

Application Tips and Suggestions
Program in Cell and Molecular Biology (CEMB)
Director: Douglas Rhoads <drhoads@uark.edu>

1. Graduate School Application

a. When to submit

- i. Any time of year is OK but the graduate school has deadlines
 - (1) Fall- August 1 (April 1 for International Applicants)
 - (2) Spring- December 1 (October 1 for International Applicants)
 - (3) Summer- April 15 (March 1 for International Applicants)
- ii. To have the best chance at receiving an assistantship your application must be complete by early January (submit in early December). Most departmental Teaching Assistantships (GTA) are awarded in February or early March for the following Fall semester, so you need to have your application in place for this deadline
- iii. Research Assistantships come available at different times of the year.
 - (1) Departmental Research Assistantships (GRA) become available when an existing student completes their degree. Therefore, these positions can begin either in the Fall or Spring Semesters
 - (2) Grant Funded Research Assistantships (GFRA) become available when grants are funded. It is difficult to predict when a grant will be funded and grant money has been difficult to secure for the past 3-4 years. Most grant periods will begin either January 1 or July 1.

b. Where to submit application materials

- i. All application materials should be sent to the Graduate school.
 - (1) The graduate school requires that all materials be sent together (Application Form, Application Fee, 2 transcripts, GRE scores, and letters of recommendation). For details see the checklists at <http://www.uark.edu/grad>
 - (2) There are electronic application forms available at:
<http://www.uark.edu/depts/gradinfo/forms/index.html>
 - (3) Contact information:
Graduate and International Admissions Office
346 N. Arkansas Avenue
1 University of Arkansas
Fayetteville, Arkansas, 72701, USA
1-479-575-6246 or Toll Free: 1-866-234-3957 or Fax: 1-479-575-5055
gradinfo@cavern.uark.edu <http://grad.uark.edu>
- ii. All application materials are assembled and evaluated first by the Graduate School in the Graduate and International Admissions Office. The application materials are then sent to the program or departments chosen by the applicant.
- iii. Check on your application
 - (1) Contact the graduate school to make sure your application is complete and has been sent to the program or department.
 - (2) Check with the department or program to make sure it was received.
 - (3) Ask the department or program
 - (a) Whether any additional information is needed

(b) When decisions will be made

c. Application to different programs and departments

i. CEMB is an interdisciplinary program including faculty from many different departments:

Animal Sciences	Food Sciences
Biological and Agricultural Engineering	Horticulture
Biological Sciences	Nursing
Chemistry and Biochemistry	Physics
Chemical Engineering	Plant Pathology
Crops, Soils, and Environmental Sciences	Poultry Sciences
Entomology	Psychology

ii. Not all faculty in the different departments are also members of CEMB

iii. Applications to CEMB are electronically available to all CEMB Faculty. **But that may not include all the faculty that might be interested in the applicant.**

iv. Students may wish to have their applications reviewed by individual departments in addition to the CEMB program.

(1) Applicants should contact gradinfo@cavern.uark.edu to indicate which departments should receive the full application file. If you apply to just one department your application will not be evaluated by any other departments. If you apply to several departments and programs you will have your best chance to find financial support and admission.

(a) Examples

(i) Only some faculty in the Department of Food Sciences are members of CEMB. Applicants interested in Food Sciences may wish to apply to both the Program in CEMB and the Department of Food Sciences

(ii) Only some of the faculty doing poultry-related research are located in the Department of Poultry Sciences and only some of the Poultry Sciences faculty are members of CEMB. The same could be said for Biological Sciences or Biochemistry.

(iii) It is difficult for applicants to appreciate the diversity of research projects across our campus or in which department particular faculty or research emphases might be found

(iv) Applicants should consult the individual departments web-sites, and inquire of program faculty. This is one major reason for the Statement of Purpose (see below)

d. How long are applications kept open?

i. Generally the applications are kept open until two weeks into the semester for which application was made. Unaccepted applications will then receive a letter of notice

ii. Applications can be extended by email to gradinfo@cavern.uark.edu indicating a desire to extend the application time for an additional semester.

e. What is the GRE requirement?

i. All applicants must submit scores for the GRE but there are no minimum scores.

ii. Poor scores in any category (especially Verbal or Written) can detract from an applicants chances of attracting a faculty sponsor.

f. What is important to include in the Statement of Purpose? **See Below: Example Statement of Purpose**

i. Purpose of this Statement

- (1) Provide important information about the applicants qualifications and goals. Things that can not come from the School Transcripts, or Letters of Recommendation.
 - (2) This Statement is very different from the GRE writing assignments or medical school application letters. Keep it short and to the purpose at hand.
 - (3) The Program Director will review this statement to summarize the applicants qualities
 - (a) This 2 line summary will be critical to attracting interest from Program Faculty
 - (b) Interested faculty will then read the entire Statement to determine whether the applicant matches their research program. Length is a detriment. Keep the statement concise and informative. Brevity is important.
- ii. Important information to include in the statement
- (1) What research experience have you had and with whom
 - (2) What are your post graduate degree goals (i.e., what do you plan to do after completing your graduate degree)
 - (3) What are your specific areas of research interest
 - (4) What program faculty have you contacted
 - (5) Which program faculty have research that is attractive to you
- iii. What does not need to be in the statement
- (1) Childhood experiences
 - (2) Colorful memories
 - (3) Quotes from Scientists or other dignitaries
 - (4) Experiences unrelated directly to your present application
- g. Include a current Curriculum Vitae/Resume
- i. Include a detailed document that lists
 - (1) Employment experiences including skills
 - (2) Post secondary schooling
 - (3) Research experiences
 - (a) duration (time frame)
 - (b) skills learned
 - (4) Research skills you are proficient in. This means hands-on experience, not internships where there was only observations.
2. The Faculty Sponsor
- a. Functions of the Major Professor
 - i. Makes all arrangements for financial support. Whether a GTA, GRA or GFRA, all students are expected to be on financial support. The Major Professor will arrange with the program or home department for financial support.
 - ii. Direct the student in research and course work.
 - iii. No student is admitted to this program without a Major Professor
 - iv. Sometimes situations change after admission making it necessary for a student to switch Major Professors. Any student wishing to switch must first notify their current Major Professor, and obtain permission from the program to switch.
 - b. How to obtain a sponsor
 - i. The best way to contact faculty is through email. Email links are available from the program website at <http://www.uark.edu/depts/cemb>
 - ii. Before you email specific faculty, the applicant should consult the faculty members personal web pages and familiarize themselves with the research program

iii. Email contact with the prospective faculty member should include **See Below: Example Email to Faculty Member**

- (1) The Subject area should include something like: "Prospective Graduate Application" or "CEMB Applicant"
- (2) Whether you are considering or have already applied to the program, as well as which degree program (MS or PhD) and the semester you would prefer to be admitted (including if you are flexible)
- (3) Statements about the links between your research interests and the faculty members research
- (4) Briefly, who you are, and why you are contacting. What is your degree history, and from what institution(s)
- (5) Personalize the email to the faculty members research. The applicant must show they have researched this specific faculty member. Speak to the contents of recent publications from the faculty member (citing findings and the topic), and then relate your background and career goals.
- (6) Indicate your financial needs and request a response pertaining to the opportunities to join the research group and receive an assistantship (including whether you would qualify for a teaching assistantship, or would be interested in one).
- (7) **Generic form letters rarely work**
 - (a) Faculty receive lots of emails addressed to "Dear Sir/Madam" that express an interest but that don't really relate to their research. Most of these end up discarded without a response.
 - (b) Form letters often contain some question like: "Would you please tell me about the research going on in your laboratory and any research opportunities in your group?" This indicates that the inquirer has not done any initial work. Faculty have web pages that describe their research work and most have links to recent publications. These emails usually get discarded.
- (8) Not all inquiries will receive a response. Do not expect every faculty member to respond.
- (9) Similar emails can be sent to the program director asking for assistance in identifying suitable Faculty members to contact. In this instance you need to include the same information as above, and which faculty interest you, which faculty you have contacted, and which faculty have responded.

3. What happens when you get admitted

- a. Off campus housing options can be found at <http://offcampushousing.uark.edu>. This is a fast and easy searchable database that includes price range, location and amenities as well as photos, maps and a roommate search option. It's a great resource to share with prospective students and incoming faculty and those students transitioning from on campus to off campus living. This site is the University's exclusive referral for off campus housing.

4. **Example Statement of Purpose**

My career goal is to become a research faculty member, preferably at a European University. Currently I am completing my BS degree at the University of Fakedata. I am applying to the Cell and Molecular Biology program to pursue a PhD.

Currently I have experience with animal cell culture, microbiology, gel electrophoresis, DNA isolation, and PCR. Part of my training was during a 6 month internship with Dr. Fillup A. Beaker at Cells-R-Us Corporation. I was fortunate to get this internship because there were more than 30 applicants and I was the only person accepted. My experiences during that internship included: growth of Hela cells, culture

maintenance, media preparation, cell transformations, and FACS analysis of the transformants. During my undergraduate work at the University of Fakedata, I have been conducting an honors research project in the laboratory of Dr. C. A. Bacillus, where I have cloned a phytase gene from *Lactobacillus sp.* isolated from the rumen of a cow. The gene was amplified by PCR and cloned into an expression plasmid. Under direction of a Ph.D. student, we were able to show that the *E. coli* clone was expressing a 110 kdalton protein as expected. This project gave me experience in DNA isolation, PCR, gel electrophoresis, and bacterial culture work. I believe these experiences have prepared me to be a productive member of a research team.

Most of my course work has been in the area of microbiology and molecular biology, but I have taken some courses in plant physiology and plant molecular biology. Part of that interest is because I grew up on a casava farm and got to see first hand the impact of bacterial and fungal diseases. That is why I have a keen interest in molecular processes underlying the interactions between plants and their pathogens.

My main areas of interest are plant molecular biology, and pathogenic microbiology. However, I also would be interested in research opportunities in protein biochemistry, and immunology, since these are important aspects of pathogenesis. I have reviewed the faculty research projects on the Cell and Molecular Biology website and know that I would be interested in exploring possibilities for the projects in the laboratories of Drs. Drivel, Dogma, Buffoon, Larry, Moe, Curly, and Yiatpos. I would like to add that my interests in cell biology are much wider and would be interested in many other opportunities.

5. Example Email to Faculty Member

Dear Dr. Yiatpos,

I have applied to the Cell and Molecular Biology program for the Ph.D. The program director, Dr. Rhoads, has informed me that my application has been received and is complete. My application ID number is 00011222. I am contacting you about opportunities in your laboratory and the chances of you sponsoring my application for Fall 2009.

I have reviewed the materials on your website and am very interested in your work studying regulatory pathways during the interactions between bacterial pathogens and intestinal epithelial cells. This is a project that is very interesting to me. I have had some training in animal cell culture during a 6 month internship I was involved in at Cells-R-Us Corporation. I was fortunate to get this internship because there were more than 30 applicants and I was the only person accepted. My experiences during that internship included: growth of Hela cells, culture maintenance, media preparation, and cell transformations. I also was able to get some experience analyzing samples on a FACS. In addition, during my undergraduate work at the University of Fakedata I did an honors research project where I cloned a phytase gene from *Lactobacillus sp.* which had been obtained from the rumen of a cow. The gene was amplified by PCR and cloned into an expression plasmid. Under direction of a graduate student we were able to show that the *E. coli* clone was expressing a 110 kdalton protein as expected. This project gave me experience in DNA isolation, PCR, gel electrophoresis, and bacterial culture work. I believe these experiences have prepared me to be a productive member of your research team.

My long term goals are to obtain a PhD, and then seek a postdoctoral position. I would be most honored if you would consider me for a position in your research group. If there are other new opportunities in your research, I would enjoy hearing about them.

Thank you for your time, and I look forward to hearing from you.