University of Virginia Division of Infectious Diseases and International Health Fellowship Program
Eric Houpt, MD
Division Chief
University of Virginia Health System
Division of Infectious Diseases and International Health
Professor of Medicine
Chris Moore, MD
Fellowship Program Director

Kate McManus, MD
Fellowship Associate Program Director
Brian Wispelwey, MD
Vice Chief for Clinical Affairs and Education

Barbara Mann, PhD
Vice Chief for Research and Faculty Development
Creating and maintaining a climate of diversity and inclusion are priorities at the School of Medicine and the Division of Infectious Diseases.

We recognize that diversity is an essential component in our efforts to continue, and to expand upon, the traditions of excellence in the School and the Division of Infectious Diseases.

https://med.virginia.edu/diversity/
UVa Infectious Diseases Fellowship Program—Diversity and Inclusion

- 2020—Higher Education Excellence in Diversity Award; 10 years in a row
- 2017, 2018, 2019—LGBTQ Healthcare Equality Leader

% URM Residents

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>7.2</td>
</tr>
<tr>
<td>2016-17</td>
<td>9.2</td>
</tr>
<tr>
<td>2017-18</td>
<td>10.5</td>
</tr>
<tr>
<td>2018-19</td>
<td>11.9</td>
</tr>
<tr>
<td>2019-20</td>
<td>14.2</td>
</tr>
<tr>
<td>2020-21</td>
<td>15.3</td>
</tr>
</tbody>
</table>

% URM Fellows

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>8.7</td>
</tr>
<tr>
<td>2016-17</td>
<td>9.9</td>
</tr>
<tr>
<td>2017-18</td>
<td>12.2</td>
</tr>
<tr>
<td>2018-19</td>
<td>14.8</td>
</tr>
<tr>
<td>2019-20</td>
<td>14.9</td>
</tr>
<tr>
<td>2020-21</td>
<td>14.6</td>
</tr>
</tbody>
</table>
UVa Infectious Diseases Fellowship Program

- Committed to producing the next generation of leaders in infectious diseases through outstanding clinical and research training with the ultimate goal of preventing and optimally treating infectious diseases here and around the world
- Committed to a collegial and supportive environment in the care of patients, research, teaching, and learning
UVa Infectious Diseases Fellowship Program

- 3 year NIH T-32 supported training program (ID x 44 yrs; Biodefense x 18 yrs!!)
- Year 1: dedicated research training
- Years 2 & 3: Six months each of clinical training and research training
UVa Infectious Diseases Fellowship Program—
The Research Experience

• Goal: To progress from an outstanding medical resident to a much sought after Assistant Professor in 3 years
UVa Infectious Diseases Fellowship Program—The Research Experience

• How?
  • Research acumen in a focused area of infectious diseases
  • Track record of peer reviewed publications
  • Propose research compelling enough to receive extramural funding
    • National Institutes of Health
    • Burroughs-Wellcome Fund
    • Gates Foundation
    • Harold Amos Faculty Dev’t Program
UVa Infectious Diseases Fellowship Program—The Research Experience
UVa Infectious Diseases Fellowship Program—The Research Experience

- Research development
  - Work with one or more faculty members from the Division of ID&IH and/or affiliated departments
- Extensive mentoring, individualized research plan and an advisory committee
- Protected time for research
- Superb research infrastructure and support
UVa Infectious Diseases Fellowship Program—The Research Experience

- Research portfolio
  - Basic laboratory science
  - Translational science
  - Clinical science
UVa Infectious Diseases Fellowship Program—
The Research Experience
UVa Infectious Diseases Fellowship Program—The Research Experience

- **Bacterial diseases**
  - Biodefense pathogens
  - Enteric pathogens
  - *Campylobacter*
  - *C. difficile*
  - Neisseria/STDs
  - *S. aureus*
  - MDROs
  - *M. tuberculosis*
  - Sepsis

- **Parasitic diseases**
  - Amebiasis
  - Cryptosporidiosis
  - Giardiasis
  - Malaria
UVa Infectious Diseases Fellowship Program—The Research Experience
UVa Infectious Diseases Fellowship Program—
The Research Experience

- Virology (HIV, HCV, HHV-8, Influenza, Ebola)
- Host genetics
- Epidemiology
- Immunology
- Molecular diagnostics
- Health policy and outcomes
- mHealth

- Hospital epidemiology
- Antibiotic stewardship
- Predictive analytics
- Transplant infections
- Clinical trials
UVa Infectious Diseases Fellowship Program—
The Research Experience
MUAC PREDICTS SURVIVAL AND TREATMENT OUTCOMES

Probability of survival (red) and favorable treatment outcome (blue) by MUAC at diagnosis

MUAC at TB diagnosis was associated with treatment failure (coef=-0.96, p=0.002) and mortality (coef=-1.47, p=0.004)

Children experiencing severe acute malnutrition were nine times more likely to fail treatment (95% CI=2.3-42, p=0.003) and 26 times more likely to die during treatment (95% CI=4.0-518, p=0.004)
UVa Infectious Diseases Fellowship Program—International collaborations
UVa Infectious Diseases Fellowship Program—The Research Experience
UVa Infectious Diseases Fellowship Program—
The Research Experience

- Dean’s Excellence in Research Award
  - Heysell, Houpt, Mathers, Petri, Platts-Mills

- UVA Distinguished Scientist Award
  - Petri, Scheld

- Bailey K Ashford Medal, ASTMH
  - Houpt, Kosek, Mann

- Oswald Avery Award, IDSA
  - Houpt, Petri

- Maxwell Finland Award, NFID
  - Guerrant

- Walter Reed Medal, ASTMH
  - Guerrant

- Walter E Stamm Mentor Award, IDSA
  - Guerrant

- Alexander Fleming lifetime achievement award, IDSA
  - Scheld
UVa Infectious Diseases Fellowship Program—The Research Experience
UVa Infectious Diseases Fellowship Program—The Research Experience

• Research funding
  • Annual grants and contract awards of ~20 million dollars per year
  • Highest in the Department, School of Medicine, and University of Virginia
UVa Infectious Diseases Fellowship Program—
The Research Experience
UVa Infectious Diseases Fellowship Program—Fellow publications
UVa Infectious Diseases Fellowship Program—The Clinical Experience
Microbiology laboratory orientation

Mendy Poulter, PhD
Director of Clinical Microbiology

Amy Mathers, MD
Associate Director of Clinical Microbiology
UVa Infectious Diseases Fellowship Program—The Clinical Experience

- Inpatient consultations
  - General infectious diseases and HIV
    - Two clinical fellows
  - NP and attending only team
    - Improves fellow work flow
- Non-HIV immunocompromised ID
  (Solid organ and stem-cell transplant patients; liquid tumors)
  - One clinical fellow and one NP
UVa Infectious Diseases Fellowship Program—The Clinical Experience

• COVID-19
  • Schedule—initially modified to limit to two consecutive weeks only on service; now returned to standard schedule
  • Remdesivir; lab approval—faculty team
  • Clinical trials—led by faculty with fellow involvement based on interest
    • ACTT—Remdesivir RCTs
    • Convalescent plasma
    • Mesenchymal stem cells
    • Bio-repository
UVa Infectious Diseases Fellowship Program—The Clinical Experience

- Outpatient infectious diseases clinics
  - Ryan White HIV clinic
  - General infectious diseases
  - Transplant
  - Travel
  - TB & NTM
  - Hepatitis C
  - Musculoskeletal
  - Complicated Clostridium difficile

- Antibiotic stewardship elective
- Dedicated non-fellow OPAT team
UVa Infectious Diseases Fellowship Program—Learning Opportunities

- Case conference
- Didactic conference
- HIV didactic/case conference
- Transplant ID didactic
- Journal club
- Clinical microbiology rounds
- Research seminars
- Research in progress
- Board review course
- Public Health Sciences certificate
- National meetings (eg ID week, ASTMH)
- ASTMH Diploma Course Certification
UVa Infectious Diseases Fellowship Program—
Learning opportunities

- Faculty teaching excellence
  - Dean’s Excellence in Teaching Award
    - Dillingham, Houpt, Hughes, Mathers, Sifri, Townsend, Wispelwey
  - David A. Harrison Distinguished Educator Award
    - Rein, Scheld, Wispelwey
  - All University Teaching Award
    - Dillingham, Donowitz, Petri, Wispelwey
  - Outstanding Faculty Award—State Council of Higher Education, Virginia
    - Hewlett, Petri
UVa Infectious Diseases Fellowship Program—
Learning opportunities
UVa Infectious Diseases Fellowship Program—Learning opportunities
UVa Infectious Diseases Fellowship Program—Current fellows
# UVa Infectious Diseases Fellowship Program—Current fellows

<table>
<thead>
<tr>
<th>Fellow</th>
<th>PGY</th>
<th>Residency</th>
<th>Project</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkabab</td>
<td>7</td>
<td>UVA/ABIM Research Pathway</td>
<td>TB &amp; DM outcomes in Bangladesh/F31 &amp; K23 submitted/Burroughs-Wellcome Fellowship Award</td>
<td>Heysell</td>
</tr>
<tr>
<td>Robinson</td>
<td>7</td>
<td>Indiana U</td>
<td>Antimicrobial stewardship</td>
<td>Mathers</td>
</tr>
<tr>
<td>Van Aartsen</td>
<td>6</td>
<td>Case Western U</td>
<td>Anti-TB therapy pharmacokinetics/K23 pending</td>
<td>Heysell</td>
</tr>
<tr>
<td>Grundy</td>
<td>6</td>
<td>U Texas-Austin</td>
<td>Molecular diagnosis of AFI in Uganda</td>
<td>Houpt</td>
</tr>
<tr>
<td>Sasson</td>
<td>5</td>
<td>UVA</td>
<td>SARS-CoV-2 immunity</td>
<td>Petri</td>
</tr>
<tr>
<td>Hodges</td>
<td>4</td>
<td>UVA/ABIM Research Pathway</td>
<td>TB, HIV, &amp; SUD linkage to care in Russia</td>
<td>Dillingham</td>
</tr>
<tr>
<td>Bielick</td>
<td>4</td>
<td>Boston U</td>
<td>Engagement in HIV care/LGBTQ health</td>
<td>Dillingham</td>
</tr>
<tr>
<td>Geba</td>
<td>4</td>
<td>UVA</td>
<td>STI/Anal pap screening in HIV</td>
<td>Thomas</td>
</tr>
<tr>
<td>Ilaiwy</td>
<td>4</td>
<td>Georgetown</td>
<td>TB biomarkers/diagnostics</td>
<td>Thomas</td>
</tr>
</tbody>
</table>
UVa Infectious Diseases Fellowship Program—
### UVa Infectious Diseases Fellowship Program—Recent fellows

<table>
<thead>
<tr>
<th>Year</th>
<th>Current Position/Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Campbell</strong> 2021</td>
<td>Louisiana Private practice</td>
</tr>
<tr>
<td><strong>Mohamed</strong> 2021</td>
<td>UVA Post-doc/NIH R01 Diversity Supplement</td>
</tr>
<tr>
<td><strong>Park</strong> 2021</td>
<td>UVA Academic faculty</td>
</tr>
<tr>
<td><strong>Madden</strong> 2020</td>
<td>UVA Academic faculty/NIH K08</td>
</tr>
<tr>
<td><strong>Sherbuk</strong> 2020</td>
<td>U South Florida Academic faculty</td>
</tr>
<tr>
<td><strong>Steiner</strong> 2020</td>
<td>Ohio State U Academic faculty/Burroughs Wellcome Fellowship Award</td>
</tr>
<tr>
<td><strong>Fleece</strong> 2019</td>
<td>UAB Academic faculty</td>
</tr>
<tr>
<td><strong>Gray</strong> 2019</td>
<td>U Michigan Academic faculty</td>
</tr>
<tr>
<td><strong>Gulleen</strong> 2019</td>
<td>U Washington Post-doc/clinical staff/NIH T-32; NIH Fogarty; NIH K08 submitted</td>
</tr>
<tr>
<td><strong>Schnee</strong> 2019</td>
<td>U South Carolina Academic faculty</td>
</tr>
<tr>
<td><strong>Ebers</strong> 2018</td>
<td>Arkansas Private practice</td>
</tr>
<tr>
<td><strong>Shin</strong> 2018</td>
<td>UVA Academic faculty/NIH K08</td>
</tr>
</tbody>
</table>

- Other destinations: Cleveland Clinic, Columbia, Duke, Johns Hopkins, LSU, Mt. Sinai, MUSC, Northwestern, Pitt, Stanford, Vermont, Wake Forest, Yale

- Last 10 years, **19 NIH K grants funded!**
Welcome to Charlottesville
arts
music and more
UVa Infectious Diseases Fellowship Program—

IDWeek, San Diego (pre-COVID-19 pandemic)
UVa Infectious Diseases Fellowship Program—Today!

- Welcome!
  - We hope you enjoy your interactions with faculty and fellows
  - We look forward to your questions and comments
  - If there is any way that Ginny, Kate, or I can help today or in the future, please let us know
UVa Infectious Diseases Fellowship Program—Stay in touch!

Eric Houpt, MD  
erh6k@virginia.edu

Ginny Atwell  
Fellowship Coordinator  
vma9t@virginia.edu  
434.243.6832

Chris Moore, MD  
ccm5u@virginia.edu

Kate McManus, MD  
km8jr@virginia.edu

@UVA_ID