LIFE SCIENCES SUMMARY DATA
(biology, biochemistry/biophysics, chemistry, and neuroscience)

LIFE SCIENCE MAJORS: GRAD & MEDICAL SCHOOL OUTCOMES

A recent examination of graduate school outcomes of Amherst students who graduated in class years 2004 through 2011 with a degree in life sciences determined the following:

- Nearly 70% of all life sciences majors enrolled in a graduate degree program in the sciences.

<table>
<thead>
<tr>
<th>All graduate majors in the life sciences (n=432)</th>
<th>number</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical or dental degree</td>
<td>170</td>
<td>39%</td>
</tr>
<tr>
<td>PhD</td>
<td>86</td>
<td>20%</td>
</tr>
<tr>
<td>Combined MD/PhD</td>
<td>23</td>
<td>5%</td>
</tr>
<tr>
<td>MS/MA</td>
<td>19</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Total enrollments in science degree programs</strong></td>
<td><strong>298</strong></td>
<td><strong>69%</strong></td>
</tr>
</tbody>
</table>

Under-represented minorities (URM) constitute 16% of all graduate majors in the life sciences.

- URM students enrolled in graduate degree programs at a rate equivalent to that of the larger cohort of graduates: over two thirds (68%) enrolled in a graduate degree program in the sciences.

<table>
<thead>
<tr>
<th>Under-represented students in the life sciences (n=71)</th>
<th>number</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical or dental degree</td>
<td>28</td>
<td>39%</td>
</tr>
<tr>
<td>PhD</td>
<td>12</td>
<td>17%</td>
</tr>
<tr>
<td>Combined MD/PhD</td>
<td>3</td>
<td>4%</td>
</tr>
<tr>
<td>MS/MA</td>
<td>5</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total UR enrollments in science degree programs</strong></td>
<td><strong>48</strong></td>
<td><strong>68%</strong></td>
</tr>
</tbody>
</table>

COMPARISON OF LIFE SCIENCES PHDS EARNED BY AMHERST GRADUATES VS. OTHER PEER COLLEGES

- Amherst College ranks 9th among its peers in generating future PhDs in the life sciences over a 10-year period. Ranks by discipline:
  - Biology: rank=9th (79 PhDs)
  - Chemistry: rank=60th (8 PhDs)
  - Medical sciences: rank=10th (11 PhDs)

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1 Analysis updated in March 2015 for students tracked in Amherst’s student research database.
2 URM includes students who self-identify as Black, Hispanic, Native American or mixed race.
3 NSF CASPAR Survey of Earned Doctoral Degrees, years 2003-2012, comparing 104 Carnegie 1 colleges for which the bachelor’s degree is the highest degree offered.
LIFE SCIENCE MAJORS: INCREASING URM REPRESENTATION

- For the class of 2014, 20% (14/70) of those majoring in life sciences self-identified as members of under-represented minorities (Black, Hispanic, Native American or mixed race)\(^4\)
- Over the past 10 years, the percentage of students graduating with a major in the life sciences who were members of under-represented minorities rose from 16% to 20%.\(^5\)

LIFE SCIENCE MAJORS: THESES RESEARCH

- Percent of students who undertake an honors thesis (based on 3 year average for graduation years 2012-2014):
  - 55% of all life science majors
  - 95% of biochemistry/biophysics majors
  - 55% of neuroscience majors
  - 51% of biology majors
  - 50% of chemistry majors

GENERAL AMHERST AND SCIENCE DATA

DEMOGRAPHICS

Amherst College is recognized as a leader among liberal arts colleges in enrolling a student body that is highly diverse. Forty-three percent of current Amherst students are U.S. students of color and 27% of U.S. students are Pell grant recipients.

ALL AMHERST GRADUATES: ENROLLMENT IN MEDICAL SCHOOL

- On average, 11% of all Amherst graduates entered medical school for the past 10 years. Of those who matriculate, about 10% self-identify as members of under-represented minorities, and 55% are women.\(^6\)

FUNDING

- Since 2005, Amherst College has received 61 grants, and more than $13 million from Federal grants, including NIH and NSF. The College also received over $2 million in research funding from private funders over this time period.\(^7\)

\(^4\) Amherst’s Office of Institutional Research
\(^5\) Amherst’s Office of Institutional Research for graduation years 2005-2014.
\(^6\) Association of American Medical Colleges (AAMC) database counts of Amherst matriculates (12-year aggregated total for years 2002-2013) compared against Amherst College Office of Institutional Research data (12-year aggregated total of previous year’s count of Amherst graduates classes of 2001-2012).
\(^7\) Amherst’s ARI Grant Proposal tracking database. Includes awards from HHMI, Albree Trust, American Chemical Society, Research Corporation, Dreyfus and Whiting for Jan 2005-March 2015.
• Amherst ranks 8th among 59 peer institutions for federally financed R&D expenditures over the past 10 years, with nearly $15 million in federal funding.  

**PUBLICATIONS**

• Since 2000, more than 250 Amherst students have co-published their research results in peer-reviewed science journals with their faculty mentors.

**PARTICIPATION IN UNDERGRADUATE RESEARCH**

Amherst’s **SURF (Summer Science Undergraduate Research Fellows) Program** provides opportunities for students to immerse themselves in a hands-on, collaborative science research project for 8-10 weeks during the summer. Research fellows work closely with their faculty mentors to design and execute their research projects, and all Fellows take part in educational and social activities. In early fall, Fellows present their findings at Amherst's annual poster session and are encouraged to present their work at a regional or national conference. Fellows receive on-campus housing and a stipend.

The SURF Program supports approximately 30 rising sophomores and juniors each year, and has served nearly 500 students since it began in 1998.

Between 2010 and 2014, 15% of the 140 summer fellows who conducted research in the life sciences through Amherst’s Summer Science (SURF) Program self-identified as members of under-represented minorities.

Amherst’s **Clare Boothe Luce** Award enables the College to advance women students’ participation in mathematics, computer science, physics, physical chemistry and geology—all fields in which women are underrepresented nationally—by further widening the pipeline for women students at Amherst who pursue these STEM fields. The grant provides $223,300 in summer research funding to a total of 24 students over three years (2014-2016). CBL Fellows undertake immersive research projects and travel to professional conferences to present their research. They also benefit from networking and mentoring activities with alumnae scientists.

Through the **Student Research Program (SRP)**, Amherst supports about 30 rising seniors each year who conduct honors research on campus in the sciences, mathematics, and social sciences through the year. SRP students receive a stipend and on-campus housing support to enable them to work on their theses for 6-8 weeks during the summer. They also take part in social and skills-building activities for students conducting summer research.

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8 WebCASPAR database, years: 2004-2013, Carnegie Liberal Arts 1 and 2 Colleges, BA=highest degree awarded. In March 2015, the most recent year for which R&D expenditure info was available was 2013.

9 Total obtained in March 2015 for publications tracked in Amherst’s student research database.

10 The SURF program was formerly known as the HHMI program.