The participants were positively affected by the PUMAS program in many ways.

**What is it?**
- A nine-week paid **biomedical research internship** funded by the National Institutes of Health (NIH)
- Gives **hands-on lab experience**, networking opportunities with research faculty, and exposure to different career paths in science and health
- PUMAS’s principal investigators and graduate student/post-docs mentors are committed to **building gender and ethnic diversity** in STEM/health

**Who is it for?**
- **Underrepresented* community college students** with intentions to transfer to four-year institutions as STEM majors
- **Small cohort** (eight students) accepted per year

**Who were the 2019 participants?**
- **88%** from underrepresented populations
- **3.42** average college GPA
- **75%** first-generation college students
- **$69,747** median household income
- **100%** aimed to pursue a STEM-related degree

**Effect of the Program**

The participants were positively affected by the PUMAS program in many ways.

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using technical science skills</td>
<td>2.8</td>
<td>4.6</td>
</tr>
<tr>
<td>Understanding lab roles &amp; responsibilities</td>
<td>2.6</td>
<td>3.6</td>
</tr>
<tr>
<td>Using scientific literature to guide research</td>
<td>3.1</td>
<td>3.9</td>
</tr>
<tr>
<td>Thinking of myself as a ‘scientist’</td>
<td>3.4</td>
<td>4.3</td>
</tr>
<tr>
<td>Overall scientific self-efficacy scale</td>
<td>3.0</td>
<td>3.8</td>
</tr>
</tbody>
</table>

* The National Science Foundation (NSF) considers groups to be underrepresented minorities (URMs) when they “constitute disproportionally smaller percentages of employed scientists and engineers than they do of the U.S. population” as a whole. Currently, NSF identifies members of the following groups to be URMs: “Women, persons with disabilities, and three racial and ethnic groups – blacks, Hispanics, and American Indians or Alaska Natives” (Women, Minorities, and Persons with Disabilities in Science and Engineering (2017). www.nsf.gov).
Alumni/ae

89% sustained or increased interest in biomedical science
96% intend to pursue STEM-related careers
89% completed or attend 4-year institutions
74% aspire to advanced degrees (M.S. or higher)
69% of PIs and mentors were in contact with alumni/ae last year

39 alumni/ae completed the PUMAS program between 2014 and 2018, of whom 72% responded to the 2019 follow-up survey.

Effect of the Program (cont.)

All interns increased their knowledge of career readiness and graduate/professional school topics
Interns increased the average size of their professional networks from 17 contacts at the start of the program to 32 contacts at the end

Mentors’ assessments of interns’ science skills
Mentors’ assessments of interns’ science communication skills (written)
Mentors’ assessments of interns’ science communication skills (verbal)

All interns increased their knowledge of career readiness and graduate/professional school topics
Interns increased the average size of their professional networks from 17 contacts at the start of the program to 32 contacts at the end

Founded in 1979, the Gladstone Institutes is an independent biomedical research institution with a focus on finding new pathways to cures. Over 350 scientists and trainees work at Gladstone using science and technology in cardiovascular biology, immunology, neuroscience, and stem cell biology to study unsolved diseases. A common belief of the organization is that diversity will bring the best solutions to the world’s scientific challenges.

Actionable Insights is a consulting firm that helps organizations discover and act on data-driven insights. Using their expertise in applied research and program evaluation, the firm’s partners work with nonprofits and government agencies to measure impact in the areas of health and wellness, housing, STEM education, and youth development.