# Table of Contents

**Program Leadership** ................................................................. 5  
Director Barbara Kazmierczak, M.D., Ph.D. ........................................ 5  
Deputy Director Fred Gorelick, M.D. ............................................... 5  
Associate Directors .......................................................................... 5  
Assistant Directors ........................................................................... 6  
Administration ................................................................................ 6  

**Faculty Committee Members** ....................................................... 7  

**Student Directory (By Year)** ......................................................... 9  

**Student Facebook (By Year)** .......................................................... 13  
First-Year Students ............................................................................... 13  
Second-Year Students ......................................................................... 15  
Third-Year Students ........................................................................... 18  
Fourth-Year Students ......................................................................... 21  
Fifth-Year Students ............................................................................ 24  
Sixth-Year Students ........................................................................... 26  
Seventh-Year Students ....................................................................... 29  
Eighth-Year Students .......................................................................... 32  
Ninth-Year Students ........................................................................... 34  

**MD-PhD Timeline (Graphic)** ............................................................. 36  

**MD-PhD Timeline (Narrative)** ......................................................... 36  
Early Matriculation ............................................................................ 36  
MS1: Year One .................................................................................... 36  
MS2: Year Two ................................................................................... 37  
MS3 (GS1): Year Three – Transition to PhD ....................................... 37  
MS4 (GS2): Year Four—PhD Qualifying Exam and Thesis Prospectus ............................................................................. 37  
GS3 to Completion ............................................................................ 38  
MS3 and MS4 (MD-PhD Year 7-8): Final Clinical Years .................... 38  

**PhD Coursework, Laboratory Rotations, & Requirements** ............... 39  
Coursework Attachments: BBS Handbook and Course Directory ........ 39  
Courses Co-listed as Medical School and Graduate School Courses .... 39  
Suggested courses for incoming 1st years ......................................... 39  
Laboratory Rotations .......................................................................... 40  
Choosing a Lab and Deciding on Research Topics ................................. 41  
Program/Department specific requirements for MD-PhD students ....... 41  
Applied Mathematics .......................................................................... 41  
Cell Biology ....................................................................................... 41  
Cellular & Molecular Physiology ........................................................ 42  
Computational Biology and Bioinformatics ......................................... 42  
Experimental Pathology ..................................................................... 42  
Genetics ............................................................................................. 42  
History of Science & Medicine .......................................................... 43  
Immunobiology .................................................................................. 43  
Interdepartmental Neuroscience Program ........................................... 44
Molecular Biophysics & Biochemistry ................................................................. 44
Integrated Graduate Program in Physical and Engineering Biology (PEB) ........... 44
Pharmacology ................................................................................................. 45
Public Health ................................................................................................. 45

DIRECTORS OF GRADUATE STUDY AND REGISTRARS .................................. 47

UNITED STATES MEDICAL LICENSING EXAMINATION (USMLE) ................. 49
USMLE- STEP I AND II OF THE BOARDS ....................................................... 49
COST OF USMLE EXAMS ............................................................................. 51

CLINICAL CLERKS AND RE-ENTRY ......................................................... 52
CLerkship Requirements ............................................................................... 52
CLerkship Directors And Coordinators ......................................................... 53
RE-entry To The Wards For MD-PhD Students ............................................ 53

CLINICAL SKILLS DEVELOPMENT ......................................................... 56
Longitudinal Clinical Electives ..................................................................... 56
Primary Care Experience at the VA ............................................................... 56
Wednesday evening Clinic (WEC) ................................................................. 56
Haven Free Clinic ......................................................................................... 57
Yale Adult/Pediatric Refugee Clinics ............................................................. 57
Clinical Reasoning Workshops .................................................................... 57

MD-PH D THESIS REQUIREMENT ......................................................... 58
2018-2019 Graduate School Deadlines: ....................................................... 58
December Degree Award ............................................................................ 58
May Degree Award ...................................................................................... 58

PUBLICATIONS ......................................................................................... 59
NIH Publications and Public Access Policy ................................................... 59
Open Researcher and Contributor ID ............................................................ 59
Acknowledgement of MD-PhD Fellowship Support in Publications ............. 59

MENTORING ACTIVITIES ...................................................................... 60
Peer Advising by Senior Students (PASS) ..................................................... 60
Faculty Mentoring Program ......................................................................... 60
Advising for Clinical Electives and Clerkships ........................................... 60
Career Planning ........................................................................................... 60

STUDENT GROUPS & ACTIVITIES ....................................................... 61
MD-PhD Student Council ............................................................................. 61
Committee on Diversity & Inclusion ............................................................ 61
Student Hosting During the Interview Season ............................................. 61
Second Look for MD-PhD Recruits .............................................................. 62
Annual MD-PhD Program Retreat ............................................................... 62
The Selma and Karl Folkers Lecture in Biomedical Research ...................... 62
START@Yale (Summer to Advance Research Training) ............................. 64
Research in Progress Student Talks (RIP) .................................................... 64
Brown Bag Seminar Series ......................................................................... 64
Emerging Biomedical Scholars at Yale (EBSY) ........................................... 64
Leadership in Biomedicine ......................................................................... 65
Student Research Day ............................................................................... 65
## Non-MD-PhD Program Departmental Retreats .................................................65

### Information Required by the Program ..................................................67

#### MD-PhD Student Stipend Information ..................................................68

- Support While in the MD-PhD Program ..................................................68
- Healthcare Coverage .................................................................................69
- Time Away from the MD-PhD Program .....................................................69
- Sick Leave or Other Leaves ......................................................................70
- External Funding Opportunities .................................................................70
- Tax Information .........................................................................................70
- Working While in the MD-PhD Program .....................................................71

### Reimbursement Guidelines and Procedures ...........................................72

- Requests for Reimbursement ....................................................................72
- Travel Reimbursement ...............................................................................72
- Trainee Reimbursements ..........................................................................73

### Student Safety and Support Services .....................................................74

- Yale Police ..................................................................................................74
- Nighttime Safe Rides .................................................................................74
- Yale Health Plan .........................................................................................74
- Yale School of Medicine Title IX Coordinators .........................................74
- SHARE: Information, Advocacy, Support ................................................75
- University-Wide Committee on Sexual Misconduct ...................................75
- Office of the Ombudsman .........................................................................75
- Office of Diversity, Inclusion, Community Engagement and Equity ..........75
- Chaplain’s Office .......................................................................................75
- Disability Services ....................................................................................76
- Office of LGBTQ Resources ......................................................................76
- Office of International Student Services ..................................................76
- GSA Legal Aid ............................................................................................76
- Office of International Medical Student Education ...................................76
- Transportation ............................................................................................76

### YSM Academic Calendar 2018-19 ...............................................................78
PROGRAM LEADERSHIP

**DIRECTOR**  **Barbara Kazmierczak, M.D., Ph.D.**  
Professor of Internal Medicine and Microbial Pathogenesis  
*Office: TAC 169A; Phone: 5-5062, 5-5083*  
*For appointments, email Barbara.kazmierczak@yale.edu*

**DEPUTY DIRECTOR**  **Fred Gorelick, M.D.**  
Henry J. and Joan W. Binder Professor of Medicine (Digestive Diseases) and of Cell Biology  
*Office: V.A Medical Center.; Phone: 932-5711 ext: 3679*

**ASSOCIATE DIRECTORS**

**Peter S. Aronson, M.D.**  
C.N.H. Long Professor of Internal Medicine, Professor of Cellular & Molecular Physiology, (Nephrology)  
Associate Director for Academic Career Planning, MD/PhD Program  
*Office: TAC S255C; Phone: 5-4902*

**Keith A. Choate, M.D., Ph.D.**  
Professor of Dermatology, Pathology & Genetics, Yale Cancer Center: Cancer Genetics & Genomics,  
Associate Director of the MD/PhD Program  
*Office: 604b HRT; Phone: 5-3912*

**Michael N. Nitabach, Ph.D., J.D.**  
Professor of Cellular & Molecular Physiology, Professor of Genetics, INP, Affiliate, Program in Cellular Neuroscience, Neurodegeneration & Repair  
Associate Director of the MD/PhD Program  
*Office: BE29 SHM; Phone: 7-2939*

**Faye A. Rogers, Ph.D.**  
Associate Professor of Therapeutic Radiology  
Associate Director of the MD/PhD Program  
*Office: HRT 213b; Phone: 7-3658*

**Tamar Taddei, M.D.**  
Associate Professor of Therapeutic Radiology  
Associate Director of the MD/PhD Program  
*Office: 1080 LMP; Phone: 7-6060*
ASSISTANT DIRECTORS

Jonathan S. Bogan, M.D.
Associate Professor of Medicine and Cell Biology, Section of Endocrinology and Metabolism
Assistant Director for Education for the MD/PhD Program
Office: TAC 141b; Phone: 5-6319

Karin E. Finberg M.D., Ph.D.
Assistant Professor of Pathology
Assistant Director for Education for the MD/PhD Program
Office: LH 208; Phone: 5-5107

George Lister, M.D.
Jean McLean Wallace Professor of Pediatrics and Professor of Cellular & Molecular Physiology
Assistant Director for Education for the MD/PhD Program
Office: 208a ESH (A); Phone: 7-1159

ADMINISTRATION

Cheryl DeFilippo
Associate Director for Program Administration
Office: 319 ESH; Phone: 5-2103

Reiko Fitzsimonds, Ph.D.
Associate Director for Program Development & Assessment
Office: 317 ESH; Phone: 7-5613; Cell (203) 676-5432

Susan Sansone
Registrar MD/PhD Program; Registrar and Interview Coordinator
Office: 316 ESH; Phone: 5-4403; Cell (203) 494-2150
<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Location</th>
<th>Phone No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clara Abraham, M.D.</td>
<td>Int. Med. (Dig. Dis)</td>
<td>TAC S155B</td>
<td>5-5610</td>
</tr>
<tr>
<td>Anton Bennett, Ph.D.</td>
<td>Pharmacology</td>
<td>B226D SHM</td>
<td>7-2441</td>
</tr>
<tr>
<td>Ranjit Bindra, M.D., Ph.D.</td>
<td>Therapeutic Rad. Pathology</td>
<td>313c HRT</td>
<td>200-3672</td>
</tr>
<tr>
<td>William Cafferty, Ph.D.</td>
<td>Neurology</td>
<td>300 George</td>
<td>7-3575</td>
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<tr>
<td>Stuart Campbell, PhD.</td>
<td>Biomed. Eng.</td>
<td>MEC 211</td>
<td>432-4321</td>
</tr>
<tr>
<td>Sandy Chang, Ph.D., M.D.</td>
<td>Laboratory Medicine Pathology</td>
<td>BML 462</td>
<td>7-4667</td>
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<tr>
<td>Ted Cohen, M.D.</td>
<td>Epidemiology</td>
<td>608 LEPH</td>
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<tr>
<td>Todd Constable, Ph.D.</td>
<td>Radiology Biomed., Neurosurgery</td>
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<td>Joseph Contessa, M.D., Ph.D.</td>
<td>Therapeutic Radiology</td>
<td>HRT 139</td>
<td>200-2634</td>
</tr>
<tr>
<td>Kelly Cosgrove, Ph.D.</td>
<td>Psychiatry, INP</td>
<td>2 Church St. South</td>
<td>7-6969</td>
</tr>
<tr>
<td>Charles Dela Cruz, M.D., Ph.D.</td>
<td>Int. Med (Pulmonary)</td>
<td>TAC S441C</td>
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<tr>
<td>Marie Egan, M.D.</td>
<td>Pediatrics, C&amp;M Physiology</td>
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<td>Barbara Ehrlich, Ph.D.</td>
<td>Pharmacology</td>
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<td>Stephanie Eisenbarth, M.D., Ph.D.</td>
<td>Laboratory Medicine</td>
<td>CB 403</td>
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<td>Ellen Foxman, M.D., Ph.D.</td>
<td>Laboratory Medicine</td>
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<td>Anjelica Gonzalez, Ph.D.</td>
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<td>Neurosurgery, Neuroscience</td>
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<td>454E BCMM</td>
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<td>Arthur Horwich, M.D.</td>
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<td>Raymond Johnson, M.D., Ph.D.</td>
<td>Microbial Pathogenesis</td>
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<td>TMP 430</td>
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<td>Cell Biology</td>
<td>BCMM 254d</td>
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<td>Pathology</td>
<td>300 George St, 505L</td>
<td>7-6262</td>
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<td>Priti Kumar, Ph.D.</td>
<td>Microbial Pathogenesis</td>
<td>WWW 403A</td>
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<td>Immunobiology</td>
<td>300 George Ste. 353</td>
<td>5-7158</td>
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<td>Peggy Myung, M.D., Ph.D.</td>
<td>Dermatology, Pathology</td>
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<td>Abhijit Patel, M.D., Ph.D.</td>
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<td>João Pereira, Ph.D.</td>
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<td>S541A</td>
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<td>Katerina Politi, Ph.D.</td>
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<td>Hesper Rego, Ph.D.</td>
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<td>Albert Shaw, M.D., Ph.D.</td>
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<td>David F. Stern, Ph.D.</td>
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<td>Carson Thoreen, Ph.D.</td>
<td>C&amp;M Physiology</td>
<td>SHM B163</td>
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</tr>
<tr>
<td>Mary Tomayko, M.D., Ph.D.</td>
<td>Dermatology, Genetics</td>
<td>2 Church St. S #305</td>
<td>7-6124</td>
</tr>
<tr>
<td>Christian Tschudi, Ph.D.</td>
<td>Public Health</td>
<td>136C BCMM</td>
<td>5-7332</td>
</tr>
<tr>
<td>Andrew Xiao, Ph.D.</td>
<td>Genetics</td>
<td>10 Amistad St</td>
<td>7-3650</td>
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<td>Abbottsmith, Jane</td>
<td><a href="mailto:jane.abbottsmith@yale.edu">jane.abbottsmith@yale.edu</a></td>
</tr>
<tr>
<td>2018</td>
<td>1</td>
<td>Bachtel, Nathaniel</td>
<td><a href="mailto:nathaniel.bachtel@yale.edu">nathaniel.bachtel@yale.edu</a></td>
</tr>
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<td>1</td>
<td>Batchelor, Hannah</td>
<td><a href="mailto:hannah.batchelor@yale.edu">hannah.batchelor@yale.edu</a></td>
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<td>Chowdhury, Shanin</td>
<td><a href="mailto:shanin.chowdhury@yale.edu">shanin.chowdhury@yale.edu</a></td>
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<td>2018</td>
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<td>Davoudian, Pasha</td>
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<td>Fitzpatrick, Sarah</td>
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<td>Hoyt, Laura</td>
<td><a href="mailto:laura.hoyt@yale.edu">laura.hoyt@yale.edu</a></td>
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<td>Jensen, Tyler</td>
<td><a href="mailto:tyler.jensen@yale.edu">tyler.jensen@yale.edu</a></td>
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<td>2018</td>
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<td>Leitner, Brooks</td>
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<td><a href="mailto:jordan.valdez@yale.edu">jordan.valdez@yale.edu</a></td>
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<td>Wood, Madeleine</td>
<td><a href="mailto:madeleine.wood@yale.edu">madeleine.wood@yale.edu</a></td>
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<td>Wu, Anchi</td>
<td><a href="mailto:anchi.wu@yale.edu">anchi.wu@yale.edu</a></td>
</tr>
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<td>Zhao, Amy</td>
<td><a href="mailto:amy.zhao@yale.edu">amy.zhao@yale.edu</a></td>
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<td><a href="mailto:sisi.zheng@yale.edu">sisi.zheng@yale.edu</a></td>
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<td>Fang, Calvin</td>
<td><a href="mailto:calvin.fang@yale.edu">calvin.fang@yale.edu</a></td>
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<td>Feizi, Alborz</td>
<td><a href="mailto:alborz.feizi@yale.edu">alborz.feizi@yale.edu</a></td>
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<td>Gonzalez-Hurtado, Elsie</td>
<td><a href="mailto:elsie.gonzalez-hurtado@yale.edu">elsie.gonzalez-hurtado@yale.edu</a></td>
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<td>Goodwin, Justin</td>
<td><a href="mailto:justin.goodwin@yale.edu">justin.goodwin@yale.edu</a></td>
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<td>Hubbard, Brandon</td>
<td><a href="mailto:brandon.hubbard@yale.edu">brandon.hubbard@yale.edu</a></td>
</tr>
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<td>Jaycox, Jillian</td>
<td><a href="mailto:jillian.jaycox@yale.edu">jillian.jaycox@yale.edu</a></td>
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<td>Klein, Jonathan</td>
<td><a href="mailto:jon.klein@yale.edu">jon.klein@yale.edu</a></td>
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<td>Kostiuk, Valentyna</td>
<td><a href="mailto:valentyna.kostiuk@yale.edu">valentyna.kostiuk@yale.edu</a></td>
</tr>
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<td>Li, Dan Dan</td>
<td><a href="mailto:dan.li@yale.edu">dan.li@yale.edu</a></td>
</tr>
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<td>Lin, Kingson</td>
<td><a href="mailto:kingson.lin@yale.edu">kingson.lin@yale.edu</a></td>
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<td>Lynn, Anna</td>
<td><a href="mailto:anna.lynn@yale.edu">anna.lynn@yale.edu</a></td>
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<td>Savalia, Neil</td>
<td><a href="mailto:neil.savalia@yale.edu">neil.savalia@yale.edu</a></td>
</tr>
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<td>2</td>
<td>Shelby, Tyler</td>
<td><a href="mailto:tyler.shelby@yale.edu">tyler.shelby@yale.edu</a></td>
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<tr>
<td>2017</td>
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<td>Pappalardo, Laura</td>
<td><a href="mailto:laura.west@yale.edu">laura.west@yale.edu</a></td>
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<tr>
<td>2010</td>
<td>9</td>
<td>Thomas, Alexandra</td>
<td><a href="mailto:alexandra.thomas@yale.edu">alexandra.thomas@yale.edu</a></td>
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<tr>
<td>2010</td>
<td>9</td>
<td>Zhang, Ke</td>
<td><a href="mailto:ke.zhang@yale.edu">ke.zhang@yale.edu</a></td>
</tr>
</tbody>
</table>
STUDENT FACEBOOK (BY YEAR)

FIRST-YEAR STUDENTS

ABBOTTSMITH, JANE

NATHANIEL BACHTEL
George Washington University, B.S., 2017 (Chemistry)

HANNAH BATCHelor
Michigan State University, B.S., 2016 (Neuroscience)

PASHA DAVOUDIAN
University of Virginia, B.A., 2016 (Neuroscience)

NICHOLAS DIAB
Vanderbilt University, B.A., 2017 (Molecular and Cellular Biology)
KATHARINE ELLIS  
Duke University, B.S., 2016 (Biology with a concentration in genetics)

SARAH FITZPATRICK  
The Ohio State University, B.S., 2016 (Neuroscience)

RACHEL HENNEIN  
Duke University, B.S., 2016 (Global Health, Psychology)

LAURA HOYT  
University of Vermont, B.A., 2015 (Biology)

TYLER JENSEN  
Northeastern University, B.S., 2017 (Biochemistry)

BROOKS LEITNER  
University of Maryland, College Park, B.S., 2015 (Kinesiology)

ELIZABETH LI  
Massachusetts Institute of Technology, B.S., 2018 (Biology)
DUY PHAN
Johns Hopkins University, B.S., 2018 (Neuroscience)

JORDAN VALDEZ
Emory University, B.S., 2016 (Biology)

MADELEINE WOOD
Cornell University, B.S., 2016 (Human Biology)

ANCHI WU
Duke University, B.S., 2017 (Biomedical Engineering)

AMY ZHAO
Yale University, B.S., 2018 (Statistics and Data Science & Molecular, Cellular and Developmental Biology)

SIJIN (SISI) ZHENG
New York University, 2017, B.A., (Biochemistry)

SECOND-YEAR STUDENTS

CALVIN FANG
Cornell University, B.S., 2015 (Biology)
ALBORZ FEIZI
University of California-Los Angeles, B.S., 2016 (Bioengineering)

ELSIE GONZALEZ-HURTADO
University of California-Riverside, B.S., 2015 (Biochemistry)

JUSTIN GOODWIN
University of Texas at Dallas, B.S., 2015 (Biology), M.S. 2016 (Biotechnology)

BRANDON HUBBARD
Oklahoma State University, B.S., 2015 (Physiology, Psychology)

JILLIAN JAYCOX
Carnegie Mellon University, B.S., 2016 (biological Sciences); University of Cambridge, M. Phil Medical Science

JONATHAN KLEIN
University of California-Davis, B.S., 2012 (Biochemistry; Minor: Neuroscience)

VALENTYNA KOSTIUK
CUNY Hunter College, B.A., 2016 (Biological Sciences)
DAN LI  
Harvard University, B.A., 2015 (Chemical and Physical Biology)

KINGSON LIN  
University of Pennsylvania, B.A., 2017 (Biochemistry); M.S., Chemistry

ANNA LYNN  
University of Kansas, B.S., 2017 (Chemical Engineering)

NEIL SAVALIA  
Washington University, B.A., 2013 (Biology, MB&B, Philosophy-Neuroscience-Psychology)

TYLER SHELBY  
Pittsburgh State University, B.S., 2016 (Biology, Chemistry)

JULIO SILVA  
University of California - Los Angeles, B.S., 2015 (MCDB)

RONAN TALTY  
Northeastern University, B.S., 2017 (Behavioral Neuroscience)

ELIZABETH WOO  
University of Chicago, B.A., 2017 (Economics)
SANGWON YUN  
Duke University, B.S., 2017 (Biology, Evolutionary Anthropology)

MARYAM ZEKAVAT  
Massachusetts Institute of Technology, B.S., 2015 (Biological Engineering)

THIRD-YEAR STUDENTS

SHAWN AHN  
University of Illinois, B.S., Electrical Engineering, 2016

EMMANUELLA ASABOR  
Harvard University, B.A., History & Science, 2013

RYAN CHOW  
Harvard University, B.A., Biology, 2016

ANDREW DANIELS  
Johns Hopkins, B.A., Neuroscience, 2014
LUIS GONZALEZ
U.C.L.A., B.S., Biochemistry, 2015

MICHAEL GORMALLY
Pomona College, B.A., Chemistry, 2011

SYDNEY GREEN
Harvard University, B.A., History & Science, 2013

KENNETH GUNASEKERA
Yale University, B.S., Molecular Biophysics and Biochemistry, 2015

GRANT HIGERD

JUSTIN JOHNSON
Yale University, B.S., Molecular Biophysics and Biochemistry, 2016

SAHANA KRIBAKARAN

MYTIEN NGUYEN
Cornell University, B.A., Biological Sciences, 2014
SAMANTHA OLYHA
Cornell University, B.S., Biological Sciences, 2014

ANNSEA PARK
U.C. Berkeley, B.A., Molecular Cellular Biology, 2014

ERIC SONG
U. of Southern California, B.S., Biochemistry, 2014
Department/Graduate Program: Immunobiology
Mentor: Akiko Iwasaki

ALEXANDRA SUBERI
U. of Maryland, B.S., Biochemistry, 2016

TAYLOR TAKASUGI
U. of Minnesota, B.S., Biochemistry, Genetics & Cell Biology, 2016

CE ZHANG
PENN State, B.S., Biology, Neuroscience, 2012

CHERYL ZOGG
Macalester College, B.A., Biochemistry, 2011
Department/Graduate Program: Public Health
Mentor: Judith Lichtman
FOURTH-YEAR STUDENTS

MATTHEW ALSALOUM
SUNY-Stony Brook, B.S., Neuroscience Specialization, 2015
Department/Graduate Program: INP
Mentor: Stephen Waxman

JENNIFER CHEN
Harvard University, B.A., Human Developmental &
Regenerative Biology, 2015
Department/Graduate Program: Immunobiology
Mentor: Stephanie Eisenbarth

ADRIANA CHERSKOV
Princeton University, B.A., Molecular Biology, 2014
Department/Graduate Program: INP
Mentor: Nenad Sestan

STEFANO DANIELE
Georgetown University, B.S., Chemistry, 2012
Department/Graduate Program: INP
Mentor: Nenad Sestan

TYRONE DESPENZA
Dartmouth College, B.A., Neuroscience, 2013
Department/Graduate Program: INP
Mentor: Kristopher Kahle
MATTHEW DONG
U.C. Berkeley, B.A., Molecular Biology, 2012 Department/Graduate Program: Immunobiology
Mentor: Sidi Chen

NICHOLAS ECONOMOS
Tufts University, B.S., Biology, 2013 Department/Graduate Program: Genetics
Mentor: Peter Glazer

MARGRET ERLENDSDOTTIR
Yale University, B.S., Molecular, Cellular & Developmental Biology, 2015 Department/Graduate Program: CB&B
Mentor: Forrest Crawford

CARRIE FLYNN
Johns Hopkins University, B.A., Natural Sciences, 2010 Department/Graduate Program: Microbiology
Mentor: Barbara Kazmierczak

JAMES GARRITANO
Mentor: Yuval Kluger
CASEY GRUN
Harvard University, B.A., Biomedical Engineering, 2014
Department/Graduate Program: Microbiology
Mentor: Barbara Kazmierczak

DANIELLE MIYAGISHIMA
New Mexico State University, B.S., Biochemistry, 2015
Department/Graduate Program: Genetics
Mentor: Murat Gunel

RAMAN NELAKANTI
Stanford University, B.S., Bioengineering, 2014
Department/Graduate Program: Genetics
Mentor: Andrew Xiao

JONATHAN PARK
Yale University, B.S., MCDB, 2014
Department/Graduate Program: CB&B
Mentor: Mark Gerstein

ELIAS QUIJANO
Yale University, B.S., Biomedical Engineering, 2012
Department/Graduate Program: Genetics
Mentor: Peter Glazer/Mark Saltzman
DIANA YANEZ
U.C.L.A, B.S., Molecular, Cell and Developmental Biology, 2012
Department/Graduate Program: Immunobiology
Mentor: Oscar Colegio

FIFTH-YEAR STUDENTS

DANIEL BARSON
Princeton University, B.A., Molecular Biology, 2012
Department/Graduate Program: INP
Mentor: Michael Higley, Michael Crair

JESSICA CERDEÑA
Washington University, B.A., International & Area Studies, 2014
Department/Graduate Program: Anthropology
Mentor: Richard Bribiescas

ABIGAIL GREENE
Princeton University, B.A., Psychology, 2012
Department/Graduate Program: INP
Mentor: Todd Constable

WILLIAM HANCOCK-CERUTTI
Department/Graduate Program: INP
Mentor: Pietro De Camilli
COREY HORIEN
Concordia College, B.A., Biology with honors, 2013
Department/Graduate Program: INP
Mentor: Todd Constable

WOONG HWANG
University of Rochester, B.S., Neuroscience, 2013
Department/Graduate Program: Genetics
Mentor: Mustafa Khokha

ROY JIANG
Yale University, B.S., Molecular Cellular & Developmental Biology, 2013
Department/Graduate Program: Immunobiology
Mentor: Steven Kleinsein/Kevin O’Connor

DANIEL KIM
Harvard University, B.A., Chemical & Physical Biology, 2014
Department/Graduate Program: Immunobiology
Mentor: Akiko Iwasaki

ZACHARY KLOOS
Case Western Reserve U., B.S., Biochemistry & Economics, 2013
Department/Graduate Program: Microbial Pathogenesis
Mentor: Christine Jacobs-Wagner

KATHERINE LEIBY
Yale University, B.S., Biomedical Engineering, 2013
Department/Graduate Program: BME
Mentor: Laura Niklason
JONATHAN LIANG
Yale University, B.S., Molecular Biophysics and Biochemistry, 2013
Department/Graduate Program: GPP-NIH
Mentor: Ian Fraser, Oxford

JONATHAN MARQUEZ
Yale University, B.S., Molecular Cellular & Developmental Biology, 2013
Department/Graduate Program: Cell Biology
Mentor: Mustafa Khokha

SARAH MELLER
Carlton College, B.A., Biology, 2013
Department/Graduate Program: INP
Mentor: Charles Greer

ALYSSA MITSON-SALAZAR
Yale University, B.S., Biology, 2013
Department/Graduate Program: Immunobiology
Mentor: Ruslan Medzhitov

MICHA SAM RAREDON
Yale University, B.S., Molecular Cellular & Developmental Biology, 2013
Department/Graduate Program: BME
Mentor: Laura Niklason

CATHERINE XIE
California Institute of Technology, B.S., Bioengineering & English, 2013
Department/Graduate Program: Immunobiology
Mentor: Jordan Pober

SIXTH-YEAR STUDENTS
SHIVANI BHATT
Yale University, B.S., Biology, 2013  Department/Graduate Program: INP
Mentor: Kelly Cosgrove

SWETHASRI DRAVIDA
MIT, B.S., Brain & Cognitive Sciences/Math, 2013  Department/Graduate Program: INP
Mentor: Joy Hirsch

AMANDA JENG
Washington University, B.A., Biology, 2010  Department/Graduate Program: INP  Mentor: Anthony Koleske

ALANNA KAPLAN
Dartmouth College, B.A., Neuroscience, 2011  Department/Graduate Program: Experimental Pathology  Mentor: Peter Glazer

IRINA KRYKBAEVA
Brandeis University, B.S., Neuroscience, 2011  Department/Graduate Program: Experimental Pathology  Mentor: Marcus Bosenberg
DON LI
Yale University, B.S., Biochemistry, 2013
Department/Graduate Program: Cell Biology
Mentor: Jonathan Bogan

GEORGE LINDERMAN
Case Western Reserve U., B.S., Biomedical Engineering, 2013
Department/Graduate Program: Applied Mathematics
Mentor: Yuval Kluger, Ronald Coifman

ERIN REED
Davidson College, B.S., Neuroscience, 2011
Department/Graduate Program: INP
Mentor: Philip Corlett

WILLIAM MEYERSON
Yale University, B.S., Molecular Biophysics & Biochemistry, 2013
Department/Graduate Program: CB&B
Mentor: Mark Gerstein

MINH THAN
U. of Colorado at Boulder, B.A., Biochemistry, Molecular Biology, 2012
Department/Graduate Program: Genetics
Mentor: Richard Lifton

JOHN WALSH
Florida State University, B.S., Chemical Engineering, 2010
Department/Graduate Program: BME
Mentor: Fahmed Hyder
SEVENTH-YEAR STUDENTS

GREGORY BREUER
University of Connecticut, B.S., Biophysics and Computer Science, 2012
Department/Graduate Program: Experimental Pathology
Mentor: Ranjit Bindra

NASHID CHAUDHURY
Barnard College, B.A., Neuroscience, 2011
Department/Graduate Program: INP
Mentor: Susumu Tomita

WILLIAM CULLIGAN
University of Notre Dame, B.S., Chemistry, 2010
Department/Graduate Program: MB&B
Mentor: Matthew Simon

JESSICA JOHNSTON
University of Utah, B.S., Physics, 2012
Department/Graduate Program: Cell Biology
Mentor: Megan King

ANGELA LEE
University of Maryland College Park, B.S., Physiology, Neuroscience and Psychology, 2011
Department/Graduate Program: INP
Mentor: Marina Picciotto
YOUNG LIM
Yale University, B.S., Biophysics, 2011
Department/Graduate Program: Genetics  Mentor: Keith Choate

CHRISTINA LIN
Yale University, B.S., Molecular Biophysics and Biochemistry, 2011
Department/Graduate Program: Microbiology  Mentor: Barbara Kazmierczak

JACOB LISTER
Middlebury College, B.A., Philosophy, 2011
Department/Graduate Program: INP  Mentor: Michael Crair

ALICE LU
Cornell University, B.S., Biology, 2010
Department/Graduate Program: Immunobiology  Mentor: Akiko Iwasaki

MATTHEW MEIZLISH
Yale University, B.A., History, 2011
Department/Graduate Program: Immunobiology  Mentor: Ruslan Medzhitov

KEVIN PERKINS
Rice University, B.S., Biomedical Engineering, 2012  Department/Graduate Program: MCDB  Mentor: Ronald Breaker
LORENZO SEWANAN
Trinity College, B.S., Engineering and Physics, 2012
Department/Graduate Program: BME
Mentor: Stuart Campbell

DURGA THAKRAL
Yale University, B.S., Molecular Biophysics and Biochemistry, 2012
Department/Graduate Program: Exp. Pathology
Mentor: Marcus Bosenberg

ANDREW TIMBERLAKE
Yale University, B.S., Molecular Biophysics and Biochemistry, 2011
Department/Graduate Program: Genetics
Mentor: Richard Lifton

REBECCA TREGER
Yale University, B.S., Biology, 2012
Department/Graduate Program: Immunobiology
Mentor: Akiko Iwasaki

JESSICA YE
Cornell University, B.A., Biology and Chemistry, 2012
Department/Graduate Program: Immunobiology
Mentor: Ruslan Medzhitov
LEE YING
University of California, Berkeley, Molecular & Cellular Biology, B.A., 2011
Department/Graduate Program: Genetics
Mentor: John Hwa & Kathleen Martin

LAURA YOCKEY
Washington University, B.A., Biology, 2011
Department/Graduate Program: Immunobiology
Mentor: Akiko Iwasaki

MARK YOUNGBLOOD
Georgia Tech, B.S., Electrical Engineering, 2007
Department/Graduate Program: INP
Mentor: Murat Gunel

EIGHTH-YEAR STUDENTS

ALEXANDRA ALBERT
University of Maine, B.S., Biochemistry & Molecular Cellular Biology, 2009
Department/Graduate Program: Cell Biology
Mentor: Don Nguyen

SEAN BICKERTON
University of Amherst, B.S., Biochemistry and Chemistry, 2010
Department/Graduate Program: Biomedical Engineering
Mentor: Tarek Fahmy
DIMITRI DE KOUCHKOFSKY
U.C. Berkeley, B.A., Molecular Cellular Biology, 2010
Department/Graduate Program: Immunobiology
Mentor: Carla Rothlin

RAMAK KHOSRAVI
University of Toronto, B.S., Developmental Biology Specialist, 2011
Department/Graduate Program: Biomedical Engineering
Mentor: Jay Humphrey

JONATHAN LEVINSOHN
Williams College, B.A., Biology, Chemistry, 2010
Department/Graduate Program: Genetics
Mentor: Keith Choate

ALICE LI
U.C.L.A., B.S., Physiological Sciences, 2011
Department/Graduate Program: INP
Mentor: Jaime Grutzendler

KAVITA MISTRY
Yale University, B.A., English Literature and MB&B, 2011
Department/Graduate Program: C&M Physiology
Mentor: Michael Caplan

ADELE RICCIARDI
U. of North Carolina, B.S., Biology and Chemistry, 2010
Department/Graduate Program: Biomedical Engineering
Mentor: W. Mark Saltzman
ALEXANDER SCHERER  
Stanford, B.S., Chemistry, 2011  
Department/Graduate Program: Cell Biology  
Mentor: Anthony Koleske

SAMUEL SONDALLE  
Ripon College, B.A., Biology and Chemistry, 2011  
Department/Graduate Program: Genetics  
Mentor: Susan Baserga

ALEXANDER SVORONOS  
Brown University, B.S., Biomedical Engineering, 2010  
Department/Graduate Program: Molecular Biophysics and Biochemistry  
Mentor: Donald Engelman

NINTH-YEAR STUDENTS

SHIHAN KHAN  
University of Michigan, B.S., Biomedical Engineering, 2010  
Department/Graduate Program: Biomedical Engineering  
Mentor: Tarek Fahmy

REBECCA LIU  
Duke University, B.S., Biology, 2010  
Department/Graduate Program: Immunobiology  
Mentor: Jordan Pober
KELSEY LOELIGER  
University of Maryland, B.S., Biology, 2008  
Department/Graduate Program: Public Health  
Mentor: Christian Tschudi

LAURA W. PAPPALARDO  
University of Texas, Pharm.D., Pharmacy, 2010  
Department/Graduate Program: INP  
Mentor: Stephen Waxman
**MD-PhD TIMELINE (NARRATIVE)**

**Early Matriculation**
Incoming students have the option of matriculating early (June – August before the first year of medical school) to do their first lab rotation at Yale through either the START@Yale Program or independently in an approved PhD lab. Funding is provided. Please discuss your choice of research mentor with Dr. Kazmierczak or Dr. Peter Aronson if participating in START@Yale.

**MS1: Year One**

- **August:** White Coat Ceremony and the start of MS1

- **September:** Registration for MD/PhD students (courses, clinical clerkships, dissertation research, etc.) is online through the MD/PhD Registrar Sue Sansone; students should discuss their course selections with Dr. Barbara Kazmierczak.
October: Begin identifying faculty and laboratories for lab rotations during the summer between MS1 and MS2. Please reach out to current or previous MD/PhD students who have rotated or are doing their dissertation in those laboratories for insight and advice about specific research mentors.

November – February: Contact faculty to meet and discuss potential rotation projects and start dates.

March – May: Have two rotations laboratories lined up with specific starting and ending dates.

June – August: Complete 2 rotations in potential thesis labs

**MS2: Year Two**

August – December: Completion of Medical School didactic years

January – June: 6 months of Integrated Clinical Clerkships. Identify a thesis laboratory and complete affiliation paperwork. Note: Meet with the Director of Graduate Studies when you have made a decision about the laboratory in which you want to affiliate to make sure your thesis advisor and department are compatible. Your MD-PhD Faculty Adviser or program staff can also assist you.

June – August: 12 weeks of protected study time for Step 1 examinations. Almost all MD/PhD students take Step 1 during July or August of this period, however; there are rare occasions when students chose to delay their examinations. Note: Step 1 must be completed by December of MS3.

**MS3 (GS1): Year Three – Transition to PhD**

Discuss MS3 Graduate School Course selections with Dr. Barbara Kazmierczak, Dr. Fred Gorelick, or your Faculty Mentor.

This is a good time to also begin planning F30/F31 submissions by attending Drs. Fred Gorelick and Reiko Fitzsimonds’ Grant Writing Workshops which are scheduled to coincide with NIH grant submission cycles.

Meet with the Director of Graduate Studies (DGS) of your Ph.D. department to discuss the timing and protocol for the qualifying exam during MS4

**MS4 (GS2): Year Four—PhD Qualifying Exam And Thesis Prospectus**

You must complete the Qualifying Examination and thesis prospectus by the fall semester of MS4.

Graduate School specific teaching requirements must be fulfilled after passing your qualifying examinations.
Many Yale MD-PhD students use their thesis prospectus as a springboard for writing an NIH F30/F31 proposal for submission by April of MS4.

**GS3 to Completion**

- Students are required to successfully write, defend and submit their PhD thesis prior to reentering the wards and completing their final clinical years. Submission of a first-author peer reviewed science manuscript is expected.

- MD/PhD students should participate in longitudinal clinical care during their thesis years – either at the Wednesday Evening Clinic, HAVEN Free Clinic, or other clinical activities to maintain their clinical skills while working on their thesis research. Six months prior to re-entry, all MD-PhD students must meet with Dr. Tamar Taddei, Associate Director for Clinical Education to complete Re-Entry requirements.

- See Clinical Re-entry section.

**MS3 and MS4 (MD-PhD Year 7-8): Final Clinical Years**

- MS3 June – MS4 March
- Completion of Integrated Clinical Clerkships – two of the following:
  - Biopsychosocial Approach to Health
  - Primary Care, Psychiatry and Pediatrics
  - Women and Children’s Health
  - Obstetrics & Gynecology and Pediatrics
  - The Surgical Approach to the Patient
  - Surgery and Emergency Medicine
- Completion of Clinical Electives, Sub-Internships, Away Rotations, Capstone Course
- Interview for Residencies during this period

- March MS4: Residency Match Day
- May: GRADUATION
PHD COURSEWORK, LABORATORY ROTATIONS, & REQUIREMENTS

Coursework attachments: BBS Handbook and Course Directory
The BBS Handbook “Osmosis” details the requirements for PhD programs in the BBS. It can be found in the MD-PhD Handbook Folder in the MD-PhD Student Box. The BBS Course Directory is also available, and the Yale Course Search (https://courses.yale.edu/) is an online application for viewing course information. For questions and assistance with registration, please contact the MD-PhD Program Registrar, Sue Sansone.

Courses Co-listed as Medical School and Graduate School Courses
These can be taken for credit in years 1 & 2 without scheduling conflicts with YSM curricula
**These courses are being offered for credit as far as we know**

**Suggested courses for incoming 1st years**
MEDC 999 01 (CRN) Courses in School of Medicine Staff 2 HTBA (1st and 2nd years)
CBIO 501 01 (10613) Molecules to Systems Peter Takizawa, 3 HTBA
CBIO 600 01 (10614) Science at the Frontiers of Medicine Fred Gorelick, Th 4.30-6.00
MB&B 800 01 (12351) Adv Topics Molecular Medicine Susan Baserga, Konigsberg M 11.00-1.00
INP 701 (13813) Principles of Neuroscience DiLeone, Louvi T/F 3-4:30 (for those interested in Neuroscience)

Course selections for students in lab and/or on the wards
MEDC 999 01 (CRN) Courses in School of Medicine Staff 2 HTBA (2nd years)
QUAL 999 01 (CRN) Preparing for Qualifying Exams Staff 2 HTBA
CAND 999 01 (CRN) Prep: Admission to Candidacy Staff 2 HTBA
DISR 999 01 (CRN) Diss Research - in Residence Staff 2 HTBA
MEDR 999 01 (CRN) Clinical Clerkships Staff 2 HTBA

B&BS 501: Responsible Conduct of Research: REQUIRED COURSE. You will register for this in the Spring, however, there is ONE session in the Fall. September 26, 2018 at 9 a.m.

Cell Biology 600/601: “Frontiers in Medicine,” a graduate credit course for first-year MD-PhD students and an elective course for medical students, emphasizes the connections between basic and clinical science, human physiology and disease. It parallels the content of Yale Medical School’s first-year courses and is designed for students who are considering a career in medical research or who choose to explore scientific topics in depth, learn about cutting-edge research and improve their presentation skills. Discussions cover the challenges faced in research, selecting your topic and pursuing an academic career. Enrollment is limited to those who have taken or are taking the Masters
Courses. Select topics are presented by eminent faculty who serve as excellent role models for your academic careers. In most sessions, 2 students review relevant manuscripts under the guidance of a faculty mentor and present the material to the group. Student evaluations are graded on attendance, participation in group discussions and formal presentations. The course runs from late August to mid-May and provides graduate credit if needed. The first class is Thursday, August 23 at 5:00 pm in Hope 203; the class will meet on most Thursdays until mid-May from 4:30 -6:00pm. Fred Gorelick, George Lister, Karin Finberg, and Jonathan Bogan are organizers. Catherine Xie, Roy Jiang and Jennifer Chen are MD-PhD student TAs for this course.

**INP 701 [01]/ Principles of Neuroscience** Ralph DiLeone, Angeliki Louvi
General neuroscience seminar: lectures, readings, and discussion of selected topics in neuroscience. Emphasis is on how approaches at the molecular, cellular, physiological, and organismal levels can lead to understanding of neuronal and brain function. T,F 2:15–3:45

**MB&B 800 [01], Advanced Topics in Molecular Medicine** Susan Baserga, William Konigsberg.
The seminar, which covers topics in the molecular mechanisms of disease, illustrates timely issues in areas such as protein chemistry and enzymology, intermediary metabolism, nucleic acid biochemistry, gene expression, and virology. M.D. and M.D./Ph.D. students only. Prerequisite: biochemistry (may be taken concurrently).

**CBIO 501 [01, Molecules to System** Peter Takizawa
This full-year course (CBIO 501/ CBIO 502) is designed to provide medical students with a current and comprehensive review of biologic structure and function at the cellular, tissue, and organ system levels. Areas covered include structure and organization of cells; regulation of the cell cycle and mitosis; protein biosynthesis and membrane targeting; cell motility and the cytoskeleton; signal transduction; cell adhesion; cell and tissue organization of organ systems. Clinical correlation sessions, which illustrate the contributions of cell biology to specific medical problems, are interspersed in the lecture schedule. Histophysiology laboratories provide practical experience with an understanding of exploring cell and tissue structure.

**Laboratory Rotations**
MD-PhD students are strongly encouraged to consider completing a rotation during the summer before Year 1 through the START@Yale program.

MD-PhD students also complete two 4-5 week lab rotations during the summer between the first and second years of medical school. These are designed to familiarize students with research options before they start thesis work.

The MD-PhD Student Directory lists the rotations of all current students. Please reach out to your fellow students to ask/learn about their rotation or thesis laboratory experiences.
Choosing a Lab and Deciding on Research Topics

Students transitioning from medical school into the thesis research years should schedule a meeting with Drs. Kazmierczak and Gorelick for guidance in choosing a mentor and lab.

Meetings with the first-year students focus on the processes of defining an exciting research question and establishing useful criteria for identifying the appropriate research environment in which to address this question. Strategies for approaching potential research mentors are discussed, and the students discuss their plans for summer laboratory rotations.

Meetings with the second-year students focus on their rotation experiences. Students discuss their research experiences and impressions of the training environment. These meetings allow students to ask questions or express concerns about their choice of dissertation laboratory.

Students who are undecided or who harbor concerns about their choices meet individually with Dr. Kazmierczak. Through these meetings, strategies for addressing concerns or identifying alternative research mentors are developed. These interactions help to ensure that by the end of their second year, students have established a productive relationship with their ultimate research mentor.

Program/Department specific requirements for MD-PhD students

All degree-granting programs and departments at Yale annually publish their degree requirements and course offerings; the 2018-19 Bulletin can be found at [http://catalog.yale.edu/gsas/degree-granting-departments-programs/](http://catalog.yale.edu/gsas/degree-granting-departments-programs/) and in the MD-PhD Handbook Folder in the MD-PhD Student Box.

Applied Mathematics

With permission of the DGS, M.D./Ph.D. students may request a reduction in the program’s academic teaching requirement to one term of teaching. Only students who teach are eligible to receive a University stipend contingent on teaching.

Cell Biology

M.D./Ph.D. students are required to take a total of five graduate-level courses for a grade, including the CBIO 500/CBIO 501/CBIO 502 sequence (Molecules to Systems; three terms, counts as one course), CBIO 602 (Molecular Cell Biology), and a seminar course that involves the reading and class discussion of research papers. The remaining courses can be in areas such as Genetics, Neuroscience, Immunology, Microbiology, Pharmacology, and Physiology. Students must meet the Graduate School requirement of a grade of Honors in two courses, if necessary taking additional courses beyond the five required in the department to fulfill this requirement. Students must also maintain an average grade of High Pass in all courses. One term of teaching is required.
Cellular & Molecular Physiology
M.D./Ph.D. students must pass at least three graduate-level courses that are not part of the Yale School of Medicine's regular M.D. program, including at least one C&MP course, preferably C&M 560. Courses taken toward the M.D. degree can be counted toward the Graduate School’s Honors requirement provided that the course carries a graduate course number and the student has registered for it as a graduate course. Two laboratory rotations, each lasting five weeks, are required. One term of teaching is required.

Computational Biology and Bioinformatics
Students pursuing the joint M.D./Ph.D. degrees must satisfy the course requirements listed above for Ph.D. students. With approval of the DGS, some courses taken toward the M.D. degree can be counted toward the ten required courses. Such courses must have a graduate course number, and the student must register for them as graduate courses (in which grades are received). Laboratory rotations are available but not required. One teaching assistantship is required.

Experimental Pathology
M.D./Ph.D. students must satisfy the requirements listed above for the Ph.D. with the following modifications: Two laboratory rotations are required. Assisting in teaching of one course is required. Five courses are required for the Ph.D., including PATH 640, Developing and Writing a Scientific Research Proposal; PATH 650, Cellular and Molecular Biology of Cancer; and PATH 690, Molecular Mechanisms of Disease. In addition, students are required to register for School of Medicine courses in OCS (Online Course Selection), https://students.yale.edu/ocs.

Genetics
M.D./Ph.D. students affiliate with the Department of Genetics graduate program via a different route than other incoming graduate students in the department, resulting in some modification of the academic requirements for the Ph.D. portion of the M.D./Ph.D. degree. Typically, one or more research rotations is done during the first two years of medical school (in many cases, the first rotation is done during the summer between years one and two). No set number of research rotations is required. M.D./Ph.D. students officially affiliate with the Department of Genetics after selecting a thesis adviser and consulting with the director of graduate studies (DGS). M.D./Ph.D. students interested in Genetics are required to consult with the DGS prior to formal affiliation to determine an appropriate set of courses tailored to the student’s background and interests. The courses, rotations, and teaching requirements for M.D./Ph.D. students entering the Genetics graduate program (see below) are modified from the normal requirements for Ph.D. students. Besides the modifications in these three requirements, M.D./Ph.D. students in the Department of Genetics are subject to all of the same requirements as the other graduate students in the department.

Courses Four graduate-level courses taken for a grade are required (two Yale graduate-level courses taken for a grade during medical school may be counted toward this requirement at the discretion of the DGS). Course work is aimed at providing a firm basis
in genetics and in cellular molecular mechanisms, with graduate-level proficiency in genetics, cell biology, and biochemistry.

**Required courses:** In addition to the four graduate-level courses, all M.D./Ph.D. students must take: Genomic Methods for Genetic Analysis (GENE 760); Graduate Student Seminar: Critical Analysis and Presentation of Scientific Literature (2 terms; GENE 675 and GENE 676, graded Satisfactory/Unsatisfactory); Ethics: Scientific Integrity in Biomedical Research (as part of GENE 901, graded Satisfactory/Unsatisfactory).

**Recommended courses:** Advanced Eukaryotic Molecular Biology (GENE 743); Biochemical and Biophysical Approaches in Molecular and Cellular Biology (MCDB 630); Molecules to Systems (CBIO 502); Frontiers (CBIO 601).

**Electives:** Other courses may be taken in a wide variety of fields relevant to the biological and biomedical sciences.

**Laboratory rotations** One or more rotations are necessary to identify a thesis adviser. No set number of research rotations is required.

**Teaching** One term of teaching is required. Previous teaching while enrolled at the Yale School of Medicine may count toward this requirement at the discretion of the DGS.

**Qualifying exam** M.D./Ph.D. students take their qualifying exam in the term following the completion of their course work. The structure of the qualifying exam is identical to that for other Ph.D. students in Genetics. Students read with three faculty members for five weeks, one of whom supervises the reading on the thesis research topic, but who is not the thesis adviser. The following two weeks are devoted to writing two research proposals, one on the student’s thesis research. An oral exam follows in the eighth week.

**Prospectus** M.D./Ph.D. students submit their prospectus once their qualifying exam has been completed, but no later than the 30th of June following their exam.

**Candidacy** M.D./Ph.D. students will be admitted to candidacy once they have completed their course work, obtained two Honors grades, passed their qualifying exam, and submitted their dissertation prospectus.

**Thesis committee** M.D./Ph.D. students are required to have one thesis committee meeting per year, beginning the term after passing their qualifying exam. However, students are strongly encouraged to consider having additional meetings if they feel their project could benefit from the assistance of members of the thesis committee.

**History of Science & Medicine**

Students may pursue a doctorate in History of Science and Medicine jointly with a degree in Medicine or Law. Standard graduate financial support is provided for the doctoral phase of work toward such a joint degree. Information about the joint-degree program with Medicine can be obtained from the website of the [Section of the History of Medicine](#).

**Immunobiology**

**Required** Six courses for a grade. Out of the six courses the following are mandatory:

1. IBIO 530, Biology of the Immune System (Students have the option of passing out of IBIO 530 by taking the final exam from the previous year.)
2. IBIO 531, Advanced Immunology
3. Two Immunobiology seminar courses taken from this series: IBIO 536, IBIO 537, IBIO 538, IBIO 539 (The second seminar course can be audited if a student has grades in six other courses and has already taken one seminar course for credit.)
Also required Two grades of Honors: Yale University graduate courses taken for a grade at the School of Medicine may be counted toward the Honors fulfillment and the six total required courses. Verification must be provided to the DGS. One term of teaching: Previously taught courses in the School of Medicine may count toward this requirement. To request credit for previous teaching experience, a note from the course director describing the teaching experience (duration of the teaching experience, frequency of class meetings, number of students taught, materials covered, dates, and for whom) should be provided to the Immunobiology DGS. Responsible Conduct of Research, Refresher Course: Fourth-year students are required to take a refresher training course in the responsible conduct of research. M.D./Ph.D. students can fulfill this NIH requirement through Immunobiology (IBIO 503) or through the M.D./Ph.D. program. M.D./Ph.D. students are not required to take:
1. IBIO 600, Introduction to Research
2. IBIO 611, IBIO 612, IBIO 613, Research Rotations
3. IBIO 601, Fundamentals of Research: Responsible Conduct of Research.
A note from the DGS of the M.D./Ph.D. program must be forwarded to the Immunobiology DGS stating that the student has taken a course in Research Conduct and Ethics, or its equivalent in the School of Medicine. Include dates, titles, and faculty. If the student has not taken this course, then registration in this class is required.
Annual thesis committee meetings Each student is required to have a thesis committee meeting at least every twelve months, and more frequently if the student or committee feels that it would be appropriate or helpful. The thesis supervisor (the student’s PI) then submits a thesis committee report form to the DGS summarizing the student’s progress.

Interdepartmental Neuroscience Program
Requirements for M.D./Ph.D. students are the same as for Ph.D. students with the following differences: three courses are required (INP 701; Structural and Functional Organization of the Human Nervous System [INP 510]; and one elective graduate-level course). M.D./Ph.D. students are required to serve for one term as teaching assistants; however, two terms of teaching are preferred.

Molecular Biophysics & Biochemistry
M.D./Ph.D. students must satisfy the requirements listed above for the Ph.D. with the following modifications: Laboratory rotations are not required but are available. Assisting in teaching of one lecture course is required. Students are required to take MB&B 800 as part of their medical curriculum in addition to the two courses in molecular biophysics described above. Students with weak backgrounds in molecular biology will need to take MB&B 743.

Integrated Graduate Program in Physical and Engineering Biology (PEB)
Requirements for M.D./Ph.D. students are the same as for Ph.D. students, except that a single term of teaching is required. During their first year of study, students must successfully complete MCDB 901, First-Year Introduction to Research—Ethics: Scientific Integrity in Biomedical Research, to fulfill the responsible conduct and ethics in research requirement. This requirement must be met prior to registering for a second year...
of study. Further, in the fourth year of study, all students must successfully complete B&BS 503, RCR Refresher for Senior BBS Students.

**Pharmacology**
M.D./Ph.D. students must satisfy all of the above requirements for the Ph.D. with the following modifications: (1) only two of three laboratory rotations are required; (2) some medical school courses (except Pharmacology) can qualify as Graduate School courses as long as the M.D./Ph.D. student registers for them in OCS (Online Course Selection); and (3) only one term of teaching is required. Current Graduate School courses cannot be used to fulfill any medical school course requirements.

**Public Health**
All M.D./Ph.D. students must meet with the Director of Graduate Studies (DGS) in Public Health if they are considering affiliating with Public Health. Students in this program are expected to meet the guidelines listed below in the timeframe outlined. The DGS must approve any variations to these requirements.

**Teaching**
One term of teaching is required. If students teach beyond this requirement, they can be compensated. If a student has served as a teaching fellow elsewhere on campus, this experience may be counted toward the requirement. DGS approval is required to waive the teaching requirement on the basis of previous Yale teaching experience.

**Rotations/Internships**
Students should do two rotations/internships with potential advisers in Public Health. The purpose of these rotations/internships is to learn lab technique and/or to allow the student time to determine if the PI’s research interests are compatible with the student’s research interests. These rotations/internships are usually done during the summer between the first and second years of medical school course work. In some cases, students may need to defer this requirement until the summer after the second year after taking certain courses and/or completing readings in order to possess the background necessary for a successful rotation/internship.

**Required Course Work**
M.D./Ph.D. students are generally expected to take the same courses as traditional Ph.D. students. Departmental requirements may vary; therefore students should confer with the DGS and their Ph.D. adviser.

**Timeline for Qualifying Exam**
Students generally will take medical school courses in years one and two. Students can take Public Health doctoral courses in years one and two before they affiliate if scheduling allows. Once affiliated with the Public Health program, students will complete all course requirements for the department. This generally takes a minimum of two terms but can take up to four terms after affiliating with Public Health. The qualifying exam is commonly completed after the fourth term of affiliation with the Ph.D. program in Public Health but can sometimes be done earlier with approval of the Ph.D. adviser and DGS.

**Prospectus Timeline**
Following completion of the qualifying exam, students should focus on the prospectus, which has to be approved by the Public Health Graduate Studies Executive Committee (GSEC) before the end of their sixth term as an affiliated Ph.D. student in Public Health.

**Admission to Candidacy**
To be admitted to candidacy, students must: (1) satisfactorily complete the course requirements for their department as outlined above, achieve grades of Honors in at least two full-term courses, and achieve an overall High Pass average; (2) obtain an average grade of High Pass on the qualifying exam; and (3) have the dissertation prospectus approved by the Graduate Studies Executive Committee. All Ph.D. students must be admitted to candidacy before the start of their fourth year in the Ph.D. program (i.e., before the start of the seventh term).

Ph.D. or terminal M.S. degree program materials are available upon request to the Office of the Director of Graduate Studies (c/o M. Elliot), School of Public Health, Yale University, PO Box 208034, New Haven CT 06520-8034; 203.785.6383; e-mail melanie.elliot@yale.edu.

**Required Courses**

For a complete list of Public Health courses, see the School of Public Health bulletin, available online at [http://bulletin.yale.edu](http://bulletin.yale.edu); and Yale Course Search at [https://courses.yale.edu](https://courses.yale.edu).

All Ph.D. students are required to take the following courses. Students entering the program with an M.P.H. may be exempt from EPH 608.

**EPH 600a, Research Ethics and Responsibility** Christian Tschudi

This course seeks to introduce major concepts in the ethical conduct of research and some of the personal and professional issues that researchers encounter in their work. Sessions are run in a seminar/discussion format. Prerequisite: doctoral student or postdoctoral status only. 0 Course cr

**EPH 608b, Frontiers of Public Health** Albert Ko

This course is designed for Ph.D. and Advanced Professional M.P.H. students. It explores the major public health achievements in the last century in order to provide students with a conceptual interdisciplinary framework by which effective interventions are developed and implemented. Discussions examine the advances across disciplines of biomedical research, epidemiology and biostatistics, environmental and behavioral sciences, and health policy and management services that led to these major public health achievements. The course examines global and national trends in the burden of disease and underlying determinants of disease, which pose new challenges; and it covers new approaches that are on the forefront of addressing current and future public health needs.

**IF YOU DO NOT SEE MD-PHD SPECIFIC REQUIREMENTS FOR YOUR DEPARTMENT/PROGRAM OF INTEREST, PLEASE CONTACT THE DGS AND REGISTRAR.** Please contact Dr. Reiko Fitzsimonds in the MD-PhD Program Office or Sue Sansone, the MD-PhD Program Registrar for assistance.
<table>
<thead>
<tr>
<th>Department</th>
<th>DGS</th>
<th>Telephone</th>
<th>Registrar</th>
<th>Telephone2</th>
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<tbody>
<tr>
<td>Applied Math</td>
<td>Zhiwei Yun</td>
<td>2-1278</td>
<td>Nathesia Wethington</td>
<td>2-1278</td>
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<tr>
<td>Biomedical Engineering</td>
<td>Richard Carson</td>
<td>(203) 932-5711</td>
<td>Deanna Lomax</td>
<td>2-4262</td>
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<tr>
<td>Cell Biology</td>
<td>Karin Reinisch</td>
<td>5-6469</td>
<td>Lisa Crotty</td>
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<td>Cellular &amp; Molecular Physiology</td>
<td>David Zenisek</td>
<td>5-6474</td>
<td>Leisa Strohmaier</td>
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<tr>
<td>Chemistry</td>
<td>Patrick Holland</td>
<td>2-5162</td>
<td>Stacey Watts; <a href="mailto:Chemistry.dgs@yale.edu">Chemistry.dgs@yale.edu</a></td>
<td>2-3913</td>
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<tr>
<td>Computational Biology &amp; Bioinformatics</td>
<td>Mark Gerstein</td>
<td>8-7861</td>
<td>Lisa Sobel</td>
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<td>Genetics</td>
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<td>Deborah Losi-Sullivan</td>
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<td>John Warner</td>
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<td>Erica Lee</td>
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<td>Barbara Cotton</td>
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<td>Interdepartmental Neuroscience Program</td>
<td>Charles Greer</td>
<td>5-4034</td>
<td>Carol Russo</td>
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<td>MB&amp;B</td>
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<td>David Watts</td>
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<td>Microbiology/Microbial Pathogenesis</td>
<td>Walther Mothes</td>
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<td>Ronald Eyerman</td>
<td>2-5998</td>
<td>Nancy Hopkins</td>
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<tr>
<td>*Graduate School</td>
<td>Richard Sleight,</td>
<td>308297</td>
<td>Claudia Schiavone</td>
<td>6-1579</td>
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<tr>
<td></td>
<td>Associate Dean</td>
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United States Medical Licensing Examination (USMLE)

Yale POLICY: MD-PhD students are required to take USMLE Step I by December 31st of the year in which they complete their first 6 months of clerkships.

GUIDELINE: It is strongly suggested that MD-PhD students take USMLE Step I by August 31st after completing their 6 months of clerkships to prevent a delay in beginning PhD coursework and research.

Summary Points:
- Each MD-PhD student must take (and pass) Step I before beginning research
- Each MD-PhD student must take (and pass) Step 2 during the fourth year of medical school
- Passing Step I and Step 2 is required for MD-PhD graduation

USMLE- Step I and II of the Boards

The United States Medical Licensing Examination (USMLE) assesses a physician's ability to apply knowledge, concepts, and principles, and to demonstrate fundamental patient-centered skills, that are important in health and disease and that constitute the basis of safe and effective patient care. Each of the three Steps of the USMLE complements the others; no Step can stand alone in the assessment of readiness for medical licensure. Because individual medical licensing authorities make decisions regarding use of USMLE results, physicians seeking licensure should contact the jurisdiction where they intend to apply for licensure to obtain complete information.

USMLE Step 1 assesses whether you understand and can apply important concepts of the sciences basic to the practice of medicine, with special emphasis on principles and mechanisms underlying health, disease, and modes of therapy. Step 1 is a one-day examination, lasting 8 hours. The testing day includes 310 multiple-choice questions, divided into seven 60-minute blocks.

USMLE Step 2CK (Clinical Knowledge) is designed to assess whether medical school students or graduates can apply medical knowledge, skills and understanding of clinical science essential for the provision of patient care under supervision, with an emphasis on health promotion and disease prevention. US medical students typically take Step 2 during the fourth year of medical school. Step 2CK is a one-day examination, including 350 multiple-choice questions, divided into eight 60-minute blocks.

USMLE Step 2CS (Clinical Skills) uses standardized patients to test students on their ability to gather information from patients, perform physical examinations, and communicate their findings to patients and colleagues. Step 2CS is a one-day examination, lasting 8 hours. The examination is only offered in six cities across the country: Philadelphia (2), Chicago, Atlanta, Houston, and Los Angeles.
The common pathway for MD-PhD students involves completing the first two years of medical school and then moving to graduate school studies and research for a three- or four-year period.

The USMLE program recognizes that the recommended seven-year time limit to complete medical licensure may pose problems for some candidates with a combined degree (i.e., MD-PhD). For this reason, the USMLE program recommends to licensing jurisdictions that they consider allowing exceptions to the seven-year limit for MD-PhD candidates who meet the following requirements:

1. The candidate has obtained both degrees from an institution or program accredited by the LCME and a regional university accrediting body.

2. The PhD should reflect an area of study which ensures the candidate a continuous involvement with medicine and/or issues related, or applicable to, medicine.

3. A candidate seeking an exception to the seven-year rule should be required to present a verifiable and rational explanation for the fact that he or she was unable to meet the seven-year limit. These explanations will vary and each licensing jurisdiction will need to decide on its own which explanation justifies an exception. Students who pursue both degrees should understand that while many states' regulations provide specific exceptions to the seven-year rule for dual-degree candidates, others do not. Students pursuing a dual degree are advised to check the state-specific requirements for licensure listed by the FSMB.

For additional information, please see www.usmle.org.
Cost of USMLE exams

The MD-PhD Program does not cover the costs of USMLE exams, but the cost of Step I is factored into the Year 2 stipend. The information listed below, using 2018 figures is provided for budgeting purposes:

<table>
<thead>
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<tr>
<td>USMLE Step 1</td>
<td>$610</td>
<td>$630</td>
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<td>USMLE Step 2 CS (apply during winter/spring prior to 4th year)</td>
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<td>Travel/hotel (approximate)</td>
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<tr>
<td>USMLE Step 2 CK (take before 12/31 of 4th year)</td>
<td>$610</td>
<td>$630</td>
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Electronic Residency Application Service (ERAS)

First 10 programs applied to $99
11-20 programs $14/program
21-30 programs $18/program
> 31 programs $26/program

National Residency Matching Program (NRMP) $85 (6/30/18-7/1/19)

Interviews: Airfare/Rental Car/Gas/Accommodations/Food (approximate) $2,250 -- $11,000
**CLINICAL CLERKSHIPS and RE-ENTRY**

While this overview is considered a guideline for a typical MD-PhD student, we recognize some flexibility in this timeline is necessary to accommodate unforeseen circumstances in life and research. Any digression from this timeline must be discussed and approved by the DGS and the MD-PhD Program and documented in the student’s file. Continued participation in the MD-PhD Program requires timely completion of requirements.

**Clerkship Requirements**

- Please refer to [https://medicine.yale.edu/education/curriculum/clerkships/](https://medicine.yale.edu/education/curriculum/clerkships/) for complete information on clinical clerkship requirements.

- While all MD-PhD students complete the same clerkships requirements as MD students, the timing of the completion of these requirements differs.

- All MD-PhD students must complete 6 months of clerkships prior to beginning their PhD research in the laboratory. Any exception must be authorized by the Program Director Dr. Barbara Kazmierczak after consulting with Dr. Tamar Taddei, Associate Director for MD-PhD Clinical Education.

- Students are required to complete the mandatory YSM orientation “Tran-si-tion” in June immediately after finishing the second year of medical school.

- Only in extraordinary circumstances are students allowed to break up their thesis work with clinical rotations. The MD-PhD Program does not encourage its students to begin their thesis work at the end of the first year of medical school because they will not have had a chance to do rotations between the 1st and 2nd year, which is important in deciding upon a mentor and a PhD dissertation project. In addition, there are clinical programs that require continuity between the 1st and 2nd year.

There are four required clerkships:

1. **Biopsychosocial Approach to Health** (*Ambulatory Internal Medicine, Psychiatry, Family Medicine, and Pediatrics*) – 12 weeks
2. **Medical Approach to the Patient** (*Internal Medicine and Neurology*) – 12 weeks
3. **Surgical Approach to the Patient** (*Surgery and Emergency Medicine*) – 12 weeks
4. **Women’s and Children’s Health** (*Obstetrics & Gynecology and Pediatrics*) – 12 weeks
# Clerkship Directors And Coordinators

<table>
<thead>
<tr>
<th>Biopsychosocial Approach to Health Clerkship</th>
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<tbody>
<tr>
<td><strong>Primary Care Clinical Component</strong></td>
</tr>
<tr>
<td>Director: Peter Ellis, MD</td>
</tr>
<tr>
<td><a href="mailto:peter.ellis@yale.edu">peter.ellis@yale.edu</a></td>
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<tr>
<td>Associate Director (Pediatrics):</td>
</tr>
<tr>
<td>Ada Fenick, MD</td>
</tr>
<tr>
<td><a href="mailto:ada.fenick@yale.edu">ada.fenick@yale.edu</a></td>
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<tr>
<td><strong>Coordinator</strong>: John Genest [203-785-3578]</td>
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<tr>
<td><a href="mailto:john.genest@yale.edu">john.genest@yale.edu</a></td>
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<tr>
<td><strong>Psychiatry Clinical Component</strong></td>
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<tr>
<td>Director: Kirsten Wilkins, MD</td>
</tr>
<tr>
<td><a href="mailto:kirsten.wilkins@yale.edu">kirsten.wilkins@yale.edu</a></td>
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<tr>
<td>Associate Director: Matthew Goldenberg, MD</td>
</tr>
<tr>
<td><a href="mailto:matthew.goldenberg@yale.edu">matthew.goldenberg@yale.edu</a></td>
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<tr>
<td>Coordinator [203-785-2089]</td>
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<tr>
<td><strong>Medical Approach to the Patient Clerkship</strong></td>
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<td><strong>Neurology Clinical Component</strong></td>
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<tr>
<td>Director: Daniel DiCapua, MD</td>
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<tr>
<td><a href="mailto:daniel.dicapua@yale.edu">daniel.dicapua@yale.edu</a></td>
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<tr>
<td>Coordinator: Donna Cartwright</td>
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<tr>
<td><a href="mailto:donna.cartwright@yale.edu">donna.cartwright@yale.edu</a></td>
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<tr>
<td><strong>Internal Medicine Clinical Component</strong></td>
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<tr>
<td>Director: Dana Dunne, MD</td>
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<tr>
<td><a href="mailto:dana.dunne@yale.edu">dana.dunne@yale.edu</a></td>
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<tr>
<td>Coordinator: Aimee Patel [203-785-2477]</td>
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<td><a href="mailto:aimee.patel@yale.edu">aimee.patel@yale.edu</a></td>
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<td><strong>Surgical Approach to the Patient Clerkship</strong></td>
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<td><strong>Emergency Medicine Clinical Component</strong></td>
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<tr>
<td>Director: Jessica Bod, MD</td>
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<tr>
<td><a href="mailto:jessica.bod@yale.edu">jessica.bod@yale.edu</a></td>
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<tr>
<td>Coordinator: Rebecca Sullivan [203-737-4703]</td>
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<tr>
<td><a href="mailto:rebecca.sullivan@yale.edu">rebecca.sullivan@yale.edu</a></td>
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<td><strong>Surgery Clinical Component</strong></td>
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<tr>
<td>Director: Felix Lui, MD</td>
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<td><a href="mailto:felix.lui@yale.edu">felix.lui@yale.edu</a></td>
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<tr>
<td>Associate Director: Kevin Pei, MD</td>
</tr>
<tr>
<td><a href="mailto:kevin.pei@yale.edu">kevin.pei@yale.edu</a></td>
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<tr>
<td>Associate Director: David Stitelman, MD</td>
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<tr>
<td><a href="mailto:david.stitelman@yale.edu">david.stitelman@yale.edu</a></td>
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<tr>
<td>Coordinator: Lee Sylvestre [203-915-7167]</td>
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<td><a href="mailto:lee.sylvestre@yale.edu">lee.sylvestre@yale.edu</a></td>
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<td><strong>Women &amp; Children's Health Clerkship</strong></td>
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<td><strong>Obstetrics and Gynecology Clinical Component</strong></td>
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<tr>
<td>Director: Shefali Pathy, MD</td>
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<tr>
<td><a href="mailto:shefali.pathy@yale.edu">shefali.pathy@yale.edu</a></td>
</tr>
<tr>
<td>Associate Director (YNHH): Vrunda Desai, MD</td>
</tr>
<tr>
<td><a href="mailto:vrunda.desai@yale.edu">vrunda.desai@yale.edu</a></td>
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<tr>
<td>Associate Director (Bridgeport): Crina Boeras, MD</td>
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<tr>
<td><a href="mailto:crina.boeras@bpthosp.org">crina.boeras@bpthosp.org</a></td>
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<tr>
<td><strong>Manager/Coordinator</strong>: Janice Crabtree</td>
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<tr>
<td><a href="mailto:janice.crabtree@yale.edu">janice.crabtree@yale.edu</a></td>
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<tr>
<td><strong>Pediatrics Clinical Component</strong></td>
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<tr>
<td>Director: David Hersh, MD</td>
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<tr>
<td><a href="mailto:david.hersh@yale.edu">david.hersh@yale.edu</a></td>
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<tr>
<td>Co-Director: Uma Phatak, MD</td>
</tr>
<tr>
<td><a href="mailto:uma.phatak@yale.edu">uma.phatak@yale.edu</a></td>
</tr>
<tr>
<td>Coordinator: Neha Ranjan [203-785-6957]</td>
</tr>
<tr>
<td><a href="mailto:neha.ranjan@yale.edu">neha.ranjan@yale.edu</a></td>
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## Re-entry to the Wards for MD-PhD Students

Following completion of PhD course work and research, students return to complete remaining clerkships, sub-Is and electives, thus completing the medical degree in seven to nine years after first matriculating.
It is essential that students who have been in the lab have the appropriate clinical skills when they return to the wards. The MD-PhD Program has determined that after a prolonged absence, i.e. one year or longer, the student must engage in a “warm-up” period. Students who have participated in a longitudinal experience generally do well when re-entering the clinical setting. It is vital that students have choices to accommodate their complicated schedules and laboratory commitments.

**Student must meet with Dr. Tamar Taddei concerning their timeline for re-entry at least 6 months prior to beginning clerkships.** It is essential that students who have been away from clinical study return to clerkships with adequate clinical skills. The Educational Policy Committee, in conjunction with the MD-PhD Program, has determined that after any period of longer than one year in which a student has not engaged in meaningful clinical activity, students must engage in a clinical “re-entry elective” prior to entering clerkships. The objectives of this elective may be found on the elective site under “Internal Medicine” at: [https://medicine.yale.edu/education/curriculum/advancedtraining/clinicalelectives/electivecataloging/](https://medicine.yale.edu/education/curriculum/advancedtraining/clinicalelectives/electivecataloging/)

To assure flexibility, the following tracks have been created:

<table>
<thead>
<tr>
<th>Experience/Action</th>
<th>TRACK A</th>
<th>TRACK B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical experience prior to entering research or other non-clinical pursuit</td>
<td>6-month clinical experience prior to research</td>
<td>6-month clinical experience prior to research</td>
</tr>
<tr>
<td>Clinical experience during research</td>
<td>At least six months to one year of clinical longitudinal experience or Wednesday Evening Clinic (WEC)</td>
<td>None or less than six months to one year of clinical longitudinal elective/WEC</td>
</tr>
<tr>
<td>Actions required at least 9 months prior to re-entry</td>
<td>1. Mandatory meeting with the Director of Re-Entry&lt;br&gt;2. Mandatory meeting with Registrar to confirm clerkship schedule&lt;br&gt;3. Meeting with academic advisor</td>
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</tr>
<tr>
<td>Actions required prior to re-entry</td>
<td>1. Participation in WEC or clinical longitudinal elective within 1 year prior to re-entry. If students are away from clinical pursuits for greater than approximately 1 year, they may need to follow track B after consultation with the Director of Re-Entry&lt;br&gt;2. Meeting with Academic Advisor</td>
<td>1. Re-entry elective, usually two weeks in duration, as determined by the Director of Re-Entry&lt;br&gt;2. Meeting with Academic Advisor</td>
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</table>
CLINICAL SKILLS DEVELOPMENT

Students who have maintained clinical skills during research time by participating in clinical longitudinal electives generally do well when re-entering the clinical setting. It is vital that MD-PhD students have choices to accommodate their clinical interests, complicated schedules, and research commitments. For more information or guidance, students should contact Dr. Tamar Taddei, Associate Director for MD-PhD Program Clinical Education.

Longitudinal Clinical Electives

MD-PhD students are encouraged to proactively identify physician mentors from among the Yale faculty or clinicians in the community who can provide supervision and guidance for longitudinal clinical experiences. These experiences are instrumental in helping students maintain clinical continuity and involvement in patient care during the graduate research period.

Elective credit is available, and students have the flexibility to propose and set tailored learning objectives depending on the discipline and duration of the arrangements. Please visit the elective catalogue at https://medicine.yale.edu/education/curriculum/advancedtraining/clinicalelectives/electivecataloglisting/.

Primary Care Experience at the VA

MD-PhD students have had the opportunity to engage in a longitudinal rotation in the Center of Excellence in Primary Care Education at the VA for a one-year period. Interested students should contact the Clerkship Coordinator, (203) 688-4545. This option is subject to preceptor availability at the VA.

Wednesday Evening Clinic (WEC)

The Wednesday Evening Clinic (WEC) is a longitudinal primary care clinic for up to 15 Yale Medical Students in Yale's Primary Care Center (a resident clinic during the daytime). Participation in WEC provides an opportunity for MD-PhD students to follow their own patients and complete the Primary Care Clerkship during their research years.

Responsibilities include seeing 1-3 patients/night, discussing the patients with an attending, and writing notes. Students will also present at pre-clinic conferences, and take turns bringing dinner. Work for the clinic is mostly completed during the evening on Wednesdays but follow-up on studies may occur throughout the week. Providers also may participate in the care of their patients outside of the clinic (i.e. scrub in on their surgeries). At WEC, students are able to follow their own cohort of patients over the course of many months.

There is a minimum commitment of 1 calendar year (many MD-PhDs stay a few years). Students are required to attend at least 38 of 50 clinic sessions. Students may start at any point during the year. Completion of the integrated Medical Approach to the Patient clerkship is required.

Completion of Wednesday Evening Clinic (WEC) now fulfills the requirements for primary care sub-internship credit. For more information, please contact MD-PhD student Lee Ying.
Haven Free Clinic
HAVEN is a student-run free clinic in partnership with the Fair Haven Community Health Center (FHCHC) and Yale University. HAVEN provides primary care, reproductive healthcare, social services, and health education for uninsured members of the Fair Haven community. Students can get involved with HAVEN as early as their first semester at Yale.

HAVEN Free Clinic is open on Saturdays from 9am to noon and is located at: Fair Haven Community Health Center, 374 Grand Avenue in New Haven. For more information, please contact MD-PhD student Alanna Kaplan.

Yale Adult/Pediatric Refugee Clinics
In collaboration with Integrated Refugee and Immigrant Services (IRIS), the Yale Adult Refugee Clinic and Pediatric Refugee Clinic provide healthcare to newly arrived refugees. For more information, please contact MD-PhD students Shivani Bhatt or Christina Lin.

Clinical Reasoning Workshops.
Clinical reasoning workshops are intended for MD-PhD students currently in the lab. These workshops take place every month during the regular school year and are moderated by a Yale faculty member who guides students through a clinical case scenario. Sessions begin with a chief complaint and are followed by a thorough discussion of the differential, relevant diagnostic tests, and approach to treatment/management, as well as any basic science and clinical research findings that might pertain to the case.
MD-PHD THESIS REQUIREMENT

Typically, an MD-PhD student completes and defends his/her/their dissertation during the fall semester of Year Six.

MD-PhD students must complete their PhD (thesis successfully submitted, approved, and defended) before returning to fulfill the remaining Medical School clinical requirements. Submission of a 1st author peer reviewed scientific manuscript is the minimum expectation for all students by the time of graduation. Exceptions must be discussed with the MD-PhD Program Director, Dr. Barbara Kazmierczak.

The completed PhD thesis satisfies the Yale School of Medicine’s MD thesis requirement. Graduating MD-PhD students must have their PhD thesis submitted no later than the Graduate School’s December deadline in order to avoid having to submit a separate MD thesis.

2018-2019 Graduate School deadlines:

**December Degree Award**

- August 31, 2018: Due date to notify department of intention to submit dissertation for award of the Ph.D. in December
- October 1, 2018: Due date for dissertations to be considered by the Degree Committee for award of the Ph.D. in December
- November 12, 2018: Deadline for departments to return Degree Recommendation Forms for December degrees
- December 20, 2018: Date of December degree award

**May Degree Award**

- February 15, 2019: Due date to notify department of intention to submit dissertation for award of the Ph.D. in May
- March 15, 2019: Due date for dissertations to be considered by the Degree Committee for award of the Ph.D. in May
- April 18, 2019: Deadline for departments to return Degree Recommendation Forms for May graduation
- May 20, 2019: Date of May degree award

The MD-PhD Program has two mechanisms for monitoring the student’s progress in the lab: (a) bi-annual advisor reports containing a checklist of academic requirements for the Ph.D., including thesis committee meetings; and (b) an Associate Director of the MD-PhD Program serves as a member of the student’s thesis committee and is asked to attend at least one thesis committee meeting annually and in the final research year.

A final copy of the dissertation should be provided to the MD-PhD Program Office.
NIH Publications and Public Access Policy
The NIH Public Access Policy ensures that the public has access to the published results of NIH funded research. It requires scientists to submit final peer-reviewed journal manuscripts that arise from NIH funds to the digital archive PubMed Central (PMC) (http://www.ncbi.nlm.nih.gov/pubmed) upon acceptance for publication. To help advance science and improve human health, the Policy requires that these papers are accessible to the public on PubMed Central no later than 12 months after publication.

All of your papers fall under the NIH Public Access Policy, whether in press or in print, and must include evidence of compliance in all of your NIH applications and reports. For complete information, please review the website at http://publicaccess.nih.gov/policy

Open Researcher and Contributor ID
We are requiring that all current MD-PhD students register for a free and easy to obtain ORCID iD. An ORCID iD is a permanent 16-digit unique identifier that allows you to distinguish yourself from other researchers to create an accurate record of research activities that are attributable to you and only you. ORCID iDs are being used or even required by an increasing number of publishers, funding agencies and professional associations to reduce administrative burdens and errors to ensure consistent, reliable attribution of your work. ORCID can also be integrated into NIH’s SciENcv tool to create biosketches. ORCID is a valuable tool for you to have now at the early stages of your career, and will also help us, the MD-PhD program to accurately track your current and future accomplishments.

Summary Points:
- All peer-reviewed articles must comply with the NIH Publications and Public Access Policy
- When citing papers, include PMC reference numbers
- Provide PMC reference numbers to the MD-PhD Program for incorporation into reports prepared for the NIH. Non-compliance could jeopardize continued funding for the Program

Acknowledgement of MD-PhD Fellowship Support in Publications
ALL students must acknowledge their financial support in all publications (except abstracts). The standard format is: “This work was supported by NIH Medical Scientist Training Program Training Grant T32GM007205 {also list other funding sources}.” It does not matter if you are supported by our MSTP TG at the time of your publication. The MSTP TG made it possible for you to be at Yale and do the work and it should always be acknowledged.
MENTORING ACTIVITIES

Peer Advising by Senior Students (PASS)
The PASS Program was initiated by students to facilitate peer-to-peer mentoring in which senior students share (“pass” down) information and experiences to junior students. Under some circumstances, students prefer seek insight and support from fellow students who can share similar recent experiences, challenges and strategies for success. Peer mentors are selected to reflect program-specific interests and strengths based on PhD department or clinical interests. Additionally, the PASS Program aims to provide junior students with an easily accessible academic and social support network that remains pertinent as they progress through different stages of training and is flexible and adaptable to accommodate those who have changed their PhD departments or clinical interests.

The program will be guided by Dr. Michael Nitabach, the MD-PhD Program Associate Director for Graduate Mentoring. For more information, please contact MD-PhD students Lee Ying, Alanna Kaplan and Dan Barson.

Faculty Mentoring Program
Dr. Michael Nitabach, Associate Director for Graduate Mentoring, oversees the Faculty Mentoring Program. The goals of the Program are: (1) To establish relationships between students and MD-PhD faculty committee members, starting with matriculation at Yale, and maintained throughout the entire course of their study; (2) To have these mentors provide unique resources and mentoring perspectives for dual-degree students that are not otherwise provided by the MD and PhD advisory programs; (3) To foster interclass relationships within a mentor’s cohort of students that provide an additional level of peer-peer mentorship between dual-degree students; and (4) To create a better support network for MD-PhD students that is not only helpful to students when they seek out support, but also actively promotes their ongoing development as a physician-scientist in every stage of their training.

Advising for Clinical Electives and Clerkships
Dr. Tamar Taddei, Associate Director for Clinical Education is available for advice and guidance for clinical activities at any point over the course of your MD-PhD training. All students will meet with Dr. Taddei to discuss maintenance of clinical skills as they begin their PhD work, as maintaining some clinical activity throughout the PhD years is important and encouraged. Students should schedule a meeting with Dr. Taddei at least 9 months prior to anticipated thesis defense and again at 4 months prior to scheduled thesis defense in order to plan re-entry.

Career Planning
Dr. Peter Aronson, Associate Director for Career Development, offers an annual lecture for first-year students, “Career Tracks in Academic Medicine: Implications for Education and Training.” Dr. Aronson meets with each student as he or she completes the PhD thesis and re-enters clinical training. He provides advice about residency planning and refers students for additional career planning advice to physician-scientist faculty in the clinical discipline of the student’s interest.
STUDENT GROUPS & ACTIVITIES

Participation and input by students in all years of the Program is encouraged for these programmatic activities.

MD-PhD Student Council

The MD-PhD Student Council to provide broadly representative student feedback and suggestions about Program activities. Each class has two student representatives (with the exception of years 7+ who will have one representative) who meet with MD-PhD Program leadership every other month, and participate in planning program activities, such as the Research in Progress (RIP) sessions, annual retreat, mentoring programs, and new initiatives.

MD-PhD Mixers. are events organized by the MD-PhD Student Council that help connect MD-PhD students across all years in the program. The events are held at least once per season (winter, spring, summer, and fall) and are an excellent opportunity to meet junior and senior students in a relaxed atmosphere. In the past, events have included happy hours, bowling nights, and brewery tours.

The current representatives for 2018-19 are: Year 1: Sarah Fitzpatrick and Hannah Batchelor; Year 2: Anna Lynn and Jon Klein; Year 3: Drew Daniels; Year 4: Stefano Daniele; Year 5: Dan Barson; Year 6: Alanna Kaplan; Year 7: Lee Ying; Year 8: Dimitri deKouchkovsky.

Committee on Diversity & Inclusion

The Program has had a strong commitment to recruiting a diverse cohort of students from backgrounds traditionally underrepresented in medicine and in the sciences; students with disabilities; and students from diverse geographic, economic, racial and ethnic, religious backgrounds. The Committee on Diversity and Inclusion was formed to continue on-going discussions, planning of events and workshops, and attendance of student representatives at recruitment fairs such as SACNAS and ABRCMS to ensure that the MD-PhD program’s is an inclusive community where students’ multiple and intersecting identities are affirmed and valued.

The Committee meets every other month with the Program’s leadership. Current Committee members are Dan Barson, Shivani Bhatt, Nicholas Economos, Carrie Flynn, Kelsey Loeliger, Jessica Minor, Alyssa Mitson-Salazar, Danielle Miyagishima, Mytien Nguyen, Elias Quijano, Rebecca Treger and Lorenzo Sewanan.

Student Hosting during the Interview Season

The MD-PhD program relies upon our current students to host applicants who come to Yale for interviews. Please respond to the email from the MD-PhD Host Coordinator Susan Sansone when she writes for host volunteers. As you know, it is a very important part of our recruiting efforts and we are depending on you for assistance.

The Program sponsors a pizza party at BAR with current MD-PhD students on Sunday evening for applicants who arrive in New Haven the night before their interviews. In addition, a mix of student hosts and upperclassmen organize and attend dinner with the applicant on Monday evenings.
This year’s interview dates are:

- Sunday, October 7th – Tuesday, October 9th
- Sunday, October 21st – Tuesday, October 3rd
- Sunday, November 11th – Tuesday, November 13th
- Sunday, December 2nd – Tuesday, December 4th
- Sunday, January 6th – Tuesday, January 8th
- Wednesday, January 23rd – Friday, January 25th
- Sunday, February 3rd – Tuesday, February 5th
- Sunday, February 10th – Tuesday, February 12th

**Second Look for MD-PhD recruits.**
As with student hosting during interview season, active student participation in Second Look Weekend for accepted students is critical to the successful recruitment of the next class of MD-PhD students. Current first-year MD-PhD students start the day before YSM Second Look activities to offer visitors a glimpse of the richness of our scientific and social community at Yale and in New Haven.

**Annual MD-PhD Program Retreat**

*(mandatory attendance)*

MD-PhD students plan and organize an annual 2-day retreat which is one of the most interactive and well-attended programmatic activities within the academic year. Occurring in the fall at a beautiful venue outside of New Haven and attended by all currently enrolled MD-PhD students, members of the MD-PhD Faculty Committee and staff, the retreat is an important opportunity for students to get to share personal, clinical and research stories, participate in mentoring activities, and have fun spending time together. Programming includes career and professional development breakouts as well as panel discussions on topics such as choosing a research lab, making the most of clinical experiences, transitioning to and from the lab, and other relevant issues raised by the student body.

**The Selma and Karl Folkers Lecture in Biomedical Research**

The Folkers Lecture is the highlight of our annual retreat. Karl Folkers (1906 - 1997) left a legacy of over 66 years of outstanding research in organic and biological chemistry. He received his B.S. (1928) from the University of Illinois and his Ph.D. in Chemistry (1931) from the University of Wisconsin. He was a postdoctoral fellow in the Chemistry Department at Yale from 1931 to 1934 where he developed an interest in pharmaceutical chemistry. Dr. Folkers spent his most productive years in research at Merck in Rahway, NJ where he made a number of significant discoveries in the field of biological chemistry including the structure and synthesis of vitamin B 6, isolation and characterization of vitamin B 12 and the synthesis of Coenzyme Q 10. Elected to the National Academy at the age of 39 and recipient of the Presidential Medal of Science in 1990, Dr. Folkers spent
his later years (1968 onward) at the University of Texas, Austin where he created the institute for Biomedical Research whose mission was to demonstrate the use of CoQ in clinical medicine.

Dr. Folkers endowed a lectureship to Yale in remembrance of his formative years here as a postdoc. Each year, a distinguished speaker or alumni of the MD-PhD program is invited to give the Folkers Lecture at the program’s annual retreat.

**Folkers Lecturers:**

**September, 2018** - Helena Hansen, MD, PhD; Associate Professor of Anthropology and Psychiatry, New York University School of Medicine

**March 2018** - Robert Darnell, MD, PhD; Robert and Harriet Heilbrunn Professor in Cancer Biology, Rockefeller University

**December, 2017** - Wendy Garrett, MD, PhD; Professor of Immunology and Infectious Diseases, Harvard T.H. Chan School of Public Health

**February, 2016** - Laura Niklason, PhD, MD; Nicholas Greene Professor of Anesthesiology and Professor of Biomedical Engineering, Yale School of Medicine

**March, 2015** - Arthur Horwich, MD; Sterling Professor of Genetics and Professor of Pediatrics, Yale School of Medicine

**February, 2014** - Marcus Bosenberg, MD, PhD; Professor of Dermatology, Pathology, and Immunobiology, Yale School of Medicine

**February, 2013** - Peter Aronson, MD; C. N. H. Long Professor of Medicine (Nephrology) and Professor of Cellular & Molecular Physiology

**January, 2012** - Marina Picciotto, PhD; Charles B. G. Murphy Professor of Psychiatry and Professor in the Child Study Center, of Neuroscience and of Pharmacology; Deputy Chair for Basic Science Research, Dept. of Psychiatry; Deputy Director, Kavli Institute for Neuroscience, Yale School of Medicine

**January, 2011** - Gerald Shulman, MD, PhD, FACP, MACE; George R. Cowgill Professor of Medicine (Endocrinology) and Professor of Cellular & Molecular Physiology, Yale School of Medicine

**January, 2010** - Michael S. Brown, MD; The WA (Monty) Moncrief Distinguished Chair in Cholesterol and Arteriosclerosis Research; Regental Professor; Paul J. Thomas Chair in Medicine, UT Southwestern Medical Center

**January, 2009** - Samuel C. Silverstein, MD; John C. Dalton Professor of Physiology & Cellular Biophysics, and Professor of Medicine, Columbia University Medical Center

**January, 2008** - Stephen G. Emerson, MD, PhD; Clyde ’56 and Helen Wu Professor of Immunology (in Medicine); Director, The Herbert Irving Comprehensive Cancer Center at New York-Presbyterian Hospital/Columbia University Medical Center

**January, 2007** - Susan Baserga, MD, PhD; Professor of Molecular Biophysics and Biochemistry, of Genetics and of Therapeutic Radiology, Yale School of Medicine

**January, 2006** - Fred Gorelick, MD; Henry J. and Joan W. Binder Professor of Medicine (Digestive Diseases) and of Cell Biology; Deputy Director, Yale MD-PhD Program

**January, 2005 — Inaugural Lecture**: Michael Caplan, PhD, MD; C. N. H. Long Professor of Cellular & Molecular Physiology and Professor of Cell Biology; Chair, Cellular and Molecular Physiology, Yale School of Medicine
START@Yale (Summer to Advance Research Training)
START@Yale provides the opportunity for MD-PhD students to do a research rotation with Yale faculty member in their chosen field of interest in the summer (June to August) before the start of classes. It is an ideal way for incoming students to get to know some of their classmates, graduate students, postdocs and faculty and get a head start on exploring the extensive restaurant scene, entertainment and recreational activities the New Haven area has to offer. Detailed information about the START, including a list of participating faculty mentors and their research interests, and a link to the online application, are available via the following website. Contact: Please feel free to contact MD-PhD-track START Program Coordinator Dr. Peter Aronson (peter.aronson@yale.edu) with any questions.

Research in Progress Student Talks (RIP)
(attendance highly recommended)
These monthly seminars enable students nearing the completion of their thesis work to present it publicly and critically to MD-PhD program peers and faculty, who give constructive feedback to the presenters at the end of each session.

Connections made between the junior and senior students helps to unify the Program vertically and fosters a spirit of shared participation. Often, these seminars become occasions for the senior students to offer advice based on their own experience concerning the choice of a discipline, a laboratory, a mentor or a career direction. For the senior students, these seminars provide a valuable opportunity to practice their presentation skills. Many students use these seminars as an opportunity to practice and critique their thesis defense presentations. Students in the early stages of their training come away with an immense appreciation for the progress and research accomplishments of the more senior students.

Brown Bag Seminar Series
Brown Bag lunches are monthly informal meetings with the Associate Directors of the MD-PhD Program to discuss topics in which students express interest. These topics are generally centered around long-term career advice for MD-PhD students, as well as talks on practical skills like grant writing and balancing clinical and research commitments.

Topics of discussion in the past have included:
“Grant Writing 101”
“Clinical and Basic Science Departments: Implications for Your Career”
“Short-track Residency”
"Clinical versus research time: What is a meaningful balance?"
“The life you see for yourself in the future: how do my choices now affect my opinions later?”
“Decision points: when and how do I decide on what I want to do in my professional life?”

Emerging Biomedical Scholars at Yale (EBSY)
Scholars at Yale pursuing advances in the biomedical sciences are spread across departments at the School of Medicine, the School of Arts and Sciences, and Yale-New Haven Hospital, and
span a range of professional levels, including medical and graduate students, medical residents and post-docs, early-career investigators, and tenured professors. EBSY was created with the intent of uniting this community of scholars, bridging the horizontal boundaries of discipline and the vertical boundaries of professional hierarchy. The mission of EBSY is to: 1) serve as a hub to facilitate social and professional interactions across departments and stages of professional development, in order to facilitate scientific synergies and exploration and professional mentorship, and 2) serve as a central clearinghouse of information and resources that are useful for a wide range of biomedical scientists, including core facilities and technical expertise, training in skills such as grant and fellowship writing, other opportunities for education and career development, and resources to help promote sustainable work/life balance.

For more information, please contact George Lister, MD, MD-PhD Program Assistant Director for Education.

Leadership in Biomedicine
This seminar series offers students the opportunity to hear the inspiring life stories of our distinguished as well as relatively junior physician-scientists who have navigated the many personal and professional challenges of this unique career to achieve success at Yale. Faculty presenters are asked to address questions such as: What inspired them to choose their fields of interest? Who were their mentors and why did they select them? What were the challenges they faced and how did they deal with them? To provide students an opportunity to interact with our academic leaders, the School of Medicine sponsors three lectures a year, each of which is followed by a dinner where students and the speaker informally discuss issues about mentoring and careers.

Student Research Day
Student Research Day is a major event at the Yale School of Medicine where graduating medical students and upperclass MD-PhD students working in the lab present the results of their thesis research work in a scientific poster session to a university-wide audience of interested faculty members and students. In addition, five oral presentations of prize winning theses are presented in a Plenary Scientific Session.

Non-MD-PhD Program Departmental Retreats
The Departments of Genetics, Cell Biology, Cellular & Molecular Physiology, Pathology and Molecular Biophysics & Biochemistry conduct annual retreats that take place at facilities on or off the Yale campus. MD-PhD students are invited to these retreats and are strongly encouraged to attend. The costs of attendance is often covered by the host departments. These retreats provide important opportunities for MD-PhD students to meet faculty members and learn of their research. These retreats also allow MD-PhD students to meet the graduate students and postdoctoral fellows in a relaxed off-campus setting. These interactions may help students to identify laboratories that will provide training environments best suited to their own individual needs. Please see Sue Sansone or contact the Department/Program registrar to learn about the date, venue and details of their retreats.
INFORMATION REQUIRED by the PROGRAM

As part of the funding received to support the MD-PhD Program, we are required to provide updated information regarding our students, curriculum and activities. It is essential that you respond to requests for information in a timely fashion to ensure continued funding and success of the program. Required requests for information include, but are not limited to:

- **Annual Individual Development Plan** – The Program Director Dr. Barbara Kazmierczak and the Associate Directors will review each student’s IDP annually in order to ensure that the student is successfully navigating through the Program and identify any problems/issues as they arise.

- **Annual Funding Agency Reports** – Funding agencies require annual biographical information for students supported on the MSTP Training Grant, University funds or individual fellowships.

- **Updating Information** – Please provide updated information to the MD-PhD Program Office if you change your address, marital status, health insurance coverage, direct deposit information, etc.

- **Publications, professional recognitions and honors** – Please notify the MD-PhD office if/when a paper is accepted for publication on which you are an author, you are selected to present in a conference, receive a fellowship, are recognized for teaching or other research or clinical activities, etc. We want to celebrate these accomplishments, but also be able to include them in outcomes assessments and reports about the program. Every student must register for an ORCID and be sure to keep it up-to-date.

- **Laboratory affiliation and thesis defense** – Meet with the Director of Graduate Studies when you have decided on the lab in which you want to do your PhD research and make sure your thesis advisor and department are compatible. Complete the affiliation paperwork for the MD-PhD program which must be signed by Program Director Dr. Barbara Kazmierczak.

- **Clerkship/Re-entry Information** – After meeting with Terri Tolson (Medical School Registrar) and Dr. Tamar Taddei, please let us know of your timeline for re-entry to the wards.

- **Human and Animal Protocol Information** – Provide the MD-PhD Program Office with a copy of the Protocol letter and protocol information including the PI under whom the protocol is registered, the protocol number, and the protocol approval & expiration dates. This information is required by the NIH for continuation of the program’s funding.
  - If you are working in the lab and involved in research, teaching and/or testing on live vertebrate animals, federal regulations (regardless of funding) require approval by the Institutional Animal Care and Use Committee (IACUC) prior to implementation of the project.
  - If you are involved in research involving human subjects, Federal Regulations at 45CFR46 and University policy require that all projects be reviewed and approved by one of the University’s Institutional Review Boards (IRB).
MD-PhD STUDENT STIPEND INFORMATION

MD-PhD students in Years 1-2 receive an NIH base stipend which is supplemented by YSM.

Upon selecting a PhD advisor and official affiliation with a Ph.D. program, the MD-PhD student's stipend will increase to that of the current graduate student stipend level as determined by the Graduate School, currently at $35,850 for the period July 1, 2018-June 30, 2019. In Year 3, the supplement to the base rate, is equally split between the advisor and the Medical School. The stipend supplement will be subject to tax withholding, so be sure the appropriate tax forms have been completed.

During years 4-6 of the Program, 100% of the salary is provided by the MD-PhD student's thesis advisor. N.B.: the funding category changes from stipend to salary and is therefore subject to tax withholding. The advisor is financially responsible until the student defends the PhD thesis, is no longer working in the lab, and resumes clerkship training. At this time, the student returns to MD-PhD Program funding. The MD-PhD Program has secured funding so that students do not experience a “bump down” as a result of finishing their PhD; the student’s stipend remains at the current Graduate School level until graduation from the MD portion of their training. Therefore, it is important for the MD-PhD Program to know the student's status with the lab to determine the proper stipend supplementation: (1) if the student has defended the dissertation, but is still working part-time in the lab while pursuing medical school requirements, the advisor should provide a stipend supplement; (2) if the student has submitted the dissertation and is still working part-time in the lab while pursuing medical school requirements, the advisor should provide a stipend supplement; (3) if the student has earned the Ph.D. and is still working part-time in the lab while pursuing medical school requirements, the advisor should provide a stipend supplement.

Please note that while MD-PhD students earn the Ph.D. before completing all of the medical school requirements, MD-PhD students are still considered full-time students in a pre-doctoral dual-degree program. This means that the student cannot be paid as a postdoctoral fellow and can only receive a stipend supplement. The student must remain in close communication with the MD-PhD Program Office during this time. Please contact Cheryl DeFilippo if you have any questions regarding your stipend or supplement.

Support While In the MD-PhD Program

Year 1 -- Stipend (NIH base, supplemented by YSM) = fellowship; no taxes withheld
Year 2 -- Stipend (NIH base, supplemented by YSM) = fellowship; no taxes withheld
Year 3 -- Stipend (NIH base, supplemented by YSM and PhD Advisor) = fellowship & taxable income: taxes withheld from stipend supplementation. The level of support increases to the Graduate School stipend level at the time of PhD affiliation.

• When you affiliate with a PhD department and begin working in a lab, the IRS considers you to be an “employee.” During this time the majority of your financial support is a fellowship. However, the portion of your support from YSM and your PI are subject to tax withholding.

• Double-check Forms W-4 (IRS & CT) in Workday to ensure the appropriate amount of tax withholding is in place. A Form W-2 will be prepared for you at the end of the calendar year.
Year 4 -- Earnings (PI and YSM) = fully taxable. The level of support remains at the Graduate School stipend level. A Form W-2 will be prepared for you at the end of the calendar year.

Year 5 – Earnings (PI) = fully taxable. The level of support remains at the Graduate School stipend level. A Form W-2 will be prepared for you at the end of the calendar year.

Year 6 – Earnings (PI) = fully taxable. The level of support remains at the Graduate School stipend level. A Form W-2 will be prepared for you at the end of the calendar year.

Year 7 – Earnings (PI) = fully taxable – if you are still in lab / Stipend (NIH Base, YSM supplement at Graduate School stipend level) = fellowship; no taxes withheld. Set up estimated quarterly tax schedule.

Year 8 – Stipend (NIH Base, YSM supplement at Graduate School stipend level) = fellowship; no taxes withheld. Continue with estimated quarterly tax schedule.

Healthcare Coverage

The MD-PhD Program pays each student’s tuition responsibilities for the Medical and Graduate Schools (7 semesters of Med; 5 semesters of Grad), as well as single health care coverage (Rx included). Students can purchase the dental and/or vision plans from Yale Health. The MD-PhD Program participates in the Family Health Subsidy Plan.

If you have any changes in your health insurance coverage, you should notify Cheryl DeFilippo in the MD-PhD office. Changes include waiving coverage, marriage, divorce, birth of a child, adoption of a child, etc. and require the processing of new paperwork which need to be renewed annually.

Time away from the MD-PhD Program

The MD-PhD Program does not have any stated “vacation” time for its students but there are procedures that serve as guidelines for our students when there is a need to be away from the Program for a brief period of time.

- All students are permitted to take 2 weeks in addition to stated University holidays (Thanksgiving, Winter and Spring breaks, and major religious observances). Students should refrain from being away during any time they are scheduled to participate in required courses, teaching obligations, clerkships or the following mandatory Program events: Annual Orientation (Sept. 15); Annual Retreat (Dec. 1).
- Following affiliation, the MD-PhD students should discuss time away from the lab with their thesis advisor. If the student is affiliated with a lab outside of Yale, the student should conform to the official holidays observed by the institution at which the thesis laboratory is located.

If a student wants to take additional time off beyond the permitted 2 weeks and University holidays, this must be cleared with your thesis advisor and the MD-PhD Program Director Dr. Barbara Kazmierczak. MD-PhD students making satisfactory academic progress may receive stipends during this time.
Sick Leave Or Other Leaves
MD-PhD students are governed by the rules of the GSAS (http://bulletin.printer.yale.edu/htmlfiles/grad/policies-and-regulations.html#leaves_of_absence) and the NIH with regard to sick, medical or personal leave. Students must review the policies and procedures stated in the Graduate School Bulletin and consult the appropriate University representatives. Forms must be processed through Cheryl DeFilippo in the MD-PhD Program Office. The NIH permits the receipt of stipends for up to 15 calendar days of leave per year. Anything beyond 15 calendar days requires filing for a medical leave of absence. Currently, the students who take a medical leave have access to student health services for the rest of that semester. However, this should be individually discussed with Dean Richard Sleight and MD-PhD Program Director if an extended leave is indicated.

• NIH Parental Leave Policy. The MD-PhD Program follows the NIH policy concerning parental leave: “Trainees and fellows may receive stipends for up to 60 calendar days (equivalent to 8 work weeks) of parental leave per year for the adoption or birth of a child when those in comparable training positions at the grantee organization have access to this level of paid leave for this purpose. Either parent is eligible for parental leave. The use of parental leave must be approved by the training Program Director.”

• GSAS Parental Support and Relief. Registered PhD students who wish to modify their academic responsibilities because of the birth or adoption of a child may request parental support and relief during or following the term in which the birth or adoption occurs. For full details, see http://bulletin.printer.yale.edu/htmlfiles/grad/policies-and-regulations.html#parental_support_and_relief

External Funding Opportunities
Students are encouraged to apply for outside funding for their MD-PhD work, either through private agencies or the NIH. Students who are successful in obtaining individual fellowships may be considered for a combined award (i.e. bonus) to their stipend.

Grant-writing workshops are given three times per year, coinciding with the NIH F30/31 NRSA Fellowship Application deadlines by Drs. Fred Gorelick and Reiko Fitzsimonds. In addition to the general instructions and guidelines presented in the workshop, Drs. Gorelick and Fitzsimonds are available to work with you on specific parts of your proposal; previously successful applications are available as examples upon request (from Cheryl).

All external fellowships and their accompanying administrative requirements are processed through the MD-PhD Program. Schedule a meeting with Cheryl to review the administrative requirements for submitting an external fellowship.

Tax Information
Please be sure to complete Forms W - 4 (IRS & CT) in Workday. The University Tax Department contains information concerning the filing of taxes for the calendar year. The
website address is: http://www.yale.edu/tax. The website has a comprehensive tax guide for graduate students.

From matriculation into the MD-PhD program until your affiliation with a graduate program and thesis laboratory (typically in your third year), your stipend is considered a fellowship and is not subject to tax withholding. Even though taxes are not withheld, the IRS considers the stipend “reportable income” when you file a tax return. In order to avoid having to pay taxes at the end of the calendar year, each student should set up quarterly estimated tax payments during Years 1 & 2. Please consult the University’s Tax Department’s website (www.yale.edu/tax) and also IRS Publication 970, Tax Benefits for Education (www.irs.gov). These resources provide examples of educational costs which can reduce the reportable income amount. Keep in mind the IRS operates on a calendar year (Jan - Dec), while Yale operates on a fiscal year (July - June). The December 31st pay slip serves as the reportable income for the calendar year.

When you affiliate with a lab, the financial support provided by your thesis advisor is considered “earnings” and is subject to tax withholding. Your tax withholding status is determined by the CT Form W-4 and an IRS Form W-4 that you file in Workday. If these forms are not on file with the University, the IRS mandates that the maximum amount of tax be withheld from your earnings. Tax withholding also applies when you are teaching (for requirement and/or for pay), receiving a stipend supplement, serving as a Project Assistant, etc. Please see Cheryl DeFilippo for the appropriate forms.

**Working While in the MD-PhD Program**

MD-PhD students engaged in any work-related activity for which compensation is provided may work up to a maximum of 10 hours per week. Compensation for any work activity must be scheduled and payments made through the MD-PhD Office. This policy also applies to teaching, whether for requirement or pay.

Please discuss any paid fellowship opportunities with MD-PhD Program Office prior to accepting, as students cannot receive concurrent funding from a federal source, including the NIH.
Requests for Reimbursement

Requests for reimbursement can be submitted for this fiscal year from August 1, 2018 to May 31, 2019. Students graduating from the MD-PhD Program in 2019 must submit their reimbursements requests by May 15th. All reimbursements are processed through EMS which will send you a prompt to approve your expense reimbursement—please be sure to use your “yale.edu” email address to respond to the EMS prompt. If you do not have direct deposit to receive reimbursements into your account, a check will be mailed to whatever address you have on file with the University.

Requests for reimbursement must be submitted to Cheryl DeFilippo within 10 business days of incurring the expense or returning from the trip. Items submitted after this time period may not be eligible for reimbursement. You can be reimbursed for conference expenses only after you have returned from the conference. Reimbursement requests must contain the following:

- A signed MD-PhD Program Request for Trainee Reimbursement Form.
- A memorandum stating the reason for the reimbursement. If reimbursement is for attendance at a scientific meeting, the memo must indicate (a) the purpose of attendance (i.e., poster presentation, etc.) and (b) a summary of how participation has benefitted your research. The reimbursement cannot be processed until the summary is received.
- Original receipts and proof of payment for each receipt submitted. The receipt(s) for textbooks must include name, shipping address and method of payment.
- If you are traveling as part of a group and another department is paying for a portion of the expenses, attach a copy of the other department’s expense report. The University requires full accounting of how you traveled and who paid for expenses.

Travel reimbursement

Travel information must include date and place (city, state). N.B.: the University cannot reimburse for penalties incurred for changing reservations, for upgrades in travel, or for using frequent flyer or similar awards. If a ticket is refundable and was not used, a refund should be obtained.

- A conference program must be included as part of the reimbursement packet. If meals are offered at the conference, the University cannot reimburse you for that particular meal. If meals are not offered at the conference, you will be entitled to per diem reimbursement for meals (receipt not required for per diem meals).
- Use of a personal vehicle for University-related business is reimbursable at 57.5 cents per mile.
- If a receipt is missing and the expense is greater than $25, it is your responsibility to obtain a duplicate receipt. If the expense is less than $25, a missing receipt form can be completed.
- Non-reimbursable travel expenses include, but are not limited to: child care, pet care, in-room alcoholic beverages, gym and recreational fees, laundry or valet service (for
travel under 5 consecutive days), personal grooming services, car rental insurance, baggage fees, theft, cash advance money, personal funds or property, parking tickets/traffic violations, meals for spouses/guests, travel-related expenses for spouses/guests.

**Trainee Reimbursements**

The MD-PhD Program encourages trainees to attend scientific meetings and courses. **Funds are available to support participation.** We encourage students to process their registration, travel, hotel, etc. with Cheryl DeFilippo so charges can be paid in advance by the MD-PhD Program on a Yale Purchasing Card instead of submitting for reimbursements.

Students supported by the training grant or other Program funding source are able to request up to $300 per fiscal year for travel to a scientific meeting or to purchase textbooks not available in the University Library system. If you are presenting a paper or poster, you may be eligible for additional funds at the discretion of the MD-PhD Program, subject to federal guidelines and University guidelines.

Students supported by an external funding source (e.g., an NIH NRSA grant, private fellowship, or other departmental grant) are ineligible for the $300 trainee allocation from the MD-PhD Program, as these sources provide travel support.

Students supported by their thesis **advisor** are ineligible for the $300 trainee allocation from the MD-PhD Program, as the research grant/source from which you are funded by your advisor should provide travel support. If your advisor does not have sufficient funds to support your attendance, please inform the MD-PhD Program well in advance of the conference.

Unallowable Expenses include, but are not be limited to: student activity costs, computers, computer equipment (hardware and/or software), cell phones, phone-type devices, electronic organizers, dues/memberships, and/or extracurricular activities.

The Program cannot reimburse for items related to preparation for Boards.

Reimbursements are not treated as income to the individual and are not be subject to tax withholding or reporting. If you have any questions, please contact Cheryl DeFilippo.
STUDENT SAFETY AND SUPPORT SERVICES

**Yale Police**
For non-emergencies 203-432-4400  
For emergencies 911 New Haven Police 911  
*Approximately 500 exterior phones are strategically located throughout the campus and are readily identified at night by blue lights located above or near them. The phones are equipped with red emergency buttons for direct connection to the University Police for police, fire, or medical emergencies and a keypad for dialing any campus number.*

**Nighttime Safe Rides**
203-432-6330  
Security is available from 6:00 p.m. to 6:00 a.m. to take you to any area within the campus map.  
Dial 2-6330 from any campus phone or Blue Phone for service. For more information, please visit http://your.yale.edu/community/public-safety/campus-safety-services.  
Lab & Animal Safety:  
Office of Environmental Health & Safety (chemical, radiation, biohazard emergencies)  
Normal working hours 203-785-3555 After hours 911

**Yale Health Plan**
55 Lock Street, [http://yalehealth.yale.edu/](http://yalehealth.yale.edu/)  
Whether or not you have chosen to purchase the hospitalization piece of the Yale Health Plan, Basic Coverage is offered at no charge and includes preventive health and medical services in the departments of Mental Health & Counseling, Student Health, Gynecology, and Health Education. In addition, treatment for urgent medical problems can be obtained twenty-four hours a day through Acute Care.  
You may consult with Mental Health & Counseling about problems related to mood, coping, relationships, stress, anxiety, etc. You may go directly to Yale Health or call to make an appointment.  
Mental Health & Counseling Services (203) 432-0290  
Urgent Care (203) 432-0123 open 24 hours a day  
Student Health Department (203) 432-0312  
Substance Abuse Counselor, Maury Steigman (203) 432-7366

**Yale School of Medicine Title IX Coordinators**
The Title IX Coordinators are responsible for protecting students from sex discrimination. Sex discrimination includes sexual harassment, sexual assault, and other forms of misconduct. The University is committed to providing an environment free from discrimination on the basis of sex. Title IX Coordinators can resolve complaints and assist with informal remedies. The Title IX Coordinators do not conduct formal hearings but may investigate complaints and work with the complainant and the respondent to achieve resolution of the complaint.  
Merle Waxman, Associate Dean merle.waxman@yale.edu (203) 737-4100 / Rosemarie Fisher, Professor & Associate Dean for Graduate Medical Education rosemare.fisher@yale.edu (203) 688-1449.
SHARE: Information, Advocacy, Support
http://sharecenter.yale.edu/
SHARE, the Sexual Harassment and Assault Response and Education Center, is a primary Yale resource. The SHARE Center is located on the Lower Level of Yale Health and students can walk in 9-5:00 weekdays. They can also call SHARE to schedule a daytime appointment. Trained counselors are also available after hours, holidays and weekends via their direct hotline, to speak with students, their supporters, or other community members with questions or concerns. These conversations are kept completely confidential; callers do not even need to give their names. Along with providing support, SHARE Counselors have crucial information about medical, legal, and disciplinary options, and help callers make their own decisions about how to proceed. For Yale students who do choose to take legal or disciplinary action, SHARE Counselors can facilitate those processes and serve as advocates. SHARE works closely with the Yale Police Department as well as the various disciplinary boards SHARE: Information, Advocacy, and Support. 24-hour confidential/anonymouse hotline (203) 432-2000

University-Wide Committee on Sexual Misconduct
(203) 432-1834; http://provost.yale.edu/uwc. The UWC on Sexual Misconduct is available to answer informal inquiries and fairly and expeditiously address formal and informal complaints of sexual misconduct across the entire Yale community. Through the Provost’s Office, it is comprised of faculty, administrative, and student representatives drawn from throughout the University, including YSM. Core UWC members (listed on the UWC website) are available for exploratory conversations or to receive complaints.

Office of the Ombudsman
Confidential line (203) 737-4100. The Ombuds Office is a neutral and safe resource within YSM where students can bring issues with which they are concerned. Merle Waxman, the Ombudsperson, will help find solutions, options and strategies for dealing with a particular concern or complaint, refer to other resources and advocates, and mediate or facilitate conversations between two or more people or groups. Merle Waxman is also the Title IX Coordinator for the School of Medicine who can help with issues related to gender inequality.

Office of Diversity, Inclusion, Community Engagement and Equity
Darin Latimore, MD, Deputy Dean and Chief Diversity Office can be reached at darin.latimore@yale.edu or (203) 785-7278. The Office of Diversity, Inclusion, Community Engagement and Equity (DICE) works to foster a community that embraces diversity and respects all voices.

Chaplain’s Office
Sharon M.K. Kugler, Yale University Chaplain (203) 432-1128; http://chaplain.yale.edu. The Chaplain’s Office provides connections to a variety of religious and spiritual communities on campus and in New Haven, lively interfaith programming, as well as confidential conversations about any topic (religious or not) and resources for students who are grieving. Please contact Associate University Chaplain Candice Provey at candice.provey@yale.edu for assistance.
Disability Services
The Office of Student Affairs at Yale School of Medicine (YSM) works closely with Yale's Resource Office on Disabilities (ROD) to support students with a wide range of disabilities, of differing severity levels.

Office of LGBTQ Resources
Maria Trumpler, Director, (203) 432-0309; maria.trumpler@yale.edu; http://lgbtq.yale.edu/. This office offers programming for grad-prof students every weekday including discussions of relationships and wellness, Queer Yoga, political discussions and affinity groups. Queer Peers counseling is also available for professional students by students in other professional schools.

Office of International Student Services
The Office of International Student Services can help international students with immigration regulations, visa issues and other matters. More information can be found on the OISS web site at http://oiss.yale.edu/. Walk-in or call anytime. There is always an advisor on-call to assist during regular business hours. Call (203) 432-2305 or email questions to oiss@yale.edu

GSA Legal Aid
http://gsa.yale.edu/resources/ask-lawyer. Services and resources for graduate students with legal needs. Two options are available:
1) Ask-A-Lawyer Sessions - Each month during the academic year meet with volunteer lawyers from the New Haven Bar Association for a one-on-one consultation. Please check the GSA website for updates on the upcoming dates.
2) Free Referral Service - A list of lawyers who have agreed to offer a free consultation to students is available. Please email GSAS Assistant Dean Richard Sleight for access to the list.

Office of International Medical Student Education
You will undoubtedly be traveling abroad at various times during your medical education. Whether you are traveling for research, clinical, conferences, or for personal reasons, you are requested to register your travel with Yale. The OIMSE is also available to provide information on safety while traveling abroad. For more information, please contact Anne.Kellett@yale.edu or visit the OIMSE website for registering your travel. https://transact.med.yale.edu/world/travelform/index.asp

Transportation
- **Getting Around:** 2-WALK (432-9255) is an escort service. You may request an escort by calling 432-WALK (432-9255). A security officer will walk you to and from any point on campus 24 hours a day, seven days a week.
- **Security dispatch minibuses** run seven days a week from 6 p.m. to 7:30 a.m. Call 432-6330 to arrange for a ride. For schedules and maps, visit http://www.yale.edu/minibus
- **The daytime shuttle bus** runs from 7:20 a.m. to 6 p.m. Monday through Friday. Buses circle the campus following routes that include residential and university buildings, including the medical school. Visit http://yale.edu/parkingandtransit/shuttle.
- **The special services van** transports members of the Yale community who are temporarily or permanently disabled. Call 432-2788 for more information.
Yale School of Medicine
2018 – 2019 Calendar

Matriculation START@Yale: June 11 – August 2, 2018
First Year Students: Thursday, August 9, 2018, 8:00 a.m. to 11:00 a.m.
Sterling Hall of Medicine (SHM), Harkness Auditorium & Lobby, 333 Cedar Street

Registration Dates

Fall Semester
Fall Tuition & Fees Billed: 07/02/2018
Fall Term Bill Due Date: 08/01/2018
Online SIS Registration Check-in: 08/18/2018 – 10/31/2018

Spring Semester
Spring Tuition Billed: 11/01/2018
Spring Term Bill Due Date: 12/03/2018
Online SIS Registration Check-in: 01/03/2019 – 03/15/2019

Annual Vaccination Requirements: The PPD skin test or the quantiferon-78 gold test are required to be completed in the student’s birth month unless exempt. The Flu shot is required in the Fall Semester unless the student has a medical reason not to be vaccinated.

Enrollment Dates

Fall Semester
First Year Students (Class of 2022): 08/09/2018 – 12/21/2018
Second Year Students (Class of 2021): 09/05/2018 – 12/18/2018
Third Year Students (Class of 2020): 07/01/2018 – 12/14/2018
Fourth Year Students (Class of 2019): 06/18/2018 – 12/28/2018
Fifth Year Students (Extended Study): 06/18/2018 – 12/28/2018

Spring Semester
First Year Students (Class of 2022): 01/02/2019 – 06/11/2019
Second Year Students (Class of 2021): 01/07/2019 – 06/21/2019
Third Year Students (Class of 2020): 01/02/2019 – 06/14/2019
Fourth Year Students (Class of 2019): 01/02/2019 – 05/17/2019
Fifth Year Students (Extended Study): 01/02/2019 – 06/14/2019

Clinical Rotation Periods & Block Dates

<table>
<thead>
<tr>
<th>Clerkships - 12 Week Rotation Periods</th>
<th>Clerkships - 12 Week Rotation Periods</th>
<th>Electives/Subinternships - 4 Week Block Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class of 2020</td>
<td>Class of 2021</td>
<td>06/16/2018 – 07/13/2018</td>
</tr>
<tr>
<td>01/02/2018 – 03/23/2018</td>
<td>01/07/2019 – 03/29/2019</td>
<td>07/16/2018 – 08/10/2018</td>
</tr>
<tr>
<td>03/26/2018 – 06/15/2018</td>
<td>04/01/2019 – 06/21/2019</td>
<td>08/13/2018 – 09/07/2018</td>
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<td>11/03/2018 – 11/30/2018</td>
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<td>12/03/2018 – 12/28/2018</td>
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<td>*12/31/2018 – 01/25/2019</td>
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<td>01/28/2019 – 02/22/2019</td>
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<td>02/25/2019 – 03/22/2019</td>
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<td>03/25/2019 – 04/19/2019</td>
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<td>04/22/2019 – 05/17/2019</td>
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<td>05/02/2019 – 06/14/2019</td>
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</tbody>
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*Some electives or subs may begin on 1/2/2019, the start date is left to the discretion of the director.

Capstone Course
03/11/2019 – 03/29/2019

Vacation, Holiday & Special Event Dates

<table>
<thead>
<tr>
<th>Vacation</th>
<th>Start Date</th>
<th>End Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Break</td>
<td>June 16</td>
<td>July 1</td>
<td>(Third year students)</td>
</tr>
<tr>
<td>Fourth of July</td>
<td>July 4</td>
<td></td>
<td>(Third year students)</td>
</tr>
<tr>
<td>Labor Day</td>
<td>September 3</td>
<td></td>
<td>(No classes all day – First and second year students)</td>
</tr>
<tr>
<td>Fall Recess</td>
<td>November 19</td>
<td></td>
<td>(First and second year students)</td>
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<tr>
<td>Thanksgiving Break</td>
<td>November 22</td>
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<td>(Third year students)</td>
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<tr>
<td>Winter Break</td>
<td>December 15</td>
<td></td>
<td>(First year students)</td>
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<tr>
<td></td>
<td>December 22</td>
<td></td>
<td>(Second year students)</td>
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<tr>
<td></td>
<td>January 1</td>
<td></td>
<td>(No classes all day – First year students)</td>
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<tr>
<td>Martin Luther King Day</td>
<td>January 21</td>
<td></td>
<td>(First year students)</td>
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<tr>
<td>Spring Break</td>
<td>March 11</td>
<td></td>
<td>(No afternoon classes – First year students)</td>
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<tr>
<td>Match Day</td>
<td>March 15</td>
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<td>(Congratulations to the Class of 2019)</td>
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<tr>
<td>Student Research Day</td>
<td>May 7</td>
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<td>(First year students)</td>
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<tr>
<td>Commencement</td>
<td>May 20</td>
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<td>(Second year students)</td>
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<tr>
<td>Memorial Day</td>
<td>May 27</td>
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<tr>
<td>Summer Break</td>
<td>June 12</td>
<td>August 30</td>
<td>(First year students)</td>
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<tr>
<td></td>
<td>June 22</td>
<td>July 7</td>
<td>(Second year students)</td>
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</table>

03/12/2018