Accepted!:
Preparing a Successful Graduate School Admissions Package
Mission:

Founded in 1961, the Society of Toxicology (SOT) is a professional and scholarly organization of scientists from academic institutions, government, and industry representing the great variety of scientists who practice toxicology in the US and abroad. The Society’s mission is to create a safer and healthier world by advancing the science and increasing the impact of toxicology.
Your Hosts:

Shaun D. McCullough, PhD
Principal Investigator
Clinical Research Branch
US Environmental Protection Agency
Vice President, MSBSS
Co-Chair, CRAD

Mindy Reynolds, PhD
Associate Professor and Co-Chair
Department of Biology
Washington College
Chair, Education Committee
Q&A

Send questions to “All Panelists” via the Q&A panel.
Accepted!:

Preparing a Successful Graduate School Admissions Package
Your Panelists:

Aaron Bowman, PhD
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Director, Training Program in Environmental Toxicology
Vanderbilt University
Chair, SOT Graduate Education Subcommittee
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Associate Professor of Environmental Health Sciences
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Faculty website
Predicting Admission to the Ivory Towers: Grades, Scores, and Other Flowers

Overview of the admissions process and discussion of grades and scores

Aaron B. Bowman, PhD
Vanderbilt Univ. Med. Center
Associate Professor of Pediatrics, Neurology and Biochemistry
Director, Vanderbilt Training Program in Environmental Toxicology

Chair, Society of Toxicology Graduate Education Subcommittee
Member, SOT Education Committee
Common Requirements for Graduate School Applications

A graduate application packet is like a basket of cut flowers

Typical Components of the Floral Basket
- Undergraduate transcripts (GPA)
- GRE Scores
- Publications and relevant experiences list
- Letters of Recommendation
- Description of Research Experiences (Dr. Dolinoy will cover in detail)
- Personal Statement (Dr. Aleksunes will cover in detail)
Typical Admissions Process

1. Prospective student’s completed packet is received (Nov – Dec)
2. Administrative Review by the Graduate School (Dec - Jan)
3. Review by Graduate School Admission Committee (Nov- Jan+)
4. Selection of candidates to invite out for interviews (Dec - April)
5. INTERVIEW (Jan-April)  (January Webinar!!!)
6. Applicant Evaluations submitted (Jan - April)
7. Offers made to candidates (Feb - April)
8. Student submits decision to accept offer or not (April - May)
9. *Matriculate and Embark upon your PhD training* (June – Sept)
Presenting Your Best Basket of Flowers

Prepare early and invest the time to learn
• Take Fundamental Science Classes
  • Org. Chem, Chem, Math, etc) even if not an A
  • GPA of 4.0 is not required, diminishing returns
• Discover your research passion(s)
• Get intensive and diverse research experiences
  ➢ More than 1yr cumulative experience best
  https://www.toxicology.org/careers/if/internships.asp
• Get connected with the labs you work with
• Learn about the institutions you are interested in attending
Advice on Grades and GRE

- Strive for a GPA of ~3.5 or higher, but >3.0 is okay
- Upper-level science coursework is most important
- Upward trajectory can overcome poor initial performance
- Master’s program success can overcome poor undergrad. GPA
- If above threshold GRE scores, may be better off investing in your research experiences than extensive studying to improve your scores.
- If there is a reason for lower grades/GRE include them on personal statement
Example GRE Scores of Admitted Students

**GRE Scores (A)**

- Number of students: 0 to 50
- Score range: < 300, 300-390, 400-490, 500-590, 600-690, ≥ 700

**GRE Scores (V)**

- Number of students: 0 to 250
- Score range: < 300, 300-390, 400-490, 500-590, 600-690, ≥ 700

**GRE Scores (Q)**

- Number of students: 0 to 250
- Score range: < 300, 300-390, 400-490, 500-590, 600-690, ≥ 700

**GRE Scores (V+Q)**

- Number of students: 0 to 175
- Score range: < 1000, 1000-1090, 1100-1190, 1200-1290, 1300-1390, 1400-1490, ≥ 1500
GPA, GRE and Other Flowers Do a Dismal Job at Predicting Graduate School Success Measures

Simulated data set of random numbers (GRE-Q 520 to 800) is surprisingly representative of actual findings published from two graduate programs. Similar results for GPA, faculty interviews, prior research experience, True for many other measures of success: # of 1st author papers, time to graduation, Qual exam success, etc.

First study listed below found letters of recommendation scores correlated positively with # 1st author publications in graduate school.

Second study listed found GRE-Q and GRE-V had moderate predictive power for first semester grades


Administrative and Committee Review

• Representative outcomes (~1400 applicants, ~350 committee review, ~150 interviews offered, ~100 offers made)

• Are there GPA, GRE minimum cut offs?
  • typical ranges of GPA = 2.5 to 4.0; with most above 3.0
  • typical ranges GRE percentile scores = GRE-Q or V (>40%, but most above 60%)
  • Vary widely by school and program
  • School you attended makes a difference in evaluating GPA
  • GPA and GRE scores can make a big difference for some scholarships/bump ups

• Coursework (course requirements, hard sciences, discipline specific classes)

• Research experiences and evidence of productivity

• Evidence to predict success in the graduate coursework

• Letters of reference to gauge your chances of success in grad. school.

• It’s a committee decision
Gaining Admission to the Best Program for You

• Quality/productivity of your research experience(s) (duration, publications, letters)
• Letters of references from your research mentor(s)
  ➢ who should you ask to write letters for you?
  ➢ course instructors, grad students, postdocs, program directors are often weighted lower than letters from mentors of research experiences
• Read the literature in your research area
• Learn about the research hypotheses and data interpretation
Applying to the Right Program for You

• Umbrella or Discipline-Specific Program
• Faculty doing research that suits your intellectual passions
• Funding level of these faculty
• Relevant course work for your training
• Contact admissions offices – don’t take decisions personally
Be Now Who You Want to be Tomorrow
Wishing you success!!!

Aaron B. Bowman, PhD
Vanderbilt Univ. Med. Center
Associate Professor of Pediatrics, Neurology and Biochemistry
Director, Vanderbilt Training Program in Environmental Toxicology

https://medschool.vanderbilt.edu/toxicology/

SOT Undergraduate Student Resources
https://www.toxicology.org/groups/ug/affiliates.asp

SOT Graduate Student Resources
https://www.toxicology.org/groups/gs/graduates.asp

Questions via the Q&A function at end of the webinar
Dana C. Dolinoy, PhD
Associate Chair of Nutritional Sciences
Associate Professor of
Environmental Health Sciences
University of Michigan

Vice President-Elect, MSBSS
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Faculty website
Selecting the Best Degree Program For You and Crafting an Impactful Research Statement

Dana C. Dolinoy, MSc, PhD
Associate Chair and Associate Professor of Nutritional Sciences
Associate Professor of Environmental Health Sciences

UNIVERSITY OF MICHIGAN
School of Public Health

SOT Webinar on Accepted! - Preparing a Successful Graduate School Admissions Package
November 10, 2017

www.sph.umich.edu/ehs
What is Toxicology?

Toxicology studies the adverse effects of substances on organisms based on factors such as dose or way of exposure. Experts learn to interpret and communicate data to insure population safety. Careers in toxicology include work in forensics, healthcare, pharmaceutical science, etc.

www.sph.umich.edu/ehs
Where do you find Toxicology Graduate Degrees?

• Pharmacology Departments
• Schools of the Environment
• Schools of Public Health
• Interdepartmental Programs
• Track in MD/PhD or Pharm/PhD programs

www.sph.umich.edu/ehs
Example Degrees Offered

**Master of Public Health (MPH)**
- Focused on professional skills and knowledge
- Required (summer) internship component
- Designed to prepare for an EHS-based professional career
- Capstone projects

**Master of Science (MS)**
- Focused on research, less course requirements
- Required thesis project

**Doctor of Philosophy (PhD)**
- Research-focused, with high expectations for academic research achievement
- Some required courses
- Designed to prepare students for a research-based career in academia, government, industry or non-government sector
- Some but not all programs require a Master’s degree

**Combined Degrees**

[www.sph.umich.edu/ehs](http://www.sph.umich.edu/ehs)
MPH in Environmental Health Sciences (4 semesters)

Example Specializations:

Environ Quality, Sustainability & Health

Industrial Hygiene

Occupational and Environ Epidemiology

Toxicology

www.sph.umich.edu/ehs
Environmental Quality, Sustainability and Health

Water quality management

Community air pollution

Exposure / risk / sustainability

www.sph.umich.edu/ehs
Industrial Hygiene

- Hazardous Materials
- Ergonomics / safety
- Allergens
- Stress
- Nano materials
- Pesticides
- Noise
- Pathogens
- Disasters

www.sph.umich.edu/ehs
Occupational and Environmental Epidemiology

 Causes of disease

 Risk of injury

 Community education

 Health outcomes

www.sph.umich.edu/ehs
Toxicology

- Analyze the hazard
- Health outcomes
- Study the chemical
- Assess mechanisms of action
- Limit the damage

The majority (but not all) of those who graduate with tox-related degrees work in industry.

www.sph.umich.edu/ehs
Master of Science (MSc)

Research-focused degree
   Research thesis instead of internship
   Fewer didactic credits, more research credits

Degree completion
   3-4 semesters based on specializations and certificates

Preparation
   Talk to students working research settings
   Research faculty profiles

www.sph.umich.edu/ehs
Doctor of Philosophy (PhD)
Research-focused degree
  Research dissertation
  Highly rigorous quality and quantity of research

Degree completion
  4-5 years based on research project

Preparation
  Talk to students and graduates working research settings
  Research faculty profiles
  Is a master’s degree required? Can it be obtained concurrently?

www.sph.umich.edu/ehs
Selecting the Best Program for You!

Questions/Outcomes to Reflect Upon:
• Time-to-degree
• Are publications required? How many?
• Professional development activities
• Student organizations
• Does the program have a training grant? Who does it support?
• Teaching opportunities
• Geography vs. quality education (i.e., a finite training period)
Example Graduate Certificates

For example:

- Global Public Health
- Risk Science and Human Health
- Injury Science
- Industrial Ecology
- Environmental Justice
- Science, Technology, and Public Policy

www.sph.umich.edu/ehs
MS and PhD Applications: Research Statement

• Proofread!
  • Don’t tell us why you want to attend the University of Minnesota
• Do reflect on your One Shining Moment(s) that led you to consider a graduate degree in Toxicological Research
  • Will help focus and personalize your essays
• Why Michigan? Why Toxicology?
• Strongly encouraged to discuss specific projects or faculty you’re interested in learning more about

www.sph.umich.edu/ehs
Environmental Health Sciences

2015-2016 GRADUATE OUTCOMES REPORT

Postgraduate outcomes
- 13% Pursuing advanced degree
- 4% Actively seeking
- 9% Fellowship, internship, or residency

74% Employed

Entry-level salaries reported
$62,500 AVERAGE SALARY

96% reported being either employed, finishing fellowships & internships, pursuing an advanced degree or post doc work, or not seeking employment as of April 1st.

www.sph.umich.edu/ehs
Careers
Consulting Firms
Multinational Corporations
Government and Universities

Employment outcomes by sector

- 33% Industrial/Commercial Firm
- 28% Federal Government
- 17% Academia
- 17% Nonprofit Organization
- 5% State Government

www.sph.umich.edu/ehs
Wishing You Success!!

Questions via the Q&A function at end of the webinar

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https://sites.google.com/a/umich.edu/dolinoy-lab/

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Faculty website
Personal Statements: Where to Start and What to Include

Lauren Aleksunes, PharmD, PhD, DABT
Associate Professor and Director,
Joint Graduate Program in Toxicology (JGPT)
Why do I need to write a personal statement?

The personal statement provides the opportunity to demonstrate your abilities, strengths and an understanding of the demands and expectations of graduate education.
Personal Statements

• Personal statements provide Admissions Committees with a sense of who you are, what you have done and where you are going.

• A well-crafted statement will bring together your cumulative training and experiences and demonstrate how you will capitalize on the training opportunities afforded you.

The best personal statements will motivate an admissions committee member to advocate on your behalf even in the face of other perceived weaknesses.
One Size/ Fits All
Preparation

• View each institution as unique and tailor appropriately
  – Why do you fit well at their institution?
  – What attracts you to this institution?

• Identify institution-specific questions or topics to address

• Talk with current graduate students and professors to make sure you understand the expectations of graduate students
Questions You May Address

• Did a specific event lead to your decision to pursue graduate education?

• Why are you excited to pursue research training in this particular field of study?

• What skills, training or experiences have you obtained to prepare you for this field of study?
  – Use specific examples: internships, summer fellowships, research projects, unique technologies, special coursework
Questions You May Address

• How are you prepared to succeed in graduate school?
  – Recognize and acknowledge the intellectual and emotional challenges of graduate school
  – Examples that demonstrate your ability to meet these challenges

• Are the circumstances or obstacles that you have had to overcome?
  – Be careful to not appear like you are making excuses for weaknesses
# Preventing Common Pitfalls

<table>
<thead>
<tr>
<th>Pitfall</th>
<th>Potential Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗ Clichés or vague statements</td>
<td>✓ Specific examples or illustrations</td>
</tr>
<tr>
<td>✗ Trying to include humor</td>
<td>✓ Ok to show some personality but focus on you as a future colleague</td>
</tr>
<tr>
<td>✗ Reiterating your resume/CV (long lists of awards or honors)</td>
<td>✓ Focus on key experiences that demonstrate specific qualifications</td>
</tr>
<tr>
<td>✗ Overly formal/thesaurus-type writing</td>
<td>✓ Use your voice to write and undergo many revisions</td>
</tr>
</tbody>
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Potential Attributes to Convey

- Confidence
- Motivation
- Experience
- Collegial
- Analytical Skills
- Intelligence
Potential Organization of the Personal Statement

1. Introduce Yourself – narrative, anecdotes, intellectual passion, unique attributes, commitment
2. Provide specific examples (experiences, training coursework), address gaps, and illustrate passion for the field
3. Describe plans for excellence at the particular institution and for your future
First Draft

• Start in the middle or the end
• Write down bullet points in order to have your ideas in one place
• Set deadlines with someone
  – Accountability will keep you moving forward

Get started!
Revisions

• Write and rewrite and rewrite
• Look at each word/phrase/sentence and assess its value
• Is the ‘voice’ appropriate for you as a professional?
• Get feedback!
Other General Tips

• Use your experiences as a learner and a scholar
• Do not overpromise what you will deliver
• Do not plagiarize or quote others
• It is ok to ask a program director what their admissions committee is looking for in the personal statement

✓ Be Concise
✓ Be Sincere
✓ Write Clearly
✓ Be Organized
✓ Be Memorable
Feel free to email your questions to me

Lauren Aleksunes

aleksunes@eohsi.rutgers.edu

Rutgers Toxicology Program

(http://jgpt.rutgers.edu)
Q&A

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Want More?

- Become an Undergraduate Affiliate of the Society of Toxicology
  - Quick and easy application
  - It’s FREE!
  - Access to recorded SOT webinars on scientific and career development topics
  - Eligibility for travel and poster awards at SOT Regional Chapter meetings
  - Full day of undergraduate programs at the SOT Annual Meeting
  - [https://www.toxicology.org/groups/ug/affiliatesform.asp](https://www.toxicology.org/groups/ug/affiliatesform.asp)
Thank you for joining us!

Stay tuned for our follow-up webinar on graduate admissions interviews in January 2018