

Cedars-Sinai Medical Center



Clinical Scholars Program

2021-2022



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Clinical Scholars Program

Introduction

The Cedars-Sinai Medical Center Clinical Scholars Program is an innovative program that provides funding, career guidance, education and skill acquisition for aspiring clinical scientists working at one of the country's most distinguished medical centers, Cedars-Sinai Medical Center in Los Angeles.

Since its founding in 1961, Cedars-Sinai has focused on providing the finest healthcare available. As a result, many advances in all areas of healthcare have been made and many lives have been significantly impacted. Cedars-Sinai ranks as one of the top California hospitals in clinical care. More than 1,800 physicians in virtually all medical specialties are affiliated with Cedars-Sinai. They join more than 8,000 employees, 2,000 volunteers and 15,000 support group members to form a unique partnership in delivering world-class medical care.

Cedars-Sinai physicians and scientists are leaders in basic and clinical research, bringing advancements in medicine directly from the laboratory to the bedside. In addition, they teach over 400 residents and fellows in nearly 60 graduate medical education programs at Cedars-Sinai. Over 500 3rd and 4th year medical student rotations and clerkships take place at Cedars-Sinai. Major components of the Cedars-Sinai Mission include service to the community and the education and training of healthcare professionals and medical research personnel. It is therefore appropriate to offer formal clinical research training, through a Clinical Scholars Program, to those aspiring to academic and research careers.

Educational training is conducted in the state-of-the-art Medical Center and laboratories, by faculty and mentors whose interests cover a wide range of basic biomedical science and its application to 21st century medicine.

The Clinical Scholars Program adds an important element to the profile of Cedars-Sinai by expanding the dimension of its education and training mission as embraced in its mission statement as follows:

Cedars-Sinai Health System, a nonprofit, independent healthcare organization, is committed to:

- Leadership and excellence in delivering quality healthcare services
- Expanding the horizons of medical knowledge through biomedical research
- Educating and training physicians and other healthcare professionals
- Striving to improve the health status of our community

Quality patient care is our priority. Providing excellent clinical and service quality, offering compassionate care, and supporting research and medical education are essential to our mission. This mission is founded in the ethical and cultural precepts of the Judaic tradition which inspires devotion to the art and science of healing, and to the humanistic treatment we give to our patients and staff.

Clinical Scholars Program: Mission Statement & Objectives

Mission Statement

- Educate physicians and other doctoral-level clinical healthcare professionals about the broad foundations of clinical and translational research, in a spirit of creativity and independence, to optimize their chances of success in becoming productive clinical researchers
- Highlight the relevance of scientific knowledge to human disease, teach clinical scholars how such knowledge can be effectively translated into research and develop clinician-investigators focused on research related to prediction, prevention, diagnosis and treatment of human disease.

Program Objectives

- Provide a comprehensive curriculum which covers the knowledge-base required to engage in human disease-related research and teaches how such knowledge may be integrated into novel and creative applications of human disease research
- Provide individual mentoring for clinical scholars to support human disease research careers
- Train clinical scholars to think, write and communicate scientifically, with an emphasis on proficiency in articulating ideas, knowledge gaps and hypotheses.
- Educate clinical scholars in the development of fundable translational research proposals, including designing and conducting experimental plans, formulating a cohesive and logical research project application, and completing competitive applications for appropriate grant programs
- Demonstrate the advantages and techniques of scientific networking and mentoring across clinical, applied health services and laboratory domains
- Provide instruction in cutting-edge research methodologies and exposure to developing technologies relevant to human disease research

Admission Requirements

The program is directed towards residents (in the later years of their training), fellows, junior faculty and some Post-doctorates with aspirations to become clinical scientists.

All training programs and clinical departments are eligible to nominate candidates for competitive admission.

Requirements for admission include a baccalaureate degree (or its foreign equivalent) plus an M.D. or other health-related doctoral degree. High academic achievement and considerable interest in a career as a clinical investigator are required. All Applicants must complete the “Clinical Scholars Application Form,” which includes items 1-6 below.

1. Clinical Scholars Application form
2. A current C.V.
3. Personal statement of career goals
4. A letter of recommendation from the Division Director, Departmental Chair, or Institute Director indicating the financial support and protected time being provided during the didactic and research years of the program. The letter must specifically state the source of the support.
5. A letter of commitment by the applicant’s research mentor(s)
6. A brief (2-3 page) description of the research project the applicant will be working on during the program.

All the above information (items 1-6) should be emailed to the Program Coordinator at the email below and an interview with the Program Director will then be scheduled:

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Overview of the Curriculum

The curriculum is designed to allow busy clinicians to participate with minimal disruption of their duties. In enrolling in the Cedars-Sinai Clinical Scholars program you are automatically concurrently enrolled in the UCLA CTSI/TPTS Program

Teaching sessions are held from 5-6:30pm twice weekly (Tuesdays and Thursdays) during the first year; full participation is expected; 70% attendance is required.

Required CSP courses/Events:

- Biostatistics
- Grantsmanship
- Bioethics
- Grant Writing Seminar
- Encouraged to attend any Clinical Scholars Program Sponsored Events (such as sponsored roundtables, workshops, CTSI-CSP events, etc)

UCLA CTSI/TPTS Program Requirements

- Attend & Present to the monthly CTSI/TPTS monthly meeting once per year for the 2yrs you are in the program. The Year 1 presentation will be

on your research interest and the Year 2 presentation will be a presentation on a research challenge you may have faced.

- Recommended but not required – participate live or by video conference the monthly meetings

Class Descriptions

Grantsmanship - The goal of the Grantsmanship lecture series is to introduce trainees to the basics of current NIH funding realities, the NIH grant submission and review process, funding programs most appropriate for fellows and junior faculty, and non-NIH sources of funding.

Bioethics – This class discusses controversial ethics brought about by advances in biology and medicine. It will address the ethical questions that arise in the relationships among life sciences, biotechnology, medicine, politics, law, and philosophy.

Biostatistics - This class will cover study design, descriptive statistics for continuous, binary and survival data and inferential statistical concepts including p values, confidence intervals and power and sample size.

Grant Writing Workshops - These will be conducted as small working group encounters with a member of the Research Grant Development Team. The goal is to generate a real application within an assigned period of time.

Mentoring – All Clinical Scholars will receive ongoing mentoring from the Clinical Scholars leadership team.

Basic Science Liaison - Clinical scholars are assisted in identifying basic science mentors when it is deemed useful for their career development. Attendance at the laboratory meetings of the mentor would allow the scholar to understand better the language of science and to interact with scientists in a related discipline.

The Curriculum

Program duration of 2-3 years

The Clinical Scholars Curriculum is designed with clear “expectations” set out for Scholars to meet upon graduation from the Program:

Research Design

- Develop a valid and achievable research question that can be quantified in measurable terms.
- Utilize available databases to obtain/review relevant literature.
- Properly reference citations and bibliographies.
- Critique research approaches and applications as to significance, innovation, approach and feasibility.
- Develop a strategic career plan for independent research.

Bioethics

- Identify and adhere to ethical practices and principles during the design, data collection, and reporting of research on humans and animals.
- Identify requirements for research involving vulnerable groups, e.g. children, women, underserved minorities.

Communication Skills

- Clearly present and communicate scientific ideas and research results.
- Engage in research collaborations with colleagues from varied backgrounds and areas of research.

Grantsmanship

- Research and locate different types of funding opportunities.
- Write a scientific grant application for solicitation of funding, including preparation of a grant budget.

Year 1 Requirements:

- Attend all required courses (70% attendance rate required) and workshops.
- Fully participate in the Biostatistics course, by completing all homework assignments and taking the final examination which is graded on a Pass/Fail basis.
- Meet with the Program Director twice/year to plan an individualized 2-year program, identify a local mentor and discuss program progress.
- Submit a CSMC CTSI Clinical Scholar/Eigler-Whiting-Mann Grant application (includes oral presentation, see below).
- Attend & Present to the monthly CTSI/TPTS monthly meeting once per year for the 2yrs you are in the program. The Year 1 presentation will be on your research interest and the Year 2 presentation will be a presentation on a research challenge you may have faced.

Year 2/3 Requirements:

- Full-time/substantial part-time ($\geq 50\%$) research under the supervision of an experienced mentor.
- By full-time it is implied that the clinical scholar and the mentor can assure the program that blocks of time will be set aside for full-time research over a 1-2 year period. The program aspires to a minimum of 100% time over one year or 50% time over 2 years.

In selected cases, admission for a one-year program, which combines fulltime research with participation in the curriculum, may be considered.

CSMC CTSI and Eigler-Whiting-Mann Grants

The overall goal of the CSMC Clinical Scholars Grant Program is to assist promising investigators in the early stages of their career development to become well-trained clinician-scientists competitive for NIH research project (R01) grant support. To accomplish this goal, seed grants will be awarded for the purpose of conducting studies to generate preliminary data to support an application for a NIH career development (K08 or K23) or research project (R01) grant. It is expected that this award will supplement other departmental sources of funding available for the applicant's research career development and will not be the sole funds available to support the applicant's salary and research efforts.

It is anticipated that multiple grants of up to \$30,000 will be awarded, of which at least one will be an Eigler-Whiting-Mann grant. Because the nature and scope of each award will vary, it is anticipated that the size of each award will vary also. Awards are contingent on the availability of funds. Funds must be used on the CSMC campus.

The Eigler-Whiting-Mann Grant was established to support the research aims of deserving young postdoctoral biomedical investigators. The grant was established by Neal Eigler MD, James Whiting PhD, and Brian Mann, recognizing their long-standing commitment to Cedars-Sinai Medical Center. The donors specifically wish to recognize the ongoing need to provide seed funding for promising clinical investigators who have yet to establish a track record of competitive grant funding in a particular discipline.

Applicants for this award must be enrolled in the CSMC Clinical Scholars Program. Scholars must have successfully completed the first year program requirements prior to the award. Successful applicants must be able to devote a minimum of 50% of full-time effort to conducting research activities. The remaining effort may be devoted to research, clinical and teaching activities.

Expected Progress towards Completion

The principle criterion for a successful outcome is the production of a successful clinical scientist who will have an impact on a field of clinical science upon graduating from the program.

The essential requirement for defining a "successful" outcome will be a successful application for peer-reviewed research support, particularly a K-series grant from NIH.

Competitiveness in the job market is also a goal of the program. This will be assessed by the following:

1. Research publications
2. Grant support
3. Likelihood of future grant support based upon current work

4. Presentation and communication skills
5. Breadth of scientific understanding
6. Entrepreneurial approach

Specific personal qualities and skills will be developed while in the program:

1. Dedication to solving a scientific problem
2. Ability to formulate a hypothesis or relevant research question
3. Ability to present information to others
4. Ability to review basic and clinical research critically
5. Appreciation of the relevance of a broad range of scientific disciplines.

Completion of the Core Curriculum

A certificate of completion of the Core Curriculum will be issued to Clinical Scholars who have met the attendance and academic requirements of the program.

Completion of the Program

A certificate of completion of the program will be issued to Clinical Scholars who have completed the core curriculum and their research time and requirements of the program.

Ongoing Career Development

Clinical Scholars who excel will be viewed as potential faculty recruits. Appropriate discussions will be initiated with such individuals to ascertain whether their career goals can be served by a faculty appointment at Cedars-Sinai, including considerations of start-up support for an independent research career.

Grievance Resolution

The Clinical Scholar is encouraged to seek resolution of complaints and other concerns relating to his/her appointment or responsibilities. The scholar is urged to first discuss complaints and similar concerns with his/her mentors and teachers wherever possible and appropriate. Issues can best be resolved at an early stage and every effort should be made to achieve a mutually agreeable solution. After thorough discussion, if the complaint or concern is not adequately addressed to the reasonable satisfaction of the scholar, then he/she may present the complaint or concern to the Clinical Scholars Program Director for the purposes of achieving a mutually agreeable solution. Failing resolution, the matter will be referred to the Director of Graduate Research Education. Notwithstanding the foregoing, in situations in which the complaint or concern is related to a faculty member or the scholar's mentor and the scholar believes that a fair resolution cannot be attained by presenting the complaint or concern to these individuals, the student may present the complaint or concern *directly* to the Director of Graduate Research Education.