Academy of NEXT WAVE of INVESTIGATORS

in CLL and NHL

Small Group Discussions

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PACE
Partners for Advancing Clinical Education

Bio Ascend™

Academy of NEXT WAVE of INVESTIGATORS

Grants, funding, publications

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Disclosures

- Consulting/Advisory Board: Abbvie, Adaptive, Astra Zeneca, BeiGene, Bristol-Myers Squibb, Celgene, Eli Lilly/Loxo, Genentech, Gilead, Janssen, Pharmacyclics

- Research support to Institution: Abbvie, Astra Zeneca, BeiGene, Eli Lilly/Loxo, Genentech, Ming Sight, Octapharma, Oncternal, TG Therapeutics

Grant Funding

- Funding agencies
  - Internal institutional pilot awards
  - Non-Government:
    - Voluntary Health Organizations
    - Professional Societies
    - Foundations
    - Industry
  - Government/Federal: grants.nih.gov
    - National Institutes of Health (NIH)
    - Department of Defense (DOD)
    - Agency for Healthcare Research and Quality (AHRQ)

Grant Funding

- Types of awards
  - Grants, Contracts, Cooperative agreements
  - Mentored Career development awards (K's- K01, K08)/Scholar awards:
    - 3 year minimum (up to 5 year period) of supervised study and research for clinically trained professionals who have the potential to develop into productive, clinical investigators
  - K12/KL2: CTSI institutional internal mechanism
  - Research grants (R's)
  - Fellowships (F's)/Training grants (T's)

Grant Funding

- R01 (up to 5 years), R21 (1-2 years), and R03 (1-2 years)
  - **R01**: Clinical Oncology (C-ONC) section ($250,000 per year in direct costs)
  - **R21**: Exploratory/Developmental Research Grant Award; no "parent" awards; combined budget for direct costs for the two year project period may not exceed $275,000 (no renewals)
  - **R03**: Pilot or feasibility studies; secondary analysis of existing data; small, self-contained research projects; development of research methodology; development of new research technology ($50,000/year)

Grant Funding

- Different time frames
  - Not renewable: e.g. 5 years (K's), 3 years (F's), 2 years (T's)
  - Renewable: 4-5 years (R01) each competitive period

Grant Funding – lots of potential private sources

- Lacher Award
- ASCO YIA
- Damon Runyon Fellow
- Leukemia Lymphoma Society
- Lymphoma Research Foundation
- Damon Runyon Physician Scientist Training Award
- American Cancer Soceity
- ASH Scholar
- Evans Foundation YIA
- ASCI Young Physician Scientist
- Stand up 2 Cancer (SU2C)
- Gabrielle's Angels
- Damon Runyon Clinical Investigator
- Evans MDS Discovery Award
- MDS Foundation Young Investigator Grant
- AACR MPM (Baselga)

Objectives – when writing a grant

- Learn how to formulate a research question and conduct rigorous hypothesis-driven research
- Improve scientific writing skills and learn how to write convincingly
- Build up CV with publications, presentations, etc. for future job opportunities – edit CV/biosketch several times a year!
- Gain insight to improve patient care

Elements of a Good Proposal

- Feasible
- Relevant
- Unique
- Innovative
- Clear
- Brief
- Consistent
- Anticipate questions AND answer them before they are asked!

Grant-Writing Tips

- Read instructions
- Review successfully funded grants
- Explicitly state the rationale, thoroughly and thoughtfully review the literature
- Present an organized, lucid write-up; include tables and figures
- Get as much feedback from people who are skilled at reviewing grants
- Don't be last minute!

Grant Requirements (e.g. ASCO YIA)

- Eligibility
  - MD within 10 years, last 2 years of final subspecialty training, planning investigative career in clinical oncology
  - At least 60% effort for research during award period
  - Candidate and mentor are ASCO members
- Key dates
  - Application due: September 22, 2022, 11:59pm EST
  - Notification date: April 2023
  - Award period: 7/1/23-6/30/24

Grant Requirements (e.g. ASCO YIA)

Mandatory

- Applicant Information
- Project Information
- Research Strategy
- Biostatistical Plan
- Cited References
- Patient Advocate Form
- Budget
- Project Timeline Form
- Resubmission Documentation
- Personal Statement Form
- Applicant's Biosketch
- Mentor(s) & Sponsor Invites: Biosketch, LOS
- Biostatistician and Patient Advocate: LOS
- Mentor Plan
- Institutional Letter of Support from Department Chair/Dean
- Institutional Approval

Grant Requirements (e.g. ASCO YIA)

Optional

- Clinical Protocol (strongly encouraged)
- Publication Form (maximum of two publications)

Review Criteria for Career Development Awards

- Primary criteria:
  - Research plan (35%) – rationale, innovation, approach
  - Mentor (30%) – credentials, involvement
- Secondary criteria:
  - Candidate (25%) – research experience, potential and commitment
  - Research environment (10%) – resources available, institutional support

Review Process (e.g. ASCO YIA)

- YIA committee – about 35 people
- Grants distributed based on expertise
- Every grant reviewed by 2 people and scores submitted (primary/secondary)
- ½ are "triaged"
- Those selected for discussion get biostats review
- Everyone meets. 2 reviewers discuss justification for scores while everyone briefly reviews comments/grant.
- Everyone votes

Review Form (1-9 NIH Grading)

Strength of the Proposal:

- The project title appropriately describes the focus.
- The proposal has a clear, concise, informative abstract.
- The proposal is well written, organized, annotated, and easy to read.
- The proposal's hypotheses are focused, evidence-based, and testable.
- The proposal has clearly stated, well developed goals and objectives, and an innovative, realistic plan and timeline for achieving them.
- The proposal includes clear plan and methodology for collecting and evaluating data and for measuring success of the project.
- The proposal discusses potential pitfalls and alternative approaches.
- The project has intellectual merit and likely broad impact.
- The expertise, training, and capability of the applicant and personnel.
- The proposal includes a cost-effective budget.

Review Form (1-9 NIH Grading)

Strength of the Applicant:

Strength of the Applicant, Mentor, and Institution:

- The applicant has a background that demonstrates that he/she has the potential to pursue an academic career in clinical oncology.
- The mentor was appropriately chosen for the scope of the project.
- The mentor's letter outlines a training plan for mentoring the applicant.
- The letters of support demonstrate that the individual(s) are qualified.
- The institution has sufficient resources to support the proposed project.

General:

- This application has potential for future funding.

Common Problems with Grants from New Investigators

- Over ambitious (e.g. $, time, expertise, career level, resources
- Does not address/follow funding agency's mission, specific instructions
- Unrealistic timeline or budget
- Not hypothesis-driven, "fishing" expedition
- Descriptive, not mechanistic
- Lacks/insufficient preliminary data
- Unfocused, vague, inadequate methods
- Inadequate statistical plan

Take-Home Points

- Match grant opportunity to idea
- Understand review criteria and target audience
- Work closely with your mentor(s), obtain many reviews
- Preliminary data helps convince reviewers that you have a chance of success
- Meet with your statistician and work on the budget early
- Develop a proposal that you are excited about!

Besides funding.....

- Role Models are Important
- Mentors are Important: meet regularly with your mentor – prepare for meetings; provide outline of your activities for discussion and make time line to meet deadlines; perform self-reflection and be prepared to edit!
- Colleagues are Important
- Be Open to New Ideas and Challenges
- Take Advantage of Unique Opportunities
- Networking – whether by accident or on purpose – is Important!

Besides funding.....what does success mean to you?

- What are *your* interests and goals
- Many ways to be 'successful'
  - Increasing prominence in clinical trials
  - Translational work
  - Career development and other funding
  - Local/regional clinical expert
  - Press and notoriety
  - Educational leadership
  - Committees
  - Local leadership
  - Quality Improvement
  - Informatics and Database Be Open to New Ideas and Challenges

Publications

- **What is a good quality journal?**
  - A good, quality journal includes peer-review. Peer-review has a check-and-balance mechanism to ensure only reliable and credible research goes through into the vast academic literature.
  - The rank is usually determined by the journal impact indicator metrics, such as the JIF (journal impact factor) or SJR (scientific journal ranking). The placement of a journal within a list is often used for evaluative purposes – e.g. selecting to publish in a journal that appears in the first quartile of a list (Q1).

Publications

- **Journal rankings:**
  - Q1 is occupied by the top 25% of journals in the list
  - Q2 is occupied by journals in the 25 to 50% group
  - Q3 is occupied by journals in the 50 to 75% group
  - Q4 is occupied by journals in the 75 to 100% group. The most prestigious journals within a subject area are those occupying the first quartile, Q1.
- The most prestigious journals are those occupying the first quartile, Q1.
  - Q1 journals include: *Blood, Journal of Clinical Oncology, Nature, New England Journal of Medicine, The Lancet, Science*

Publications

- **In which journal should I publish?**
  - If your research is clinical, target a clinical journal; if it is basic research, target a journal that publishes basic research.
  - Make sure your paper fits within the scope of the journal - the journal's audience.
  - Assess the credentials of the journal or publisher.
  - Browse the content they publish for quality and relevance to your field.
  - Check the quality of their website.

Publications

- **In which journal should I publish?**
  - Ask a supervisor or colleague for their recommendations. Your co-authors should do this too.
  - The “Aims and Scope” of a journal is written by the editor. It’s a description of the type of content published by the journal and often includes information on the peer review process and open access options for that journal.
  - As you narrow your choices, read the “Author Guidelines” for each journal. These are instructions for how to submit to an article for publication and include templated and special instructions.

Good Luck! And remember...Edward Hickson, *The Singing Master - 1836*

'Tis a lesson you should heed–
Try again;
If at first you don't succeed,
Try again.
Then your courage should appear;
For if you will persevere,
You will conquer, never fear,
Try again.

Once or twice though you should fail,
If you would at last prevail,
Try again.
If we strive, 'tis no disgrace
Though we did not win the race–
What should you do in that case?
Try again.

If you find your task is hard.
Try again;
Time will bring you your reward,
Try again;
All that other folk can do,
Why with patience should not you?
Only keep this rule in view,
Try again.

If at first you don't succeed, keep trying!

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