

CLAS Academic Advising Center

Academic advising for students pursuing majors and/or minors offered by the College of Liberal Arts and Sciences
Call Us: (616) 331-8585 • Visit us On-line: www.qvsu.edu/clasadvising

Pre-Professional E-Bulletin

Week of October 26, 2009

We hope everyone is having a successful semester. As the second half of the semester begins, be sure to keep up with class work and catch up on anything that you may be behind on. Use your time wisely as this is the busiest part of the year. We are only a month away from Thanksgiving and seven weeks from finals week. This time will fly by! Do your best to start projects early and don't wait until the weekend before finals to begin studying and/or writing papers. We wish you the best in these next seven weeks. They are just as important as the previous eight! Good Luck ☺

Click to view our: [CLAS Academic Advising Center Pre-Professional Webpage](#)

1. **Open Houses**
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The purpose of this newsletter is to share information that may be of interest to you. By posting information, it does not mean that we endorse the organizations or services enclosed.

1. **Open Houses**

National University of Health Sciences

National University of Health Sciences Campus Visit Day

We offer an exciting and fully interactive Campus Visit Day here at NUHS in suburban Chicago. We'll give you a taste of what it would really be like for you as a student in one of our programs. When you visit, you can explore any of the following advanced degrees:

Doctor of Chiropractic Medicine

Doctor of Naturopathic Medicine

Master of Science in Acupuncture

Master of Science in Oriental Medicine

Open House on **Saturday, November 7, 2009** from 9am-2pm

At National University of Health Sciences

200 E. Roosevelt Road

Lombard, IL 60148

Experience life as a NUHS student, Take a guided Campus Tour, meet with financial aid, housing and student groups, interact with NUHS students and alumni and enjoy a complimentary lunch.

When you attend our Campus Visit Day, you will receive a \$500 tuition credit for your first trimester in one of our professional programs (DC, ND, MSAc/MSOM).

R.S.V.P.

Phone: 1.800.826.6285

Email: admissions@nuhs.edu

Website: www.nuhs.edu

University of Detroit Mercy School of Dentistry

The offices of Admissions and Student Affairs of University of Detroit Mercy School of Dentistry cordially invites you to attend an open house **Sunday, November 8, 2009** at 2:00pm. Arrive on time for a structured program concluding at 5:00pm. Program includes: Doctor of Dental Surgery and Dental Hygiene Program Information, Community Outreach, Student Life, Admissions Process, Financial Aid, Tours...etc. This is an opportunity to observe what students do! Faculty, students, staff, and the School's administration will be performing demonstrations, providing tours, and presenting information. Light refreshments served.
2700 Martin Luther Kin Jr. Boulevard
Detroit, MI 48208-2576

Ferris State University College of Pharmacy

There will be an information night on **November 18, 2009** from 7-9pm in the Pharmacy Building Room 101 located at Ferris State University, 220 Ferris Drive, Big Rapids, MI 49307.

Stop in and learn about the career of pharmacy, including developments in many and varied career paths that pharmacists can embark on. We will also be discussion the new admission policies and procedures. New and transfer students are encouraged to attend to learn more about the exciting profession.

RSVP to: pharmadmiss@ferris.edu

2. Program Opportunities

Medicine and Dentistry

SMDEP Application Opens November 1, 2009

The Summer Medical and Dental Education Program (SMDEP) is a free six week summer academic enrichment program for college freshman and sophomore students who are interested in a career in medicine or dentistry. The goal of the program is to prepare aspiring freshman and sophomores to become competitive applicants to medical and dental school.

SMDEP is implemented at the following 12 program sites across the nation.

- Case Western Reserve University Schools of Medicine and Dental Medicine
- Columbia University College of Physicians and Surgeons and College of Dental Medicine
- David Geffen School of Medicine at UCLA and UCLA School of Dentistry
- Duke University School of Medicine
- Howard University Colleges of Arts and Sciences, Dentistry, and Medicine
- The University of Texas Dental Branch and Medical School at Houston
- UMDNJ-New Jersey Medical and New Jersey Dental Schools
- University of Louisville Schools of Medicine and Dentistry
- University of Nebraska Medical Center, College of Medicine and Dentistry
- University of Virginia School of Medicine
- University of Washington Schools of Medicine and Dentistry
- Yale University School of Medicine

*Application opens: **November 1st**

Application deadline: **March 1st***

*All applicants are strongly encouraged to apply early!

For additional information and to access the online application, visit www.smdep.org
<<http://lists.aamc.org/t/35751/170728/236/0/>>.

Optometry

Berkeley Optometry

The Admissions and Student Affairs team at Berkeley Optometry would like to invite pre-optometry undergraduate students to an informational webinar about a career in optometry and admissions to our school. There is one webinar still this month:

Thursday, October 29, 2009 - 5-7PM (Pacific Daylight Time)

Anyone who is interested can contact me at ariana@berkeley.edu, and I will send them an invitation with details about how to log-on to the webinar. You do not need any special software. -Ariana Cho

M.D./Ph.D

NIH-Oxford-Cambridge Fully-Funded Doctoral Program in Biomedical Research

We would like to bring your attention to a groundbreaking biomedical research doctoral program-the National Institutes of Health-Oxford-Cambridge Scholars Program. This innovative program grew from the realization that the next generation of research scientists will increasingly need to adopt interdisciplinary approaches as they strive to produce high impact research outcomes whether basic or clinical.

This is an accelerated program, and students typically receive a doctoral degree in approximately four years. There is no standard curriculum or required coursework. Rather, each student pursues an individualized course of study in which thesis work is initiated at the beginning of the first year. The thesis project is carried out as a collaboration between two labs, with half the research undertaken at NIH and half at one of the UK universities and each student being mentored by a senior scientist at each location. The program takes advantage of the superb resources and training environments at Oxford, Cambridge, and the NIH, the world's largest biomedical research facility, the main campus of which is located in Bethesda, Maryland where a diverse community of scientists conduct their research in over 1000 laboratories and the world's largest clinical research center conducts more than 1000 clinical research protocols.

From its first class that matriculated in 2001, NIH-Oxford-Cambridge Scholars have achieved at the highest levels of biomedical research, publishing first-author papers in journals such as Nature, Nature Medicine, Nature Immunology, Proceedings of the National Academy of Sciences, and The Journal of Experimental Medicine. Graduates have gone on to do post-doctoral training in top academic institutions and industry labs, and a few have gone directly to faculty positions.

All students are fully funded by the NIH for the duration of their doctoral work at both research sites and receive a stipend, health insurance, and travel assistance. Through the NIH M.D./Ph.D Partnership Training Program, we also offer funding for combined M.D./Ph.D. training in collaboration with over twenty U.S. medical schools participating in the Medical Scientist Training Program (MSTP). For details about the M.D./Ph.D. options and training tracks please consult <http://gpp.nih.gov/Prospective/InstitutionalPartnerships/MSTPatNIH/>.

The application deadline for Ph.D. and M.D./Ph.D. candidates is **January 4th, 2010**. The free application is available online through the program website at <http://oxcam.gpp.nih.gov> <<http://oxcam.gpp.nih.gov>> via the "Apply Now" button. On our web site you will find additional program details, FAQs, student biographies, descriptions of some of the exciting research projects underway, and more. We would also like to invite you to participate in a teleconference call to learn more about our programs.

Please email us at

oxcam@mail.nih.gov <<file:///C:/Documents%20and%20Settings/schulmanr/Local%20Settings/Temporary%20Internet%20Files/OLK1C/oxcam@mail.nih.gov>> or

mdphd@mail.nih.gov <<file:///C:/Documents%20and%20Settings/schulmanr/Local%20Settings/Temporary%20Internet%20Files/OLK1C/mdphd@mail.nih.gov>> if you would like more information or would like to participate in a conference call.

Please take a look at the flyers through the links below. We hope to hear from you soon!

<http://oxcam.gpp.nih.gov/prospectiveStudents/documents/OXCAM2010Flyerwdeadline.pdf>

<http://oxcam.gpp.nih.gov/prospectiveStudents/documents/MSTPflyer2010.pdf>

3. M.D./Ph.D Program Information

Is an M.D.-Ph.D. Program Right for me?

The experience of applying to M.D.-Ph.D. programs is very different from applying to college. The issues are different, the stakes are higher, and the long-term career implications are much greater. This article will answer the questions above, drawing on my experiences as an M.D.-Ph.D. student, an M.D.-Ph.D. program director, a physician-scientist, and a mentor, as well as conversations with other program directors and administrators who in their outreach efforts get asked the same questions.

Question #1: Is an M.D.-Ph.D. program the right choice for me?

The answer to this question depends on your interests and career plans. Do you want to be a physician-investigator? Is doing research and making discoveries really important to you? If so, is the field you hope to work in one that is traditionally associated with Ph.D.-level training? For example, if you know that you want to do basic research and run a lab in the biological sciences, the appropriate graduate degree is a Ph.D. However, if you intend to do clinical research, a master's degree (in combination with your medical degree) may be what you need. You can pursue a master's degree either during medical school or after completing residency training.

Although you don't need to know precisely what research project you want to tackle 20 years from now, you do need to decide before you apply to M.D.-Ph.D. programs whether a Ph.D. is the appropriate preparation for you.

Before applying to M.D.-Ph.D. programs, you also need to decide under which broad discipline your interests fall: Biomedical sciences? Engineering? Social sciences? Economics? Anthropology? Most current and past M.D.-Ph.D. students (nearly 90% in a recent survey) pursue Ph.D.s in the biomedical sciences. The next largest percentage is in engineering fields. The remaining 5% or so are in diverse fields including the social sciences, humanities, economics, anthropology, and epidemiology. Moving within a general field (for example, molecular biology to immunology) is common and done easily. Moving between entirely different disciplines (for example, engineering to economics) happens much less frequently and may be more difficult.

Medical schools and graduate schools have fundamentally different goals. Medical schools focus on teaching the art and science of the *practice* of medicine. Although they may include wonderful opportunities to do research, most of the curriculum is about training you to be a clinician, not about preparing you for a research career. Graduate school, on the other hand, is intended to train you in the art and science of *investigation*, including the skills needed to be an independent investigator. Medical schools emphasize the acquisition and application of existing knowledge; graduate schools emphasize the discovery of new knowledge.

M.D.-Ph.D. programs integrate medical school and graduate school training to make you an effective physician-investigator, working to discover and apply new knowledge about the mechanisms, diagnosis, and treatment of human disease. Their goal is to help you become a true chimera: a physician whose skills and interests are informed by his or her training as an investigator, and an investigator whose research interests are informed by a deep understanding of people, their biology, and their disorders. Combined degree programs are intended to be preparation for a research-driven career; most M.D.-Ph.D. graduates spend much more time on research than on clinical practice and are employed in academia or at research institutions and in industry. Is that where you are headed?

Of course, M.D.-Ph.D. programs are not the only way to become a physician-scientist. Many physician-investigators who did not go to graduate school have enjoyed successful careers; some have even won Nobel Prizes. So why bother with an M.D.-Ph.D. program? Why not just go to medical school? This is a question I hear a lot, especially from undergraduates receiving well-meant advice from scientists who completed their training some time ago.

Things have changed since then. Recall the point made earlier: 4-year medical schools do not normally include research training. If you choose to attend medical school but not an M.D.-Ph.D. program, you will end up spending considerable time as a postdoc after your clinical training learning how to do research. Consider the data: M.D.s and M.D.-Ph.D.s who successfully compete for their first National Institutes of Health (NIH) grant typically reach that point at approximately the same age. Avoiding an M.D.-Ph.D. program won't save you time if you intend to be a scientist.

If you are sure you want to be a physician but less sure about your goal of becoming a physician-investigator, start medical school. If you change your mind about the role of research in your future career, you may be able to transfer into an M.D.-Ph.D. program at the same school. If not, you can complete your research training after medical school. Conversely, if you are sure you want to be a scientist but less convinced that you want to be a doctor, go to graduate school. You may be able to transfer into an M.D.-Ph.D. program before you start your thesis project, or you can go to medical school after you complete graduate school. It takes longer that way and is more expensive, but it is definitely doable.

Summing up: M.D.-Ph.D. programs are a wonderful option if 1) your goal is to become a physician-investigator, 2) you have the necessary academic credentials and research experience prior to applying, and 3) you make the decision early enough to apply as a combined degree candidate.

Question #2: Where should I apply?

This question is often reduced to "how many" and "which ones," but there is much more to it than that. M.D.-Ph.D. program applicants can choose from among 70 to 80 programs, 42 of which currently receive financial support from NIH in the form of an [NIGMS Medical Scientist Training Program \(MSTP\) grant](#).

In 2007, the average candidate applied to 10 different programs, but some applied to only one program, and one applied to 90! Applying to M.D.-Ph.D. programs can be time-consuming and--when the costs of interview visits are factored in--quite costly. (If the cost of applying is an issue for you, please note that many schools offer to waive application fees for candidates in financial need, and some will subsidize or even completely cover interview costs.) I advise applying to approximately the mean number of schools--10--rather than either extreme.

The decision of where to apply should be informed by the strength of your qualifications. M.D.-Ph.D. admissions committees are looking for strong academic and research credentials, along with exceptional letters of recommendation from faculty members with whom you did research, and a well-articulated reason for becoming a physician-investigator. They will also look at whether you have had experiences in the clinical setting to confirm your decision to go to medical school. Assess your chances realistically, and seek knowledgeable, objective advice.

What should you look for in a program? There is no single answer to this question; the answer will depend largely on what factors are important to you. Here are some things to consider:

1) Research infrastructure: All medical schools train physicians, but some have made a large investment in the faculty and infrastructure needed to do research. Those are the places where you are most likely to end up working, and arguably they are the places that you should experience as a trainee.

2) Role models: Role models are important for any professional career. Look for medical centers that employ physician-scientists.

3) Training support: The presence of an NIH MSTP grant doesn't guarantee that the program is the right one for you, nor does the absence of an MSTP grant mean that the program is less worthy of your consideration. However, MSTP status does guarantee that the program will be subjected to regular external review and critical feedback.

4) Curriculum integration: In the early days of M.D.-Ph.D. programs (40 years ago), the curriculum was basically the sum of medical school and graduate school; there were few cross-connections between the two. Now it is generally accepted that the best way to train students for well-integrated careers as physician-investigators is to blend the training elements together as much as possible. Different schools do this in different ways and to different extents.

5) Presence of an appropriate Ph.D. program: If your plan is to obtain a Ph.D. in cell and molecular biology, biochemistry, or the neurosciences, you will find programs everywhere. If you seek a Ph.D. in bioengineering, sociology, health care economics, or anthropology (to name a few less-common disciplines), your choices may be more limited. Not every M.D.-Ph.D. program offers opportunities in these areas, either because they are not located at a university that offers doctoral training in them or because the medical school is not currently partnering with the school or department involved. Be sure to check before you apply.

6) Perceived difficulty in obtaining admission: My usual advice to even the strongest candidates is to apply to schools with a range of selectivity. Every year I see candidates who are accepted by one highly competitive program but rejected by another program that is equally or less competitive. There are the obvious objective metrics, such as mean grade point average and MCAT scores; but considerable weight is given to the interviews, which are highly subjective.

No M.D.-Ph.D. program is easy to get in to, but some are definitely tougher than others. It is emphatically not true that you need a 4.0 GPA and 40 on the MCATs to be a successful M.D.-Ph.D. candidate, though your chances grow more remote if your GPA is below 3.5 and your MCAT scores are below 30. I usually advise undergrads to take the test early enough that there is time to take it again before applying.

7) Program size: The current average size of an M.D.-Ph.D. program is about 90 students; but programs vary enormously, with a range from about 25 to about 180 students. That's as few as three new students a year on up to 30. There are advantages and disadvantages associated with all sizes of programs, and this is one of the things that you will want to ask about when you visit.

Be an informed consumer; consult a variety of resources and people to gather information. Mentors and role models who are physician-scientists can be particularly helpful. If you can identify someone whose career has the elements that you hope to have in yours, ask him or her how they came to be where they are. Program directors and administrators of the programs you're interested in are usually happy to answer questions about physician-investigator training in general, as well as about their own programs. Other candidates (past and present) may share their experiences, but keep in mind that their perspective, however well meant, may be limited. You should definitely consult more than one source.

Your college's prehealth adviser may also be able to answer questions, especially if you are at a college that regularly sends candidates to M.D.-Ph.D. programs. You may find answers to some of your questions on the Association of American Medical Colleges' Web site, [Considering a Career in Medical Research](#), which contains links to the programs as well as some highly useful advice. Web sites for the individual programs will describe the program and its guiding philosophy and provide links to the constituent Ph.D. programs and information about activities sponsored by the program.

Finally, try to learn as much as you can about M.D.-Ph.D. training before your first interview visit. Read about the programs that you are visiting before you arrive and have some idea about faculty members whom you might like to meet. Some schools will even ask for your requests before your visit and arrange for you to meet with those faculty members. They do this in part to help you learn about the school and in part to see whether your interests fit within the range of faculty interests in the Ph.D. program. Take notes on your visits and impressions; months may pass between when you visit a school and when you have to make a decision to enroll.

Question #3: Where should I go?

Let's look ahead a bit. Most people apply in the summer and fall, interview in the winter, and make a final decision in the spring when they see what offers they have received. Some candidates find that deciding where to go is straightforward; as offer(s) come in, they use their personal "wish list" to decide which offers to hold on to and which ones to either set aside or not wait for. Others find this decision exceedingly difficult and go down to the wire before making their final choice.

Here are some of the factors that might go into making that choice. You may have others. Keep in mind that everyone weights these factors differently.

- 1) Impressions.** Begin with all of the attributes listed in Question #2 that informed your decision about where to apply. Compare your notes on what the school was really like with your reasons for applying to it. You will likely find that some programs moved up on your wish list and others moved down.
- 2) Community.** What did you think of the students you met when you did your interview visit? The students who enter with you are likely to have similar characteristics. Did they seem committed to the goal of becoming a physician-investigator? Were they happy with their choice of an M.D.-Ph.D. program? Did they make you feel welcome?
- 3) Geography.** Is the location one where you would like to live for an average of 8 years? Is housing available and affordable on your stipend? Are your nonscholarly interests well-represented?
- 4) The two (or more) body problem.** Do you have a significant other who is also applying to schools and has to end up with an offer in the same location? Or, if your partner will be looking for a job, is he or she likely to find something suitable in that location?
- 5) Outcomes.** The goal of an M.D.-Ph.D. program is to train physician-investigators. Most programs do pretty well at this; but if a program's outcomes data show that large numbers of their graduates are in full-time private practice, you should be concerned. Ask about this during your interview or afterward if it didn't come up.
- 6) The perception of prestige.** Many candidates use their sense of the university's prestige or *US News and World Report* rankings to decide where to go, just as they did when applying to college. My advice is to not put too much weight on those rankings. Pick the program that seems the most appealing to you after you weigh all the factors.

Conversely, there are some factors that should have less weight in your decision-making process:

- 1) The program that accepts you first.** The first offer will undoubtedly fill you with a sense of relief that someone wants you, but it may not be the program that best fits your goals and dreams. If it is, then go for it. If not, be patient and see what other options appear.
- 2) The size of the stipend.** One of the really great things about being accepted into an M.D.-Ph.D. program is that most of them offer fellowships that cover tuition for medical school and graduate school and offer a stipend that can be anywhere from \$20,000 to \$30,000 per year. Don't spend too much time weighing differences in stipend amounts. Ask the students in the program whether the stipend that they receive is adequate for the costs of living in the community where the school is located.
- 3) Time to degree.** Although some programs claim that their students finish faster than students in other programs, data from a recent survey of 61 M.D.-Ph.D. programs show that the average time is 8 years, with little variation.
- 4) The presence or absence of a particular faculty member.** Some candidates seek training with a particular faculty member whose interests (and/or fame) aligns particularly well with their goals. However, most candidates seek programs with broad strengths, recognizing that their interests may change as they learn about new fields and new problems.
- 5) Location as an index of how good the program is.** Geography may be very important to you for personal or family reasons, but don't assume that all of the great programs are located in just one part of the country. It isn't true.

Summing up: Applying to M.D.-Ph.D. programs can be a daunting process; it will consume much of your time and energy during the year you do it. I have tried to demystify the process and help you prepare for it. I hope it helps, because I believe that a physician-investigator is one of the very best careers a person can have.

Article from: http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2009_10_16/caredit.a0900124

4. Upcoming Events at Grand Valley

Michigan State University – College of Human Medicine Early Assurance Program- Information Session

Wednesday, October 28, from 7pm-9pm, in MAK B-L-126. Come and get information about the GVSU-MSU College of Human Medicine Early Assurance Program. Learn about the program, including what the program is, benefits of the program, eligibility for application, application processes and deadlines and next steps for follow up. This program offers an opportunity for early acceptance into MSU's College of Human Medicine. The event is open to all students and juniors are especially encouraged to attend. Please contact 331-8585 or stop by C-1-140 MAK for more information and register to attend!

Majors Fair

Wednesday, November 4 from 11am-2pm, in the Grand River Room 2250 Kirkhof Center. The Academic Majors Fair will provide an opportunity for students to meet with faculty, advisors, and alumni from a variety of academic majors to discuss career options. Also, information about career testing and services, international studies, and scholarship opportunities will be available. This event is being hosted by the University Academic Advising Council and Alumni Relations. For more information, call 616-331-3588.

The Arnold C. Ott Lectureship in Chemistry

Wednesday, November 4, 2009 there will be a lecturer providing two experiences for students. The lecturer is Chad A. Mirkin, Ph.D. He is a chemist and a world-renowned nanoscience expert.

Building Valency in Metallic Nanostructures: The Atom Analogy
Chemistry Seminar – 1pm
123 Manitou Hall-Allendale Campus

Programming Materials Assembly with DNA: Applications in Biology and Medicine
Evening Lecture-7pm
Preceded by a 6pm reception
Cook-DeWitt Center-Allendale Campus

Interview Workshop

Tuesday, November 10, 2009 from 4-6pm in Loutit Lecture Hall 103. In the first hour, join us for interview strategies with Ginger Lange from Career services. In the second hour hear a panel of your colleagues talk about their interviewing experiences. ***Current applicants are especially encouraged to attend.***

GVSU Pre-Professional Day

Saturday, November 14th, 2009
10am-4pm

Students must pre-register for the event. Below is the link for the registration form. You can also pick on up at the CLAS Academic Advising Center in C-1-140 MAK. We look forward to seeing you on November 14! We will have professional schools from across the State of Michigan in attendance, a dynamic keynote and breakout sessions of relevance to you!

<http://www.gvsu.edu/clasadvising/clas-advising-center-events-workshops-for-students-140.htm>

Preparing for the Application Process

Tuesday, November 17 from 4-6pm & Wednesday, November 18, 2009 from 3-5pm

Any student who plans to apply to professional school this year (medical, dental, chiropractic, pharmacy, optometry, podiatry, veterinary medicine) is strongly encouraged to attend this workshop to help you start preparing for the upcoming process.

These sessions are the same and you only need to attend one of the two.

Location: **Tuesday – LTT 103; Wednesday – LOH 167** -Please check our events website for updates and more information:

[Upcoming CLAS Events and Information](#)

Consult not your fears but your homes and dreams. Think not about your frustrations, but about your unfilled potential. Concern yourself not with what you tried and failed in, but with what is still possible for you to do.

-Pope John XXII