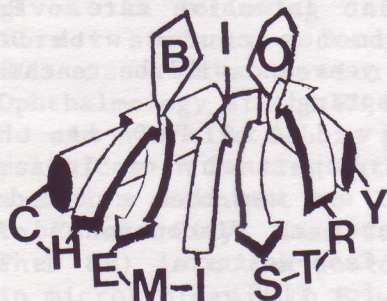


NEWSLETTER

Fall

1987



FROM THE DEPARTMENT HEAD

This is the first issue of a newsletter that we will produce for alumni and friends of the Department twice a year from now on. These are tough times for higher education and for K-State in particular. Nevertheless, the Department is doing very well and exciting things are happening that we hope you will want to know about.

This issue features items on the new building that we will share with Chemistry, on new faculty most of you haven't met, on old friends among retired faculty, and on some former students who are doing interesting things. We are also including some of the gossip we have picked up about people who have been around the Department.

Since this is our first effort, we would very much like to hear from you. We want to know how you like the newsletter and what you would like to see in it. We particularly want to have information about you and what you are doing that we can put into future issues.

--David Cox

NEW BUILDING

Construction of Phase I of the new Chemistry/Biochemistry building is well underway. The outer shell of the building is up, most of the major utilities are in, and installation of hoods and lab furniture has started. We expect to move in next summer. The building is going up across the street from Willard Hall on the site of the old greenhouses south of King Hall. It already looks very much like the drawing on the cover of the enclosed leaflet. The exterior is designed to harmonize with Willard, Dickens, and King Halls, which surround the site. Inside, the building is engineered to the state of the art for efficient and flexible use for the next fifty years.

We will move our entire laboratory teaching complex, occupying about two-thirds of the street-level floor. The top floor will house research suites for seven faculty. Chemistry will have the rest of the ground floor, the basement, and the second floor. When the new space is ready, we will vacate the research space in Leasure Hall and the teaching labs in Willard. We will keep our space in Burt Hall and about half of the basement in Willard. The Department office will stay where it is.

Phase I is the result of a cooperative effort with Chemistry that began in 1974. Phase II, which will complete the re-housing of both departments is high on the K-State priority list but has not yet been funded by the Legislature. Those of you who still live in Kansas are welcome to mention the project to your legislators.

FEATURED FACULTY

This fall Professor Owen Koeppe joined the department with a joint appointment in the Center for Science Education, which is currently housed in the College of Education. Prior to this appointment he was Provost of the University for seven years. He came to KSU from Missouri where he had been Chair of biochemistry for five years and Provost for seven years.

In the Center he will be developing strategies to communicate chemistry and biochemistry more effectively to undergraduates and high school students. The NSF now is supporting efforts of this sort including summer science institutes, teacher advancement courses etc. In the department he will be teaching IOB this spring and hopes to love every minute of it.

R. Krishnamoorthi joined the department as an assistant professor in the fall of 1986. His major research interest is two-dimensional NMR of proteins. He is studying a protein inhibitor of Hageman factor, involved in blood clotting; nitrite reductase, an essential enzyme in plant nitrogen metabolism; HIPIP, a high potential iron protein found in the electron transport pathway of bacteria. Krish obtained a PhD in Chemistry from UC-Davis and was a post-doc with J. Markley at Purdue and Wisconsin. His wife Shymala has a PhD in organic chemistry. They have one daughter Sindhuja, who is just over a year old. Krish is enjoying teaching IOB this fall. This year his office is in Leasure room 111 but he will be moving to the new building when it opens to be closer to the 400 MHz super conducting NMR that we share with the chemistry department.

Ray Ochs made the big move to Manhattan in the summer of 1985. In his own words "My laboratory occupies two rooms in Burt Hall, in the remodeled half of the second floor. A collection of skeletons was removed just before my arrival. These have since been replaced by two graduate students and one undergraduate. We are studying the regulation of liver metabolism by

hormones, especially the epidermal growth factor. The goal of the laboratory is to understand how hormones can regulate both rapid metabolic responses of the cell and long term ones, i.e., those requiring gene expression."

Ray's wife Julie is a nurse, specializing in intensive care. Ray taught a hormones course with Dee Takemoto last year and will be teaching General this spring.

Ray received his PhD at the Biochemistry Department of Indiana Medical School and was then a post-doc with Henry Lardy at Wisconsin and A. Goodridge at Case-Western. He is an active writer for TIBS.

OLD FRIENDS

All of the recently retired faculty have remained in Manhattan and we see them fairly often.

Howard Mitchell, who retired in 1981, has been doing a good deal of traveling. Last winter the Mitchells varied their usual habit by going to Florida instead of Texas. This year they will be going back to the Rio Grande valley. One of their daughters is in England- her husband is on a two year assignment for Upjohn- and so the Mitchells are likely to make a trip across the Atlantic next summer.

Bob Clegg was in England last spring and is off about now to see young Bob in Germany. Last summer he went back to visit relatives in Rhode Island. Since "retiring" in 1984, Bob has been back twice to help us out with IOB. Between trips, Bob reports, he plays golf every chance he gets.

Don Parrish retired in October 1983 after 40 years at KSU. His wife Hazel had a stroke in 1984 and although he is very busy doing things around home, he checks in at the department about once a week. Hazel is able to travel by car so they regularly go visit their children in the Washington DC area and make some shorter trips. Don is still active in Sertoma Club and will begin his 55th year in the Manhattan Municipal Band.

We'll bring you up to date on Bill Ruliffson and Bryce Cunningham in the next issue.

NEWS

Dee Takemoto's program is funded by several grants, and while she is only in her fourth year as Assistant Professor, she has had an active laboratory for almost a decade. She gives the following information about former students: **Randy Kresie** (B.S. 80) is now a senior resident in Ophthalmology at the KU Medical Center. He and his wife Debbie plan on private practices in Kansas; **Cathy Jilka** is now a senior scientist at K.C. Biologicals in Kansas City; **Joan Cunnick** (Biology Ph.D. 87) is now a postdoctoral fellow in microbiology with Bruce Rabin at the University of Pittsburgh.

Larry Davis, whose laboratory has just received USDA funding for a study of mutants in the Fe protein of nitrogenase, conveys the following information concerning students who worked in his laboratory: **Rick Johnson**, (B.S. 78) is now a baby doctor at Fort Riley. He and his wife Barbara (B.S. 78) have three children and all of them are runners (parents and children). Barbara is working for Jerry Reeck; **Marilyn Mai** (M.S. 76) works with Monsanto in St. Louis; **Wade** (B.S. 80) and **Pat Leitner** are parents. Wade has gone into engineering while Pat is an accountant; **Ted** (B.S. 76) and **Claudia Socolofsky** are still in Boulder. Ted works for AT&T; **Sotaro Kotake** (M.S. 80) returned to Japan after a time in the Philippines and took a job with a major pharmaceutical company; **Hussein El-Sherif** returned to Sudan last year; **Sue Brown** (post doc 83-85) has a more permanent job in the Division of Biology at KSU; **Gary Radke** who was research assistant here for several years made a gradual transition to Roche's laboratory while working on a master's degree in computer science which he will soon complete.

Besides Rich Cate (below), the careers of the several graduates from Tom Roche's program are progressing well: **Tom O'Connor** (Ph.D. 79) works for

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Electro-Nucleonics (Columbia, MD) and, last we heard, was pursuing studies on the early detection of certain cancers by immunological assays; **Bryan Lawlis** (post doc 79-81) is employed by Genencor (S. San Francisco) where he headed the development of a fungal system for the production of rennin (used in cheese making). He has recently been promoted to Director of Process Development; **Doug Brandt** (Ph.D. 81) is employed at Abbott Laboratories (Chicago, IL) and is heading the development of a monoclonal-based assay for the form of creatine kinase that is released into the blood with heart attacks. Doug also had the experience of delivering their (his and Cheryl's) third child in the back seat of their car during the past year; **Jim Maher** (Ph.D. 83) is working for American Biomedical Inc. (Tulsa, OK). This company is developing a variety of diagnostic assays including new diagnostics for some of the less common viral diseases. Not all former students of Roche have been captured by industry: **Mary Pratt** (postdoctoral 77-81) is still working on multienzyme systems at University of Texas-Houston; **Max Cary** (Ph.D. 84), according to our best information, is working towards a DVM degree in Ohio; **Joseph Jilka** (M.S. 85) is working towards his Ph.D. in the Department of Biochemistry at the University of Illinois. Several former research assistants and undergraduates who worked in Roche's laboratory have completed higher degrees: **Dave Dyer** is now on the faculty at University of North Carolina; **Jennifer Gold** is doing postdoctoral work at the University of Pennsylvania; **Kevan Flaming** (BS 84) has nearly finished his DVM and MS degrees at KSU; and **Tim Verschelden**, who got his M.S. with Muthukrishnan (1985) and worked for T. Roche, has returned to teaching high school chemistry and physics at Bishop Hogan High School in Missouri and evening classes at Penn Valley Community College.

FORMER STUDENTS

Richard Cate (Ph.D. 1979 with Tom Roche) is employed at Biogen Inc. in Cambridge, Massachusetts. His research received interest in the national press last year. At that time, he had cloned the gene for a human protein known as Mullerian Inhibitory Substance (MIS) into Escherichia coli. MIS normally functions in males to prevent the development of the Mullerian duct into uterus and fallopian tubes. Preliminary studies indicated MIS inhibited the growth of cell lines developed from ovarian cancers. Thus there is considerable interest in use of MIS to specifically inhibit cancers that develop in female reproductive organs. Dr. Cate has now developed lines of mammalian cells (CHO cells) that produce high quantities of MIS with the desired modifications (glycosylation) that occur in mammalian cells following protein synthesis. Using these cells lines, large amounts of MIS have been prepared. After success in phase 1, Dr. Cate has received a phase 2 small business grant from NIH (\$500,000 for two years). In part, he will learn how modifications in the structure and processing of MIS will affect its function. Work also continues on the testing of the inhibition of cancer cells by MIS.

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News Notes concerning you or other graduates:

Peter J. Reimers received a B.S. degree in Biochemistry with a dual major in crop protection in 1986. Pete attended Gardner High School near Lawrence, KS, and came here because he had a specific interest in doing graduate work in the area of plant pathology. The dual major provided him with both applied courses in crops and their protection, as well as the tools needed by a modern plant pathologist to do research with plant pathogens.

Prior to beginning studies in the Department of Plant Pathology here at KSU, Pete made a successful application for a NSF predoctoral fellowship. This will support him for three years to do research on a bacterial leaf blight of rice, studying gene expression in the plant host when it is infected by the pathogen. Some of the tools of biochemistry that he uses nearly every day include DNA digestion, RNA isolation, translation of RNA into protein and gel electrophoresis.

In the long run, Pete would like to move into an academic position in the field of plant pathology. He has had a continuing interest in the problems of third world countries and spent a summer (1986) in the Philippines, though not to do science. The International Rice Research Institute is located there, in Los Banos, and he would like to return sometime to do collaborative work at IRRI.

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