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Center to coordinate “biotech” work on campus, with industry

A Center for Biotechnology has been established at WU to coordinate research and training in the field, including collaboration with industry.

The Monsanto Co., recognizing the desirability of an academic biotechnological effort in the St. Louis area, has been particularly helpful in the start-up phase of the Center for Biotechnology and in providing seed money and funds for a public seminar series and student fellowships. The center also has received laboratory equipment donated by the Ralston Purina Co. These and other local and regional firms have indicated interest in joint projects with the University on biotechnology — the use of biological processes to produce simple and complex chemicals.

Organized as an interdisciplinary operation, the center embraces three major academic areas: College of Arts and Sciences, School of Engineering and Applied Science, and Division of Biology and Biomedical Sciences. William D. Phillips, Charles Allen Thomas Professor of Chemistry and chairman of the chemistry department, is acting director.

“What we’ve planned is a center in the true sense of the word,” said Phillips, who noted that the center exemplifies the Regional Commerce and Growth Association’s recent proposal for a “biotech” research park linking industry and academia in the St. Louis area. “There’s enormous interest here in biotechnology,” he added.

An introductory course offered this fall on the subject and involving such aspects as bioreactor design, genetic engineering of microbes, and patents and regulations, attracted not only students, but faculty, administration and industrial leaders, including representatives from Monsanto Co., Ralston Purina Co. and Mallinckrodt, Inc. Additional courses leading to a master’s degree, and eventually, a PhD degree in biotechnology are being developed. The new degree will be offered through such traditional departments as biology, chemistry and chemical engineering.

A laboratory in Urbauer Hall has been converted for use by the Center for Biotechnology. A proposal for an additional facility in the Department of Biology is under consideration by the National Institutes of Health.

Ultrasound experiments aimed at refining images of cardiac tissue

To turn a shadowy, impressionistic image of the human heart into a clearly defined, “paint-by-number” representation — that is one way to describe the goal of ultrasound researchers at WU, who are engaged in a new field called tissue characterization.

The researchers recently received a five-year, $644,000 grant from the National Institutes of Health to pursue their study of ultrasound — a radar-like imaging technique in which high-pitched sound waves (inaudible to the human ear) are bounced off an object and the echoes displayed on an oscilloscope screen. In industry, ultrasound is used to detect flaws in structural materials. In medicine, it is used to detect changes in the body such as cirrhosis of the liver, breast tumors, fetal growth and position, and heart disease.

The latter is the concern of Lewis J. Thomas, Jr., director of the Biomedical Computer Laboratory (BCL) and principal investigator for the grant, who is working with R. Martin Arthur, associate professor of engineering, and James G. Miller, professor of physics. Together with colleagues in the School of Medicine’s Cardiovascular Division, they are trying to add a new dimension to ultrasound imaging — an achievement that would literally show a “change of heart” in cardiac patients.

“Conventional ultrasound already is a spectacular success,” said Miller. “Right now you can get a good picture of organs such as the heart. We’re trying to make the interpretation of those pictures less subjective by tracking a quantitative measurement to small amounts of tissue in the image.”

Ideally, these measurements would make up an ultrasonic index that could be linked to already established indices of heart disease. Doctors could determine not only the composition of the tissue in question (proteins, fats, water), but also the amount of new and old scar tissue, and even the minute-by-minute effects of drug treatment.

Experts agree that the ability to identify positively the state of tissues with ultrasound would be a revolution in medical diagnosis. Explained Arthur, “A new tool doesn’t just do old things better. It opens up whole new horizons in treatment.” If ultrasonic tissue characterization becomes a working reality, he said, it may rank alongside X-rays as a common, non-surgical method for detecting body injuries and abnormalities.

What’s more, ultrasound appears to be harmless and can be used for repeated studies.

Arthur and Miller are designing equipment to improve the generation and reception of sound waves, and to measure more accurately how different types of tissue absorb, scatter, and otherwise interact with sound. In collaboration with Thomas and colleagues at BCL, they are devising computer-based models for those interactions.

Thomas, who has worked on other state-of-the-art imaging systems, points out that each system provides unique information about the body. He says ultrasound has the potential to show the orientation of structures within organs, such as scars and the direction of muscle fibers.
Hyman Meltzer dies; developed PhD program in organizational behavior

Hyman Meltzer, professor of psychology and organizational behavior at Washington University in St. Louis, died November 27 after a heart attack at the age of 75. "He was responsible for introducing courses in clinical psychology applicable to managerial and organizational problems in industry," said his wife, Dorothy Meltzer. In 1964 he introduced courses in humanistic psychology and in 1972 he developed the doctoral program in organizational behavior whose directorship he shared with Walter Neidig, professor of organizational psychology in the School of Business and Public Administration.

Meltzer was born in Russia and reared in New Jersey. He received a BS in chemistry from the University of Illinois in 1921, and MA and PhD degrees in psychology from Columbia University a few years later. At Columbia, Meltzer studied with such pioneers in psychology as Dewey, Thorndike and Woodworth. He was a past president of the consulting division of the American Psychological Association and the Missouri Psychological Association and a past vice president of the American Orthopsychiatric Association. He was a Diplomate of the American Board of Examiners of Professional Psychology.

Meltzer was a Fellow of the American Psychological Association, the American Orthopsychiatric Association and the American Association for the Advancement of Science. The Department of Psychology has established an annual student prize in his honor as a "lasting tribute to this outstanding individual and teacher who had a warm and loving approach to people and life." Donations may be sent to the Department of Psychology, Box 1125, addressed to the Hyman Meltzer Award Fund.

Four scholarships established for area students

Chancellor William H. Danforth has announced the establishment of four scholarships for area high school seniors interested in attending WU next fall.

The four George W. F. and Martha Russell Myers Scholarships, two with full tuition and two with half-tuition, will be awarded to seniors nominated by their high school principals on the basis of academic achievement. The scholarships are available to students residing in the city of St. Louis; the Missouri counties of Franklin, Jefferson, St. Charles and St. Louis; and the Illinois counties of Madison and St. Clair.

The scholarship fund was established last year by a $345,000 gift from the late George W. F. Myers. Myers was founder and owner of the Myers Engineering and Equipment Co., of St. Louis.

One of the full-tuition scholarships will be awarded to a candidate for admission to the School of Engineering and Applied Science. One full-tuition and two half-tuition scholarships will be awarded to three students applying to the College of Arts and Sciences, the School of Architecture or the School of Fine Arts. The awards will cover all four years of undergraduate study.

Nominations are complete for next year's awards.

Ultrasound—continued from p.1

The researchers are using ultrasound to study animals with heart disease in the Orchard Paper Company of St. Louis; the Psychiatric Child Guidance Clinic.

The Albert Gallatin Fellowship in International Affairs at the Graduate Institute of International Studies, University of Geneva, Switzerland, is offering a $7500 fellowship for the academic year October 1983 to July 1984. Application forms may be obtained from the Office of International Studies, Box 1088. Deadline for receipt of applications is March 9, 1983.

For more information, including the catalogue of the Graduate Institute of International Studies, contact William D. Carter, PERIS Foundation of America, 5 Harvard Court, Huntington, N.Y. 11743.

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Edward L. MacCordy, associate vice chancellor for research, has been elected chair of the Board of Directors on behalf of University Research Administrators. He will serve as vice president for 1983 and 1984. His council was founded in 1959 to promote sponsored programs at colleges and universities in a more effective way to administer them.

The St. Louis Raptiz Ensemble presented a full evening’s concert of its dance and music Nov. 11 at Hannibal Conservatory. The raptiz performers played with a capacity audience in a program sponsored by the Hannibal Concert Association. Edison Theatre’s technical director Jack Brown supervised technical aspects of the performance.

Two faculty members delivered papers recently at the 21st Annual Central Slavic Conference at the University of Kansas, Lawrence. Renata Rotkowicz, director of public services and collection development at Olin Library, participated in a discussion on “Polish Solidarity and Marital Law in Soviet and American Media.” She read a paper on “Paraad on Solidarity and Marital Law.”

Robert C. Williams, professor of history and dean, University College, took part in a session on “Germania in Russia and the U.S.S.R.” Williams’s paper was entitled “Lenin and Com- socialism, 1900-1914.” Earlier, he inaugurated the new Distinguished Lecturer Series at Wittenberg University in Springfield, Ohio, on Sept. 25 with a talk on “The Manhattan Project Reconsidered.” On Nov. 7 he lectured on “Selling the Romanov Treasure” at the opening of the George Conklin exhibit of Russian avant-garde at the Indianapolis Art Museum.

Robert C. Smith, professor of art and acting chairman of the Department of Design, School of Fine Arts, and Jim Dutton (BFA 1982), St. Louis freelance graphics designer, have received “Awards of Excellence” in a competition sponsored by the University and College Designers Association (UCDA). Smith’s entry, a catalogue, The Architectural Heritage of St. Louis, which he designed for the WU Gallery of Art in 1982, and Dutton’s poster, prepared for the WU Performing Arts area’s production of Company last spring, were both hung in the “Designers Show ’82,” sponsored by UCDA. Their entries were among 139 exhibited from among 1,000 submitted.

Luther S. Williams, dean of the Graduate School of Arts and Sciences and professor of biology, has been elected to a three-year term on the board of directors of the Council of Graduate Schools in the United States, beginning Jan. 1.

Rosen to serve for year as director of Israeli school of social work

Aaron Rosen, professor of social work and psychology at WU’s George Warren Brown School of Social Work, has been granted an M.A. degree program and to help in faculty recruitment and development. As director, Rosen will continue to develop the school’s curriculum and also work to integrate the social work graduate research program with the university’s social science disciplines. In addition, Rosen will work with Erola E. Proctor, WU assistant professor of social work, on a study of treatment planning and case management techniques at WU’s School of Social Work and the Barstow School of Social Work.

Rosen joined the faculty of the George Warren Brown School of Social Work in 1965. In 1970, he developed and chaired the interdisciplnary PhD program in social work. His current research includes: a five-year study with Arthur D. Shulman, WU associate professor of psychology, of the experiences and interperson coping strategies of widows in the St. Louis metropolitan area; an evaluation of doctoral education in social work in the United States; and several studies on psychotherapy and social work intervention.

WU students described as hardworking, preprofessional in colleges survey

An article in the November issue of Seventeen Magazine by Edward B. Fiike, education editor of The New York Times and author of Selective Guide to Colleges 1981-82, published by Times Books, lists 16 colleges, including WU, selected from among 1,700, each of which offers “something unique,” according to the author. Excerpts from his comments on WU state: "(t) is a quality regional university, traditionally known for its sciences. But in recent years, WU has built itself into a solid all-around institution, and students from all over the country are clamoring to get in . . . (the students) are hardworking and overwhelmingly preprofessional. Faculty members are supportive but demanding. ‘Professors act as if their course is the only one you’re taking,’ one student said."

Center—continued from p. 1

Among the new courses being organized for the center by Eric H. Dunlop, professor of chemical engineering, are industrial biotechnology, bioreactor design and bioseparation or isolation of biological products. Dunlop, who joined WU in June, worked for Imperial Chemical Industries in the United Kingdom as a biotechnology specialist.

The board of directors for the Center for Biotechnology includes Ralph E. Mortow, dean of the Faculty of Arts and Sciences; James M. McKelvey, dean of the School of Engineering and Applied Science; and Luigi Giastra, head of the Department of Biological Chemistry.

The center was established at the request of deans James M. McKelvey and Ralph E. Mortow. Opportunities for responding to the proposal to create the center were provided to the Faculty Sen- a capacity audience in a program sponsored by the Hannibal Concert Association. Edison Theatre’s technical director Jack Brown supervised technical aspects of the performance.

Suzanne Grace, part-time lecturer in dance, has been chosen by Young Audiences to participate in its “Arts in Education” program in Missouri schools. Grace, who is a solo dance artist, will conduct two-week residencies that will focus on the language of movement through dance and will culminate in a solo concert. She has also been asked to choreograph a new group piece for Thomas McKenzie, professor of music at the University of Missouri, Columbia. The work will be performed in February at the conference of the American Society of University Composers in Baton Rouge, La.

Edward J. Inwinkleried, professor of law, spoke recently at a meeting of the Missouri Chapter of the American Association of Teachers of Slavic and East European Languages (AATSEEL) on “Techniques of Annotating Russian Literature: What and How.”

Before coming to WU, Rosen was a lecturer in social work and psychology at the Barstow School of Social Work from 1963 to 1965. He was also a visiting professor at The University of Haifa School of Social Work and Tel Aviv University School of Social Work, both in Israel.

Rosen received a BA in psychology from Brooklyn College in 1958, an MSW from Columbia University in 1960, and an MA in psychology and a PhD in social work and psychology from the University of Michigan, Ann Arbor, in 1962 and 1963, respectively.
Lectures

Thursday, Dec. 9


Friday, Dec. 10
Noon. WU Women's Club Luncheon. Presentation by the Fashion Dept. of the WU School of Fine Arts. St. Louis Club, 7701 Forsyth.


7:10 p.m. Inter-Varsity Christian Fellowship Meeting and Vespers. Lower level, Ann Whitney Olin Women's Bldg.

Saturday, Dec. 11
9 a.m. Neural Sciences Seminar, "Theories of Learning and Memory," Jeff Lehman, WU postdoctoral fellow in physiology and biophysics. 928 McDonnell Medical Sciences Bldg., 4955 McKelvey.

Monday, Dec. 13
2:30 p.m. Department of Chemical Engineering Seminar, "Design of Resilient Processing Plants," Manfred Morari, assoc. prof. of chemical engineering, U. of Wis. — Madison. 100 Cupples Hill.

Tuesday, Dec. 14
9 a.m. Center for the Study of Data Processing Colloquium, "High Level Application Languages," Richard E. Dodson, president of Richard E. Dodson and Assoc., Inc., a management consulting firm.


Tuesday, Dec. 14
8 p.m. Hillel House Chanukah Concert, with the Dianne Yorkin Band. The band won the Chasidic Song Festival in 1977, 1978 and 1980. Hillel House, 6400 Forsyth. General admission $1. $1 for students, senior citizens and groups. For more information, call 726-6177.

Exhibitions

"The Faculty Show." Works in all media by WU faculty artists. Through Jan. 9. Upper Gallery, Gallery of Art, Steinberg Hall. 10 a.m.-5 p.m. weekdays. 1-5 p.m. weekends.

"Recent Acquisitions." Books from the Modern Literature, Semiology, History of Printing collections, and other materials. Through Dec. 29. Special Collections, Level 5, Olin Library. 8:30 a.m.-5 p.m. weekdays.


Performing Arts

Friday, Dec. 10
8 p.m. Performing Arts Area "Studio Series" presents the Student Dance Concert "Piercing Moments." New works by student choreographers. Admission $1. Mallinckrodt Dance Studio. (Also 8 p.m. Sat., Dec. 11, and 5 p.m. Sunday, Dec. 12, Dance Studio.)

Wednesday, Dec. 15
8 p.m. WU and Opera Theatre of St. Louis present The Poetin de Penttence Gilbert A. Sullivan's nautical opera. Editor Theatre. Tickets are $10 and $14. Children 12 and under half-price to all matinees; limit one ticket with each full-price ticket. WU students admitted half-price on Thursday, Dec. 16. Tickets available at Edison Theatre box office, 889-6034. (Also 8 p.m. Dec. 16-18, 21-23, and 28-29-31. Matinees are at 2 p.m. on Dec. 10, 19, 20, Jan. 1 and 2. Edison.)

Films

Thursday, Dec. 9
7 and 9:30 p.m. WU Filmboard Series, "The Parent Trap." $2. Brown Hall Aud.

Friday, Dec. 10


Friday, Dec. 17

Sports

Thursday, Dec. 9
7-30 p.m. Women's Basketball, WU vs. Lindenwood College. Field House.

Saturday, Dec. 11

Tuesday, Dec. 14
7-30 p.m. Men's Basketball, WU vs. Principia College. Gen. admission. $2. WU students free. Field House.

Calendar Deadline

The deadline to submit items for the Jan. 26-29 calendar of the WU "Record" is Jan. 6. Items must be typed and state time, date, place, nature of event, sponsor and admission cost. Incomplete items will not be printed. If available, include speaker name and identification and the title of the event. Submit items as late as possible, but please include your name and telephone number. Address items to King McElroy, calendar editor, Box 116.