tumor profiling instrumentation, methods, reagents and assays, or other relevant technologies that can enable clinician scientists to generate deeper insights into the mechanisms of action of effective or ineffective cancer immunotherapies.

Award winners will be selected based on the novelty, creativity, technical sophistication, and transformative potential of the technology to impact cancer ...

Cancer Research Institute

Applicants must hold a faculty appointment as a tenure-track assistant professor (or higher rank) at the time of award activation.

The grant will be awarded to a scientist who describes an extraordinarily novel, yet practical research plan that is creative and technically sophisticated.

Joint submissions from collaborators will also be considered. (The collaborators will share the award.) Each collaborator must meet the eligibility criteria.

Selected projects that meet their 12 and 24 month milestones may be eligible for follow-on funding that will enable the established proof-of-concept technology to be developed into a methodology that improves cancer immunotherapy research worldwide.

Cancer Research Institute

New bioinformatics methods or technologies that speed collection and analysis of large sets of patient-derived biological data

Computer simulations for modeling biological systems and responses to immunotherapy

Tools and methods that improve profiling of tumors to inform therapeutic strategies

Real-time visualizations of molecular and cellular activity to improve tracking of responses to immunotherapy

In vitro tissue culture systems that recapitulate the interactions between primary tumor cells and the immune system

Disease-directed Grants

Prostate Cancer Foundation and “Movember”

- Both foundations separately fund prostate CA but also co-sponsor research
- PCF received donation from Movember Foundation for 2017 cycle
- Challenge award
 - Cross-disciplinary teams
 - At least 3 investigators, at least one young investigator [each foundation defines but often <5 years following end of fellowship training or equivalent]
- Funded projects for 2017
 - PARPi resistance mechanisms
 - Androgen receptor variant targeting with novel Ab-drug conjugate
 - Novel nanoparticle-based vaccine
 - Effect of local Rx on outcomes of met PrCA by molecular subset
 - Epigenetic targeting of ACK1/androgen receptor pathway
 - Special category award—broadening T cell activation w/PD-1 blockade



Melanoma Research Alliance



Since its founding in 2007, the Melanoma Research Alliance has committed \$88 million to fund melanoma research. With an additional \$89.5 million leveraged from additional sources, MRA has catalyzed strategic, collaborative, and accountable research efforts, moving the field toward effective treatment options for all melanoma patients as quickly as possible.

MRA supports both individual investigator and collaborative team projects focused on translational, innovative research that will impact the prevention, diagnosis, staging, and treatment of melanoma in the near and intermediate future.

Recent landmark advances in melanoma treatment have provided new options for patients, and melanoma stands as the case study for state-of-the-art cancer drug development, precision medicine and immunotherapy.

Young Investigator Awards—early career scientists with novel ideas in melanoma research, to recruit and support the next generation of melanoma researchers. Scientists within four years of their first academic faculty appointment. A mentorship commitment from a senior investigator is required.

Pilot Awards test potentially transformative ideas that do not have extensive preliminary data but articulate a clear hypothesis and translational goals. Resources for such “high-risk, high-reward” projects are important to establish proof-of-concept, which may then leverage additional funding through more traditional avenues.

Established Investigator Awards support senior investigators with an established record of scientific productivity and accomplishment and who are past the initial four years of their first academic faculty appointment.

Team Science Award Programs are the centerpiece of the MRA research funding portfolio. This program fulfills one of MRA’s primary goals: to foster a collaborative research process. Multidisciplinary teams consist of Principal Investigators with complementary expertise who may be from the same institution, inter-institutional, and/or international institutions. Team science projects promote transformational melanoma research advances with the potential for rapid clinical translation

Partnership Awards—to facilitate interactions between sectors including industry and other nonprofits.

Development Awards—subtype of Pilot Award—one year of funding to test potentially transformative "high-risk, high-reward" ideas without extensive preliminary data but would establish proof-of-concept. Investigators who are past the initial four years of their first academic faculty are eligible.

2017-2018 MRA RFP

Melanoma Research Alliance

The Melanoma Research Alliance (MRA) is pleased to announce a Request for Proposals (RFP) for high- impact pre-clinical, translational, and early clinical research that has the potential to lead to near-term impact in melanoma prevention, detection, diagnosis, staging, and treatment. This cycle, proposals will be accepted for Team Science Awards, Young Investigator Awards, Academic-Industry Partnership Awards (for Established Investigators), and a Special Opportunity Award. This cycle, MRA plans to support at least \$9 million in new funding through this RFP with an additional \$1 million through the American Cancer Society-MRA joint RFP: Understanding, Preventing and Managing Immunotherapy-Related Adverse Events (irAEs) Associated with Checkpoint Inhibition for Melanoma and Other Cancers, which was announced separately.

SPECIAL OPPORTUNITY AWARD FOR TEAM SCIENCE: RTFCCR-MRA (EUROPEAN-LED TEAM SCIENCE AWARD)

The following Special Opportunity is for a Team Science Award, which is designed to foster a multidisciplinary, collaborative research process and promote transformational research advances with the potential for rapid clinical translation in prevention, early detection, staging and/or treatment of melanoma.

Multidisciplinary teams of two or more PIs led by an **Administrative PI at a European research institution** will receive up to \$900,000 USD total over 3 years, to support clinical research projects related to melanoma. Teams may include researchers located outside of Europe. Projects must include at least 50% of the budget focused on early stage clinical studies and/or clinical translational research that demonstrates potential for quick and meaningful impact. Basic research or phase IV clinical trials are not eligible for this award. Each team must also include at least one Young Investigator as a co-investigator.

- Nanobody-based checkpoint blockade, Breckpot/Thielemans, Brussels
- Biomarkers of anti-apoptosis inhibitors, Haq/Letai, Dana-Farber
- PD-1-resistance and TVEC, Hu-Lieskovan/Ribas, UCLA
- Immune evasion in MAPKi and anti-PD-1 Rx, Hugo/Lo, UCLA-
- miR29 in melanoma initiation and progression, Karreth/Smalley, Moffitt
- Nanoscale real-time tracking immunotherapy, Kulkarni/Sengupta, Brigham
- PKC-alpha node in overcoming MAPKi resistance, Kwong/Davies, MDACC
- Molecular epidemiology of gender differences, Liu-Smith/Meyskens, UC Irvine
- Epigenetic effectors of checkpoint blockade, Rai/Wargo, MDACC
- T cell genetic screen for immunotherapy, Sanjana/Varmus, NY Genome Center
- Downregulating CTLA4 on effector T cells, Stone/Weeraratna, Wistar Institute
- Blocking melanoma brain metastases via microenv, Valiente/Soengas, Madrid
- “smart” nanoparticles for immunoRx targeting, Wilson/Richmond, Vanderbilt

2017 Young
Investigator
(some w/
partner-
ships)

2017 Pilot Awards

- Next-generation inhibitors vs w.t. and mutant BRAF dimers, Gavathiotis, Einstein
- MDSC in adaptive resistance to PD-1 Ab, Hanks, Duke
- Foxp3 and NMD blockade, Pastor, Foundation Applied Medical Research
- Pigment heterogeneity, Shackleton, Melbourne
- Novel T cell regulatory receptor as target, Wang, Med College Wisconsin

2017 Academic-Industry Award

Melanoma
Research Alliance

- International prospective natural history study, Carvajal, Columbia [with Immunocore]

- Single cell analysis+ecosystem, Amit, Weizmann
- DNA-based biomarkers for Dx+prognosis, Bastian, UCSF
- Stem cells and metastasis, Fuchs, Rockefeller
- UV mutagenesis, Liang, USC
- Drugs for NF-mutant melanoma, Look, Dana-Farber
- Granzyme B imaging, Mahmood, MGH
- YAP inhibitors vs Treg cells, Pan, Hopkins
- Non-invasive imaging of immune response, Ploegh, Boston Children's
- SBI-756 translation initiation inhibitor, Ronai, Technion
- Cell of origin and heterogeneity, Studer, MSKCC
- Multiplex biomarkers for PD-1/PD-L1 block, Taube, Hopkins
- Single-cell biomarkers and T cell engineering, Varadarajan, Houston
- Adipocytes in tumor microenvironment, White, MSKCC
- TEAD auto-palmitoylation in YAP-dependent uveal melanoma, Wu, MGH

2017 Established
Investigator—
some funded w/
partnerships

Melanoma
Research Alliance

Melanoma Research Foundation (and its Breakthrough Consortium)



NEW for 2018: Medical Student Research Award—a research grant supporting **medical students early in their careers conducting clinical or laboratory-based melanoma research**. Eligible areas of research can include the prevention, biology or treatment of melanoma and may focus on the study of cutaneous, ocular, mucosal or pediatric melanoma.

The MRF is committed to introducing students early in their career to the clinical or research opportunities under the mentorship of an investigator engaged in melanoma research. As such, medical students are encouraged to submit applications for the \$3,000 award for 1 year of research. Begun in 2011, this program has funded 35 medical students to date.

Young Investigator Research Team Award

The MRF, in partnership with the [MRF Breakthrough Consortium \(MRFBC\)](#) and Bristol-Myers Squibb (BMS), is pleased to announce a new research award for 2017 for **young investigator teams designed to advance the field of translational immuno-oncology research**

Team, Established Investigator & Career Development Awards—traditional, like others



2018 Cancer Immunotherapy Fellowship Opportunities

SITC is proud to announce that we will be offering the following fellowships in 2018 made possible through the generosity and partnership of the organizations outlined below. More information about these awards, including the submission timeline, criteria and deadlines, will be released in December 2017 on the SITC website. The submission will open mid-January 2018.

2018 SITC-AstraZeneca Postdoctoral Cancer Immunotherapy in Combination Therapies Clinical Fellowship Award

This one-year named cancer immunotherapy clinical fellowship award aims to provide support for an individual who has a vested interest in furthering the research and translation of combination strategies and therapies in cancer immunotherapy.

2018-2020 SITC-Bristol-Myers Squibb Postdoctoral Cancer Immunotherapy Translational Fellowship Award

This two-year named cancer immunotherapy translational fellowship award will help to support the development of the next generation of immunotherapy experts who have a vested interest in furthering the research and translation of cancer immunotherapy.

2018 SITC-Merck Cancer Immunotherapy Clinical Fellowship Award

This one-year named clinical fellowship award aims to provide support for an individual who has a vested interest in furthering the research and translation of cancer immunotherapy.

Thank you for your attention!

WHEN I SAID I WANTED YOU TO
PAY MORE ATTENTION TO ME
I DIDN'T MEAN YOU SHOULD
FOLLOW ME ON **TWITTER**

[@SITCancer.org](https://twitter.com/SITCancer.org)

- Are there any questions/comments?

- Enjoy SITC!!

