Dear Biology Alumnus,

I trust that these greetings from the Department of Biology at Western Kentucky University arrive during a productive year for you, both professionally and personally. I feel that this opportunity to keep you informed of the activities of the department is very valuable and would appreciate any reciprocation.

After one academic year as Head of the Department of Biology, I am greatly impressed by the activities of both faculty and students. Upon my arrival at Western, I found a cooperative, enthusiastic biology faculty who have made my first year enjoyable and productive. A special thanks is gratefully extended to Dr. Jeff Jenkins, former head of the department, for his assistance in my introduction to the operation of the department. I believe that several changes in curriculum, research encouragement from Dr. Charles Kupchella, the new dean of Ogden College and myself, and a proposed new B.S. degree program in Recombinant Genetics (described below) will enhance your desire for continued support in the recruitment of excellent students and financial assistance.

Student and Clubs News

The L. Y. Lancaster Mu Gamma Chapter of Beta Beta Beta had another very successful year and continued to be one of the most active and largest chapters in the United States. Since the formal installation of the L. Y. Lancaster Biology Club as a chapter of the national organization in the Spring of 1972, there have been 383 WKU students initiated as full members of Beta Beta Beta including the 18 new members initiated during the 1985-86 academic year. Chapter members presented two papers at the 1986 regional meeting of Beta Beta Beta in Columbia, South Carolina and member Kim Eakle continued a chapter tradition by being elected as an officer (secretary) of the Southeastern United States District II of the national organization. Local officers for 1986-87 are as follows: President, Todd Cheever; Vice President, Lisa Mikulcik; Secretary, Amy Bogle; Historian, Kim Eakle; Activities Chairman, Mark Newman.
Alpha Epsilon Delta (AED) has completed an active year with the assistance of advisor Dr. Martin Houston. Dr. Blaine Ferrell will serve as faculty advisor next year because Dr. Houston will be Associate Dean of Ogden College. AED is proud to report a 94% acceptance to professional school this year with seven students accepted at the University of Louisville and three at the University of Kentucky Medical Schools. Two dental students were accepted at both of the above institutions. The annual AED awards were: AED Member of the Year, Denise Milam; Predental Student of the Year, Terry Dean; Premedical Student of the Year, Cheryl Williams. AED officers for 1986-87 are: President, Pat Dinning; First Vice President, Todd Cheever; Second Vice President, Jessica Ralston; Secretary, Lisa Mikulcik; Treasurer, Janna Tuck; Historian, Mark Newman; Scalpel Reporter, Kim Adams; Alumni Chairperson, Lisa McDonald.

Only in its second year of existence, the Association of Medical Technology Students (AMTS) has been another active student organization within the department. With a membership of 30 students, the club has sponsored several lectures and has helped to coordinate communication between faculty and medical technology students. Officers for 1986-87 are: President, Lindsey Miller; Vice President, Sharon Hayes; Secretary/Treasurer, Lea Neely; Historian, Lisa Butler. Nine of eleven students who applied for internships were accepted at our affiliated hospitals. These now include the following schools of Medical Technology: Cumberland, Cookeville, TN; Lourdes Hospital, Paducah, KY; Owensboro-Daviess County Hospital, Owensboro, KY; St. Elizabeth Medical Center, Covington, KY; St. Mary's Medical Center, Evansville, IN; St. Thomas Hospital, Nashville, TN; University of Louisville Medical Center, Louisville, KY; Vanderbilt Medical Center, Nashville, TN. Visits to the above institutions by the coordinator of our Medical Technology Program, Dr. Larry Elliott, and by the department head indicate that our students are considered to be superior and well prepared.

Pennye Steele Jenkins and Darrell L. Ray were selected by the faculty as the Outstanding Biology Graduates of 1986 (co-award). Both students completed their studies here at Western with excellent records. Mrs. Jenkins has an interest in education and should contribute greatly to the education of future biologists. Mr. Ray has received a teaching assistantship and plans to continue his education in graduate school here at Western.

The department is in the process of increasing the emphasis on research and the number of undergraduate students involved. The department is proud to recognize Mark Clauson who received first prize in the undergraduate division of the Sixteenth Annual Sigma Xi Research Conference at WKU. His research entitled "Hydrocarbon degradation in a pond by enriching for indigenous microorganisms" was directed by Dr. Larry Elliott. Two other students of Dr. Elliott's, Ann Clark and Pat Dinning, received honorable mention for their research at the Southeastern Regional Tri Beta meeting at the University of South Carolina.
Scholarships

Due to the generosity of alumni, faculty, staff and friends of the department, we have been able to increase the number of scholarships awarded to biology majors. The Biology Scholarship Fund, initiated by faculty and now supported by alumni, staff and friends, has at total value of almost $26,000 as of December 31, 1985. Several alumni work for companies that have matching fund programs, doubling or partially matching contributions from their employees. If you have questions about this fund, please contact the department.

A special note must be made in appreciation to Dr. and Mrs. Basil Cole and the families of Drs. E. O. Beal and Lewis Lockwood for established endowments that continue to support biology students. The Florence and Basil C. Cole awards, for example, provided fifteen $500 scholarships for the 1986-87 academic year. We were fortunate to have Dr. and Mrs. Cole and members of their family visit Western at the annual L. Y. Lancaster Society Lecture. The Department of Biology held a breakfast in honor of Dr. and Mrs. Cole at which they were presented a plaque for their assistance to so many of our students. These scholarship funds continue to be of major importance to our students and are greatly appreciated by the entire academic community.

Faculty News

The past year has been very busy for biology faculty. As head of the department, I am proud of the fact that in addition to teaching, committee responsibilities and public service, the biology faculty has written over 20 grant proposals this past year. Major successes in funding or rewards include: (1) Dr. Thomas P. Coohill has been awarded a NASA Senior Associateship Award by the National Research Council of the National Academy of Sciences. The award carries a $50,000 stipend and supplemental funds for travel and research. Dr. Coohill will begin his research at the Jet Propulsion Laboratory of Cal Tech University, Pasadena, California in June and continue until the summer of 1987. (2) Dr. Larry Elliott continued as project supervisor for the medical technology part of a Health Careers Opportunity Program (HCOP) grant for $62,560. Dr. Elliott is also involved in a Comprehensive Cooperative Education grant for $400,000 received by the University's Cooperative Education Office. (3) Dr. Robert Hoyt, who has returned to the department following a year in which he served as Assistant to the Dean of Ogden College, was successful in obtaining a NSF Equipment grant funded at $88,886 for an energy dispersive X-ray fluorescence spectrometer to be used by several departments. (4) Dr. Martin Houston has been involved in the development and writing of an applied research program in the biology of aging which was part of a funded university-wide $140,000 grant to train a core of faculty in the area of gerontology. (5) Mr. Rodney McCurry has obtained a grant for $32,100 from General Motors Corporation for the acquisition of an EDS X-ray detection system for the department's scanning electron microscope.
The following faculty have been funded for faculty research projects, workshops or summer fellowships by the University during the next year: Drs. Bailey, Dillard, Dunham, Elliott, Ferrell, Kupchella, Prins, Toman and Winstead.

In November of 1985 Dr. Joe E. Winstead passed the leadership of the Kentucky Academy of Science over to Dr. Charles Covell, Jr. of the University of Louisville and will continue to serve during 1986 as Past President of the Academy. During Dr. Winstead's tenure as President of KAS, the number of institutional and corporate affiliates supporting the KAS financially reached an all time high (23), a new endowment fund was started and the Academy's Foundation was strengthened significantly by long term financial commitments. Dr. Winstead also represented the Academy on the student space shuttle program Project Challenge which recently selected the six finalists from over 100 entries. The six student projects will be flown on a NASA space shuttle flight scheduled for early 1988. The third place student in this region was advised by Dr. Jeff Jenkins during the development of the project.

Tech Aqua

Drs. Shadowen and Winstead are both involved in instruction at Tech Aqua this summer.

Sabbatical Leave

Dr. Scott Ford has been awarded a sabbatical for the fall semester, 1986. His plans include working in the research laboratory of Dr. Billy Cooper at Baylor University Medical Center in Dallas, Texas to learn the latest techniques in the isolation and identification of pathogenic yeast. He then plans to return to Western later in the fall semester to initiate a research program involving pathogenic yeast found in soil samples.

Curriculum Changes

Under the able chairmanship of Dr. Herb Shadowen, the department's Curriculum Committee (with the department's approval) has developed the following core courses for the Biology major:

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Concepts I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Biological Concepts I Lab</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Biological Concepts II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Biological Concepts II Lab</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Introduction to Molecular Biology and Lab</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Undergraduate Seminar</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Plus two of the following 3 courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecology and Lab</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Genetics and Lab</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Biochemistry and Lab</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
The core integrates a principles course, botany and zoology in a year long introduction (Biological Concepts I and II) and provides the student with an introduction to molecular biology. Work is continuing in the development of track systems based on the core to provide our students with specific upper level courses as electives.

The department's Molecular Biology Committee, directed by Dr. Frank Toman as chair, has developed a B.S. degree program in Recombinant Genetics. The program, first in Kentucky and one of only four similar programs in the U.S., has passed all of the university committees and will be presented to the Council of Higher Education this summer. We anticipate officially beginning the program in Fall, 1987 but will begin offering courses in the program this fall. The program will provide the student with all of the major techniques required in genetic engineering including isolation and purification of DNA, hybridization of nucleic acids, use of restriction endonucleases, electrophoresis and cloning. Employment opportunities in this most rapidly growing area of biology are presently tremendous and are predicted to be excellent for the next two decades.

We hope that this letter has been informative with respect to our activities and the directions the Department of Biology is taking to meet the challenges of higher education. We believe that the activities of our faculty and students provide a bright future for education in biology here at Western. Your support for higher education, as emphasized by our new president Dr. Kern Alexander, is crucial to the success of the department and Western Kentucky University.

Please keep us informed of your activities and location and continue to support us as we endeavor to provide an excellent education to our students.

Sincerely,

Valgene L. Dunham, Ph.D.
Professor and Head

msd