Internship Opportunities AT the NIH

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Office of Intramural TRAINING & EDUCATION
NATIONAL INSTITUTES OF HEALTH

The Challenges We Face

- Disability and chronic diseases
- Health disparities and inequalities
- Complexity of medical decisions
- Threats to our environment
- Disconnect between science and society

- We need a talented, creative and diverse STEM-M workforce to tackle these challenges

NIH Mission

To uncover new knowledge that will lead to better health for everyone

Important to Understand!

- The NIH is comprised of 27 Institutes and Center (ICs)
- Most ICs have two major divisions – extramural and intramural
  - Extramural: Supporting research and training OUTSIDE the NIH
  - Intramural: Doing research and getting trained AT the NIH

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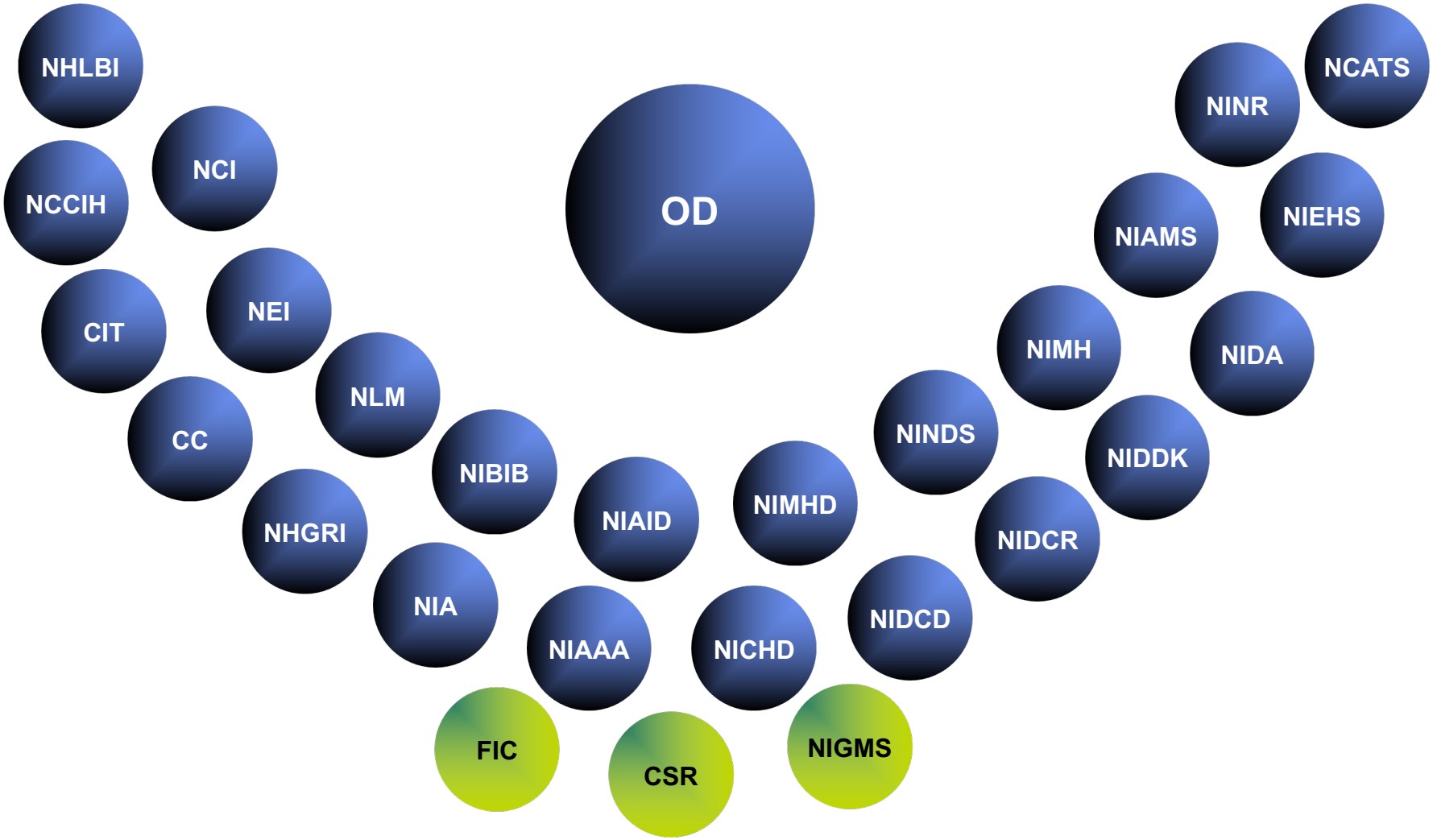
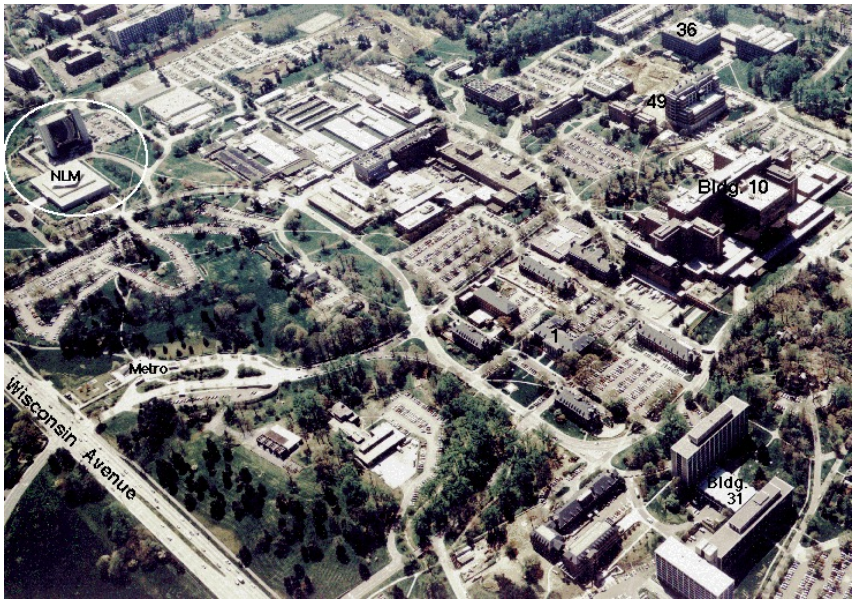
NIH Institutes & Centers



NIH Role in Supporting and Performing Biomedical Research

- Via the Extramural and Intramural Programs
- At the basic, translational and clinical level
- Using tools from the behavioral, biological, chemical, computational, mathematical, physical, and social sciences
- In the US and throughout the world
- Some programs/opportunities are specifically focused on helping you receive the training you need to develop a successful research career

The Intramural Research Program



"The Nation's biomedical research institution"

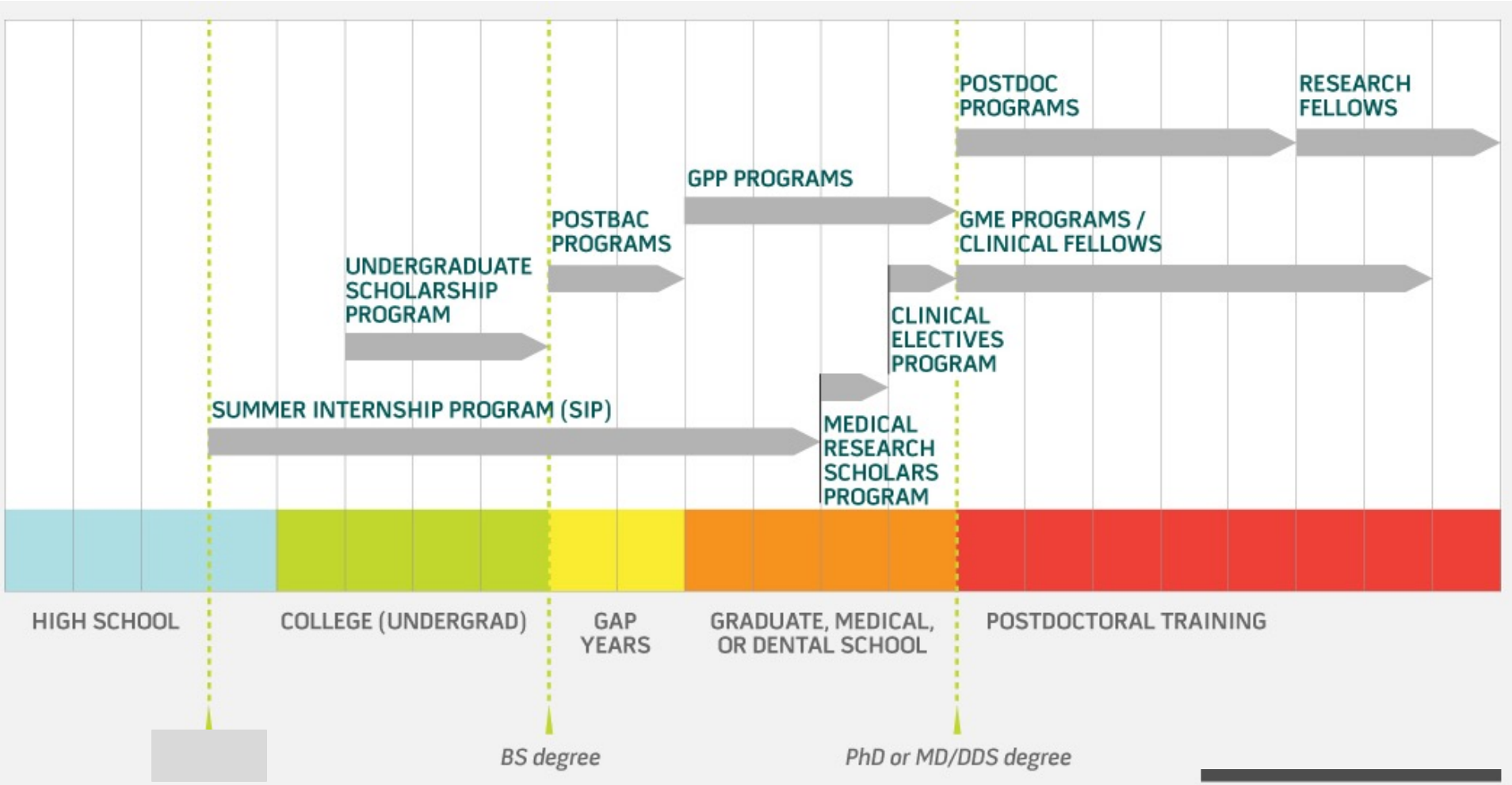
- Research enterprise in 24 NIH Institutes/Centers
- Campuses in MD, NC, AZ, MI, and MT
- Over 950 research groups doing basic, translational and clinical research
- Training opportunities for students and fellows at all levels

Bench-To-Bedside Research At NIH

- 240 bed hospital
- 7,000 inpatient admissions
- 72,600 outpatient visits
- 900 active clinical protocols

For information on clinical trials, please visit: http://clinicaltrials.gov/
We seek diversity in our clinical trials!

Trans-NIH Intramural Training



OITE Career Development Programming

- Workshops:
  - Science Communication
  - School/Career exploration and readiness
  - Resilience, wellness, leadership, mentoring and emotional intelligence
- Major Events and Boot Camps
  - NIH Career Symposium
  - Graduate & Professional School Fair
  - Postbac, Summer and Grad Student Poster Days
  - Translational Science Training Program
  - Science Advocacy Boot Camp
- Access to:
  - OITE Career Services Center
  - OITE Wellness Center
  - Pre-graduate and pre-professional advising

Some Eligibility Issues To Keep In Mind

- Some programs require citizenship or permanent residency status, and others are open to foreign nationals
- All programs require you to pass a Federal background check
- Some programs have unique eligibility criteria
  - For example, GPA, extreme financial need, community college student, interest in health disparities
  - read each program web site and reach out if you have questions

The Undergraduate Scholarship Program (UGSP)

- Provides up to $20,000/yr to cover educational expenses for undergraduates who meet specific eligibility criteria:
  - U.S. citizen or permanent resident
  - GPA ≥ 3.3
  - Extreme financial need
  - Major in a field relevant to biomedical research
  - Able to pass a Federal background check
- All UGSP Scholars
  - Participate in SIP the year following the scholarship year
  - must work in the NIH IRP for one year in return for each scholarship year

Summer Internship Program (SIP)

- Paid internships in an NIH intramural research group
  - Across many disciplines
  - Eight – twelve weeks
- Eligibility
  - US citizen or permanent resident
  - Enrolled in school at least half-time
- Can work on any NIH campus
- Research experience at all levels
  - High School (very restricted eligibility criteria)
  - College
  - Graduate School
  - Professional School

OITE-Sponsored SIP Subprograms

- CCSEP: Community College Summer Enrichment Program
- C-SOAR: Summer Opportunities for Advancing Research for college students
- V-SOAR: Virtual Summer Opportunities for Advancing Research
- Amgen Scholars at NIH
- G-SOAR: Graduate Summer Opportunities for Advancing Research
- M-SOAR: Medical Student Summer Opportunities for Advancing Research
- GDSSP: Graduate Data Science Summer Program

OITE Subprograms

- KEY POINT: The selection process happens centrally!

- Read the FAQs and watch our videos
- Apply on-line – deadlines vary
- A central committee makes selections and will notify you by the dates noted on-line
- If selected, OITE staff will work with you on an appropriate placement
  - Do NOT reach out to PIs during the application process

The **General** SIP Application Process

- KEY POINT: The selection process happens at the PI level!

- Read the FAQs and watch our videos
- Apply on-line – EARLY!
- NIH Investigators (PIs) search the application database and contact with PIs is critical
- Interviews are by phone or in person if you are close by or in the area for another reason

NIH Intramural Postbac Program

- Paid internships in an NIH intramural research group
  - Across many disciplines
  - One or two years
- For recent college grads (undergraduate or Masters)
- Can work on any NIH campus

Postbac IRTA Subprograms

- NIH Academy focuses on health disparities to enhance knowledge of gaps in health outcomes.
  - all NIH postbacs are eligible to participate in Academy activities
- The OITE-PEP is designed to encourage candidates from diverse backgrounds and experiences to perform biomedical research at the NIH.

The Postbac Application Process

- Key point: Except for the OITE-PEP, the selection process happens at the PI level!

- Read the FAQs and watch our videos
- Apply 4-6 months before you want to start
- NIH Investigators (PIs) search the application database and contact with PIs is critical
- Interviews are by phone or in person if you are close by or in the area for another reason

The SIP and Postbac Application

- Consists of:
  - Your contact information
  - A cover letter
  - Your résumé
  - Letters of recommendation
  - A list of your courses and grades

The Cover Letter

- Goal is to discuss:
  - your general interest in coming to the NIH
  - Academic and hands-on preparation to date
  - Goals for the summer or postbac experience
  - How this experience will prepare you for the future
- Should be somewhat generic since many different PIs will read it
- Provide concrete examples; be brief but complete

Appeal To Many PIs

THIS: I am broadly interested in cancer biology and wish to learn more about using animal models in cancer research. Although I would be most interested in studying prostate cancer, I would welcome to opportunity to work in any cancer biology group.

OR THIS: I would enjoy pursuing research on heart disease, stem cells, drug development, and other disease-specific research areas. For me, the ability to think about bench-to-bedside research is more important than the specific research area.

NOT THIS: I am interested in studying prostate cancer in mouse models.

OR THIS: I want to do research for a year before going to Medical School because research and medicine go hand-in-hand.

Your Résumé

- A concise representation of your educational and professional history
- Should include:
  - contact information
  - schools attended, dates, and degrees received
  - honors and awards
  - research experience
  - other work experience
  - presentations and publications
  - languages
  - leadership

Letters of Recommendation

- Best is from individuals who know a lot about your research skills
- From teachers who know you well
- Must address your scientific knowledge base and relevant personal traits
- Can be from a boss or someone outside of school but only if they can discuss similar qualities
- Should NOT be from family or friends

The Selection Process

- You apply on-line to a central database
- NIH Investigators (PIs) or their surrogates search the website
- **You greatly increase your chances by emailing PIs once you upload your application**
- Interviews are by phone or in person (depending on geography)

Finding Research Mentors (I)

- Search the NIH Intramural Investigator database (NIH Annual Reports) at https://www.training.nih.gov/programs
- Find a list of NIH intramural investigators grouped by scientific discipline at http://irp.nih.gov/our-research/principal-investigators/focus
- Contact NIH Intramural Training Directors for Institute-specific information https://www.training.nih.gov/ic_contacts
- Use the Summer or Postbac Poster Day Program to find researchers who have had postbacs in the past
- For more information, watch “Finding an NIH Mentor” video at https://youtu.be/W0m2_yPPMPE

Tips for Searching the IRP Research Database

- Not too broad but not too narrow
- Typical keywords:
  - Techniques
  - Diseases
  - Model systems
  - Organs or physiological systems

Tips for Reaching Out to NIH Intramural Investigators

- No generic spamming
- Include a discussion of why you are interested in working with them – specifically
- Talk about your previous research experiences and why you want to be an NIH summer intern
- Make it easy for them to learn more about you

PI Letter Example

I am currently a senior at the University of XX, majoring in chemistry with hopes of pursuing a PhD. For the past two summers, I worked for Dr. Esteemed Researcher at the Mayo Clinic in Rochester, MN. I am extremely interested in strengthening my research abilities especially in genetics through a post-baccalaureate program at NIH.

During my time in Dr. Researcher's lab, I examined the onset of the learned response to nicotine using a novel conditioned place preference paradigm mutant mice. I was able to help design this assay and use my creativity and innovation to make the assay more robust and effective. I was most excited when working on the experimental design. Additionally, I learned many new molecular biology techniques and strengthened my data analysis skills. Most of all, I developed an even greater passion for research, especially in genetics.

I am passionate about working on research that will impact the way we treat diseases such as your work studying cellular developmental processes in zebrafish that may lead to a better understanding of autoimmune diseases and cancer. If given the opportunity, I believe I possess the qualities that will allow me to be an integrative and productive member in your lab.

I have applied to the NIH Postbac IRTA Program, and I have attached my resume for your review. If there is any other information I can provide, please contact me by phone at 555-555-5555 or by email at myemail@mail.univ.edu. I look forward to hearing from you. Thank you for your time and consideration.

Finding Quality Mentorship

- "One size does not fit all" in research training
- Science first, but focus should be much broader
- Focus on the research and training environment
  - types of collaborations available, level of independence, management style, availability for support and guidance, training resources within the group, encouragement for training outside of the group, etc.
  - outcomes for previous fellows
  - talk with current and previous members
- Read information on finding mentors and watch our video at https://www.training.nih.gov/mentoring_guidelines

Tips for Success

- Get to know the NIH and all of the resources available
  - OITE moving guide
  - OITE and IC orientations
  - attend OITE workshops and take advantage of our career advising programs from the start
  - take the resilient scientist series and take advantage of our wellness resources
  - find community at NIH and beyond
  - cultivate relationships with science and career mentors
- Make a plan for your scientific and professional success; get help following it

The NIH Cares About You!

- www.nih.gov for health information for you, your family and your community
- www.training.nih.gov for NIH training opportunities and career development resources
- https://www.youtube.com/c/NIHOITE for webinars and the entire resilient scientist series