MD-PhD: Is it Right for me?

Communications Committee of the MD-PhD Section of the Group of Research, Education, and Training (GREAT) AAMC

• Application Process
• Training
• Careers
Why an MD-PhD?

Biomedical scientists use the power of research to understand and cure human disease.
Students interested in careers as MD-PhDs are...

- **fascinated** by human biology and disease
- **creative**
- **persist** in seeing a project to completion
MD-PhD graduates sit at the intersection of science and medicine
There are ~ 100 MD-PhD programs affiliated with medical schools:

- 50 programs (with ~40-190 trainees) are supported by NIGMS training grants known as **Medical Scientist Training Programs** (MSTPs)
- Most MD-PhD programs offer **financial support**: stipends, tuition waivers and health insurance
MD-PhD Program Overview

Goal: Prepare trainees for a career that combines research and clinical care, emphasizing research

<table>
<thead>
<tr>
<th>Years 1-2</th>
<th>Years 3-6</th>
<th>Years 7-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mostly med school</td>
<td>Mostly grad school</td>
<td>Mostly med school</td>
</tr>
</tbody>
</table>

- Curriculum integrates MD and PhD training
- complete both in 7 or 8 years
- Many PhD fields are possible
  - Non-traditional PhD training opportunities
MD-PhD Alumni.....

- Choose a variety of residency training specialties
- Do research more than 50% of the time
- Enjoy their careers; more than 80% would choose their career again
MD-PhD Careers: long term outcomes

Most MD-PhDs work in academia.

- Academia: 68%
- Private practice: 14%
- Industry: 7%
- Institutes: 5%
- Other: 6%

MD-PhDs conduct various types of research.

- Basic science
- Translational
- Patient-oriented
- Health services
- Other
A Career as a Physician Scientist

Juanita Merchant, MD, PhD
Professor of Medicine
Chief, Division of Gastroenterology

...studies transcriptional control of gastrointestinal peptides that regulate cell growth and cancer
Preparing for and Applying to MD-PhD Programs
Elements of a successful MD-PhD application

- Holistic review
- Physician scientist career commitment
- Productive research
- Experience in caring for others
- Strong academics
- Activities and life experiences
- Integrity and maturity
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What constitutes a substantive research experience?

- Enough research experience to understand what you are getting into:
  - Multiple summer projects
  - Undergraduate research, Senior research thesis
  - One or more years pursuing research after undergraduate degree (Post-bac)

Become familiar with testing a hypothesis
MD-PhD Statistics (2020-21)

• 5,563 MD-PhD trainees nationally

• 2019-2020 Application cycle (matriculated Summer/Fall 2020):
  - 1825 MD-PhD applicants (>50K straight MD)
  - 14 applications submitted/applicant (avg)
  - 701 matriculants: ~1/3 of MD-PhD applicants entered an MD-PhD Program in 2020
    - 51% women
    - 13.6% racial/ethnic URM
    - 12.4% multi racial/ethnicity
### MD-PhD Applicant Statistics (Class entering 2020)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Range</th>
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<tbody>
<tr>
<td><strong>Total applicant pool (n = 1,858)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCAT</td>
<td>511</td>
<td>474-528</td>
</tr>
<tr>
<td>GPA</td>
<td>3.67</td>
<td>1.9 – 4.0</td>
</tr>
<tr>
<td><strong>Matriculants (n = 701), 38%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCAT</td>
<td>516</td>
<td>495 – 528</td>
</tr>
<tr>
<td>GPA</td>
<td>3.8</td>
<td>2.87 – 4.0</td>
</tr>
</tbody>
</table>

Table B-10: MCAT® Scores and GPAs for MD-PhD Applicants and Matriculants to U.S. Medical Schools, 2019-2020

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Pre-application (2-3 years)
- Courses
- Research
- Clinical exposures
- Activities and life experiences

~1.5 year process
What should you look for in a MD-PhD program?

- Environment (research and academic)
- Students, program activities & professional development, community involvement
- Alumni achievement
- Location
- A sense of inclusion
For more information:

- https://www.aamc.org/mdphd
- NIH.gov/training
- Role models
- Knowledgeable people who care about you:
  - Directors and Mentors (Summer Program and Post-Bac)
  - Professors, Lab Heads and Department Chairs
  - MD-PhD Students, Graduate Students and Post-Docs
  - Career Advising Offices
  - PhD and MD-PhD Program Directors