



THE LEADERSHIP
ALLIANCE

*Tips on preparing for and
applying to graduate school*

A companion guide for Leadership Alliance-sponsored
workshops on the graduate application process.



PREPARED FOR THE LEADERSHIP ALLIANCE BY

Joel D. Oppenheim, Ph.D., NYU School of Medicine
David N. Redman, Ph.D., Princeton University
Jocelyn Spragg, Ph.D., Ed.M., Harvard Medical School

© 1999, 2003 The Leadership Alliance. All Rights Reserved.

TABLE OF CONTENTS

Introduction	1
I. How to prepare for graduate school in the sciences	2
A. College preparation	
- Freshman and sophomore years	
- Junior year	
- Senior year	
B. What students should be looking for in a graduate program	
C. What graduate schools are looking for in applicants	
D. Sources of information about which schools you could and should apply to	
II. Preparing applications for graduate school programs	5
A. General comments	
B. Transcripts	
C. Letters of recommendation	
D. The statement of purpose	
III. Interviews	8
A. How to prepare	
B. What to wear	
C. What to do	
IV. Financial considerations	9
A. Financial planning for the application and admissions process	
B. Financing your graduate education	
C. Types of financial support	
V. Networking as part of selecting graduate programs and building your career	11
VI. Appendices	12
1. Useful URLs for information about graduate programs	
2. Useful URLs for accessing pre-doctoral fellowship information	
3. Letter of recommendation summary sheet	
4. Application tracking sheet	

Joel D. Oppenheim, Ph.D.

- Senior Associate Dean for Biomedical Sciences
- Director of the Sackler Institute of Graduate Biomedical Sciences
New York University School of Medicine
Phone # 212-263-5648
Email: oppenj01@popmail.med.nyu.edu

David N. Redman, Ph.D.

- Associate Dean for Academic Affairs
The Graduate School, Princeton University
Phone # 609-258-3032
Email: dnredman@princeton.edu

Jocelyn Spragg, Ph.D, Ed.M

- Faculty Director, Minority Programs
Division of Medical Sciences, Harvard Medical School
Phone # 617-432-1342
Email: jocelyn_spragg@hms.harvard.edu

INTRODUCTION



Applying to graduate school can be a daunting and confusing process. On the following pages we will try to demystify this endeavor. While we will primarily address those students applying in the sciences, the comments, for the most part, are equally applicable to students applying to any graduate field. During the course of selecting and applying to graduate school you will (and should) get advice and opinions from many different people. Part of your task will be deciding what is the best-informed advice to meet your own individual circumstances, needs, and goals.

The comments that follow were compiled by three professors from three different institutions (left) who have been actively involved in advising and mentoring students in the graduate admissions process longer than any of them cares to remember. We will briefly discuss with you how to prepare for graduate school, what you should be looking for in a graduate program, what graduate programs are looking for, how to prepare and submit an application, how to prepare for and present yourself at an interview, and finally, how to finance your graduate education. We wish to thank our colleagues and students, whose comments, suggestions, questions, and experiences shared have contributed immeasurably to our understanding of many points of view of the graduate school application process.

I. How to Prepare for Graduate School in the Sciences

A. College Preparation

Freshman & Sophomore Years:

- Take a broad spectrum of introductory science courses (including laboratories): biology, chemistry, physics, math, computer sciences.
- Take courses that help develop skills in reading comprehension, writing and public speaking.
- Get involved in research at your home institution (MARC, MBRS or similar programs).
- Establish a good relationship with your school's health careers advisor or the graduate school advisor at your campus career center — help them get to know you.

Junior Year:

- Take advanced level science courses: cell biology, molecular biology, microbiology, physiology, organic chemistry, biochemistry, etc.
- Take liberal arts courses: economics, history, literature, philosophy, etc.
- Expand your research experiences.
 - programs such as: MARC/MBRS, McNair, Howard Hughes, etc.
 - summer research programs
 - independent study
- Begin preparation for GRE or MCAT.
 - Take preparation courses (Kaplan, Princeton Review, etc.), review copies of old exams, take timed practice tests (for the GRE prepare for the computer version).
 - For MD/PhD candidates, take MCAT's in April of your 3rd year.
 - For PhD candidates, take computerized GRE in early fall (September or October) of your 4th year; if required, take appropriate subject test and/or writing assessment at the same time.

“GUT CHECK”

Somewhere between the end of the second year and the beginning of the third year you must ask yourself “Have I prepared myself appropriately and do I have a strong enough record to apply for the graduate or professional program in which I am interested?” If the answer is “no” it is time to re-evaluate your career goals and your learning strategies.

Senior Year:

- Submit your applications early (be realistic in your choice of programs).
 - MD/PhD application by September 1st (or earliest possible date)
 - PhD application by December 15th
- If possible, visit the schools, programs or departments that interest you.
- Take advanced level science courses, especially those which are research and techniques oriented.

Take “life-enriching” courses that you will enjoy: art history, religion, etc.

B. *What Students Should be Looking For in a Graduate Program*

- Academic Considerations
 - Do you feel comfortable with the program’s structure and organization?
 - Are there sufficient faculty choices?
 - Is there flexibility within the program to change directions?
 - Are there adequate university support systems (library, computer facilities, specialized equipment, etc.)?
- Financial Considerations
 - Can you afford it? (Determine total costs involved, including housing, food, etc.)
 - availability and types of financial aid (loans, fellowships, research and teaching assistantships, etc.)
- Other Considerations
 - geographic location of the school
 - campus environment
 - appropriate support systems (advisors, tutoring-services, etc.)
 - diversity of students
 - record on placement of graduates

Does the program offer a curriculum that meets your needs?

C. *What Graduate Schools Are Looking For in Applicants*

- Strong undergraduate academic performance as indicated by
 - strength of course load
 - GPA
 - GRE scores
- Superior preparation in the discipline for which the student is applying.
- Strongly motivated students, who understand why they are applying.
- Students who can clearly express themselves both orally and in writing.
- Students who can integrate information.
- Research experience (primarily in the sciences).

D. *Sources of Information about Which Schools You Could and Should Apply to*

- Word of mouth
 - your professors
 - graduate students on your campus
 - friends, former classmates who are already in graduate school
- Internet Sources
 - Peterson's Guide web site
 - individual school web sites
 - professional society web sites (AAMC, ACS, ASM, APS, etc.)
- Library
 - NRC Report "Research Doctoral Programs in the US"
 - Peterson's Guides (and other guides to graduate education)
 - magazines that rate graduate programs (US News and World Report, etc.)

Information Sources

- Word of mouth
- Internet Sources
- Library

II. Preparing Applications

A. General Comments

- The application represents you and your level of interest and seriousness.
- It should be neat, accurate, complete, and typed.
- Read the directions completely and answer all the questions fully.
- Call the institution if an instruction is unclear to you.
- Make a copy of the completed application.
- Send in all applications well before the deadline.
- After you send applications in, keep track of their progress (see an example of a tracking sheet at the end of this document).
 - Are you getting notifications of completeness?
 - Are you getting invited for interviews at the expected time?

Keep records of any phone calls. With whom did you speak? (It's okay to ask for the name.) When? What were the main points of the conversation?

B. Transcripts

- Be aware that graduate programs usually require official transcripts from EVERY institution that you have attended.
- Make sure your grades are recorded accurately, and that you report your grades and GPA correctly in your application.
- If your recent GPA, or your GPA in your intended field of study, is considerably higher than your overall GPA, emphasize that fact in the application. Ask your recommenders if they would consider doing so, too.

Requesting transcripts often takes time — plan ahead!

C. Letters of Recommendation

- Check and follow the directions for submission of your letters.

- Find out if someone will write a good letter for you. How? Ask! “Do you think you know me well enough to write a letter of recommendation for me?”
- Aim to get a group of letters, which, when taken together, will complement (instead of duplicating) each other and will provide the fullest relevant picture of who you are NOW.
- When possible, choose letter writers who know more than one aspect of you, for example, one of your research advisors who could also write about how effectively you interact with other people and your willingness to take initiative.
- Lots of letters with no real content may be held against you.
- Plan ahead!
- Help your letter writers help you!
 - Let faculty get to know you in class and during office hours.
 - Make an appointment to discuss your application plans.
 - Discuss concerns that your letter writer could address.
 - It takes at least an hour to write a good letter — give your recommenders plenty of time. Request letters of recommendation well before the application deadline (summer for MD, early fall for PhD).

Letter Writers

- Choose letter writers who know you well enough to be able to describe your suitability for the program to which you are applying.
- Choose letter writers who know you currently, or who have known you in the recent past.

D. The Statement of Purpose: Some Things to Think About

- Your statement represents you and your level of interest and commitment. It should be written in your own words, neat, typed, accurate, and grammatically correct. Check spelling and punctuation.
- Read the questions carefully and make sure you answer them completely.
- It is expensive for schools to invest in educating graduate students and medical students. Your goal is to help admissions committees decide why they should invest in you. Let the reader get to know you; tell your own story.

- Show that your decision to pursue a particular career is an informed decision - how has your interest in that career developed over time? What kind of training will help you reach that career goal? Explain why you are interested in the school that you're applying to.
- Show that you understand the content of your previous research projects. Sound like a scientist, rather than a "pair of hands."
- Listing a position or activity in your resumé should be different from talking about it in your statement of purpose.
- Describe reasonable, well-informed goals, and why they're of interest to you, rather than pie-in-the-sky idealism.
- Document your strengths with facts rather than editorial comments. Provide specific information rather than unsubstantiated generalities.
- Adversity is not an acceptable excuse for mediocre credentials, but it may be given some consideration.
- Members of admissions committees often read dozens of applications, if not more. Write in a way that helps the reader. Keep your statement relevant, well-organized, and concise. For example, an introductory sentence in each paragraph is useful. Avoid "gimmicks"; they may get the readers' attention, but often in a negative way.
- Writing a good statement takes time - give yourself enough time to think about what you want to say, to write several drafts, and to read them critically. How does the statement sound when you read it out loud to yourself?
- Ask someone who is experienced at reading statements to review yours and discuss it with you.
- Reread your statement before your interviews.

Anything in your written application is "fair game" for an interview. Is everything that you've written about something that you will feel comfortable discussing in an interview?

III. The Interview

A. How to Prepare

- Review your application before the interview.
- Be knowledgeable about the scientific content of your previous research experiences. But,
 - Avoid making prepared speeches.
 - Read about science/medicine in the news.
 - Have positive expectations about the interview...you have already made the first cut, and the school wants to know more about you.

An interview is a
“conversation with
a purpose.”

Be ready to
participate.

B. What to Wear

- Wear comfortable clothes that give you confidence.
- Dress to be respectful of the situation.
- What you wear should not distract from what you say.
- Keep your interview clothes in carry-on luggage.

C. What to Do

- Practice your handshake.
- Make good eye contact.
- Stand when you are being introduced.
- Avoid “couch potato” postures.
- Avoid the use of slang or excessive use of distracting phrases (e.g. “like,” “you know,” etc.).
- Refrain from distracting the interviewer (e.g. chewing gum, scratching yourself, tugging on jewelry, etc.).

IV. Financial Considerations

A. *Financial Planning for the Application and Admissions Process*

Applying to graduate or medical school is quite literally an investment in your future and is going to cost some money. Planning ahead of time to save some money for this process and having a budget for it will be helpful. Here are some of the expenses that you should be anticipating:

- Cost of taking a test review course (*see if scholarships are available*).
- Cost of taking GRE and MCAT tests.
- Buying books and software related to application and testing process.
- Application filing fees (*check to see if you meet criteria for waivers*).
- ID photos for your applications (if needed).
- Photocopying, mailing, and documentation of mailing expenses.
- Travel, lodging, and meals to visit schools of interest (*some schools may cover some of these expenses, especially for graduate program applicants*).
- Long distance calls related to application process.
- After you're accepted, there will still be: phone calls, letters, and trips, and (finally!) moving and housing startup expenses.

Interview clothes

If you need to buy suitable interview clothes, do so far enough ahead of time so you are comfortable wearing them by the time you have interviews.

B. *Financing your Graduate Education: First Principles*

- Always apply for financial aid. (Unless you can support yourself fully, tuition and stipend, 12 months a year, for five years!)
- Observe all deadlines and complete all forms. (*There is great variation from one institution to another; make a calendar!*)
- Compete for appropriate national fellowships.
- Good students, admitted to PhD programs in the physical and life sciences, should NOT have to pay tuition and basic living expenses.

C. *Types of Financial Support*

Institutional

- **FELLOWSHIPS AND TRAINEESHIPS = PAYMENT FOR STUDY**
Source: Department and/or Central Graduate School Office (Usually from university or federal funds)
- **RESEARCH ASSISTANTSHIP (RA) = PAYMENT FOR WORK**
(Helping a research mentor conduct her/his research. Nominally 20 hours per week but more in dissertation phase. Offered primarily in the sciences.)
Source: Department or individual faculty member
- **TEACHING ASSISTANTSHIP (TA) = ALSO PAYMENT FOR WORK**
(Helping teach undergraduate or graduate level courses. Up to 20 hours per week.)
Source: Department

Types of Financial Support

- fellowships and traineeships = payment for study
- research assistantship (RA) = payment for work
- teaching assistantship (TA) = also payment for work

Non-Institutional (Outside) Fellowships

- A. Why bother?
- Prestige
 - Often higher stipend
 - Shows you know the game
 - Portable (you can take it with you!)
 - Affords student greater flexibility in selecting an adviser
- B. Examples
- National Science Foundation Pre-doctoral Fellowships
 - HHMI Pre-doctoral Fellowships
 - Ford Foundation Doctoral Fellowships for Minorities
 - GEM Pre-doctoral Fellowships
 - National Defense Science and Engineering Graduate Fellowships

V. NETWORKING

A. *What is Networking?*

- Everybody talks about networking, but what is it? One formal dictionary definition (from the *American Heritage Dictionary*) says it is “to interact or engage in informal communication with others for mutual assistance.”

B. *How Do You Network?*

- When you meet new people, who seem interesting to you, be sure to get their names. Ask for business cards, and note on the back when you met the person, and any special information about them that you want to remember.
- Wear your name tag when others are doing so. It helps people learn your name and where you are from (often a good conversation-starter). Wearing your name tag is a kindness to acquaintances who have trouble remembering names.
- Talk to people you already know about your interests, to see how they might help you with your school and/or career plans. Connections can sometimes be made in the most unexpected ways.
- Do you have friends or acquaintances located at schools or in cities or towns that interest you? Ask them for more information or names of people that you could talk to.
- When you are at a conference or other group gathering, try to meet new students, rather than spending all of your time with your friends.
- Maintain your friendships - keep in touch with your fellow students and with teachers and advisors who knew you well in the past.
- Be considerate - provide follow-up to people who have helped you and let them know that you appreciate their efforts in your behalf.

Networking

Networking is one of the great ways to find out more about graduate programs that interest you. Your college and summer program faculty advisors will likely be using their own networks to recommend you to graduate programs (or to other summer programs).

Building, using, and maintaining your own personal professional network will be increasingly important as you move from your undergraduate years, through your graduate training, and throughout your career.

APPENDICES

1. *Useful URLs for information about graduate programs*

- American Association of Medical Colleges
<http://www.aamc.org/>
- AAMC Group on Graduate Research, Education and Training
<http://www.aamc.org/members/gre/start.htm>
- Gradschools.com
<http://www.gradschools.com>
- Graduate Record Examination
<http://www.gre.org>
- Interview Feedback
<http://interviewfeedback.com>
- Peterson's
<http://www.petersons.com>
- Science Magazine's Academic Connection
<http://recruit.sciencemag.org>

2. *Useful URLs for accessing predoctoral fellowship information*

- Community of Science
<http://www.cos.com>
- Ford Foundation
<http://www.nationalacademies.org/fellowships>
- Howard Hughes Medical Institute
<http://www.hhmi.org/grants/index.html>
- National Institutes of Health
<http://www.nih.gov>
- National Science Foundation
<http://www.nsf.gov>
- Science Magazine's Next Wave
<http://www.grantsnet.org>
(sponsored by HHML and AAAS)

3. *Letter of recommendation summary sheet*

Letter of recommendation summary sheet

The following is a sample format of information you should give to individuals writing multiple letters of recommendation for you.

Program and Address	Receipt Deadline	Provided for you	Waiver form needed
Director, MSTP Univ. of Michigan Medical School 7310 Medical Science 1 Ann Arbor, MI 48109-0624	Dec. 1	label and stamps	NO
Office of the Dean Graduate School Loma Linda University Loma Linda, CA 92350-0001	Mar. 1	pre-addressed, stamped envelope	YES

Etc.....

4. Application tracking sheet example

ORGANIZING AND TRACKING THE APPLICATION PROCESS

School/ Program	Application Deadline	Tests Required	Date of Test(s)	Date Transcripts Requested	Rec Letter Deadline	Date Completed Application Sent	Notification of Completed Application Received	Date of Interview	Decision Letter Received	Reply Date

Recommendation Letter (Name/Number) _____

Recommendation Letter (Name/Number) _____

Recommendation Letter (Name/Number) _____

Contacts (Name/Number) _____

THE LEADERSHIP ALLIANCE MEMBERS

Brooklyn College
Brown University
Claflin University
Clark Atlanta University
Columbia University
Cornell University
Dartmouth College
Delaware State University
Harvard University
Howard University
Hunter College
Johns Hopkins University
Montana State University-Bozeman
Morehouse College
Morgan State University
New York University
Prairie View A&M University
Princeton University
Southern University at Baton Rouge
Spelman College
Stanford University
Tougaloo College
Tufts University
University of Colorado at Boulder
University of Maryland, Baltimore County
University of Miami
University of Pennsylvania
University of Puerto Rico
University of Texas at San Antonio
Xavier University of Louisiana
Yale University

