

University of Virginia

# MSTP Student Handbook

2017-2018

<b>Table of Contents</b>	<b>Page</b>
<b><u>Overview of the UVA MSTP</u></b>	<b>3</b>
<b><u>Administrative Structure</u></b>	<b>4</b>
<b><u>Financial Support for MSTP Students</u></b>	<b>6</b>
<b><u>UVA MSTP Events</u></b> <b><u>Attendance Requirements</u></b>	<b>9</b>
<b><u>MSTP Attendance Policy</u></b>	<b>12</b>
<b><u>Travel Allowance Policy</u></b>	<b>13</b>
<b><u>MSTP Reimbursement Procedures</u></b>	<b>14</b>
<b><u>Student Committees</u></b>	<b>15</b>
<b><u>Academic Support for MSTPs:</u></b>	
• <u>Individual Development Plans, Annual Meetings, IDP Committees</u>	<b>17</b>
<b><u>Curriculum</u></b>	<b>20</b>
<b><u>Student Participation Requirements: Checklists</u></b>	
• <u>First Year</u>	<b>24</b>
• <u>Second Year</u>	<b>25</b>
• <u>Third Year and Above</u>	<b>26</b>
• <u>Nearing the End of PhD</u>	<b>27</b>
• <u>Clerkship/Selective Year- Med 3 &amp; 4</u>	<b>28</b>
<b><u>Appendices</u></b>	<b>29</b>

## Overview of the UVA MSTP

---

### Mission

The Medical Scientist Training Program (MSTP) is an MD/PhD program at the University of Virginia that prepares students for careers in academic medicine.

Our goal is to train individuals who will be outstanding physicians and scientists and who will pioneer advances in clinical practice through research.

Our program aims to provide students with the skills, knowledge, and expertise to conduct high quality high impact research, and to instill in them a lifelong passion for doing biomedical research and integrating this with medical practice.

### History

The University of Virginia undertook significant expansion of research and training programs in the basic biomedical sciences during the late 1960s and early 1970s. All chairmen of the basic science departments of the School of Medicine were newly appointed during this time, a major new research building was constructed, and individual departments grew several-fold in size and quality. Similar but less dramatic growth followed in the clinical departments. Interest in the training of medical scientists flourished rapidly in this environment, in part because many of the new faculty either had experience with MSTPs or were recent graduates of such programs. Accordingly, an MSTP committee was appointed in 1971 under the leadership of Dr. Robert C. Haynes, Jr., and funds were provided by the University to initiate such training. An application for training funds was submitted to the National Institute of General Medical Sciences (NIGMS) in 1972, just prior to the time when the appropriation for such training programs was withdrawn. The application was resubmitted in 1975, and NIH support was first received in 1977 under the future Nobel Laureate, Dr. Alfred G. Gilman.

Name of Director	Tenure as Director
Robert C. Haynes, Jr.	1971-1978
Alfred G. Gilman, MD, PhD	1978-1981
Thomas E. Thompson, PhD	1981-1984
Rodney L. Biltonen, PhD	1984-1993
Steven Gonias, MD, PhD	1993-1998
Gary K. Owens, PhD	1998-2014
Dean Kedes, MD, PhD	2014-present

## Administrative Structure

---

### UVA MSTP Administration

Name	Position in MSTP	Academic Position	Contact Information
Dean H. Kedes, PhD, MD	Director	Professor, Department of Microbiology, Immunology and Cancer Biology	<a href="mailto:kedes@virginia.edu">kedes@virginia.edu</a> Pinn Hall 7230 243-2758
Adam Goldfarb, MD	Associate Director for Admissions	Professor, Pathology	<a href="mailto:Ang3x@virginia.edu">Ang3x@virginia.edu</a> 3121 MR5 982-0593
Bettina Winckler, PhD	Associate Director for Scientific Programs	Professor of Neuroscience & Cell Biology	<a href="mailto:bwinckler@virginia.edu">bwinckler@virginia.edu</a> MR4 6116 434-924-5528
Jim Mandell, MD, PhD	Associate Director for Curriculum	Associate Professor of Pathology	<a href="mailto:Jwm2m@virginia.edu">Jwm2m@virginia.edu</a> MR5 3220 434-924-2316
Dori R. Williams	Assistant Director		<a href="mailto:dori@virginia.edu">dori@virginia.edu</a> ; <a href="mailto:mstp@virginia.edu">mstp@virginia.edu</a> Claude Moore Med Ed Building, Student Affairs, room 3131; 924-1294

(see also [Appendix A – Organizational Chart](#))

Dr. Kedes is involved with all aspects of the program, and reports directly to the Associate Dean for Graduate and Medical Scientist Programs, Dr. Amy Bouton, who, in turn reports to the Dean of the School of Medicine, Dr. David Wilkes. However, to spread the considerable administrative responsibilities of the Program, and to ensure a high level of programmatic oversight of training, we have established three Associate Director Positions with well-defined responsibilities. The three Associate MSTP Director positions include: Admissions/Recruiting, Curriculum, and Scientific Programs. Dr. Kedes and the three MSTP Associate Directors plus the Assistant Director form the MSTP Executive Committee which jointly make most major decisions regarding program administration including decisions on admissions, mentor review and approval, and overall training program design, although the latter involves input from many others including the Dean, Senior Associate Dean for Medical Education, Associate Dean for Graduate and Medical Scientist Programs, and MSTP faculty mentors.

#### Assistant Director

The MSTP Assistant Director, Dori Williams, carries out the day-to-day administrative duties. These duties include all student-related matters including: selecting and scheduling courses, assisting students in selecting and setting up lab rotations, selecting a mentor, facilitating co-mentoring

relationships, student financing, collection of annual progress reports, facilitating student clinical training activities, and scheduling MSTP activities.

The MSTP Assistant Director maintains student records, coordinates recruiting, assists in reimbursements, processes students' stipends and funding, maintains the program's website, organizes student meetings with the Director and Associate Directors, and works with the student committees and assists in the planning of those activities. The MSTP Assistant Director's office is located in the Claude Moore Medical Education Building, Student Affairs, room 3131. The Graduate Programs Office staff supports MSTP students in the Assistant Director's absence and as well as other various graduate program services.

### **Associate Director of Admissions and Recruiting**

The Associate Director for Admissions and Recruiting co-chairs the MSTP Admissions Committee with the Director. Along with Dr. Kedes, he reviews and evaluates complete applications. The Associate Director and Director also interview all MSTP candidates invited for an interview. Dr. Kedes attends the Medical Admissions Committee when MSTP candidates are being considered.

### **Associate Director of Curriculum**

The Associate Director for Curriculum co-chairs the MSTP Curriculum Committee with the Director. Both the Director and Associate Director sit on the Medical Education Curriculum Committee. In this capacity, the Associate Director oversees MSTP Graduate Courses offered during the pre-clerkship Medical curriculum including course content and emphasis, as well as coordinating scheduling to avoid conflicts with the NexGen Medical Curriculum. This Associate Director also heads the MSTP's Transition Committee which helps students to identify training activities to facilitate transition to clerkships once students complete their Ph.D.

### **Associate Director of Scientific Programs**

Associate Director for Scientific Programs co-chairs the MSTP Scientific Programs Committee with the Director and assists the Director in developing programmatic activities to promote interaction and scientific exchange between the MSTP students and to foster their development as physician scientists. These activities include participation in monthly Research in Progress Dinners, the student-run Molecular Medicine Lecture Series, the annual retreat, and periodic workshops on career planning, selecting a residency program, negotiating a contract, selecting a mentor and PhD thesis project, etc.

In addition, the Associate Directors and the Director share the responsibility of reviewing student's annual progress reports and chairing Annual Progress (PSAC) Meetings with each student in the program, including those on clerkships. The purpose of these meetings is to review the written progress report, to discuss the student's research progress, to outline a timeline for completion of PhD training, to identify long term career plans including areas of interest for residency training, and to identify any problems that may need further attention including issues with mentoring, funding, or other issues. See Section V for more details on the Committee. Mentors, (including MSTP Directors who have MSTP students), do not sit on PSAC Meetings for their own students.

## Financial Support for MSTP Students

---

MSTP Student Benefits: Med 1-4, & Grad 1	Amounts reflect the 2016-17 budget
Stipend	Base \$30,000
Tuition & Fees	8 Semesters of Medical School 2 Semesters of Grad School
Travel	\$250 Med 1 \$500 Med 2+
Health/Dental	\$2690 Health Insurance Subsidy (amount increases annually) \$280 Dental

The MSTP follows a traditional fiscal year calendar from July 1 to June 30 of the following year. Funding is allocated by the FY and increases are given at the start of a new year (July 1). All students under the umbrella of the MSTP in years Med 1 through 4 and Grad 1 are paid a monthly stipend.

There are times during graduate years that a student can move from stipend (paid monthly) to wages (paid out bi-weekly). It will depend on the program and funding source which one a student will receive. All students should stay in close contact with their BIMS Administrator to make sure they understand their funding situation.

No tax statement is provided to any student other than the monthly email sent stating that a deposit is pending. These should be retained for tax recording purposes. Students can expect to hear from various administrative people in May and June to ensure that funding is in place; if there are any concerns about upcoming funding shifts, please do not hesitate to contact the BIMS Administrator (if you are in the PhD portion) or the MSTP Assistant Director.

Each fiscal year students in good standing are awarded full scholarships that cover stipend, tuition & fees, health insurance and a modest travel allowance. The financial package is guaranteed by the MSTP and The University of Virginia as long as a student is in good standing.

### Stipend

The current base stipend is \$30,000 for fiscal year 2017-2018. In the past the University has provided cost of living adjustments per year, but the adjustment is not guaranteed each year.

Student stipends may be higher than stated annual amount based on numerous factors. If a student receives an individual extramural fellowship such as an American Heart Association (AHA), Department of Defense (DOD), or National Research Service Award (NRSA) among others, students can request a merit increase to their stipend. The process of requesting the merit increase is to write to the BIMS Administrator, BIMS director, MSTP Director, and the mentor together to request the merit raise. If these individuals agree a merit supplement is warranted, it must be approved by the Associate Dean for Graduate and Medical Scientist Programs (Dr.

Bouton). Once a decision is made, the BIMS Administrator sends information to the funding coordinator in the Graduate Programs Office to set it up, and MSTP is notified. **The bonus remains in effect only during the term of funding of the extramural fellowship.**

### **Tuition and Fees**

During the medical school years (Med 1, Med 2, Med 3, and Med 4) and the first year of Graduate School (Grad 1), the MSTP funds the students through the MSTP Training Grant or other institutional funds at its disposal. The MSTP guarantees up to eight semesters of Medical School tuition.

During the remainder of the students' Graduate School training, Ph.D. Mentors are responsible for full financial support of students. Sources of funding during this period include mentors' research grants, support from Institutional NIH training grants, departmental or center funds, and/or individual extramural fellowships obtained by students with their mentor's assistance. Assuming a student is in good standing, the MSTP and Institution will provide backup support during this time period should the student's Ph.D. mentor or Department/Center be unable to fully fund a student.

### **Travel Funds**

MSTPs who regularly attend program activities will be awarded up to \$500 in travel funds annually. Please see the Attendance Policy in the section MSTP Events for further details and requirements.

### **Health and Dental Insurance**

The current Graduate Programs policy is to provide a subsidy for the student coverage. The student can pay an additional amount for family coverage.

Students can enroll in the UVA Health Insurance Program and the UVA Dental Insurance Program through [uvahealthinsurance.com](http://uvahealthinsurance.com). **Students much register annually for health and dental.** When completing the online application, the system should not prompt students to pay. If this occurs, the student should notify the Assistant Director and try processing the application a couple of days later. Dental insurance is optional and students must complete an application annually and pay with a personal credit card by the October deadline. Forward the receipt to the Assistant Director for reimbursement. ***Students are not automatically registered for either health or dental insurance and the student must register on the website per the insurance companies' instructions.***

*The University of Virginia requires that students purchase healthcare or show proof of healthcare purchased privately.*

***UVA will NOT reimburse students for privately purchased insurance.***

When a student first begins the MSTP, a gap in coverage can occur. Short term coverage is available and a number of options are listed on the student health insurance website. Do not hesitate to contact the Assistant Director should you have an emergency situation.

[www.gradmed.com](http://www.gradmed.com)

Please refer to <http://www.virginia.edu/studenthealth/insurance.html> for more information.

***Items NOT covered by MSTP Funds:***

---

**Poster printing, books, vaccinations, thesis binding, testing fees, insurance purchased outside of UVA Health Insurance, and instruments**

## UVA MSTP Events

---

Attendance Required Events	Details
Research in Progress	2 <sup>nd</sup> Wednesday of every month 5:00-6:45 pm Pinn Hall 1-5
Molecular Medicine Series	2-3 times annually. Dates/Locations TBD
First Year Orientation	First of July
Med 1 and 2 Lunches	Monthly: Noon-1:00 PM. Dates/Locations TBD
Retreat	Annually in July
Alumni/Student Talk	Annually, Friday at Lunch during Second Look
Distinguished Lecturer	Annually, in the Spring. Date/Location TBD

There are several MSTP activities to supplement the training provided by degree granting graduate programs and the Medical School. MSTP activities are extremely important in promoting the unique development of physician scientists and to allow them to identify with a cohort group with similar goals and expectations. Attendance is required unless otherwise noted.

### “Research in Progress (RIP)” Meetings

The goals of the RIP dinner series is to promote scientific interactions between the students and to provide a forum for issues particular to physician scientists. The venue includes a mixture of formal student presentations, roundtable discussions, and brief informal research presentations by students followed by a lively discussion of the project and of its significance, alternative approaches, etc. A comprehensive set of documents related to how to present at different RIP’s is located in [Appendix B](#): RIP Presentation Guide.

The RIP meetings run from 5:00 to 6:45 pm every second Wednesday of the month except December due to the holiday break and/or exam conflicts, and one month in the summer because of the annual MSTP retreat. Dinner is served at the RIP.

### Attendance:

**Attendance is required at all of the events listed above unless students have an unavoidable prior professional/academic commitment and are excused *in advance* by the MSTP Director.**

### **During the year there are specific RIP themes scheduled during the following months:**

- **August - “The Hot Seat”**

The premise of these sessions is to have students selected by pulling names from a hat to give a 5-6 minute summary of their research project without slides indicating why their project is important, what has been done so far, what needs to be done, the project hypothesis, and experimental approach, where the project is going long term, and problems or limitations in their project. Other students then ask questions to clarify their understanding of the project. A faculty panel then quizzes the student audience, not the student presenter, on their understanding of the project.

- **September – Summer Rotation Presentations**

1<sup>st</sup> or 2<sup>nd</sup> Year students who have just completed rotations give brief informal presentations regarding the rotation they completed over the summer. The presentations are typically 5-8 minutes in length.

- **February – Clinical Case Presentations by MSTP Clerkship Students**

Senior students who are currently completing clerkships present a clinical case similar to how they present at Morning Reports.

### **Scheduled throughout the academic year are other seminars or events:**

#### **Molecular Medicine Seminar Series**

MSTP students run this seminar series. There are typically 3-4 seminars over the course of a year. The MSTP Student Science Annual Progress selects and invites the seminar speakers. One of the seminars per year is the Annual MSTP Distinguished Lecture. Attendance is required unless students have some unavoidable prior professional/academic commitment or for unavoidable medical reasons and are excused in advance by the MSTP Director.

#### **Annual Retreat**

The retreat happens during the summer each year at a site selected by the Scientific and Social Committees. **Attendance is required** unless students have some unavoidable prior professional/academic commitment or unavoidable medical reason and are excused in advance by the MSTP Director. Due to shifting start dates of Medical School, the event date may change year to year. The committee and the administration make every attempt to select a date early so that everyone can make plans to attend.

Retreat formats vary but typically include activities such as an RIP presentation by a current student, a poster session for all students to participate in, and a round table discussion on a topic chosen by the MSTP Student Scientific Committee. The rest of the time is spent socializing and doing group activities available at the site. Meals are included in the retreat as well as an evening social event.

The retreat is typically attended by over 80% of students (as this a requirement of the program) including the incoming first year students, as well as by Dr. Kedes (Director), the Program Assistant Director and several invited physician scientists or basic researchers who participate in the scientific program and/or workshops.

### **1<sup>st</sup> Year Orientation**

This orientation is typically held at or near July 1 before new students begin working in their summer labs. . During this time we review the 1<sup>st</sup> Year MSTP integrated curriculum, outline program expectations, and address any questions students might have. In addition, the 2<sup>nd</sup> Year MSTP students attend and provide advice and guidance to 1<sup>st</sup> Year students and offer their assistance if needed. Attendance is required.

### **Monthly Luncheons with the Director (First and Second Year Students Only)**

The Program Director will have a monthly informal group lunch with first and second year MSTP students to discuss upcoming deadlines and any issues that have arisen for students. It is a great opportunity to voice concerns and give feedback to the Director on any programmatic or curricular issue. In addition, an invited faculty guest may be selected based on their expertise in an area of key importance to your professional development as a physician scientist. Attendance is required unless students have some unavoidable prior professional/academic commitment or for unavoidable medical reasons, excused in advance by the MSTP Director.

### **Other MSTP Activities**

There are additional MSTP group activities each year that are completely social in nature. The MSTP Social Chair organizes monthly events either after RIP or on weekends (see also [Appendix B](#) – RIP Resource Guide).

### **Other SOM Activities**

MSTP students also participate in many other School of Medicine activities that foster their development as scientists. This includes the Annual Medical Student Research Day and the Annual Graduate Biosciences Student Symposium. Participation in these activities is optional.

## *MSTP Attendance Policy*

---

### **Attendance Policy:**

Excused absences for all required MSTP activities **WILL BE** granted for professional/academic (e.g. clerkship responsibilities, exam preparation, or unavoidable medical reasons only and **not for personal conflicts**).

**If you are not able to attend RIP for any reason, you must notify the Director and Assistant Director *prior* to the night of RIP.**

All students having three or greater unexcused absences in a 12 month period will automatically be reviewed by the MSTP Executive Committee to determine if they should be allowed to continue in the program.

Remember to sign the RIP attendance form. If you do not, expect a follow up email asking why you were not there. You must respond to this email within a week or you will be counted as absent.

**Clerkship Students:** Note that the attendance policies apply to students on clerkships. Clerkship students are expected to continue to attend required MSTP activities when possible and must ask for an excuse in advance when they cannot. Students in Med 3 or 4 rarely use their travel money. Also, because these students are frequently on clerkship rotations, assessing their deserved travel money can be complicated. As a matter of course, if you are in Med 3 or 4, you should notify the Assistant Director and Director in writing ***each month*** if you will not be able to attend RIP and why. If you intend to use travel money for a conference during Med 3 or 4, these requests will be handled on a case by case basis; please write the Assistant Director and the Director if you are planning conference travel.

## Travel Allowance

---

Each fiscal year all MSTPs are eligible for a travel award the amount of which is determined by attendance at required MSTP events. Failure to attend required MSTP activities on a regular basis may result in expulsion from the program and forfeiture of your MSTP financial support package and scholarship.

To be eligible for \$250 Travel Allowance	To be eligible for \$500 Travel Allowance
In Good Standing with the program	In Good Standing with the program
In Years 1-3 (Med 1, Med 2 and Grad 1), students may have up to \$250 for attending a conference without presenting.	In Years 4 (Grad 2) and up, the student must be presenting material in an official format at the conference.
No more than TWO unexcused absences from RIPs, Molecular Medicine Series, and the Annual Retreat in the 12 months preceding the scheduled trip.	<b>Perfect Attendance</b> at all MSTP required events for 12 months prior to the scheduled conference.

### In order to receive the \$500 travel allowance:

Students must submit the title/abstract of the poster or presentation and the name and web address of the conference they will be attending to the Director and Assistant Director. The MSTP Office must have received this request no fewer than 2 weeks **before** the planned conference.

### In Order to receive the \$250 travel allowance:

Students must submit the name of the conference and provide sufficient explanation why he/she should be allowed to attend the event to the Director and Assistant Director. The MSTP Office must have received this request no fewer than 2 weeks **before** the planned conference.

The travel allowance can be combined with additional funds the student receives from other sources (e.g. travel awards from the scientific meeting, Mentor funds, etc.).

Students who wish to submit for travel reimbursement **must** follow all University of Virginia travel, meal and lodging policies as outlined by Procurement Services.

<http://www.procurement.virginia.edu/pagetravelbasics>

<http://www.procurement.virginia.edu/pagetravelformlist>

**Travel paperwork should be submitted to the MSTP Assistant Director within 14 days of the conference. Please refer to the MSTP Reimbursement Procedure section for information regarding required documentation. Failure to comply with the policy may result in your not being reimbursed.**

## ***MSTP Reimbursement Procedures***

---

There are multiple times during the program that students will need to be reimbursed for travel, recruitment functions, or health insurance. It is imperative that all UVA Procurement policies are followed. These include (but are not limited to) per person meal limits, hotel limits, and proper documentation of purchase. Procurement Services website should be consulted regularly because policies change without notice.

The table below is for reference and reflects the procedures that the Graduate Programs Office follows when completing reimbursement requests:

### **Reimbursement Required Documentation: ALL State Limits must be followed!**

<b>Travel</b>	<b>Meals</b>	<b>Insurance</b>
Original Boarding Passes	Original ITEMIZED Receipt	Dental Insurance is the only time a student can be reimbursed for insurance.*
Itinerary with airfare cost, receipt	Original CREDIT CARD Receipt	Email Receipt from the purchase which shows evidence of purchase by credit card
Hotel Folio/Receipt	Names of the Individuals in Attendance	*DUE Annually

In the case of student travel, a travel workbook will need to be signed by the student and approved by the MSTP. The Travel Workbook is located on the Procurement website and it's best to download it directly from the site so as to have the current information.

<http://www.procurement.virginia.edu/pagetravelbasics>

<http://www.procurement.virginia.edu/pagetravelformlist>

**\*As of fiscal year 2015-2016, the MSTP will no longer reimburse for insurance purchased from an outside vendor.**

## Student Committees

The MSTP relies on the students for their enthusiasm and support of activities within the program. As such, student committees were established to facilitate involvement in the many events that keep our group tightly knit. All of the committees are assisted by the Program. The chairs of the student committees are selected by the Director and Assistant Director. Any student interested in working with a committee should express interest directly to them.

### **The 2015-2016 Committee Chairs are:**

<b>Name of Committee</b>	<b>Chair and Contact Information</b>
Admissions	Janet Arras, Jocelyn Ray
Social and RIP	Nadine Michel, Shambhavi Singh
Scientific Programs & Annual Retreat	Ricky Baylis, Jake Eccles
Student/Alumni Relations	Mark Rudolf
Librarian	Teddy Kamata

### **Admissions & Recruiting**

Admissions & Recruiting assists with the coordination of recruiting activities such as student meals with applicants and involvement in the Second Look Weekend activities. This committee assists applicants and admitted students in getting current students' perspectives on the Program. Participation in the recruiting process is critical for our recruiting success and maintaining our status as an NIH Medical Scientist Training (MST) Program. Students are the face of our Program and UVA in these interactions, so please present as positive an image as possible both professionally and personally. Admissions & Recruiting Committee members interview each applicant who attends interview weekends at UVA and submit evaluations of the interviews to the MSTP Director. These evaluations are crucial for the Director in his meetings with Medical Admissions, and in special cases, Committee members may be asked to attend the Medical Admissions Committee to provide direct feedback. ALL Students are encouraged to participate in recruiting activities while they are in the Program.

### **Social and RIP**

The chair of this committee coordinates food, room set-up and clean-up after the monthly RIP meetings and coordinates other student focused events throughout the year. Please contact the Committee if you have allergy or other food limitations. The Social committee coordinates Second Look events with the Assistant Director. This group also works with the Scientific Committee to plan activities for the Annual Retreat.

### **Scientific Programs & Annual Retreat**

The Science Committee coordinates the MSTP Student Molecular Medicine Seminars, the Annual MSTP Distinguished Lecture Seminar, the annual retreat, and other events as generated by student interest.

### **Student/Alumni Relations**

The chair of this committee maintains contact with UVA MSTP alumni. Additional responsibilities may include creating and maintaining groups through social media outlets, organizing Student/Alumni events, and developing an alumni directory. The committee also contributes updates to the Alumni Announcements section of the annual newsletter.

### **Librarian**

In the Assistant Director's office a library of clerkship resources is kept for students. Students are free to check them out as needed via the shared document maintained by the MSTP Librarian. Students may also donate any materials they wish to the Library. We encourage students to make suggestions of titles that may be purchased with MSTP funds. Other media sources are also maintained by the Librarian for the use of current MSTPs.

## Academic Support for MSTPs

---

In addition to following individual students through medical school performance, monthly luncheon meetings (with Med 1 and Med 2 students), RIPs, and ad hoc meetings, the MSTP Executive Committee helps ensure that all MSTP students make sufficient progress towards their desired professional goals by use of a more formal mechanism termed the Individual Development Plan (IDP). The IDP consists of a series of questions (see below) that the student responds to each year, modifying their answers as they progress through their training. Each student then meets with 2 of the members of the Executive Committee on an annual basis to discuss these training and professional goals and to formulate plans to achieve them. We detail the IDP and IPD meeting below.

### Individual Development Plans (IDP)

The program monitors students' progress and experiences each year they are in the MSTP. As part of this process, students complete an MSTP-specific IDP (see [Appendix D](#)) and participate in a meeting with two members of the MSTP Executive Committee and other faculty committee members the student selects (see *Composition of the Committee* section).

The IDP serves as a tool that students can use as a starting point to help guide their MSTP training and career development, to create a path toward their longer term goals, and to reflect on their ongoing experiences. The Assistant Director, Ms. Williams, will send a notice to the students during the summer to complete the IDP form. The completed plan will be due in July and the annual meetings will be held in late July and August. Ms. Williams will then set up the exact IDP meeting times/locations and notify the students of the schedule via email. Two members of the MSTP Executive Committee will then meet with the student, review the IDP, and provide feedback during the meeting.

**Students failing to submit their completed MSTP IDP report by the deadline, and to attend the annual progress report meeting, will be reviewed by the MSTP Executive Committee to determine if they should be allowed to continue in the program.**

Prior to the annual IDP meeting, students will coordinate individuals who will support or represent the student during their professional development. Those individuals will attend the meeting with the student and work with the Executive Committee to assure the student's continued professional development. Together these groups become the student's **Individual Development Plan Committee**.

### The Individual Development Plan Committee

The table below outlines the overall purpose of the Individual Development Plan Committee:

IDP COMMITTEE: Purposes
1. Advise on all aspects of training
2. Monitor progress
3. Serve as a student advocate

4. Strategize with the student about potential rotations, clinical interests, residency programs
5. To discuss long term career goals

Med 1 and Med 2 students receive guidance from the MSTP Executive Committee, in one-on-one meetings, at monthly group lunches, and in their first IDP committee meeting. The MSTP Executive Committee members will assist students in selecting courses and faculty mentors for lab rotations. Rising Med 2s and above will also augment their IDP committee with individuals using the guidelines below. *The student is responsible for notifying the Assistant Director of the additional faculty members who will attend the IDP meeting and, importantly, to ensure that they are aware of the time and the location of his or her annual meeting.* Please note that the functions of the MSTP IDP committee are not meant to duplicate or replace the primary guidance provided by the Ph.D. dissertation mentor, the student’s dissertation committee, or the degree granting department or program responsible for each student. Instead, the mission of the MSTP IDP committee is to augment those activities, and represents a wonderful opportunity to help each student reach their goals, overcome potential obstacles to reaching those goals, and to ensure that the student meets all the requirements of the Program. As a result, the IDP is an essential and required part of the training itself.

If the IDP committee identifies substantial problems, the Director and Associate Director for Scientific Programs will advise the student on action to take and, as appropriate, will coordinate with the dissertation committee liaison IDP member to resolve the concern(s).

Students should select the members of their committee carefully. Below is an outline of how a student’s committee will be composed.

**COMPOSITION OF THE COMMITTEE, Guidelines for students:**

**All students:**

2 members of the MSTP Executive Committee (Assigned for you as part of the IDP Schedule Process)

**Students in Med 2+ to recruit below faculty:**

- **For rising Med 2+ students:**

Recruit 1 to 3 physician scientists and/or physicians on the faculty that work in an area that is of interest to you (clinically/translationally) and who you feel would appreciate the type of research that you will pursue during graduate training. These faculty members will grow to know you over the years of graduate and then Med 3/4 years, serving as advisors, advocates, and “connectors” in the transition back to med 3, away clerkships, and residencies.

- **For rising Grad 1+ students:**

Recruit 1 member from your BIMS degree-granting program

- **For rising Grad 2+ students, once you have formed your thesis committee:**

Add a PhD Thesis Committee Representative: a faculty member, other than your mentor. This person needs to be an approved MSTP “Mentor” but may be the same as the BIMS representative above if that person is also on your PhD committee.

- **For rising Med 3+ students:**

Focus on transition to residency/fellowship/postdoc—thus, the role of the physician-scientist(s) and physician(s) on your committee (above) plays an increasingly important role. It’s not too late to recruit these sorts of individuals if you hadn’t done so until now but it’s better if done while still in the research portion of your training.

Thus, the student forms their core IDP committee during the second year and its composition usually remains in place for the duration of their training; however, the relative role played by each advisor varies, depending on the stage of training of the student. In addition, students frequently meet with individual advisors rather than the entire committee as the need arises.

*(see also [Appendix C](#) – IDP committee )*

## ***MSTP Curriculum***

---

A critical aspect of the UVA MSTP is that physician-scientist training is integrated across all years. Thus, MSTP Students are not simply medical students for two years, PhD students for three plus years, and medical students again for one to two more years. The curriculum for the MSTP students has been optimized for promoting your development as physician scientists.

The MSTP curriculum has been substantially changed with the 2010 entering class in concert with the implementation of the Nx Gen Medical Curriculum. There is no longer designation of Years 01 and 02 as in the past. Rather, the Medical Curriculum is designated as “pre-clerkship” and “clerkship” training. Nevertheless, for the sake of simplicity we present the MSTP curriculum on a calendar basis.

### **Medical Curriculum Course schedule and description:**

<https://med.virginia.edu/admissions/curriculum/>

#### **Year 1**

Beginning with the Fall Semester of 2010 MSTPs will take the entire standard pre-clerkship Medical School Curriculum plus the following additional MSTP specialty courses: 1) Fall and Spring Semester: Molecular Basis of Human Disease (BIMS 8131/8132); 2) the monthly MSTP Research In Progress (RIP) dinners (BIMS 8171/8172); and 3) Spring Semester: the MSTP journal club (PATH 8470). In the summer before Med 1, students receive 6 credits for MED 8678 MSTP Summer Program (one 4-week Lab Rotation).

#### **Year 2**

During the summer between Med 1 and Med 2, MSTPs will complete two four-week lab rotations (MED 8678). In the fall they will continue with the NxGen Pre-Clerkship curriculum. In addition, they will be registered for the MSTP RIP course (BIMS 8171/8172). During the summer between Med 1 and Med 2, students receive 6 credits for MED 8678 MSTP Summer Program (two 4-week Lab Rotations).

In the late summer (usually close to September 1) students will need to complete the online GSAS/BIMS/BME application which includes submitting an ORIGINAL transcript from your undergraduate institution. This should be requested by the student. Having an extra copy of a transcript will help students when applying to be nominated to a training grant in your degree program. New letters of recommendation are not required and neither are application fees. Additionally students do not need to participate in the interview process.

### **Summer Lab Rotations: MED 8678**

Students are required to identify a PhD lab based on the three rotations completed during the summers. Med 1s are to complete their first rotation in the July before med school orientation begins. After the completion of Med 1, they are required to complete two four-week rotations. Students must arrange these rotations on their own by contacting the PI and discussing potential projects. The purpose of the rotations is to find a mentor to work with during a student's grad school years.

**Before winter break during their Med 2 Year (prior to board study), students must select a mentor and collect signatures on the MSTP Declaration Form. The form is then submitted to the MSTP Assistant Director.**

### **USMLE and Grad School Entry:**

The Medical Curriculum will finish in December of the second year, at which time students are given time to study for USMLE Part I by the deadline established by the Medical School. Passing USMLE I Part I is required to continue in the MSTP. Failure to pass USMLE I will result in an automatic administrative review of a student's status in the program.

Once a PhD Mentor has been selected and the student has taken the USMLE, Med 2s complete a clerkship as assigned in their respective Colleges. Students should follow all deadlines and policies related to the clerkship as outlined by the Clerkship Manual (given to all Med Students).

### **Med School Credit Transfer:**

Due to the revision of the BIMS minimum credit hours to graduate requirement during the summer of 2012, all MSTPs entering the program will be granted a total of eight hours of transfer credit for their medical school curriculum. Historically, the BIMS awarded MSTPs a third of the total required credit hours as transfer credit to count toward their graduate hours. As such, this policy will be upheld despite the change to the BIMS course structure which includes a reduction in the number of credit hours required to graduate to 24. Additionally, MSTPs entering BIMS earn an additional nine credit hours for BIMS 8131/8132, 8171/8172, and PATH 8470 taken during their Med 1 and 2 years. \*It is important to note that Biomedical Engineering (BME) is not considered a part of the BIMS/Graduate School of Arts & Sciences and therefore the credit hour transfer policy does NOT apply to those students entering BME.

### **Year 3 – 1<sup>st</sup> Year in Graduate School**

As of August 2012, the BIMS curriculum degree requirements changed as a result of the revision of their curriculum. All first year BIMS graduate students are required to take BIMS 6000 during their first semester. However, the majority of MSTPs will be able to exempt this course because of extensive prior coursework in Medical School. A letter from the program adviser is required for exemption. Decisions regarding what modules a student should take are determined by the

degree granting Ph.D. Program Director. For more information about the academic requirements for a particular program, please consult the BIMS/BME website.

### Years 4-6 (completion of your PhD)

These years are devoted to primarily to the completion of dissertation research projects and one to two additional advanced elective specialty courses as desired (these courses should be taken on an audit basis unless instructed otherwise by the Ph.D. Programs). Although variable depending on the nature of your dissertation projects, the target is for MSTP students to complete the graduate training portion of the program in four years or less. However, the emphasis **MUST** be on doing rigorous, high impact, hypothesis-based research, not on the duration of training.

**MSTP's should plan to defend during their fourth year of graduate training and reenter Medical School between March and July of that year.**

### Years 7 and 8 (Clerkship Training)

Upon completion of the dissertation project and defense of the thesis, students are required to complete their clinical training for the M.D. degree. Eight months (or 32) elective credits are granted for completion of the PhD, thus reducing the number of ELECTIVES (4th year clinical rotations) the students need to take to complete their MD-degree. It takes 12 months for students to complete their REQUIRED clerkships (3rd year clinical rotations). As such, students should try to complete Ph.D. requirements and return to the third year of Medical School (clerkships) between early March and the July entry date. Should they reenter Med School later than July, MSTPs may have difficulty completing third year requirements in time to take and pass both Step 2 CS and CK by November 1 of their Med 4 year. November 1 is a deadline set by the Medical School and is non-negotiable.

### Med School Clinical Years Requirements:

Third Year: Four 12-Week Periods	Fourth Year: 10 Weeks
Period 1: Family Med, Psychiatry, Neurology (4 weeks each)	DxRx (2 weeks)
Period 2: Surgery (6 weeks), Peri-Op (2 weeks), Surgery Subspecialties (Two 2-week rotations)	Internship Prep (2 weeks)
Period 3: Peds and OB/GYN (6 weeks each)	Geriatrics (2 weeks)
Period 4: Medicine (6 weeks), Emergency Med (3 weeks), AIM (3 weeks)	Acting Internship (ACE) (4 Weeks)

## *Student Participation Requirements: First Year*

---

<b>Checklist for Year 1 MSTPs</b>	
	Attend all MSTP Required Events as outlined by the policy.
	Complete one four-week (or longer) rotation during the summer before Med 1 year begins.
	Register for Health and Dental Insurance.
	Complete MSTP IDP and attend MSTP IDP Committee Meeting the scheduled by the Assistant Director.
	Select two summer rotations in the early Spring. Each is a required minimum of 4 weeks (8 total weeks) to be completed in the summer between Med 1 and 2 year.
	Successfully complete all coursework requirements as detailed by the Medical School. If tutoring is needed, please contact the Director, Assistant Director, or the Office of Student Academic Support and Strategic Programs.
	Start planning and organizing IDP Committee

<b>Courses</b>	
<b>SUMMER</b>	
Med 8678	MSTP Summer Program: 4 Week Lab Rotation
<b>FALL</b>	
Med 6513	Social issues in Medicine 1
Med 7751	Systems 1
Med 7718	Clinical Performance Development 1
BIMS 8131	Topic: Molecular Basis of Human Disease
BIMS 8171	Research in Progress Colloquium
<b>SPRING</b>	
MED 6513	Social Issues in Medicine 2
MED 7719	Clinical Performance & Development II (CPD)
MED 7752	Systems 2
BIMS 8172	Research in Progress Colloquium
BIMS 8132	Topic: Molecular Basis of Human Disease (ends before Spring Break)
PATH 8470	MSTP Journal Club: Readings in Molecular Medicine (Begins just before Spring Break and runs until the end of the semester)

## Student Participation Requirements: Second Year

Checklist for Year 2 MSTPs	
	Attend all MSTP Required Events as outlined by the policy.
	Complete two four-week (or longer) rotations during the summer between Med 1 and Med 2. Eight weeks total minimum.
	Register for Health and Dental Insurance.
	Participate in the Clerkship Transition course offered by the Medical School.
	Choose a mentor and notify the Director and Assistant Director
	Complete MSTP IDP and attend MSTP IDP Committee Meeting the scheduled by the Assistant Director.
	Register and take the USMLE Step 1 prior to the Medical School Deadline.
	Successfully complete all coursework requirements as detailed by the Medical School. If tutoring is needed, please contact the Director, Assistant Director, or the Office of Student Academic Support and Strategic Programs.
	Return to school and complete a clerkship, a rotation, or begin working with your mentor. You may also be able to complete modules per your program or adviser's suggestion.

Courses	
<b>SUMMER</b>	
Med 8678	MSTP Summer Program: select TWO 4 Week Lab Rotations (8 weeks total)
<b>FALL</b>	
Med 7720	Clinical Performance & Development 3 (CPD)
Med 7753	Systems 3
BIMS 8171	Research in Progress Colloquium (1.0 credit)
<b>SPRING</b>	
Clerkships	It is the Executive Committee's recommendation that you complete one clerkship prior to beginning graduate work in the lab.
BIMS	BIMS Modules: these should be determined through discussion with the student's mentor.

## Student Participation Requirements: Third Year and Above

Checklist for Year 3+/Grad 1+ MSTPs	
	As a new Grad 1, participate in all BIMS/BME orientation activities and required courses.
	<b>After</b> your first year of Grad School, you will not be on MSTP Funds. For all benefits/stipend/coursework questions, please contact your program administrator.
	Register for Health and Dental Insurance.
	Successfully complete all PhD requirements as instructed by the degree granting department.
	Attend all MSTP Required Events as outlined by the policy.
	Complete MSTP IDP and attend MSTP IDP Committee Meeting the scheduled by the Assistant Director.
	Participate in the Clinical Skills events as organized by the Student Committee.

## Student Participation Requirements: Nearing the end of PhD

<b>Checklist for Students approximately 12 months before projected thesis defense date</b>	
	Continue to attend all MSTP required Events as outlined by the policy.
	Complete MSTP IDP and attend MSTP IDP Committee Meeting scheduled by the Assistant Director.
	Register for Health and Dental Insurance.
	Consider your defense date carefully so as to allow ample time for required clerkships, preferred clerkships, away rotations, and residency interviews in Med 4 year. Ideal re-entry dates are between March and July.
	In order to determine possible clinical interests, plan to attend Grand Rounds in different departments, shadow physicians in the clinics, contact and meet with physicians to discuss clinical and research goals in order to determine the best residency programs for you.
	Contact and schedule a meeting with Dr. Kedes or Dr. Mandell to discuss the timing of transition back to Clerkships and steps to help prepare you for transition back to Medical School.
	Notify the Assistant Director of your intentions to defend and possible timing of your return to Clerkships.
	Contact and schedule a meeting with the Clerkship Coordinator in the Medical School Student Affairs Office to discuss and plan transition back to Medical School and to alert her of your clerkship interests
	Notify MSTP Assistant Director and your PhD Program Administrator regarding your defense date and the date you will to transition to 3 <sup>rd</sup> Year of Medical School. This is important information as it affects your stipend.
	Contact and schedule a meeting with one of the members of the MSTP Clerkship Transition Committee (Med 4s).
	Attend the Transition Course as outlined by the Medical School policy.
	Complete all necessary forms for GSAS or GEAS to have PhD conferred (contact your Program Administrator)
	Successfully complete defense of dissertation per PhD granting department requirements.

## Student Participation Requirements: Clerkship/Selective Years

<b>Checklist for Students in Med 3 &amp; 4</b>	
	Continue to attend all MSTP Required Events whenever possible. It is understood that you will be on-call or spending many hours on the wards and in the clinics. Please notify the Assistant Director if you're not able to participate in these activities. When not on a clerkship you are required to attend MSTP events (e.g. RIP) except if away at residency interviews. Please schedule personal time around known MSTP events.
	Complete MSTP IDP and attend MSTP IDP Committee Meeting the scheduled by the Assistant Director.
	Register for Health and Dental Insurance.
	Continue the dialogue with physicians regarding your clinical preferences and top residency programs.
	Carefully plan your clerkship schedule so that you are able to request letters of recommendation from those attendings in your clinical interest area.
	Plan electives and away rotations based on your clinical interests.
	Apply and interview for Residency programs.
	Complete MED 9080: DXRX, Health Care Policy
	Successfully complete Medical School Selectives/ACE.

## ***MSTP Handbook Appendices: 2015-2016***

---

### **Appendices**

---

**Appendix A: Organizational Chart** **30**

---

**Appendix B: Research in Progress Presentation Guide**

- B-1: RIP Research Presentation Guidelines **31**
  - B-2: Summer Rotation Presentations **32**
  - B-3: Clinical Case Conference **35**
  - B-4: Hot Seat Guidelines **36**
- 

**Appendix C: IDP Committee Guide** **37**

---

**Appendix D: Individual Development Plan Template** **38**

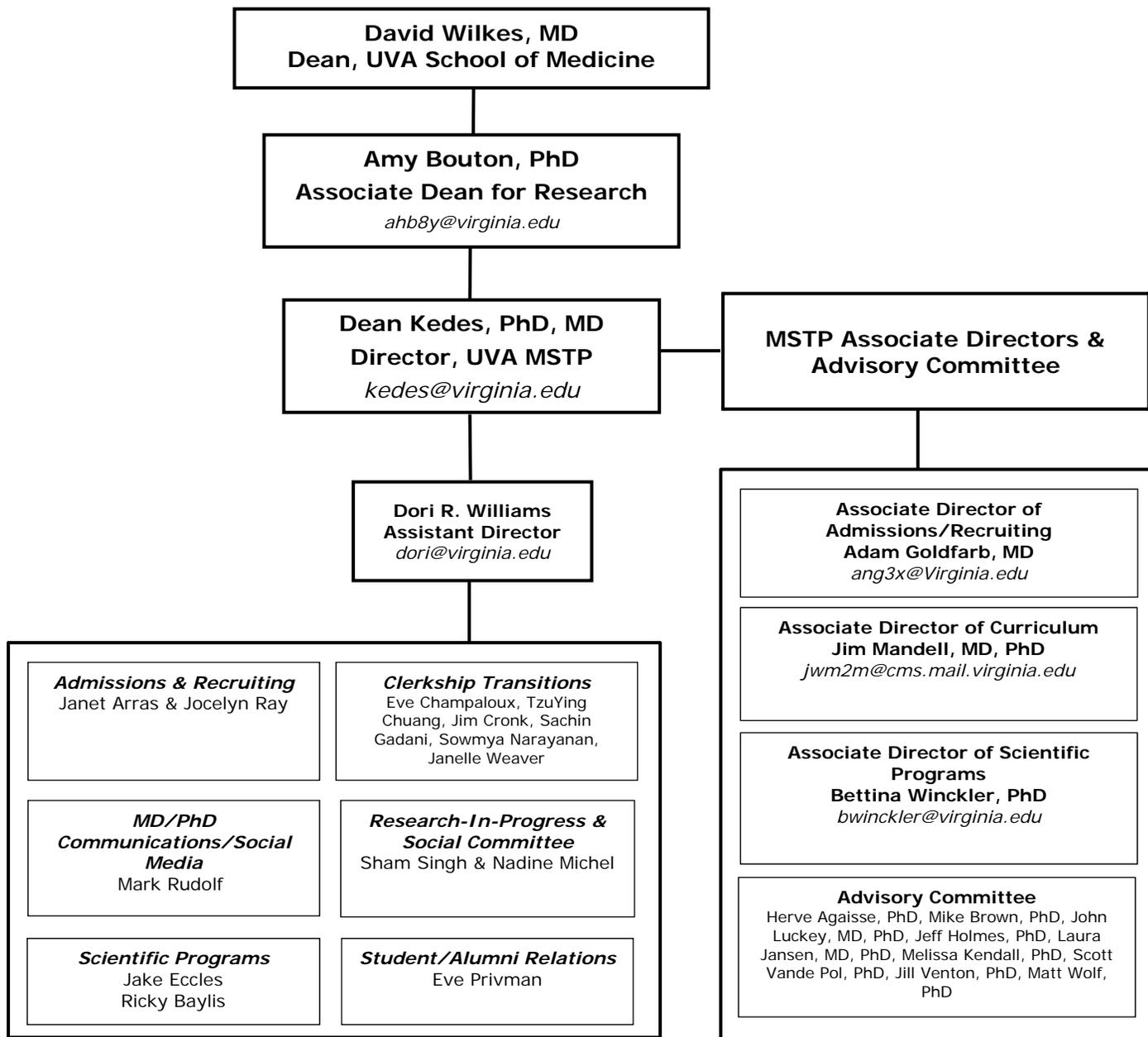
---

**Appendix E: Student Advice for Choosing a Mentor** **40**

---

**Appendix F: Guide to Clerkships and the Match Process** **43**

---



### **Appendix B-1: RIP Research Presentation Guidelines**

1. Presentations are 25 minutes plus 10 minutes for questions at the end. You will likely be interrupted with some questions during the presentation, so your talk should be completed in approximately 23 minutes. You will be timed and if you are not done by 30 minutes total you will be asked to end the talk whether finished or not. As such, please practice your talk to ensure you cover everything you want in no more than 25 minutes.
2. Two research presentations are usually scheduled for one RIP session.
3. In most cases, it is best to start your talk by outlining why the topic area is important, including relating your area of research to human disease.
4. During or following your talk, pose 3-5 questions to stimulate student participation.
5. Dr. Kedes will ask all faculty not to ask questions at the end of your presentation until there have been at least 2 student questions. Faculty of course can ask points of clarification during talks.
6. Please include material in your RIP presentation that is incomplete or controversial. Don't feel like you should have a complete story before presenting data - take advantage of the great input your student colleagues can provide early in a project.
7. Include a slide near the end that summarizes ongoing studies and future directions.
8. Consider presenting a last slide to address the questions, "How does this research project relate to my long term plans of being a successful physician scientist?"
9. The RIP is intended to be MSTP's primary forum for exchange of research ideas so please let the Program Assistant Director or Dr. Kedes know if you have additional suggestions.

**Appendix B-2: Hints and Suggestions for Summer Rotation Presentations, by James Thomas**

Research in progress is an excellent means by which aspiring scientists who must be adept at communicating information become so. People want to hear you talk, they are very forgiving, and you are (at least in the beginning) presenting a limited amount of information that you know well (even though it doesn't seem like it). All of this boils down to one thing: a low stress atmosphere. So above all, realize that the presentation is important for your development as a scientist, but nowhere near the end of the world.

With any presentation, I experience some trepidation at the thought of getting up in front of people and talking. They say that speaking in public is the most fearsome thing to the average American. Death is number two.

The following list is just something I wrote to aid you in preparing for a RIP presentation. You can take it with a grain of salt or you can study it like a daily devotional. Either way, it's just some advice that is there if you need it. Here it goes:

1. Know what you are talking about. This, of course, is rule number one. Not only does knowing relieve stress, but it gives you confidence which will only make the presentation that much better. Not to mention, you're wasting everyone's time (including your own) by not knowing what it is you are presenting. Now there are many ways to go about doing this. You all are gifted individuals who have excelled thus far in life and probably know very well how you learn best. This could be by doing, by seeing, by listening, or, my personal favorite, good old-fashioned elbow grease. When you are presenting your research, if you don't know what you're talking about, everyone else in the room will know you do not know.
2. Relax. Worry and stress are your enemies. If you're like me, you might hold the belief that anxiety is "the engine driving the train of your success." While this might be true when you are pulling an all-nighter and the alternative is spending the eight hours before test time checking your eyelids for light leaks, when you are doing a presentation it is a detractor. It's very hard to pay attention to a laser pointer that bobs around like a haystack in a hurricane.
3. Practice. "Practice does not make perfect. Perfect practice makes perfect." Vince Lombardi said that. He won Super Bowls. You do not have to win Super Bowls, but practice does help. How much is up to you (see below).
4. Know your audience. You don't want to stand up in front of the room and lecture for 20 minutes on yeast two hybrid screens because chances are fifty percent of the room have either done more yeast hybrids than you ever will, given a hundred lectures on yeast two hybrids, or invented yeast two hybrids. Of course, this is a slight exaggeration, but you see my point. Give us the good stuff. If yeast two hybrids are all you did, certainly talk about them, but also put

*Appendix B: Research in Progress, Clinical Case Conference, and Hot Seat Guidelines and Suggestions*

them into context (like how you're trying to find a novel binding partner for the CF chloride channel by using yeast two hybrids).

5. Have fun.
6. Take some chances. Now is the time to learn and develop your style in a place where you won't be shot down for saying something a little off the wall. It might even come off great in which case you can remember this for the future.
7. **LEARN FROM THE EXPERIENCE!!** If you have a horrible presentation and you just feel awful, go and do something to completely forget the experience for a day or so. Maybe more depending upon how bad it was. Then go back to the presentation and think about what happened. What did you do well? What did you not do so well? Take those things you did well, and keep them in your repertoire. Take the things you didn't do well, and burn them into your memory as things to avoid. This is by no means the last presentation you will ever do. Take the lessons you have learned and carry them forward. And remember: you will only get better at this.

**Helpful hints:**

- A. Memorize the first two or three sentences of whatever it is you are going to say. Once you hear your name, get out of your chair, and walk to the front of the room, you've done the hardest part of the presentation. You don't want to blow all of that hard work by freezing up. So, just know exactly how you're starting off. After you say the first two or three sentences, the rest is a breeze.
- B. I would say, make no more than 20 slides. The presentation you are going to make is to be somewhere in the neighborhood of fifteen minutes. There are usually three other students who present on the same day. Taking into account announcements for the program, faculty introductions, and set up, time is tight. Each slide you make is probably important and deserves its time on the screen. You don't want to be racing through 200 slides in fifteen minutes. You might have to serve Dramamine as an appetizer during the RIP dinner.
- C. When in doubt cut it out. Short and sweet is the key here. You want to take everything you have done during your rotations, boil it down, and present it in a way that everyone knows what you are talking about. It's a lot harder than it sounds.

As far as the topic of practice is concerned, what I do is I take all of my data and arrange it in some sort of order. The more rotations you have, the more complicated it gets, but first order the data and understand it like the back of your hand. This usually takes me about 10 times going through it in my head and talking about it. Then, forget everything you have learned and

*Appendix B: Research in Progress, Clinical Case Conference, and Hot Seat Guidelines and Suggestions*

focus on the introduction of your data. Make it simple and easy to understand, yet comprehensive and interesting (sounds easy, right?). Then, go straight from your intro to your data (that you haven't looked at recently). Can you understand the data at first glance based upon your intro? If you can, you've done your job. If not, tweak the intro. And be persistent. This comes naturally to very few people, but it does not mean with a little hard work, you can't be fantastic at it. Indeed, probably the best presenters never were "naturals."

- D. You don't have to have the best data in the world. People just want to see you've learned something. That's the whole point of this presentation when you get right down to it. If the best data you have is a gel that is slightly burned in the corner but illustrates a good point, show the slide. Remember the quality does not have to be publishable. Of course, it's great if you can get it there, but if not, don't fret.

### **Appendix B-3: Some Guidelines for giving MSTP Clinical Case Conference**

*By Mike Salerno, M.D., Ph.D.*

- 1) Pick a clinical case that is particularly interesting to you. Perhaps it was a case that influenced your decision to pursue a particular career pathway, or perhaps you just found the case interesting on its own merits. It is probably easiest to do a case that you saw clinically, but it is not impossible to put together a good case presentation from reviewing the chart of a patient similar to one that you have seen (and medical records is open 24 hrs/day).
- 2) Plan to present your case in 25 minutes. It is probably best to present a single patient during this time as it will give you adequate time to present the H&P, discuss salient findings, develop a differential diagnosis, discuss the management of the case, and present some interesting facts about the medical condition that the patient had. You can also include any basic-science information about the case that you think is interesting.
- 3) Present the case the way you usually present and H&P for morning report
  1. CC
  2. HPI
  3. PMH, Meds, Allergies, SH, FH
  4. ROS if pertinent
  5. Initial labs and diagnostic studies (CXR,EKG,etc.)
  6. Assessment and Differential Diagnosis
  7. Actual Diagnosis, medical course, medical management, follow up etc.
  8. Discussion of the medical condition/pathophysiology

#### Appendix B-4: HOT SEAT RIP Guidelines

Rather than having in depth research presentations by a couple of students, the format of the hot seat sessions is a roundtable where selected individuals give a brief 4-6 minute synopsis of their ongoing research (first and second year students can talk about rotations of research done as undergraduates). We then open the floor for students to ask the student questions to clarify their understanding of the project. Following this period, The Director, Associate MSTP Director for Scientific Programs, and other invited faculty will quiz the students, not the presenter, on their understanding of the project. The intent is to get all students participating and asking those questions you had but did not have the courage to ask. The Discussion tends to be far ranging and the format encourages an in depth consideration of experimental methodologies, pros and cons thereof, and potential alternative experimental approaches. The goal is to gain experience in explaining your research quickly and succinctly to a diverse audience, and for everyone to become familiarized with the research interests of their fellow MSTP students. In addition, the format gives you immediate feedback on the effectiveness of your presentation, based on assessing the questions of your fellow students. For example, I forgot to state my major hypothesis, or I failed to explain the experimental design, rationale, etc. The goal is to help you recognize how you might have done a better job at explaining what you are doing and why. We will strongly encourage your fellow students to ask questions to help clarify your presentation since those not asking questions will likely be the target of subsequent questions asked by the faculty panel.

Here are some suggestions for you to think about in preparing what you are going to say.

- **Identify your audience** and gear your presentation to the individuals in the group who know the least about your topic area. This is a critical skill for all effective communication including grant writing. Those more familiar will appreciate the refresher.
- **Identify who you are**, what lab the work was done in, and perhaps a few words about your overall long term professional interests.
- **Always open with a sentence that convinces your audience that what you are about to say is important and worth their attention.**
- **Orient the audience:** State in 1-2 sentences your project and clearly identify the problem, question, or hypothesis you hope to address.
- Tell them how you intend to **address the problem/question/hypothesis** and the rationale for choosing the experimental approach you selected.
- **State your major findings.**
- **Give a conclusion** that summarizes your findings and what is next.

It is a real challenge to communicate in this fashion but is a skill you must develop to be a successful scientist.

## Appendix C:

### IDP Committee (to be shared with selected advisors)

#### 1. Purpose of committee

The main purpose of the IDP Meeting is to provide the student career advice to optimize their professional growth/development and integration of the clinical and scientific aspects of the student's future career. The committee should not only serve as a source of constructive criticism, advice, knowledge, and career information but also as a support system for the student during the student's career training.

#### 2. Time commitment

The time commitment for the committee is minimal. The MSTP requires that you meet with your committee only once per year (in the late summer when scheduled by the Assistant Director). You may schedule additional meetings as necessary if there are any pertinent problems and issues that arise including possible mentor conflict resolution, etc. You should also feel free to contact individual IDP Committee members as needed for professional or personal advice and guidance.

#### 3. Obligations of committee members

**Disclaimer:** Most positions on the committee are **not** permanent although you will always have two members of the MSTP Executive Committee (MSTP Director or Associate Director Members). Importantly, you need to designate an MSTP-approved mentor from your PhD committee (once formed) to also serve on the IDP committee. This person will serve as the liaison between the IDP and PhD committees and should be someone who is comfortable keeping confidential any topics that you deem sensitive. In the end, the goal of this designated dual committee member is to be your advocate while providing an external perspective of your research progress while also reminding the PhD committee of the time window for your return to Med 3. If for any reason, the interests or focus, whether clinical, scientific, or otherwise, of the student changes, the student, with the help of the members, can add new members to replace past members. Also, if the commitment to the committee becomes overwhelming or if any member feels that he or she cannot meet the obligations of the committee at any point in time, the member can relieve his or herself from the committee.

- a. Serve as an advocate for the student.
- b. Advise the student and provide feedback on scientific progress in graduate school.
- c. Monitor the progress of the student as well as help to identify potential problems with the student's research project or mentor.
- d. help to integrate the student's research focus with the student's clinical interests when choosing residency programs or making career decisions.

#### 4. Obligations of Student

- a. Provide copies of MSTP student individual development plan to the committee each year (due date determined by the Assistant Director).
- b. Keep members of the committee abreast of progress and changes in scientific and/or clinical interests.
- c. Inform all members in a timely fashion about any problems, requests, or changes in interest or the focus of the committee.
- d. Make use of resources made available by the committee members.

## Appendix D: MSTP Individual Development Plan

Name:

Year of Entry:

### All Students please respond to the following:

1. **Summer Lab Rotations:** Please list the lab rotations you have completed or the ones you are considering (list faculty mentor, project title, and date):
2. **Clerkships:** Which clerkship(s) have you completed or plan to complete?
3. **Student Advisory Committee (SAC):** After you first year in the program, you should begin to establish a group of individuals who you feel will be advocates for you and your career goals during your time in the MSTP. List any individuals you have asked to serve on your SAC:
4. **Ph.D. Degree Program Selected** (or the ones you're considering):
5. **Publications:** Please attach a list with the following categories - published, submitted manuscripts, manuscripts in preparation, and abstracts. All published papers should include a PMID.
6. **Presentations, Conferences, & Special Courses:** Please list any presentations you have made at conferences, RHPs, etc. Indicate the meeting, where it was held, the date of your presentation, and the title of your talk or poster. If you attended a course away from UVA in order to learn specialized techniques or to gain exposure to different research methodology, please describe that experience here as well.
7. **Research Summary:** Please provide a 1 paragraph summary of your thesis or rotation project, as well as a list of specific techniques you have mastered. These descriptions will be compiled and distributed to other MSTP students in order to foster collaborations and assist students who are picking a thesis lab.

### MSTP's In Graduate School, please complete the following:

1. **Dissertation Mentor:**
2. **Ph.D. Program Candidacy Exam (proposed date of completion):**
3. **Dissertation Proposal Exam (proposed date of completion):**
4. **Dissertation Committee Members:**
  - a. **MD/PhD Program Representative:**
5. **Funding:**
  - a. List the outside funding (e.g. fellowships) sources to which you have applied:
  - b. If you received an outside fellowship, please list here and indicate the funding amount and duration:
6. **Dates of Dissertation Committee Meetings:**
7. **Anticipated defense date (or year):**

***All Students: Please complete the next 2 sections on setting goals***

### Planning Ahead:

1. Anticipated thesis defense date (or year):
2. Clinical Grand Rounds and Seminars are excellent ways to help make decisions about a residency program. Which Clinical Rounds/Seminars are you planning to attend?
3. What Elective Clerkships or Away Rotations do you plan to take?

4. To which Residency specialty do you plan to match?

### Setting Goals:

**Discuss the following questions regarding your goals (this can be in the form of bullet points or prose):**

1. What are my long-term career objectives?
2. What is important to me in a career?
3. How do non-work issues (family, lifestyle, etc) relate to my career aspirations?
4. What strengths will help me achieve the goals I've outlined?
5. What issues, if any, have I identified as possible barriers to my achieving my career goals?
6. What skills and resources do I need to master in order to achieve my goals?
7. How do I feel I am progressing toward my goals over the last year?
8. How might the UVA MSTP help me achieve my career goals?

### **Comments and Feedback regarding UVA's MSTP:**

Your opinions and ideas shape the future of the program. Please let us know how we're doing!

## Appendix E: Student Advice for Choosing a Mentor

### Important considerations when choosing a research professor

by Jay Purdy M.D., Ph.D. with additions by later students

1. **Area of research:** this is the most obvious of criteria. The short summaries in departmental literature give only a brief outline and can be used to narrow the field. The only realistic way to get an understanding is by talking to professors. Make a list and call for appointments. Five to ten is reasonable. This also gives you a chance to make judgments on the criteria mentioned below. Make sure that you are interested in the research actually going on in the lab. Some labs are willing to let you go off on a tangent, but this may mean the PhD takes a while longer. On the plus side, you may take more ownership in the project this way, end up with a bigger sense of accomplishment, and create a career path for yourself separate from your PhD mentor. Or the whole thing could fail, and you'll be able to fall back on a project that the lab has working.
2. **Personality of researcher:** As a student will be working with the professor for years, a good relationship is critical. This consideration is often overlooked, although I feel it is more important than #1. No matter how interesting the work, if you hate your professor, life will be hell in the lab.
  - a. *Accessibility.* Many professors are quite busy. Unless they are willing to make a significant effort, they will never have time to discuss problems with students. This risk is large in faculty with clinical responsibilities (they see patients). A large lab will have post-docs that can answer questions, however you should feel comfortable with this type of arrangement.
  - b. *Relationship.* Some people get along better than others. You must feel comfortable talking and asking questions of your professor
  - c. *Managerial style.* While related to the above, this is clearly a separate consideration. Professors range from those who want reports of each gel to those who won't talk to you for years (literally). Be sure your professor isn't too hands off or too hands on for your liking. Make sure your professor will give as much constructive criticism as you need.
  - d. *Temperament.* Professors can be thought of as kings and queens of their labs and some act like it. Some people are unaffected by being the focus of fits of rage, others are quite bothered.
  - e. *Environment.* Labs usually reflect the professor's tastes and vary greatly with cleanliness and order. While there is the aesthetic component to this question, many labs handle radioactivity and other biohazards that make mess, clutter and dirt risky. Find a lab with conditions that allow you to work comfortably. If you dislike working with animals, avoid it. Be up front with your mentor about whether or not you want an animal project.
3. **Choosing rotations:** After a full rotation through a lab, a professor's personality will be readily apparent. However, students get only three rotations out of the hundreds of possible labs.

Thus, it is important to make decisions based on the above before choosing their rotations. I suggest:

- a. *The initial interview.* Take the time to think about each of the above. If the professor cancels the appointment or cuts its short, it is likely that you will receive the same type of treatment as a student. Look around his/her office and lab and draw conclusions by what you see. Discuss how long a PhD would take. Be explicit in your expectation of how long a PhD should take.
  - b. *Older students.* This is a valuable resource often overlooked. Find out what other students think of possible professors. Believe what they say. If the word on the street is that this professor lacks funding, keeps grad students for ten years, or is incredibly busy with non-research activities, do not choose the lab.
  - c. *Students, lab techs in that lab.* Ask them for good points and bad points. Find out how long they have been there and how long it has taken past PhD students to get their degree in that lab. If the last PhD took 10 years, watch out.
  - d. *Post-docs.* Often times, post-docs will be your most valuable resource in a lab. It is important that they are available and willing to help, particularly with troubleshooting day-to-day difficulties.
- 4. Funding situation.** One of the most discouraging things that can happen is to have a professor move in the middle of your work. This is directly related to funding so ask point blank about their grant situation before making any permanent decisions (I'd even suggest before a rotation). Ask if they are happy here, if they are considering moving, etc. Ask other people about their funding situation. Ask them directly too (if you're shy, say 'My program director requires that I ask'). Oh, MSTP funds you for your first year of grad school. After that your mentor or training grants must fund you. So, make sure the PI knows this and that he/she has money for you and your reagents for the course of grad school.
- 5. Other lab personalities.** Surprising to me, a large percentage of labs contain personnel that dislike coworkers to the point of affecting the work generated. Situations of open lab warfare not only diminish the quality of data but make life miserable, even for innocent bystanders. Ask lab workers about conditions and about interpersonal lab relationships.
- 6. Know yourself:** The most important questions are those about yourself. If there was one question in particular that was supremely important, it is this: Do you enjoy working independently or do you enjoy a close mentorship with constant feedback? If you can answer that question accurately and can find a mentor who fits your learning style, you will have tremendous success.

## Appendix F: Guide to Clerkships and the Match Process

A collaborative document initiated by Laura Adang '09, Brandon Kremer '09, Mark Hoofnagle '09, and Rooshin Dalal '09 and updated by UVA MSTP clerkship students

### Important Websites

- UVA residency handbook
  - <http://www.med-ed.virginia.edu/handbook/residency/index.cfm>
  - Contains information, including Vital Signs Newsletter, which has the dates and to-do lists
  
- National Residency Matching Program (NRMP)
  - <http://www.nrmp.org/>
  - Needed for registration to the regular match, submission of your match list
  
- Electronic Residency Application Service (ERAS)
  - <http://www.aamc.org/audienceeras.htm>
  - Needed to prepare your electronic CV for residency applications
  
- San Francisco Match (SF Match)
  - [www.sfmatch.org/](http://www.sfmatch.org/)
  - Needed for early match programs only (Child Neurology, Ophthalmology, Plastic Surgery)
  
- Instructions for letters of recommendation
  - <http://www.med-ed.virginia.edu/handbook/residency/vitalsigns/2009/feb-files/lettersOfRec.html>
  
- UVA Host housing program
  - <http://hoosonline.virginia.edu/site/c.ggLQIOBKpF/b.3425571/>

### Vocabulary

- “Clerkships” – required third year rotations. These include Medicine, Surgery, Pediatrics, OB/GYN, Family Medicine, Psychiatry, and Neurology. Each of these is capped with a standardized, multiple choice, 100-question “shelf” exam on the last day of the clerkship.
  
- “Electives” – fourth year rotations in a field of your choice. These include inpatient, outpatient, and research experiences.
  
- “Selectives” – required electives that were created when curriculum reform shortened

third year. They removed sub-specialty rotations from four of the required clerkships (Medicine, Surgery, Psychiatry, and OB/GYN) and put them in the fourth year. This allowed them to offer electives early in the fourth year, when you might want letters of recommendation and experience in a potential field.

- AI/ACE – Stands for “Acting Internship” and “Advanced Clinical Elective”, respectively. Your first ACE is designated as an AI; they are interchangeable terms. This is the only other required thing for fourth year. It’s a four week-long rotation in your field of interest where you supposedly act like the intern. It’s a good way to learn how much abuse interns get, as well as a chance to get good letters of recommendation.
- Fast track—Most schools offer special residency tracks for physician-scientists. These programs entail one less year of residency (mostly through a loss of elective time) and one year more of research at the end of your fellowship. Many programs also offer a guaranteed a fellowship position at your residency institution in the field of your choice.

### **Before You Return to Medical School**

- Think about timing. As of 2009, third year starts at the end of April and goes until the end of February, divided into four-week blocks. Some rotations (Peds, Surgery, Medicine) are two contiguous four-week blocks. Going back as early as you can gives you the freedom to take other electives (if you want more experience in something or just don’t know what you want to do) as well as take time off for vacation, residency interviews, studying for boards, etc.
- Contact the Clerkship Coordinator as soon as you think that you might be going back. She schedules all of your clerkships (your third year rotations) and is pretty important for fitting the fourth year schedule around those.
- The MSTP advises that you schedule your dissertation defense 3-8 weeks before you return to clinics. Since your mentor is responsible for paying for you until the day that you return to clinics, you may want to schedule your defense just about 3-4 weeks before you return to clinics. That way you’ll have time to do revisions and still have a short break before your first rotation.
- There is no return during December, and with new required rotations, you cannot return as late as January and still do an elective. This means that the latest you can return is November (there’s one return per month). Most people who have been through it suggest returning in October at the latest, to build in a little breathing room.
- As soon as you get a return date, make sure to let the MSTP office and your BIMS Administrator know when it is so that they can initiate changing your funding from your

mentor to the MSTP on the day you start clinics. You'll be on stipend when you return, so you'll be paid on the 5<sup>th</sup> of the month for the month to come.

- Contact Jill Clarke. She schedules your fourth year rotations, namely the electives and selectives. In addition, she's in charge of all of the paperwork that defines you as a medical student, so she'll get paperwork moving, which will be essential for everything.
- New ID - With Jill's paperwork in hand, go to the ID office in Hospital West

### **Application Requirements to Participate in the Match**

- Medical Student Performance Evaluation (MSPE) letter from Dean Pearson. For this appointment, you must have a CV, Biosketch, and a rough draft of your personal statement
- Personal Statement (1 single-spaced typed page). Can be tailored to different programs, as the statements are individually assigned to each place.
- Photographs. These need to be 3.5" x 2.5" and should have a light backdrop so that they can be photocopied.
- Recommendation Letters (3-4). The 4<sup>th</sup> letter should be from your research PI, but only use this one if an optional 4<sup>th</sup> letter spot is available for the school. Always check on the number of letters requested from each school—it will vary from 2-4+. At least one letter needs to be from a physician in your specialty of interest. Again, the letters are individually assigned to each program, so they can be somewhat tailored. It is not a bad idea to get one letter from a medicine attending, regardless of your area of interest. The schedule of attendings for medicine is available on the internal medicine site. If you want to work with someone specific or someone from a specific department, check the schedule, choose your clerkship dates to coincide, and then email the medicine clerkship secretary to make sure you get put on that team.
- You may also need a letter from the head of your clinical department (check each school's residency website, as provided by ERAS, for requirements). Medicine will contact your class over the summer to arrange for this letter to be written following a meeting between you and a senior department representative (Dr. Amy Tucker in 2008). For pediatrics, the letter is rarely required (UCSF, Stanford, Wash U, and Duke wanted it last year) and typically written by Dr. Wilson.
- ERAS registration and application. This is a comprehensive online CV program. It takes a long time to complete, so start working on it as soon as you can.

- NRMP registration in the summer to submit your list in February.

### General Tips

- Do everything as early as possible: submitting your application, obtaining letters, and responding to interview invitations.
- Although there is some flexibility, and you can apply to more than one type of program (i.e. both IM and Peds), you should decide your career path by May-June of your fourth year. Program directors do speak with one another.
- Ask attendings as soon as you have finished working with them for letters. Can they give you a “strong letter of recommendation”? Remind them in June-July with an email containing the LOR instruction sheet from the UVA handbook’s site (see above), your CV, and your personal statement.
- Meet with your faculty advisor early in August to have him/her review your application, give you an estimate of how competitive you are, how many programs to apply to, and which specific programs you should consider given your preferences.
- Many of the top tier programs only interview in December-January, so don’t fill up these dates with more flexible programs if you can.
- Most people that match have 7 programs on their list. For the more competitive fields (Derm, Ortho, ENT, Plastics, Rad Onc), people that match have 14 programs on their list. Most people that do not match have significantly fewer programs listed. You will not like everywhere, therefore interviewing at a slightly larger number of schools is necessary.
- Consider bringing reprints of your papers to your interviews—questions about your PhD will likely constitute a major portion of your interviews.
- Consider making a sheet or portfolio of your outside interests if possible (woodworking, pottery).
- Submit your ERAS application within 5 days after the season opens
- Try to get all your LOR writers to send in their letters by mid-August so that they can all be ready once your application is sent out during the first week of September. Many programs do not send out interview offers until your application is complete.
- Consider bringing a copy of your ERAS application to your interviews so you can refresh your memory about what you wrote (and in case they can’t find your application!).

- Respond to interview offers within 24 hours (4 hours if possible) because interview spots fill up quickly. Programs routinely send out more interview offers than they have interview spots. Save spots though for your top schools, because those may respond last.
- Schools are very good about allowing you to coordinate your visits (i.e. clustering everything on the West coast into one trip).
- Try to arrange your rotation schedule so that you can take vacation (or easy electives) during December and January. This will make interview planning and travel much easier.
- If you did well on Step 1, consider waiting to take Step 2 CK until after January.
- Before each interview, prepare answers to the following questions since you will be asked most if not all of them:
  - Why are you applying in {insert specialty here}?
  - Why are you applying to our program in particular?
  - I noticed you did poorly in {insert clerkship, course, or USMLE here}. What happened?
  - How will your PhD training help you (in your specialty or career)?
  - How do you plan to balance research with clinical responsibilities?
  - Where do you see yourself in 5/10/20 years?
  - Tell me about a patient that you saw on the wards.
  - Variations include, tell me about your most difficult/best patient interaction.
  - What questions do you have for me?
    - You will be asked this many times, sometimes by the same interviewer. Have several backups on hand just in case.
- Thank you notes. There is no rule about this, but since everyone else sends them, you should also. Send one to each person that interviewed you as well as others who took an effort to answer questions for you, show you around, etc. Do this within 1-2 days so that the interview day is still fresh in your mind.
- It is a good idea to have a rotation in your area of interest immediately before you go to interview. This way the topic, new developments/research, and the patients are fresh in your mind.
- Almost everyone wears a dark suit to their interviews. Wear comfortable shoes—you will have to tour every hospital and grounds that you visit.