**History of HOUR**

Research has been at the heart of Johns Hopkins University since its establishment in 1876 as America’s first research university. Today, over 80% of our undergraduates participate in some form of research during their time at Hopkins. The **HOUR (Hopkins Office for Undergraduate Research)** vision is to make equitable access to impactful research opportunities the norm for all Hopkins undergraduates.

HOUR was established in 2017 under the leadership of Denis Wirtz, Vice Provost for Research, with the support of Provost Sunil Kumar and President Ron Daniels. Prior to its creation, there were few dedicated resources in place to assist undergraduates in finding and participating in research opportunities. In 2019, HOUR moved under the leadership of Farouk Dey, Vice Provost for Integrative Learning and Life Design (ILLD).

At HOUR we work with undergraduates in the Krieger School of Arts & Sciences, the Peabody Institute, and the Whiting School of Engineering, across all disciplines, from STEM to the Arts & Humanities, to understand what research looks like and how it can prepare and propel our students toward their goals at Hopkins and beyond.

HOUR began with the well-established **PURA program** (est. 1993). Soon added were the highly successful **BDP Summer program**, pairing students with Bloomberg Distinguished Professors, and **CIRCUIT@APL program**, which has led to recent graduates being hired at top companies like APL and Google. HOUR also offers events for students to share their research with the greater Hopkins community and beyond via our **DREAMS and Crossroads events**.

**Diversity, Equity, and Inclusion**

Working toward our vision for equitable access to research opportunities for all students, HOUR is actively advocating for fair compensation for research. The average student is researching 8-10 hours per week during the academic year and 30-40 hours per week during the summer and breaks. Under current conditions, students can receive a limited amount of academic credit for research (per university guidelines) and few are able to receive pay for their work. The majority of our students research as volunteers to gain experience and skills. The lack of compensation restricts equitable access to research opportunities for many of our populations, especially during the summer when local housing expense is no longer covered by financial aid packages. HOUR has worked with existing partners to increase summer program funding to match or exceed the university’s $15/hour minimum wage standard. Additionally, we are working with other ILLD offices and DAR to identify and access philanthropic funding to mitigate these financial barriers. While our efforts are helping, they are just band-aids on a larger, systemic problem throughout higher ed.
Diversity, Equity, and Inclusion cont.

Separate from the financial barriers, HOUR has always encouraged students from underserved backgrounds to participate in our programs and opportunities. We work with our partners in the Center for Student Success (FLI Network, JUMP, Hop-In, and the Success Coaches) to assure these populations are aware of and prepared to successfully take advantage of HOUR’s offerings. We have also identified student liaisons from a number of these groups, as well as the International and Transfer Student groups, to spread the word.

Pandemic Impacts on Undergraduate Research

Covid-19 has had a tremendous impact on undergraduate research. Following governmental guidance, the university was forced to restrict access to in-person research for all undergraduates from March 2020 through February 2021. Not only were student experiences limited, faculty faced burdensome delays to their projects because undergrad lab members were not there to complete critical research tasks.

Remote research was just not possible in some areas: wet lab research; community public health; and even some humanities research (lack of access to library and other tangible resources) for example. Working with faculty, remote projects were identified including data analyses and literature review, and new technologies were deployed. Our ForagerOne platform added ‘remote projects’ as a filter to help highlight these opportunities. Many students added programming classes to their learning plans to allow them research access.

Despite these challenges, as well as new financial constraints, HOUR was able to offer all its established funded programs to students, granting time extensions for those that could not take place during shutdown. The CIRCUIT summer program moved to 100% virtual, accommodating students located around the world with no loss in programming or experiences. To provide experiences for students in our other programs, HOUR created and delivered SURVE (Summer Undergrad Research Virtual Exchange). Students from all HOUR’s programs met weekly for sessions on networking, time management, reading research journals, doing effective peer reviews, creating research presentations, and engaging with an alumni panel.

Research was not the same during the pandemic, but research still went on. Students teamed up to work on award-winning projects related to COVID and its impacts, designing better masks, battery operated ventilators, and the studying and mitigating the impacts of isolation and distancing. The pandemic has shown us that nothing will stop our amazing students from learning, reaching, and growing.
AY21 By the Numbers

Engagements

HOUR’s two full-time staff, student web design assistant and student group collaborators engaged with undergraduates and other constituents across a wide range of settings, events and platforms. Due to pandemic restrictions, all programming in Fall 2020 was virtual, a practice we continued in Spring 2021 because of the dramatic increase in engagement opportunities and student satisfaction we noted using virtual solutions.

- 836 Members of HOUR on HopkinsGroups
- 1000+ Undergrads attended workshops, webinars, Info sessions etc. hosted or staffed by HOUR, including:
  - Orientation sessions
  - JUMP/Hop-in events
  - Success Coach panels
  - LDL Workshops
  - Student Involvement Fair
  - Award Info Sessions
- 140 Undergrad presentations at DREAMS Spring 2021
  - 3,220 visits to the event
  - 10,715 unique presentation views
  - 2.2 hours engaged visitor time on average at each presentation wall
- 162 Students dropped into office hours (many several times, and several many times)
- 3164 Registered undergrad users
- 603 Engaged faculty
- 400 Currently recruiting
- 2102 Messages sent on ForagerOne
- 134 1:1 meetings with students
- 108 Students awarded
  - $595k research funding
Ensuring Equitable Access to Research

A key component of HOUR’s mission is ensuring that all undergraduates who seek research opportunities are able to find positions that are meaningful, and that advance their academic, personal and professional development, regardless of student background, experiences or challenges. In AY21 we began to track our engagement and programmatic data to ensure we are reaching the populations that need our services the most.

<table>
<thead>
<tr>
<th>% Representation within:</th>
<th>A&amp;S</th>
<th>ENG</th>
<th>Male</th>
<th>Female</th>
<th>White</th>
<th>Black</th>
<th>Asian</th>
<th>NRA</th>
<th>Hisp.</th>
<th>URM</th>
<th>FLI</th>
<th>Pell</th>
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<td>45</td>
<td>55</td>
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<td>14</td>
<td>29</td>
<td>13</td>
<td>17</td>
<td>23</td>
<td>*</td>
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<td>9</td>
<td>41</td>
<td>21</td>
<td>12</td>
<td>21</td>
<td>19</td>
<td>15</td>
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</tbody>
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* Have not found reliable data; discrepancies in available datasets; see Appendix for sources of data

Key findings:
- White, Asian, URM and female students are overrepresented in HOUR on HopkinsGroups, while males are very underrepresented there.
- Asian, NRA and male students are extremely overrepresented in-person at HOUR, while Black and Hispanic students are very underrepresented.
- Arts & Sciences and Engineering students are proportionately represented in both settings.
Research Presentation Events

After a hiatus in 2020 due to the pandemic, HOUR’s signature annual research presentation event, DREAMS, returned in Spring 2021. Presented on the Symposium platform as an entirely virtual event, the showcase featured 140 student presentations over a two-day period that included on-demand viewing of presentation materials, comment walls and synchronous talks by each presenter.

AY21 Outcomes:

- The move to a virtual platform was applauded by presenters and visitors alike, as student work could be viewed by classmates, colleagues, family and mentors at their own convenience, with no travel or other challenges.
- Visitor attendance increased by more than 4 times over previous in-person events.
- Time spent by engaged visitors at specific presentations more than quintupled over the in-person experiences of the past.
- In addition to static media (conference posters, journal articles), presenters were strongly encouraged to record full presentations or shorter video ‘voiceovers’ explaining their project for visitors to their ‘wall.’ This will be a useful skill in an increasingly ‘distanced’ and virtual research presentation climate.
- Based on this success, HOUR will continue to offer virtual components to DREAMS even if we return a to live, in-person format in the future.
- In AY22, HOUR will be taking over the longstanding fall research presentation event URS (Undergraduate Research Symposium) from the Neuroscience Department, and will rebrand it as ‘Fall DREAMS.’ Departmental student group Nu Rho Psi will continue to work on the planning and staging of the fall event.
- With this and other possible presentation events in mind, we’ve upgraded our Symposium license from a single event contract to a multiple-event per year package which allows our events to remain online and accessible for the entire year, in addition to other upgrades.

AY21 was the inaugural year for the Crossroads event series, providing undergraduate researchers an opportunity to present their work in an interdisciplinary panel discussion setting. Each session is co-produced by HOUR with a different student group, and moderated by faculty and graduate students with expertise in that event’s common theme.

AY21 Outcomes:

- Working with student groups SciComm and Nu Rho Psi, we hosted one session each in Fall and Spring.
- The Fall session, ‘Communication’ had 6 student panelists, was co-moderated by MSEL Research Librarian Susan Vazakas and PhD candidate Maya Koretzky, and drew 81 students to the presentation and discussion.
- The Spring Session, ‘Trust in Research’ had 4 student panelists, was moderated by PhD candidate Alexander Parry, and drew 52 students to the event.
- Panelists and attendees welcomed the digital format, allowing participation from anywhere in the world.
- We intend to work with student group collaborators to present two Crossroads sessions per semester in AY22.

Snapshot:

- 140 Presentations
- 3,220 visits to the event
- 1,100 peak simultaneous visitors
- 10,715 unique presentation views
- 130 visitors registered in order to leave comments;
- 233 comments made.

Highest number of unique views for a presentation: 197
Average number of unique visits to all presentations: 57
Increased Use of HOUR Resources and Tools

HOUR provides a variety of resources for undergraduates on several digital platforms. In addition to making use of social media to reach our target audience, we provide 3 key resources online:

HOUR’s website serves as the official destination for all our stakeholders to find information about research opportunities for undergrad students at JHU. In AY21 we were able to pull away from the larger university Research domain by securing a new URL and website theme with better functionality for our users. We strive to meet our mission by providing clear paths to useful, current content for the wide range of users we serve. The new website reflects our vision of creating and supporting a vibrant undergraduate research community at JHU.

ForagerOne is a searchable database and engagement platform allowing undergraduates to seek and connect with over 4,400 potential mentors from among JHU research faculty.

Key Metrics:

- There were 3614 registered student users at the close of AY21. This represents a 52% increase in users since the start of the year.
- There were 603 actively engaged faculty on the platform at the close of AT21. This is an 84% increase over the year, due in large part to vigorous outreach by HOUR Director to key faculty and administrators.
- 3371 students have searched for faculty on the platform; they’ve bookmarked 18,947 of them.
- 743 students have submitted 2,548 applications to faculty through the platform.
- Students have also sent 2,102 messages to faculty.
- Of the 560 students who (self) report, there are 141 combinations of major/dual major represented.
- Developers are working to add features and provide an API so we can easily acquire the data we need.

AY21 Outcomes and Next Steps

- HOUR rolled out the community on CampusGroups in Summer 2020. Since that time, membership (exclusively undergrads) peaked at 836 (slightly lower now as seniors have aged out and incoming freshmen are coming aboard).
- We were the first office outside of Student Life to take advantage of the platform, and quickly became the largest group there.
- We’ve used the features to gather data about students and their research, market resources and events, request student feedback, and, most important, foster a peer network of supporters and collaborators through a student-moderated forum.
- This community is one part of a holistic ecosystem of peer supporters we are trying to nurture, which will culminate in recent grads coming back to mentor young researchers through the OneHop platform.
In Their Own Words......

“Receiving this award means more to me than I can articulate. I am a junior student and my parents are currently putting 3 students through college. The support I am receiving means the world to me since I can do what I love without putting extra stress on my brothers or parents.”

JOEY KOMLES
Biophysics
Class of 2023
Summer PURA Program

“PURA has given me the opportunity to continue to dedicate time to research without the worry of not spending that time working. I am so honored to have been chosen for the award and will definitely make the most of this opportunity.”

ANTHONY GARCIA
Molecular & Cell Biology
Class of 2023
Summer PURA Program

“Gaining the PURA is a validation of my passion and interest. I used to think that productivity could only ever be a side hobby or interest. But now, I can see how I could make a career out of it.”

CHI-HUH CHU
Computer Science
Class of 2023
Summer PURA Program

“We spoke in my first semester at Hopkins in Fall 2019 when I came in as a transfer that was struggling to find research. Since then, I have not let my experience with PURA help me find a position that I feel confident in. I had worked at for the last 1 and half years and have enjoyed the experience fully. Thank you so much.”

HAMIDUR RABID
Vascular & Cell Biology
Class of 2023

“Receiving this award gave me confidence in my academic abilities at a time when I did not believe that I was cut out to be a Hopkins student. It reminded me of how far I've come.”

JORDAN ADAMS
Waiting Seminaries: English
Class of 2022
BOP Summer Program

“I am extremely honored to be granted PURA. When I began research, I had no idea that it would grow to such a large part of my life. Being granted PURA will allow me to continue the meaningful work that will potentially benefit the lives of many.”

KEVIN SOMPEL
Biomedical Engineering
Class of 2022
Summer PURA Program

“Receiving this award means a lot. It is great to know that other people besides our research group share our passion about the potential and possibilities of this project and believe in the great things we are trying to accomplish.”

KEVIN CHU
Chemical & Biomolecular Engineering
Class of 2023
Summer PURA Program

“My main goal is to make medical policy that could help underserved communities. I think this program will give me an opportunity to learn more of the policy side of what I want to do and the law aspect. It's a great opportunity and I am really grateful.”

HOHIE ETTINGER
Medicine, Science, & the Humanities
Class of 2021
BOP Summer Program

Annual Report 2021 8