Notice of Special Interest: Administrative Supplements to Participate in the NCI Early-Stage Surgeon Scientist Program (ESSP) Pre-Application Webinar

**NOT-CA-21-100**

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*NCI, NIH*

September 6, 2022
AGENDA
2:00 pm: Welcome & Introductions (Dr. Zahir)
2:05 pm: ESSP Presentations (Drs. Zeiger & Bogler)
2:40 pm: Q&A Session (NCI Panel, moderated by Dr. Bogler)
3:00 pm: Adjourn
Notice of Special Interest: Administrative Supplements to Participate in the NCI Early-Stage Surgeon Scientist Program (ESSP) Pre-Application Webinar

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Martha A. Zeiger MD, FACS
Director of Surgeon Scientist Programs
Center for Cancer Research
NCI, NIH
Application Due Dates: December 8, (2022, 2023)
Earliest Start Dates: March 1, (2023, 2024)
Expiration Date: December 9, 2023
Purpose

- Administrative supplement funding to support and train early-stage surgeon scientists (ESSP) conducting cancer-related basic or translational research
- Goal to accelerate them into an independent surgeon scientist career

Background

- Physician scientists decreased from 4.7% of the workforce to 1.5% since the 1980
Challenges surgeon-scientists face

- Administrative responsibilities
- Difficulty obtaining grant funding
- Clinical productivity pressures
- *Hospitals & procedure-based revenue*
- *Surgical training paradigm*

Keswani, S et al; *Ann Surg.* 2017
Jain, MK et al; *NEJM.* 2019
Training Paradigm

Surgical Oncology

- 2 years: General surgery residency
- 2 years: Research fellowship
- 3 years: General surgery residency
- 2 years: Surgical oncology fellowship
- 2 years: Attending

Year 11
Submit K award

NCI Early Surgeon Scientist Program (ESSP)
Overall ESSP

- Participants from across the United States trained in cohorts in cancer-related basic and translational research

- Participants chosen through administrative supplement to grantee’s NCI-designated Cancer Center Core Grant (P30) or Comprehensive Partnerships to Advance Cancer Health Equity (CPACHE; U54)

- Intramural surgeon scientists [physician early investigator (PEI)] may also apply to participate in the program; administrative supplement of intramural PEI base budget

- Exposure to content experts from academic medical centers, the NCI and NIH

- Timelines and milestones proposed by participants: 1) manuscript submissions, 2) grant proposal submissions and obtaining additional funding, 3) national presentations, and 4) progress reports

- Annual surveys from participants and mentors conducted to improve program organization, educational sessions, and outcome metrics
NCI ESSP Structure

- 5-year pilot program will support a total of 36 early-career surgeon scientists total 12/yr. Intramural surgeon scientists also eligible
- Each in a 3-year program of three cohorts of 12 investigators/cohort, staggered a year apart
- Semi-annual symposia: grant writing seminars, content area mentoring, scientific methods, professional development curricula and, more

Funding per ESSP Participant

- up to $125,000 in direct costs annually to cover 6 calendar months effort and other allowable costs including travel and support for research training activities
- total cost approximately $195K (estimating F&A rate at 55%)
Diversity, Equity and Inclusion

- American College of Surgeons
- Association of Women Surgeons
- Indian American Surgical Association
- Society of Black Academic Surgeons
- Society of Asian Academic Surgeons
- Others

Diversity, equity and inclusion will be a factor in recruiting mentors for the ESSP participants to ensure that the ESSP community reflects these values.
ESSP Participant Milestones

- Second and third years of funding dependent on achieving sufficient progress towards milestones: eg. 1) acceptance of abstract at a society meeting or, manuscript submission; 2) submission of an NIH grant application; 3) submission of a non-NIH grant application; 4) participation in all professional development sessions offered by the ESSP

- Intramural Physician-Scientist Early Investigators expected to submit an internal NIH proposal and a non-NIH grant.
Evaluation Metrics

- Program evaluated annually for outcomes, through participant surveys, exit interviews of participants graduating from the program, academic activity of participants and alumni
Eligibility and Eligible Institutions

- Active NCI P30 Cancer Center or CPACHE U54 Center ISUPS awardees are eligible (ISUPS: Institutions Serving Underserved health disparity Populations and underrepresented Students)

Not Eligible

- Centers which will enter an extension year during the fiscal year in which award would be made
ESSP Participant Candidate Requirements

- U.S.-licensed surgeon scientist with active surgical duties at an NCI-designated Cancer Center (P30), an ISUPS funded by a CPACHE U54 or, Physician Early Investigator at NIH
- Within the first 5 years of academic or PEI appointment and must conduct research on cancer-related basic or translational science
- Must commit a minimum of 6 person-months (50% full-time professional effort) to the ESSP award
- Current and/or former PDs/PIs on any NIH awards are not eligible ESSP Participant candidates, with the following exceptions: PD/PIs of NIH Fellowships, PD/PIs of Loan Repayment Program (LRP) awards, and individuals appointed to institutional T programs (eg. T32 or F32)
Nomination

- The ESSP Participant candidate must be nominated by the Center Director [Principal Investigator (PI) of the P30 CCSG or PI of the U54 CPACHE] based on the candidate’s qualifications, interests, accomplishments, and plans to pursue a career as a surgeon scientist with a focus on cancer-related basic or translational research.
Number of Applications

- Only one submission per year per NCI-designated Cancer Center made through the PI of the P30 is permitted (consortium centers may submit only one application) and one submission per year per CPACHE program made through the PI of the U54 is permitted.

- The NCI-designated Cancer Center must apply for a P30 administrative supplement; the CPACHE ISUPS must apply for a U54 administrative supplement.

- Only one submission per intramural NIH Branch each year
Allowable costs

- Salary of the ESSP Participant candidate must commit a minimum of 6 person months effort
- Support for research personnel
- Research consumables and career development for the ESSP Participant
- Travel budget for ESSP Participant candidate only, up to $2,000 per year
Body of the Application

- NIH Biosketch of ESSP Participant candidate and mentors
- Candidate Section
  - Career Goals and Objectives
  - Coursework and Professional Development Plan
- Mentor Section
  - Plans and Statements of Mentor and Co-mentor(s)
- Specific Aims page
- Research Plan
- Budget
Letters of Support

- Letter from the Chair of Surgery or Branch Chief outlining the details of financial support and mechanisms to assure at least 50% protected time for research training and career development, candidate-specific goals, and curriculum for the ESSP Participant
- Letter from the P30 or U54 Center Director
- Letter from mentor(s)
Reporting Requirements

- A progress report for the ESSP supplement must be included as a separately labeled section in the annual progress report for the P30 or U54 Center for any reporting period for which ESSP supplemental funds are received.
Review and Selection Process

- NCI will conduct administrative reviews of applications and support the most meritorious applications submitted for consideration.

- ESSP Participants will be chosen based on candidate and mentor qualifications and institutional research environment.
ESSP Grant Application

Oliver Bogler, PhD
Director, Center for Cancer Training
NCI, NIH
Structure of ESSP - Grant Application

- Specific Aims: 1 page
- Candidate Section: 5 pages
- Goals for Career Development: 5 pages
- Mentor Section: 2-5 pages
- Research Strategy: 5 pages
  - Significance
  - Innovation
  - Approach

https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/page-limits.htm#car
Structure of ESSP - Grant Application

- **Specific Aims**
- **Candidate Section**
- **Goals for Career Development**
- **Mentor Section**
- **Research Strategy**
  - Significance
  - Innovation
  - Approach

- **The most important page** in the grant – the only page that non-assigned reviewers may read
  - Written for a scientist
  - Uses short declarative sentences
  - Does not include jargon
  - Clearly states the hypothesis
  - Ensures that the aims **test** the hypothesis
  - Is not technology driven
  - Elements are interdependent, not dependent
Structure of ESSP - Grant Application

Specific Aims

Candidate Section

Goals for Career Development

Mentor Section

Research Strategy
  - Significance
  - Innovation
  - Approach

- Has one to two paragraphs of introduction
- Funnels concept to the hypothesis
- “Sprinkles in” a little preliminary data
- Clearly states the hypothesis and aims
- Includes rationale and/or research design
- Ask yourself:
  - Is the hypothesis functional (mechanistic) or descriptive?
  - Do the aims test the hypothesis?
  - Is the project doable within the funding timeframe (overly ambitious)?
Structure of ESSP - Grant Application

- Specific Aims
- Candidate Section
- Goals for Career Development
- Mentor Section
- Research Strategy
  - Significance
  - Innovation
  - Approach

- Tell the story of your training path, and goals
- Focus on the “why” not the “what” you did
- Include information not in biosketch
- Put your best self forward
- Prepare a “Training Program”
  - Select mentors and/or an advisory committee
  - Self identify deficiencies in your training & address with workshops and courses
  - Use the grant to augment your training
  - Indicate how the grant will maximize your chances of becoming an independent investigator
Structure of ESSP - Grant Application

- Specific Aims
- Candidate Section
- Goals for Career Development
- Mentor Section
- Research Strategy

**Mentor and all co-mentors**

- Demonstrate sufficient independent research support
- State that there is support for candidate to commit 6 person-months effort to ESSP
- Describe experience conducting research program and supervising research
- Include plans for mentoring and supervision
- Include plan for monitoring candidate’s progress towards independence
Structure of ESSP - Grant Application

- **Specific Aims**
- **Candidate Section**
- **Goals for Career Development**
- **Mentor Section**
- **Research Strategy**
  - **Significance**
  - **Innovation**
  - **Approach**

- Is not a literature review
- Leads the reader to the hypothesis
- Demonstrates the “conversation” in the field
- Demonstrates a critical question is being asked and (hopefully) answered
- Focuses everything on the hypothesis
Structure of ESSP - Grant Application

- Specific Aims
  - Demonstrates ability to perform work
  - Shows PI’s contribution to work
  - Shows feasibility of experiments
  - Can be structured relative to each aim
  - Must be “doable” in requested period of funding
  - If studies are an extension of current project, can you take the work with you?
  - Is hypothesis-based, not tech driven
  - Is innovative and feasible - if very innovative, MUST have preliminary data to show it is feasible
  - Is NOT descriptive or a “fishing expedition”
  - Is FOCUSED and not a multi-aim proposal to conquer the world
  - Includes controls
  - Includes a section on statistics
  - Discusses potential pitfalls and proposes alternatives

- Candidate Section

- Goals for Career Development

- Mentor Section

- Research Strategy
  - Significance
  - Innovation
  - Approach
Flaws that are often Fatal

Big Picture
- Lacks relevant significance
- Not innovative
- Not hypothesis-driven
- Poorly written

Experimental Approach
- Overly ambitious …
- … Too narrow
- Dependence of one aim on another
- Lacks preliminary data & demonstrated reagents
- Lacks sufficient detail and statistical analyses
- Lacks anticipated results and alternative strategies
Other Factors to Consider

- Are the research facilities, resources (e.g. equipment, laboratory space, reagents), and training opportunities adequate and appropriate?
- Is the institutional environment for the scientific development of the fellow high quality?
- Is there appropriate institutional commitment to fostering the fellow’s training as an independent and productive researcher?
- Are the mentor(s) research qualifications (including successful competition for research support) and mentoring track record appropriate for the proposed fellowship?
- Is there evidence of a match between the research interests of the applicant fellow and the mentor (including an understanding of the applicant’s research training needs) and a demonstrated ability and commitment of the mentor to assist in meeting these needs
Common Issues that Limit Enthusiasm from Reviewers

Training plan is too generic:
- If you can put someone else’s name in the training plan then it is not specific to the applicant
- The more detail the better (who, what, where, when)

Reference letters not glowing:
- Hint: All letters need to be "outstanding"
- Strategize with your sponsor concerning letters
- Ask people who know you, know your work and who are positive people and good writers
Thoughts on Review

- Reviewers will be internal NCI & NIH surgeon scientists and program directors
- Appreciate that they are busy people with full time jobs
- Be considerate of their time
- Make their job as easy as possible with clarity, clear language, good structure e.g. sub-headings, etc
- Provide them the information they need for writing their review
Scientific/Research Contacts

For Cancer Centers:
- The Program Director for the P30 CCSG Award, NCI
  Telephone: 240-276-5000

For CPACHE Centers:
- The Program Director for the U54 CPACHE Award, NCI
  Telephone: 240-276-6170

For General Inquiries:
- ESSP Program Officer, NCI
  Email: ncia@nh.gov
Financial/Grants Management Contact

Crystal Wolfrey
Office of Grants Administration (OGA), NCI
Telephone: 240-276-6277; email: crystal.wolfrey@nih.gov
Questions?