2021

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
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
Where is MD-PhD training done?

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

- Curriculum integrates MD and PhD training
- Complete both in 7 or 8 years
- Many PhD fields are possible
- Non-traditional PhD training opportunities
• 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 70%

Translational 60%

Patient-oriented 50%

Health services 40%

Other 5%
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
- Strong academics
- Integrity and maturity
- Experience in caring for others
- Activities and life experiences
- Physician-scientist career commitment
- Experience in caring for others
- Activities and life experiences
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 will enter an MD-PhD Program in 2019
    - 51% women entering 2019
    - 13.6% racial/ethnic URM
    - 12.4% multi racial/ethnicity
# MD-PhD Applicant Statistics (2020-21)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Range</th>
</tr>
</thead>
<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>
Application Timeline
Candidates Matriculating in the Summer of 2022

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

Winter-Spring 2021
Preparing a strong application

Summer 2021
Apply

Fall 2021
Interview

Winter 2021/22
Acceptance

Summer 2022
Start

~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 belonging or 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