School of Pharmacy
Support and Facilitate Excellence in Scholarship and Graduate Training

Blackwell Smith Building

Biotech I

McGuire Hall
VCU School of Pharmacy: Overview

• Founded in 1898
• Graduate program established in 1950s
• International reputation for excellence in education and research
  − Ranked #17 Best Schools of Pharmacy (US News and World Report)
  − Ranked #24 NIH Funding (of 130 SOPs)
• Tremendous breadth of research: structural biology to population
• Three departments
  − ~65 total faculty
  − ~38 graduate faculty
• Trainees
  − ~15-20 postdoctoral fellows
  − 48 PhD
  − 9 MS
Department of Medicinal Chemistry (10 Faculty)

- Allosteric drug interactions
- Anti-cancer and anti-HIV drug development
- Anticoagulants and enzyme mechanism
- Behavioral effects of drugs
- Bioinformatics
- Centrally-active drugs
- Chemical biology
- Drug discovery
- Drugs of abuse
- Molecular modeling and drug design
- Natural product synthesis
- Next generation antibiotics
- QSAR technology development
- RNA-drug interactions
- Structural biology
- X-ray crystallography
Department of Pharmaceutics (16 Faculty)

- Pharmacokinetics and pharmacodynamics
- Aerosol drug delivery
- Drug Transporters
- Biopharmaceutical analysis
- Proteomics
- Ocular drug delivery
- Nanomedicine
Department of Pharmacotherapy & Outcomes Science (~35 faculty)

- Health economics and outcomes research: cancer, cardiovascular disease, drug abuse
- Social and administrative constructs of pharmacy practice
- Pharmacoepidemiology of antimicrobial usage
- Cardiology (heart failure, inflammation, drug development)
- Thrombosis and haemostasis (hemophilia, coagulopathy, drug development)
- Women’s health / endocrinology
- Personalized medicine (genomics, proteomics, metabolomics, lipidomics)
- Neurocritical care (TBI, stroke)
- Geriatric Pharmacotherapy
- HIV clinical pharmacology
- Clinical trials
- Scholarship of teaching and learning
- Pharmacy practice innovation
Institutes and Centers

Institute for Structural Biology, Drug Discovery and Development
Director: Martin Safo

Center for Biomarker Research and Precision Medicine
Director: Edwin van den Oord

Center for Pharmacy Practice Innovation
Director: David Dixon

Center for Compounding Practice and Research
Director: Barbara Exum
### PhD Student Employment (2012-17)

<table>
<thead>
<tr>
<th>Graduates</th>
<th>Total</th>
<th>Post Doc</th>
<th>Academia</th>
<th>Government</th>
<th>Industry</th>
<th>Unknown or looking</th>
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<tbody>
<tr>
<td>#</td>
<td>79</td>
<td>20</td>
<td>16</td>
<td>10</td>
<td>32</td>
<td>1</td>
</tr>
<tr>
<td>%</td>
<td>100%</td>
<td>25.3%</td>
<td>20.3%</td>
<td>12.7%</td>
<td>40.5%</td>
<td>1.3%</td>
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SoP Extramural Funding (BRIMR)

<table>
<thead>
<tr>
<th>Year</th>
<th>Ranking</th>
<th>Award</th>
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<tbody>
<tr>
<td>2018</td>
<td>24</td>
<td>5,473,663</td>
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<tr>
<td>2017</td>
<td>15</td>
<td>6,912,812</td>
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<tr>
<td>2016</td>
<td>17</td>
<td>5,924,585</td>
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<tr>
<td>2015</td>
<td>12</td>
<td>6,277,022</td>
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<tr>
<td>2014</td>
<td>14</td>
<td>5,632,200</td>
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<tr>
<td>2013</td>
<td>18</td>
<td>4,648,441</td>
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Grant and contract submissions

FY18
• 116
FY17
• 104
FY16
• 90
FY15
• 63
FY14
• 52
## 2018 Funding Stats

<table>
<thead>
<tr>
<th>Department</th>
<th>Total Faculty</th>
<th>Faculty who applied</th>
<th>Funded faculty</th>
<th>Student funded</th>
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<tbody>
<tr>
<td>MedChem</td>
<td>14</td>
<td>11</td>
<td>7</td>
<td>1</td>
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<tr>
<td>DPOS</td>
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<tr>
<td>Pharmaceutics</td>
<td>16</td>
<td>9</td>
<td>8</td>
<td>2</td>
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</tbody>
</table>
Challenges

• Extramural Funding
• Scholarship
  – Faculty: 2.3 papers/year
  – PhD graduate: 62.5% have 1st author pubs; 16.2% no pubs
• Facilities and Space
  – Antiquated labs
  – Spread over three buildings
• High cost of graduate program vs. productivity
• Branding issue
• Alumni engagement
• Siloed
  – Departments
  – Schools
Opportunities

• Increase collaborations (basic, clinical, and population research; education; community engagement)
  • Interdepartmental
  • Cross VCU
  • Outside VCU

• Pharmaceutical Engineering PhD program (1\textsuperscript{st} in the nation)

• Increase graduate student scholarship

• Increase percentage of funded grants
  – Mentoring junior and mid career faculty
  – Grant feedback (reviews, mock study sections etc.)

• Prioritizing action plan from 1\textsuperscript{st} full graduate program review
Office of Research and Graduate Studies
Support and Facilitate Excellence in Scholarship and Graduate Training
Aspiration: Achieve Quality of Top 10 Schools of Pharmacy