HARVARD UNDERGRADUATE RESEARCH OPPORTUNITIES IN SCIENCE (HUROS) FAIR

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Undergraduate



- Science research: why, what and where?
- How to find a lab?
- HUROS: preparing strategy
- Interviews
- Funding for research

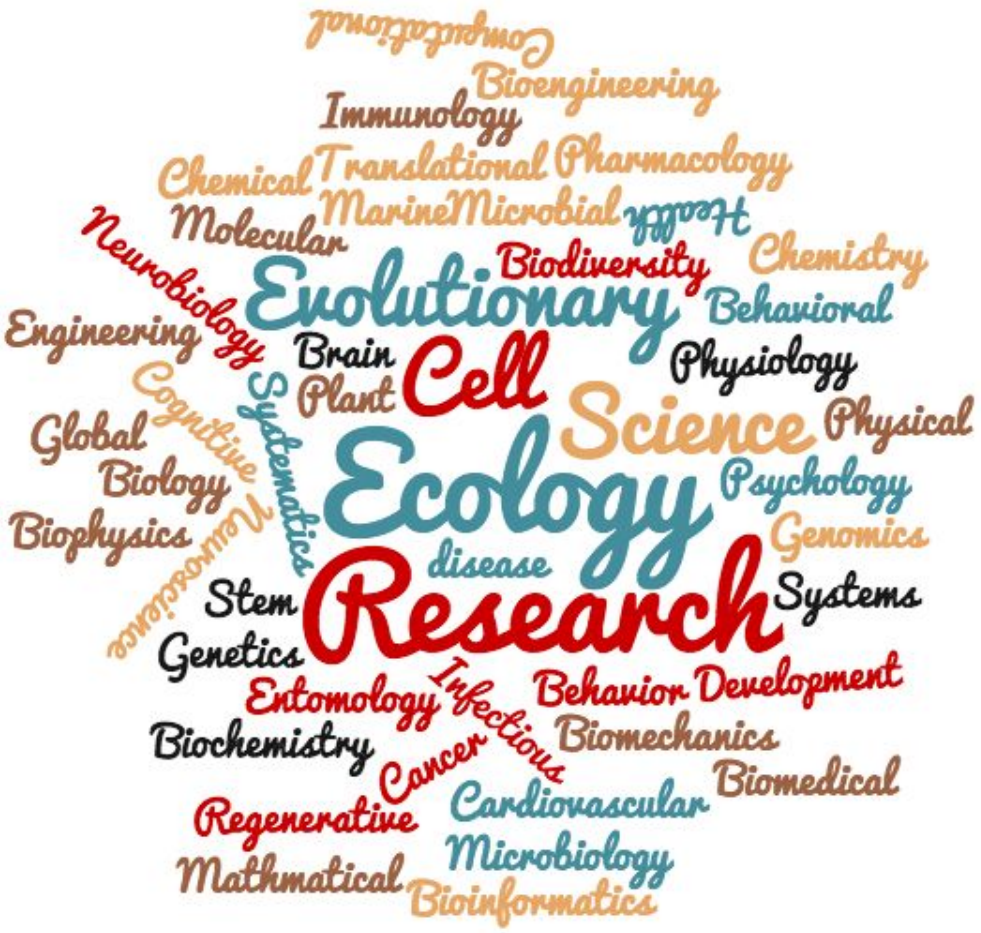
Science Research: what?

Laboratory research vs. Clinical research





Science Research: what?



- Boundaries between disciplines have dissolved
- Focus on a scientific question or problem rather than a subject
- Interdisciplinary research & teamwork is standard

Science Research: why?

- Intellectual engagement
- It's fun
- Other motivations for doing research





SURE STUDY
(Survey of Undergraduate Research Experiences)

Top 5 learning gains:

① Understanding the research process

② Readiness for more demanding research

③ Understanding of how scientists work on problems

④ Learning lab techniques

⑤ Tolerance for obstacles

Lopatto, D. (2007). "Undergraduate research experiences support science career decisions and active learning." CBE Life Sci Educ **6**(4): 297-306.

Science Research: where?

- >1,000 research groups
- FAS
- SEAS
- HMS/HSDM
- HSPH
- Harvard-affiliated hospitals: MGH, Boston Children's, McLean, BWH

  Research Institutes: Wyss, Rowland, Broad

IDENTIFY YOUR RESEARCH INTEREST:
courses, conversations, direct search

Undergraduate Research at Harvard

Type:

- Volunteer
- Course-credit
- Fellowships (due Dec-Feb)

Time commitment:

- Term-time
  - Fresh/Soph 6-10hrs/week
  - Junior/Senior 15-20hrs/week (course credit/senior thesis)
- Summer
  - 40 hrs/week
  - 8-12 weeks



Finding a Lab that Fits



How to find a lab?

- Open Research Positions https://lifesciences.fas.harvard.edu/undergraduates-open-research-positions-projects
- HUROS research fair https://lifesciences.fas.harvard.edu/huros
- Contact faculty (cold email/see Research Advisor for help: Anna Babakhanyan ababakhanyan@fas.harvard.edu)

HUROS: Harvard Undergraduate Research Opportunities in Science Fair

11/9/2017 2:30-4:30PM Knafel Center, Radcliffe Institute
REGISTER ONLINE at **https://lifesciences.fas.harvard.edu/huros**



HUROS: strategy



- Browse through the list of abstracts and check lab websites
- Abstract link: https://projects.iq.harvard.edu/officeofscienceeducation/HUROS-2017-ABSTRACTS
- Make a list of abstract titles/professors who you are interested in (abstract book is arranged by PI last name)
- Prepare list of questions (bring a list with you)
  - Potential research projects for undergraduates
  - Start time of project (e.g. Spring/Summer)
  - Length of commitment (one semester, semester plus summer, etc.)
  - Weekly time commitment (hrs/week)
  - Experience required (does it match your research skillset?)
  - Who will be your day-to-day mentor? Frequency of meeting with the P.I.?
  - Opportunities for medical shadowing (if it is a hospital-based research lab)
  - What are the next steps to follow up on this position?
- Prepare a science resume: https://lifesciences.fas.harvard.edu/resume-proposal-tips
- Bring copies of your resume for all the professors you are interested (bring extra in case you meet additional professors)

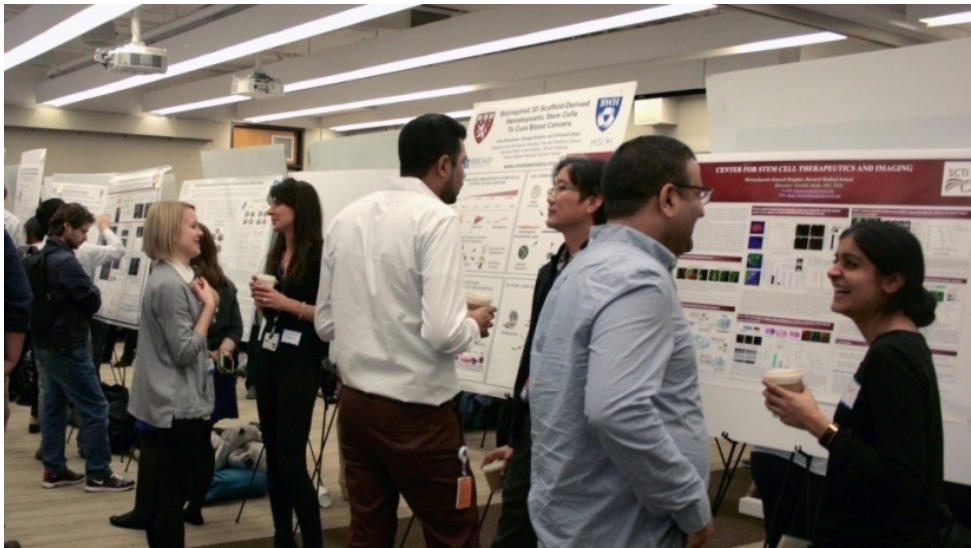
HUROS: the day of



- Bring list of your questions and resume, pen and notepad to take notes
- At the event check the abstract booklet to find abstract numbers for the PIs you are interested in and make sure you stop by their poster
- As you approach a poster:
  - Introduce yourself
  - Clarify to whom you are talking (presenter, professor, etc.)
  - Ask them to tell you about their research
  - Ask specific questions regarding research projects and logistics etc.
- Take notes when you talk to professors, ask for their business card/contact information
- Thank them at the end of the conversation
- Stop by Summer Research Program & Funding tables

HUROS: after the fair

- Within a week after the fair, follow up with the professors and research group if you are interested in pursuing a project
- Mention that you met them at the HUROS and send them a copy of your science resume again
- Prepare for the interview



Interviewing

- Prepare:
  - Read faculty website and 1-2 published manuscripts
  - Bring specific questions
  - Dress professionally
- Meet the P.I. (Principal Investigator) & potential direct research mentors
- Mentor's expectations & your availability
- Ask for a lab tour
- Follow up – email thank you note



Funding

Term-time:
- HCRP



HARVARD COLLEGE
Office of Undergraduate Research and Fellowships

Summer:
- General: PRISE, HCRP, Herchel-Smith, Harvard-Amgen
- Specific: Harvard Stem Cell Institute, Planetary Health, etc…
- International

https://lifesciences.fas.harvard.edu/research-opportunities

Transportation for researchers:
https://lifesciences.fas.harvard.edu/research-transportation

Science Research Advising Resources

- Finding a lab that fits
- Help finding lab with specific research interest
- Resumes, cover letters & interviews
- Help with research fellowships
- Feedback on research proposals for funding
- Any other questions (transportation, mentoring, presenting your research, etc.)



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Science Education

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THANK
YOU!