

Center for Cancer Research Overview & Opportunities

PAVES 12

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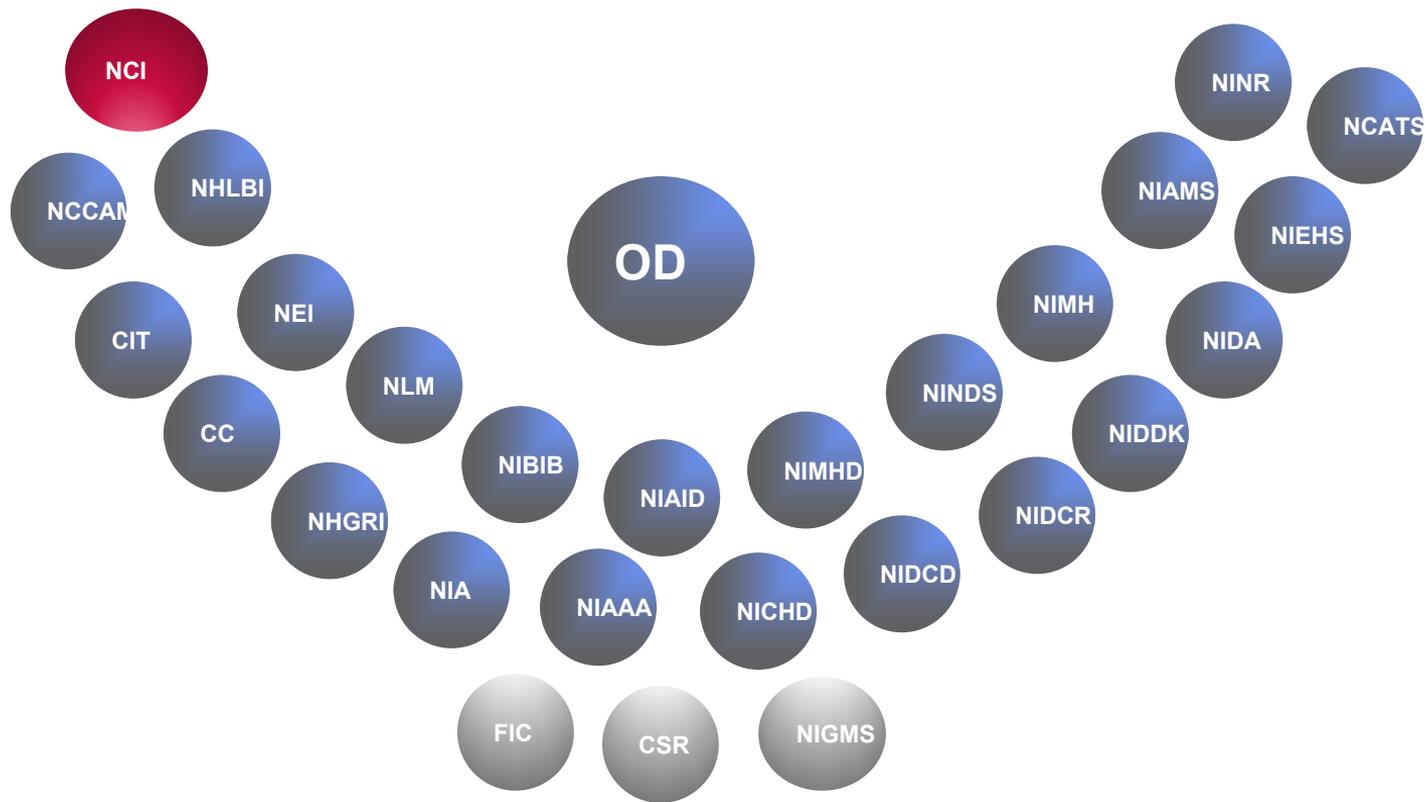
NATIONAL CANCER INSTITUTE
Center for Cancer Research



OUTLINE

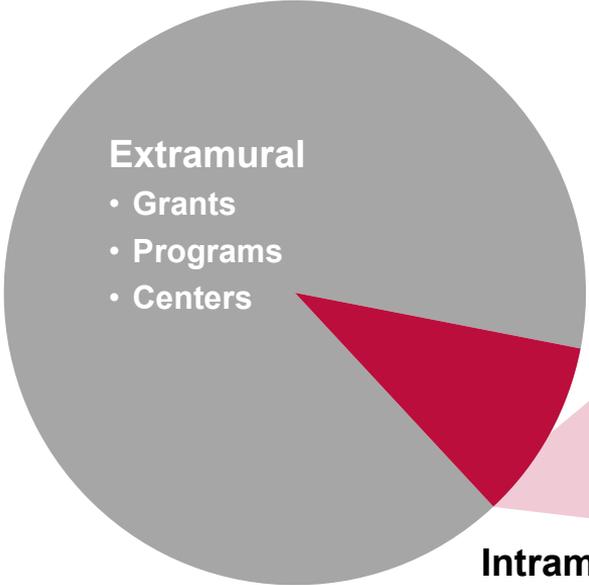
1. **CCR Overview**
2. *Stadtman Investigator Search*
3. *Clinical Research Opportunities
PEIP*

NIH Institutes and Centers

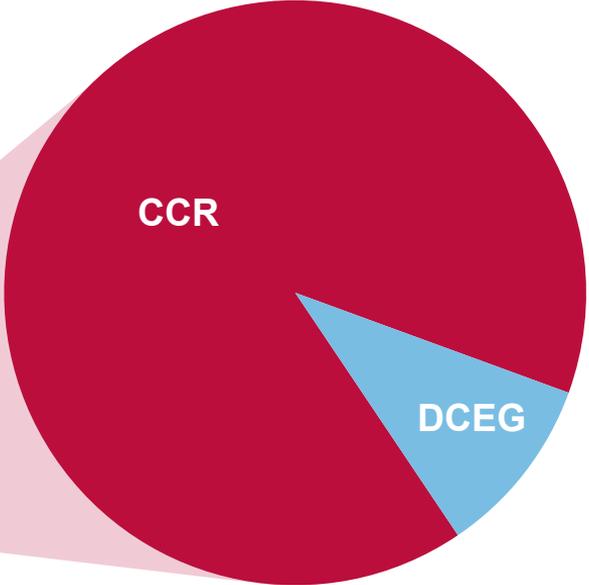


The NIH Intramural Research Program

National Cancer Institute



Intramural Research Program (IRP)



NCI Center for Cancer Research



Our **MISSION**

To improve the lives of cancer patients by solving **important, challenging and neglected problems** in cancer research, prevention and patient care

Our **VISION**

To create the **cancer medicines of tomorrow**

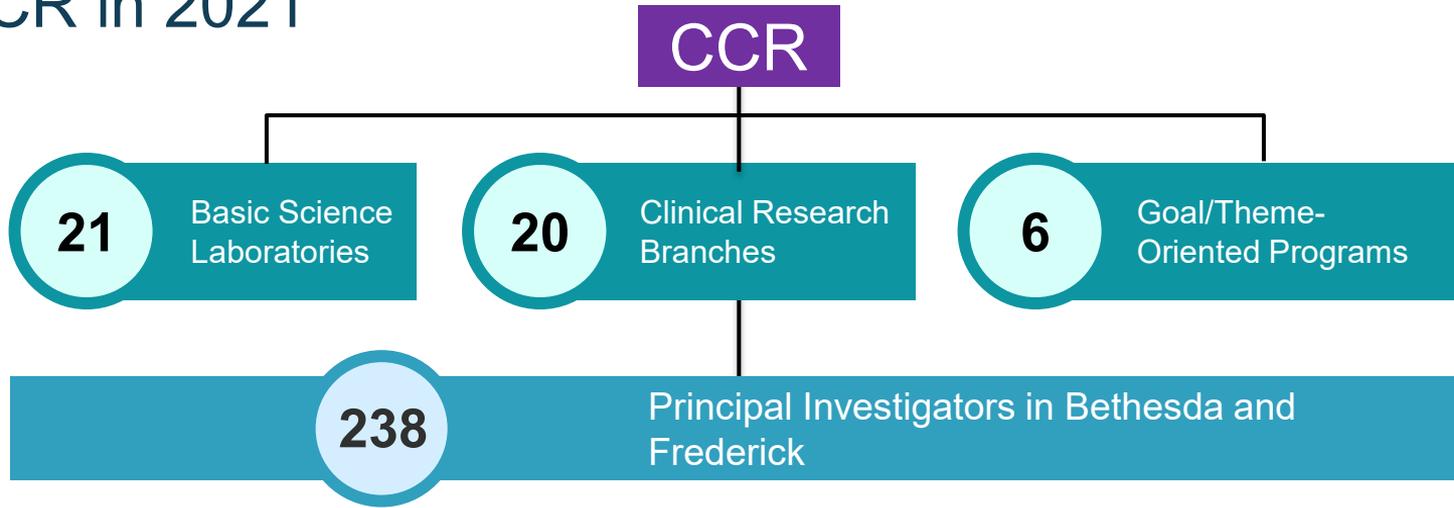


NATIONAL CANCER INSTITUTE Center for Cancer Research

- Largest component of the NIH/NCI Intramural Program
- 238 Principal Investigators organized in 47 Laboratories/Branches/Programs
- Located on Bethesda and Frederick campuses
- ~3,000 staff; ~50% trainees
- Strengths in basic, translational and clinical research



CCR in 2021



~ 3000 total staff

300 staff scientists/staff clinicians

~500 technical lab staff

~800 postdoctoral/clinical fellows

~250 postbaccalaureate/predocctoral students

~500 *summer students*

CCR By the Numbers- 2021



>**1,100** Articles in Peer-Reviewed Journals



> **50** COVID-19 projects
> **140** COVID-19 publications



>**4,000** Patients
245 Open Trials
52 New Clinical Trials
1,351 New Patients
>**29,000** Outpatient Visits



63 New Employee Invention Reports
52 Issued U.S. Patents
102 New Licenses for CCR Technologies
655 Active Licenses



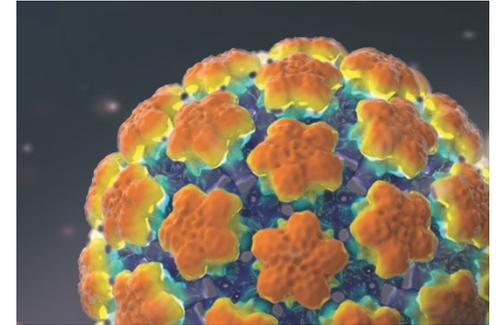
4 FDA Approvals



15 New Faculty Recruits
3 Newly Tenured Investigators

Cancer Research with a Purpose

- **Stable resources:** Freedom to pursue most important problems
- **Risk-taking:** We do what others may not do
- **Long time frame:** Difficult problems need time
- **Technology development** is encouraged
- **Full spectrum of basic to patient care**
- **Work complementary to the extramural environment** due to unique infrastructure and patient populations

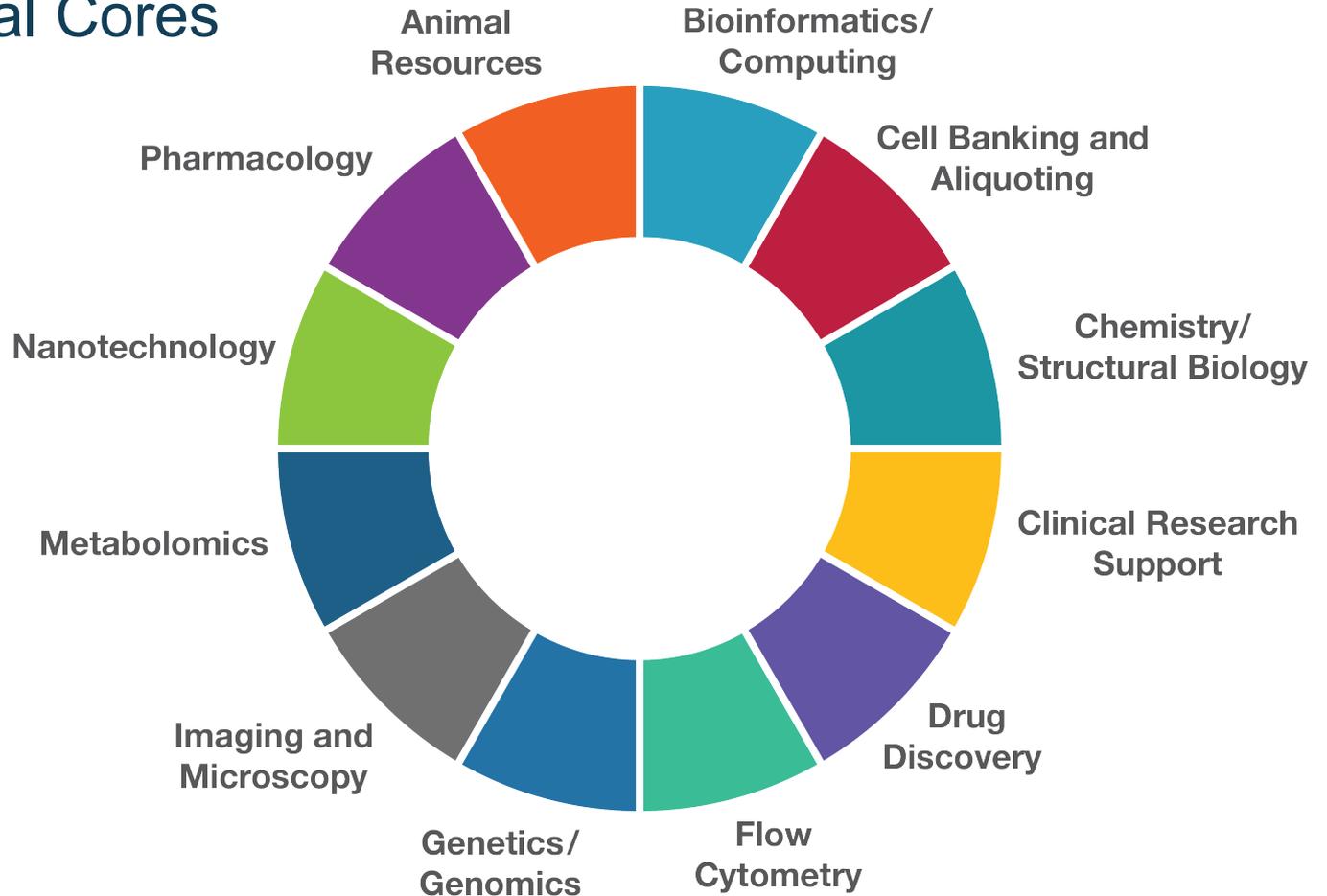


Examples of Groundbreaking CCR Research

- Combination chemotherapy
- Anti-retroviral therapies
- Discovery of TGFβ
- HPV vaccine development
- Early gene therapy
- Pioneering immunotherapy
- Development of immunotoxins
- Molecular classification of lymphoma and renal cancer
- Epigenetics and chromatin biology
- Basic Immunology
- Imaging technology (SKY, UroNav)
- Laser capture microdissection
- Discovery and use of KGF (Kepivance)



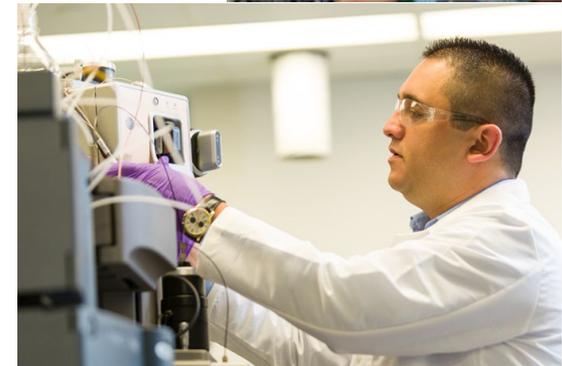
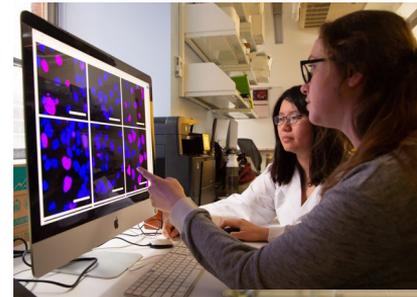
CCR Technical Cores



Career Opportunities at CCR

- Lasker Clinical Research Scholars
- **Stadtman Tenure Track Investigators**
- Open search for Tenure-Track Investigators
- **Physician-Scientist Early Investigator Program**
- NIH Independent Research Scholar

<https://ccr.cancer.gov/careers>



New faculty- FY 2021



Susan Lea
Chief, CSB
Oxford



Sung-Yun Pai
Chief, ID-CTP
Dana Farber



Kazusa Ishii
Physician-Scientist
Early Investigator
CCR



Anandani Nellan
Physician-Scientist
Early Investigator
Children's Hospital
Colorado



Freddy Escorcía
Lasker Scholar
CCR



Gabe Starrett
Stadtman TTI
CCR



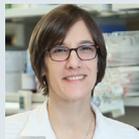
Nicholas Klemen
Physician-Scientist
Early Investigator
MSKCC



Drew Pratt
Physician-Scientist
Early Investigator
U. of Michigan



Christine Heske
TTI
CCR



Marielle Yohe
Lasker Scholar
CCR



Andra Krauze
Physician-Scientist
Early Investigator
U. of
British Columbia



Padma Rajagopal
Physician-Scientist
Early Investigator
University of Chicago



Troy McEachron
TTI
USC



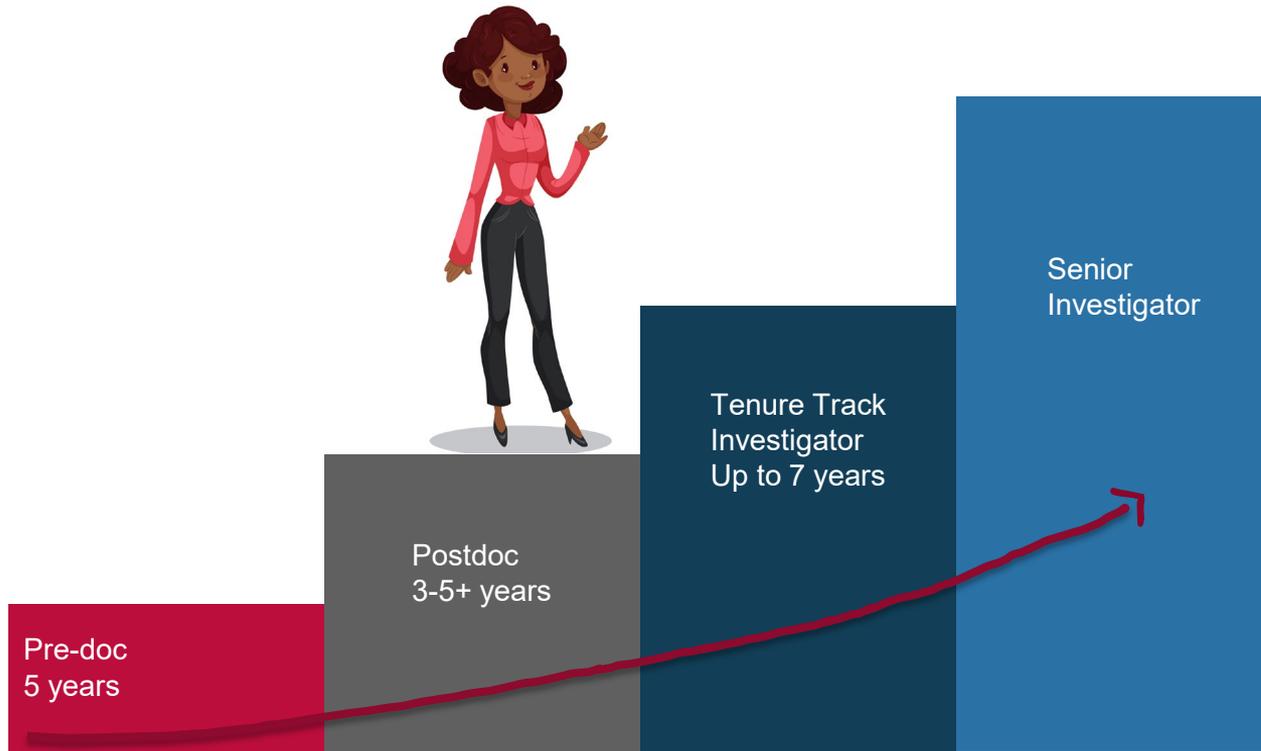
Colin Wu
Stadtman TTI
JHU



Baris Turkbey
Senior
Clinician
CCR

*NIH Distinguished Scholars

Investigator Career Progression at NIH



The NIH Tenure-Track

- Up to 7 years (9 years for clinical and epidemiology investigators) of independent resources to establish your record as an independent scientist before formal evaluation for tenure
- Equivalent to an Assistant Professor in university setting, except no formal teaching and no grant writing required
- Government retirement plan and health benefits
- May be eligible for student loan repayment
- Approximately 20-30 TT hires per year ACROSS NIH

Overview of NIH Review Process

Site visit

- Three to Four year cycle
- Retrospective and prospective review
- Site Visit Review Teams
 - Evaluates the science of individual PIs and Labs/Branches/Programs

BSC

- Board of Scientific Counselors
 - Participate in site visit
 - Provide score and recommendation to CCR Director on resource allocations

CCR Leadership

- Review BSC recommendation with CCR Chiefs
- Implementation of BSC recommendations

Laboratory of Human Carcinogenesis (LHC)- Current Open CCR Opportunity

- Recruiting a TT or tenure eligible investigator focused on health disparity of cancer
- Equivalent to Associate Professor in an academic department

Applicants should hold a Ph.D. and/or M.D. degree or equivalent doctoral degree and should have at least ten years of research experience after their terminal degree(s); a substantive record of publications; and, research productivity in molecular and biological epidemiology and health disparity to develop an outstanding independent molecular-based program in health disparity of lung cancer

2. Stadtman Investigator Search

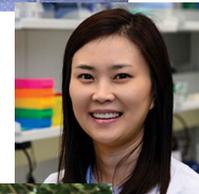
Stadtman Tenure Track Investigators

Trans-NIH effort to attract a diverse group of talented early-career scientists pursuing interests across the biomedical research spectrum

- For doctoral-level researchers in any field relevant to the NIH mission
- Seeking those studying important problems in innovative ways
- Equivalent to an assistant professor
- Candidates should outstanding record of research accomplishments as evidenced by high quality publications in peer-reviewed journals

Application deadline:

Annual call August 1- September 30



The Stadtman Search

- Allows aggressive, year-round, outreach to underrepresented groups
- Largest feeder for the Distinguished Scholars Program
 - Over half of DSPers are Stadtman Investigators
- **All African-Americans tenured since 2014 from Stadtman**
- Manuscript in preparation, “Trans-NIH Tenure-Track recruitments: A New Paradigm for Inclusive Excellence”
- Annual cohorts (at least 10)

Internal and External Candidates Have Competed Effectively in the Stadtman Search

Hired from Same IC	32 (29%)
Hired from different IC	13 (12%)
Hired from outside NIH	64 (59%)

It's Competitive- The Numbers...



2018

- 641 Applicants
- 241 Semi-Finalists
- 78 Interviewed
- 25 approved offers

2019

- 440 Applicants
- 180 Semi Finalists
- 50 Interviewed
- 16 Approved offers

2020

- 560 Applicants
- 214 Semi Finalists
- 60 Interviewed
- 10 Approved Offers

2021

Recent Stadtman Timeline (2020-2021)

June- September-
Web ads, emails
and fliers

August 1, 2020-
Application website
opened

**September 30,
2020-** Application
closed

Recent Stadtman Timeline (2020-2021)-2

- Applications include:
 - CV (with mentoring/outreach activities, esp. with underrepresented groups)
 - Three-page proposal titled “Research Goals”
 - Two-page statement titled “Long-term Research Vision and Impact” (including a formal statement on mentoring philosophy and commitment to diversity and inclusion)
 - Three letters of recommendation (see below)
- Applicants select up to **two** areas for evaluation

Example of Subject Areas- 2020

Category	App#	Category	App#
Biochemistry/Proteomics/ Metabolomics	49	Microbiology/Infectious diseases (non-viral) Molecular and Cellular Neuroscience	42 69
Biomedical Engineering/ Biophysics/Physics.	80	Molecular Biology	36
Cancer Biology	60	Molecular Pharmacology/Toxicology	15
Cell Biology/Cell Signaling	88	Neurodevelopment	29
Chemistry/Chemical Biology	30	Physiology and Systems Biology RNA Biology	32 26
Chromosome Biology/ Epigenetics/Transcription	32	Social and Behavioral Sciences	14
Computational Biology/ Bioinformatics/Biostatistics/ Mathematics	67	Stem Cells/Induced Pluripotent Stem Cells	30
Developmental Biology	43	Structural Biology	27
Epidemiology/Population Sciences	29	Synapses and Circuits	51
Genetics/Genomics	59	Systems and Cognitive Neuroscience	58
Health Disparities	12	Translation from Pre-Clinical to Clinical Research	23
Immunology	58	Virology	33

Recent Stadtman Timeline (2020-2021)-3

October 2020- Committee identifies top 25% in each category for consideration by SDs



November 2020- Interviews begin

- SDs select candidates to invite for IC based interviews from top 25%
- 

Vetted applicants in top 25% eligible for appointment for up to 2 years



April 2021- Each applicant received at least one status update

Factors Considered:

- Quality and innovation in previous work and future research plan
- Ability to present a compelling vision of the importance of their research in writing and orally
- Letters of Recommendation
- Publication Record
- Potential impact on public health
- Potential to make use of the special environment within the NIH IRP

Factors Considered (2):

- Leadership/mentoring/outreach activities, especially those involving women and persons from racial/ethnic or other groups that are underrepresented in biomedical research
- For clinicians, board certifications
- Previous competitive research support (e.g., K99/R00 grants, fellowships) or other special recognition
- Complement existing expertise at NIH
- SD/IC areas of interest

The Research Plan Should Include

- Background on the problem(s) the candidate wishes to study; what is the hypothesis?
- Why it is an important problem: long range impact on basic science or treatment of disease
- Details on what approaches and methods they would use to move the field forward in the short term (~ 5 years)
- Key experiments that have to be done first and why
- Advantages of their approach to the problem (e.g., why rat instead of mouse)
- Tools or skills that give them an advantage in tackling this problem

3. Clinical Research Opportunities

The NCI Intramural Clinical Research Program

- The NIH is the largest clinical research center in the world
- The NCI is one of its major users
- The NIH clinical center is not a regular hospital
 - *It is dedicated to patient-intensive clinical research and developing new approaches for prevention, diagnosis and treatment of cancer.*
- The NCI intramural clinical program is a resource for both basic and clinical scientists
- Translate basic discoveries to the point of first-in-human use

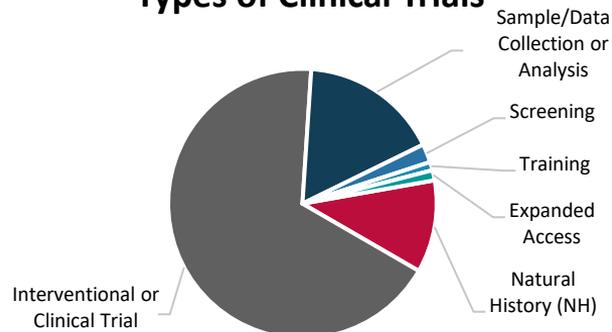


Clinical Activities



- > 4,000 patients enrolled in 245 studies
- Opened 58 new trials (+16%)
- 115 active CCR protocols held IND (+15%)
- 1,403 new patients (-32%)
- >27,000 outpatient visits (-25%)

Types of Clinical Trials



Physician-Scientist Early Investigator Program



A highly competitive opportunity intended for physicians dedicated to laboratory bench-to-bedside or clinic-based research

- Aimed at early career physician-scientists
- Mentored three-to-five-year independent research program
- Clinical responsibilities dependent on research project
- Equivalent to a starting faculty position in academia

Application deadline:

Accepted on a rolling basis with an annual call for application

Areas of Interest

medical oncology
myeloid malignancies
neuro-oncology
Pathology
pediatric hematology-
oncology
radiation oncology
surgical oncology
urology
epidemiology
genetics

PEIP Eligibility

- US citizens, permanent residents, or be eligible for work visa
- Successfully completed subspecialty training at US accredited institution
- Doctor of. Medicine or equivalent from a foreign medical school must provide education and medical knowledge equivalent to accredited schools in the US
- Must possess a current, active, full and unrestricted license or registration as a physician
 - Foreign physicians on an NIH-sponsored work visa are exempt from the licensure requirement.

PEIP Application

- CV
- Complete bibliography
- Contact for 3 letters of recommendation
- Description of research interest and goals (2-4 pages)
- Diversity Statement
- Applications accepted on a rolling basis

Lasker Clinical Research Scholars

An unprecedented "intramural–extramural" partnership between the IRP and the Albert and Mary Lasker Foundation to fund top-notch physician-scientists for up to 11 years

- Aimed at early career physician-scientists
- Assistant professor equivalent

Phase I

- 5-7 years as an independent tenure-track investigators within the NIH Intramural Research Program

Phase 2

- up to 3 years of NIH support for their research at an extramural research facility *or*
- remain as a tenure-track investigator within the intramural program

Application deadline:

Tentative deadline June 2022



Why Come to the Center for Cancer Research?

- 238 world-class, highly collaborative research groups
- Strong basic, translational and clinical research
- 40+ cutting-edge technical facilities and cores
- Close affiliation with the NIH Clinical Center
- A large, active postdoc and student community
- Extensive career development opportunities toward academic and non-academic career paths
- Generous family policies and work-life balance programs
- Life in the vibrant and culturally diverse Washington, D.C. area





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