

# CENTER- INGS



Vol. 2, No. 4

Health Sciences Center, State University of New York, Stony Brook

January-February 1974

## School of Basic Health Sciences

### New Concept For Students Seeking Science, Medical, Health Careers

When the Health Sciences Center was being designed, the concept of having a separate school of basic health sciences which would serve the five other schools training future doctors, nurses, dentists, social workers and allied health personnel was novel and raised some valid questions.

Traditionally, medical schools, nursing schools, etc. have had their own departments of anatomy, pathology, etc. Would a one-source center giving a full range of science courses to students training for a variety of health careers really work? Or would resources be thus stretched so thin that no program would be adequately served?

#### Promising

With the School of Basic Health Sciences now in its fourth year, Dr. Arthur Upton, the Dean, evaluated the results so far, saying "the system has worked — we've come a long way."

"The School of Basic Health Sciences has enabled different programs to open and function not only for Health Science

Center students but also for University undergraduates in science programs. There are substantial advantages in this arrangement by which basic science departments do in fact assume University-wide responsibility. We have students from all over the campus — over 100 students in programs other than Health Sciences Center. We see this as very good, as expanding our horizons," stated Dr. Upton.

The School of Basic Health Sciences has 7 departments: Anatomical Sciences, Biochemistry, Biomathematics, Microbiology, Pathology, Pharmacological Sciences, Physiology, and Biophysics. It has major teaching responsibilities for undergraduate, graduate, and post-graduate students. Students and faculty are also engaged in a wide variety of science research projects. Faculty have been extremely prolific in the publication of scientific articles and books.

One of the taxing problems with the setup where students in varied programs are serviced by a

separate School of Basic Health Sciences is that this requires a very large faculty, and "the budget restricts our growth," the Dean commented.

#### Advantage

On the plus side for the faculty, having their own school and their own dean does broaden the role of the scientists in the various departments.

"One problem in science has been the parochial perspective. On the one hand, scientists are often incapable of seeing their role in a broad way outside their specialty, and they, on the other hand, are not often understood

(Continued on page 8)

### Paging

Special This Month

An In-Depth Look  
At the School of  
Basic Health Sciences

Next Issue:  
The School of  
Social Welfare

### Focusing on Recruiting Black Students

Last fall, Dr. Leroy Brown, Assistant Professor in the Department of Anatomical Sciences, traveled through southern states visiting 13 colleges and universities having predominantly black students.

The Harlem-born scientist-educator's motivation was to change a statistic. No black or minority students are enrolled in the graduate program of the School of Basic Health

Sciences in spite of recruiting efforts by both the School and the University.

"We need a larger pool of minority students to tap from and I'm hoping that by my visit to these southern colleges I have created a rapport with southern black schools and generated more interest toward Stony Brook," Dr. Brown stated.

#### Problems

First problem he and his

co-traveler, Chester Copemann, Assistant to the Dean of the Graduate School, faced was finding the colleges.

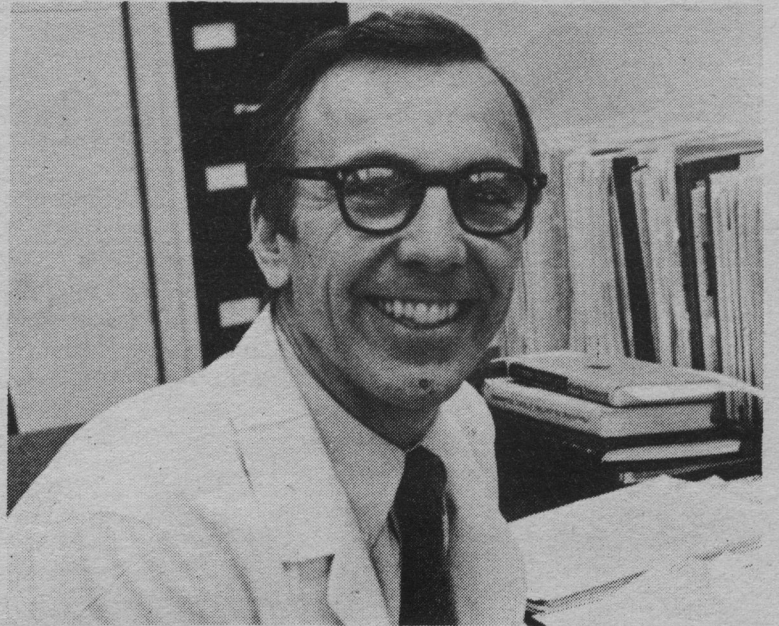
"Black schools have been cut off financially. They've had little money for building programs and they don't have an attractive college atmosphere," Dr. Brown related.

Once at the college, Dr. Brown said college recruiters faced stiff competition from industry.

"Commercial industry is a much more attractive package for the talented students, many of whom are extremely in debt. They hesitate to go to graduate school because they're not willing to place their parents further in debt."

However, Dr. Brown and his associate did meet with over 200 students individually. "Their major interest was in the medical professions," he said, giving

(Continued on page 7)



Dr. Arthur Upton

photo by Toni Bosco

### Dr. Upton Appointed to International Commission

Dr. Arthur Upton, Dean of the School of Basic Health Sciences, has been named a member of the International Commission on Radiological Protection, the only scientist from the United States currently to receive this distinction. The appointment was announced at the Commission's annual Congress held recently in Madrid.

Dr. Upton, also a Professor of Pathology, will serve a four-year term as a Commission member while continuing to serve as chairman of "Committee One" which deals with the biological effects of radiation, a position Dr. Upton has held for the past five years.

#### Risks of Radiation

Dr. Upton, former president of the American Association for Cancer Research, the American Society for Experimental Pathology, and the Radiation Research Society, has been a researchist in the area of the biological effects of radiation for the past 15 years. His work has dealt with risks to the human population arising out of peaceful uses of nuclear energy — in medical practice, such as x-rays and radioactive isotopes; from consumer products, such as TV and luminous watch dials; and in nuclear power production such as nuclear reactors and nuclear batteries.

"My major concern which is shared by Ralph Nader, conservationists, and the scientific community, is to assess realistically the risks associated with these uses, along with the benefits," Dr. Upton stated.

The International Commission on Radiological Protection (the ICRP) is the pacesetter in the area of radiation effects on populations. It has been functioning since 1928 as the world-wide body offering guidance on the use of radiation sources caused by the rapid developments in the field of nuclear energy. Only scientists who have been recognized for their outstanding work in such fields as medical radiology, radiation protection, genetics, biochemistry and biophysics are appointed to membership on the main Commission. Associates and committee members include scientists, members of radiology societies and representatives of companies producing radiological materials from countries worldwide.

#### Sound Body

The Stony Brook scientist, whose association with this group stems back to the early sixties, called the International Commission on Radiological Protection, "the most sound body in the business," adding:

"By and large its recommendations for the protection of populations have been accepted and endorsed by individual countries and by international groups such as the World Health Organization. Its standards are also viewed as models to investigate other kinds of environmental hazards, such as industrial pollution, uses of pesticides, and plastics productions."

Dr. Upton is the recipient of several awards, holds membership in 12 national scientific societies and is on numerous committees including the National Research Council of the National Academy of Science. He is also on the editorial boards of several scientific journals including Nuclear Medicine, and is the associate editor of Cancer Research.

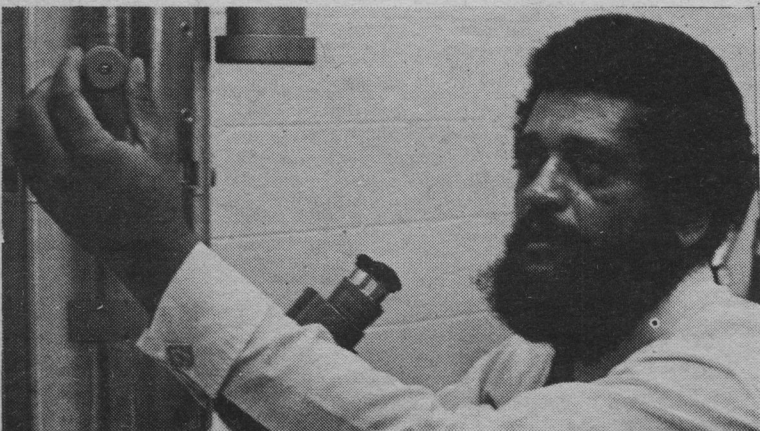


photo by Toni Bosco

Dr. Leroy Brown at the Electron Microscope



### News From UUP

# Who's Minding Your Business?

What's been happening with the organization which represents faculty and professional staff?

First, a name change — for a second time. Within a year the Senate Professional Association (SPA) has become SUNY/United, and now has been officially changed to United University Professionals, Incorporated (UUP).

Next, much ado with no results yet on a salary settlement held up by former Governor Rockefeller since July 1, 1973. His insistence on a 3½% across-the-board raise was unacceptable to UUP, particularly after a team of factfinders selected jointly by the union and the state

recommended 5% across-the-board plus 1½% merit increases.

Under the Taylor law, the legislature will make the final decision. This body has now reconvened, and with high hopes that the legislature will reflect on the soaring cost of living when considering the UUP salary question, the union is collecting signatures throughout SUNY petitioning for an 8% increase. The HSC has supplied almost 100 signatures in this drive.

A noteworthy accomplishment is the recent agreement between the state and the medical and dental faculty of the four health sciences

centers in the SUNY system. After nearly three years of negotiations it was agreed that physicians, dentists and basic scientists supporting these programs would receive salary increases of 4-7%.

Since there is a direct correlation between size of membership and the benefit packages negotiated, an invitation is being again offered to HSC non-members to join United University Professionals. Membership also entitles one to several different insurance benefits.

The new membership chairman is Audrey Harris, building C, room 155. Call her at 4-2353.

## People People People People People

Professor Julius Elias, a research associate, Department of Pathology, presented a paper entitled "Immunofluorescence: A New Tool for the Histopathologist" at the first fall seminar of the New Jersey State Society of Histopathology Technicians.

Michael Eugene is the newest member of the McDermott family arriving two weeks before Christmas. His father is Gene McDermott, biomedical photographer at Health Sciences Communications.

John P. Clark has been appointed as the new director for the Northport Veterans Administration Hospital, one of the Health Sciences Center's clinical campuses. He is succeeding Dr. Sal La Cerva who left in late November to assume directorship of the Veterans Administration Hospital in Bedford, Massachusetts. Mr. Clark has a wide background in administrative experience with the VA having served as the Director of the VA Hospital in Tucson, Arizona since 1970 and at other VA hospitals since 1954.

Dr. Harry W. Fritts, Jr. Chairman of the Department of Medicine was one of the distinguished panelists of lung specialists appearing on Channel 21 TV on January 15. The medical specialists were on hand to answer questions from TV viewers for the program 21 MED-LINE: Pulmonary Disease and Long Islanders. This special call-in program followed the presentation of "The Killers: Pulmonary Disease — The Hidden Enemy," a 90 minute documentary focusing on the early detection and treatment of lung diseases.

Dr. Campbell Lamont, Chairman of the Department of Family Medicine and Anita Kaufman, RN on the faculty of the School of Nursing, were guest panelists for the two programs presented on channel 6, Suffolk cable TV in January. The programs were on the topic of "Child Abuse and Neglect — Could This Be Your Child?" Dr. Lamont and Ms. Kaufman are both active in Suffolk Citizens for Children, an organization formed locally to work on the problem of child abuse.

Dr. Steven Weisbroth, Director of the Division of Laboratory Animal Resources has been elected President, Metropolitan New York Branch of the American Association for Laboratory Animal Science. Mr. Sheldon Scher, Assistant Director has been elected secretary-treasurer for the same association. Both will officiate for the calendar year 1974.

A display of watercolor paintings done by artist Betsy Upton were exhibited recently at the Valley National Bank in Setauket. Mrs. Upton is the wife of Dr. Arthur Upton, Dean of the School of Basic Health Sciences.

### Credit Union News

A representative from the Credit Union will be in the Lobby of Building C from 9 to 12 noon on three Mondays: January 21, February 11 and February 28. All those interested in information about how to save and borrow money the credit union way are invited to come to talk to this representative.

## Seminars At Brookhaven National Laboratory

January 18th:  
Subject: The survival value of long-term resting cells in leukemic and other populations.

Presented by: Bayard Clarkson, M.D.  
Sloan-Kettering Institute  
for Cancer Research  
New York, N.Y.

January 25th:  
Subject: Hormonal influence on in vitro granulopoiesis.

Presented by: Joan M. Bull, M.D.  
National Cancer Institute  
Bethesda, Maryland

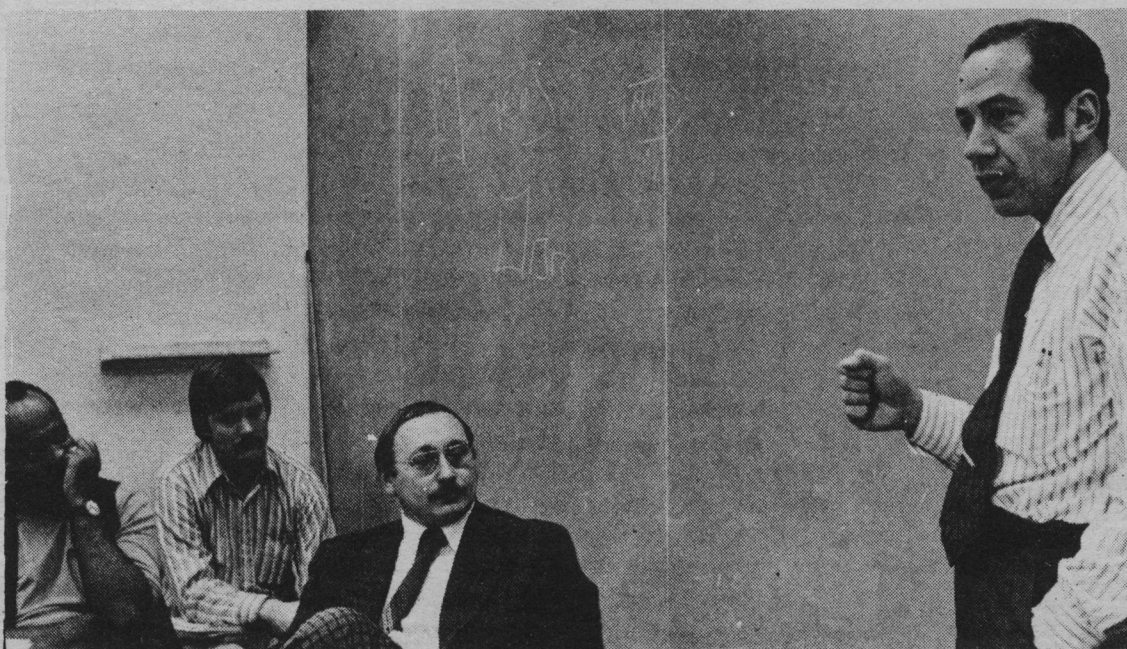
January 29th:  
Medical Staff Meeting — 4:00 P.M.

All talks are held in the Medical Research Center Seminar Room at 3:00 P.M.  
Coffee and Tea will be served.

### New Library Hours

The Health Sciences Center Library in Building A has announced the following new hours:  
Monday-Friday  
8:30 am to 11 pm (Librarian, 8:30 am to 9 pm, Monday thru Thursday)  
Saturday  
8:30 am to 5 pm (Librarian, all day)  
Sunday  
1 pm to 9 pm (student supervision only)

## LIJ Surgery Chief Lectures at HSC



Dr. Arthur Aufses, Director of the Department of Surgery at Long Island Jewish/Hillside Medical Center/Queens Hospital Center, was the guest lecturer recently for a class of graduate students in the Health Services Administration program of the School of Allied Health Professions. The lecture was arranged by Dr. Tom Dunay, center seated. LIJ-HMC/QHC is one of the clinical campuses serving the Health Sciences Center.

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Department of Pathology

# Disease — The Name of the Game

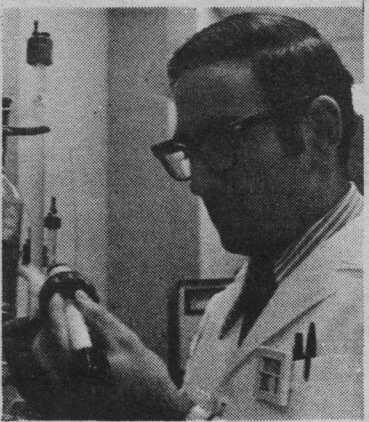
He says it with unabashed modesty: "We have the best department in the country!"

That's how the chairman Dr. Marvin Kushner labels the Department of Pathology and its faculty both here and at clinical campuses. As for pathology itself, it is the subject "concerned with disease — that's the name of the game," added Dr. Kushner, who is also Dean Pro-tem of the Medical School.

Pathology is the transition subject between basic sciences and the problem of maintenance of health.

It is the cornerstone of every curriculum because pathology reinterprets basic sciences in terms of its implications for disease," said Dr. Kushner.

He explained that while ordinarily pathology is found as a department of a medical school, Stony Brook is different. The decision was made at the



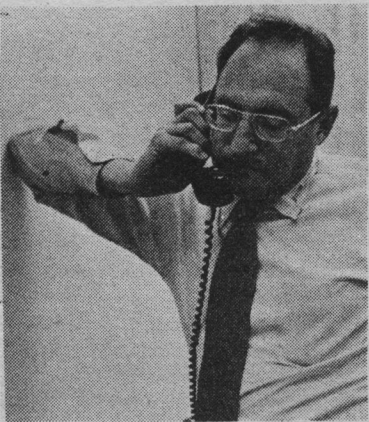
**Dr. Frederick Miller**

time of the founding of the Health Sciences Center to have a separate school with its own dean where the basic sciences would be set up as all-University departments rather than seen as belonging to the medical school.

"We are teaching groups from a variety of schools at the same time. For example, one course has students from the medical and dental schools and graduate students in basic health sciences and other biological sciences," said Dr. Kushner adding "Allied Health Professions students come in for certain parts of the course. Another course is given for Nursing and School of Allied Health Professions students."

Dr. Kushner explained that in recent years the emphasis in pathology courses has shifted to meet modern medical problems. Infectious disease has been largely conquered as a public health disorder and large source of death. The new diseases demanding attention now are in large part environmentally determined.

"The leading causes of death and disability today are heart and blood vessel diseases and cancer. They've required a renewed interest in such things as chemical injury, nutritional aspects of disease, and environmental stress as a determinant of disease.



**Dr. Marvin Kushner**

"Another entity getting increasing attention is old age. With more people reaching advanced years, the problem of senility itself may indeed be the medical problem by the year 2000."

Dr. Kushner went on. "These developments have been reflected in the kinds of emphasis we have given in our courses. Where students formerly spent weeks studying pneumonia and tuberculosis, time now is more properly devoted to concerns with carcinogens, radiation as a source of injury, those mechanisms that control blood lipid levels, etc."

Students are introduced to pathology by studying the mechanism of disease in general terms for the first half of the course, including disorders on cellular levels, processes involved in disease, abnormalities of blood coagulation, and immune mechanisms in disease and the general problem of tumors.

The second part of the course takes in the special pathological application of these general processes in specific diseases of organ systems. For example the general topics of inflammation of the lung and liver become the study of pneumonia and hepatitis.

**Systems Teaching**

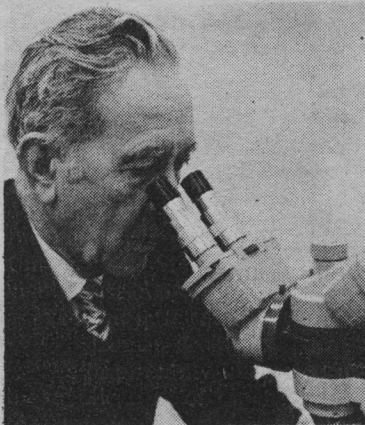
In the systems teaching, pathology is taught in conjunction with the other basic science departments and in the actual clinical situation.

"For example, as anatomy, biochemistry, microbiology, etc. are taught as they relate to the heart and blood vessels, students will also be learning from us the cause of disease and structural changes and the clinical manifestation of these," said Dr. Kushner.

"The essence of systems teaching, unique in this school, is that we have superimposed a significant clinical experience on the program. In the study of each organ system, students spend full time in didactic study on the Stony Brook campus, followed by full time in hospitals. For example, in the curriculum for the cardiovascular system, the students spend four weeks at

Stony Brook and then four weeks on the cardiac service of either the Northport VA hospital, Long Island Jewish, or the Nassau County Medical Center."

The directors of the Pathology Departments at these clinical campuses are Dr. Vincent Palladino, Nassau County Medical Center; Dr. James Berkman, Long Island Jewish; Dr. Janis Klavins, Queens Hospital Center; and Dr. Richard Singer, Northport VA Hospital.



**Dr. Loren Ackerman**

Dr. Frederick Miller an associate of Dr. Kushner's from New York University School of Medicine has taken on a variety of responsibilities, including, curriculum planning and evaluation for the Schools of Basic Health Science and Medicine; supervising the research of graduate and undergraduate students; giving medical service as a consultant on pathology and immunology as it is needed by patients in affiliated hospitals; and carrying on a research project funded by a grant by the National Institute of Health on the study of substances which would be immuno-suppressive.



**Dr. Mildred Phillips**

**Research**

Dr. Kushner's research area currently is experimental carcinogens particularly in the lungs. Dr. Bernard Lane is interested in organ cultures and malignant transformations in organ cultures. Dr. Aaron Janoff is researching endogenous mediators of tissue injury, those things produced by the body itself which are the ultimate cause of danger in disease. Dr.

Mildred Phillips' area of interest is cancer immunology. Prof. Jules Elias is researching the application of histochemical methods to abnormal tissues. Dr. Vera Farris, presently on leave of absence, is studying parasitology and ordered cell aggregation. Dr. Arthur Upton, professor of Pathology and Dean of the School of Basic Health Sciences is concerned with radiobiology.

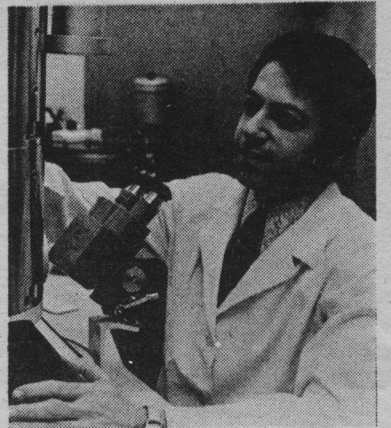
Two new members of the faculty are renowned leaders in their fields, Dr. Loren Ackerman, author of Surgical Pathology is an international authority on cancer and bone disease.

"Dr. Ackerman is one of the two or three great surgical pathologists in the country," Dr. Kushner stated.

Dr. Ackerman, an eminent medical man, who worked 25 years at Washington University in St. Louis is especially pleased that former students of his now head the surgical pathology departments in 14 medical schools and that well over 100 students who trained with him are working in universities around the world.

Newly arrived from the National Institute of Health is Dr. Leon Sokoloff, "a world authority on the pathology of arthritis and rheumatic disease," Dr. Kushner commented.

Author of Biology of



**Dr. Bernard Lane**

Degenerative Joint Disease, Dr. Sokoloff will be setting up a laboratory for research and diagnosis of rheumatic disease with an eventual goal of having services available to the community. Working as his associate in the study of the pathology of osteoarthritis is Dr. Charles Malemud who served as a biologist with the National Institute of Arthritis in 1968-1973.



photos by Toni Bosco

**Professor Julius Elias**

## Being Black, Female ---And Making It

Dr. Mildred Phillips holds the distinction of being the first black person to get an internship at Kings County Hospital — an achievement due to her determination and persistence.

"I resented the fact that Harlem Hospital was the only place where a black doctor could get an internship at that time," said Dr. Phillips, newly appointed to the faculty of the Department of Pathology. "I persisted in trying for an internship at another hospital and finally at the last minute I got into Kings County Hospital."

**Progress**

While considerable progress has been made both for blacks and for women in the last 5 years, "the situation is still not what it should be," said the soft-spoken researcher-teacher. Being a woman and black gave her two obstacles in applying for medical schools. A native New Yorker she finally had to leave the city to attend Howard University Medical School — "the only place I could get accepted."

Her interest in pathology started in medical school. After an elective period in pathology during internship, "I made the decision to take my residency in pathology," she stated, "spending two years at Mount Sinai, a third year at Presbyterian Hospital, and a fourth year back at Kings County."

Dr. Phillips was a staff physician at New York University Medical Center until coming to Stony Brook, with research interest in cancer immunology. She is continuing her research work in cellular immune responses of tumor-bearing animals here at Stony Brook.

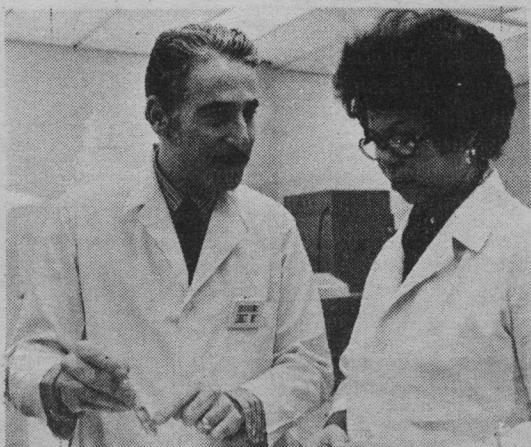
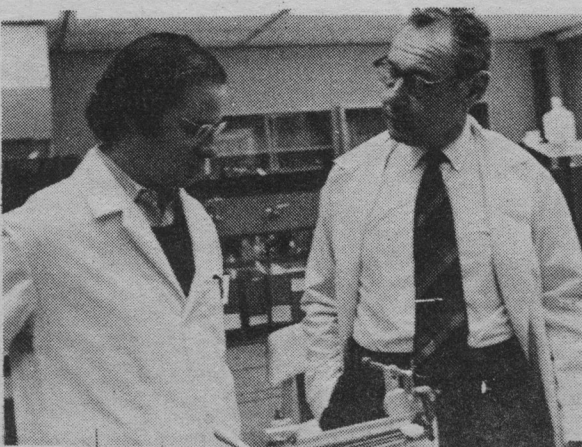
**Sensitive**

In spite of her admission that life as a black woman is "a struggle from the beginning," Dr. Phillips is a sympathetic and optimistic person.

"Any woman can achieve her goals if she has determination, strong motivation, and a desire to make it" she believes.

In her new position here, in addition to teaching and research Dr. Phillips will be concerned with admissions to the medical school. She will also represent the School of Basic Health Sciences on the Economic Opportunity Committee.

Her creativity also extends beyond the laboratory. An "amateur" artist specializing in oil painting, Dr. Phillips' choice of subjects are landscapes and florals.



**Dr. Charles Malemud with Dr. Leon Solloff     Dr. Aaron Janoff with Rosemarie Dearing**



## Department of Microbiology

# Study Cells, Viruses, Molecules ---And Seeking Excellence

The six members of the Department of Microbiology project an aura of youth and of forward-going momentum crystallized in a comment by the chairman, Dr. Joseph Kates — "We have to live partly in the future here."

Appointed in 1973 as first chairman of this department, Dr. Kates, an extremely young looking 33, has set an uncompromising goal for the very new team:

"Our goal is to see this department become a center of excellence. We won't settle for less. We won't be happy with in-between."

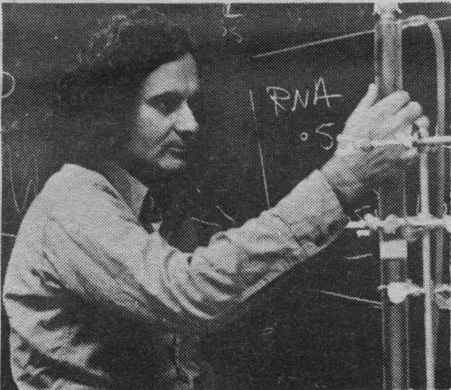
### Full Time Work

Each faculty member is involved in teaching and in an on-going research project. The department sees its teaching responsibilities as extending to undergraduate students in the biological sciences, nursing and allied health profession students, medical and dental students, and to graduate students seeking a Ph.D. in Microbiology — a brand new program. Presently the graduate program has already enrolled eight doctoral candidates.

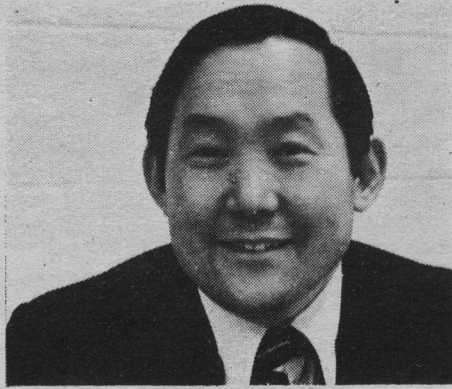
"We won't be a traditional Microbiology Department. We'll be very research-oriented and very molecular in outlook," stated Dr. Kates.

### Study of Cells

Falling within the realm of microbiology today is the study and understanding of the molecular biology of higher cells, including the exploring of basic genetic information, cell growth, mechanisms of cell expression, the role of the cell services in regulation and growth, comparative cell regulations, the biochemical basis of cancer, especially where viruses are involved as agent.



Dr. Nicholas Delihias



Dr. Charles Kim

"Diverse points of view are represented on the faculty. Some are studying cells, some viruses, and some molecules. We hope to jell as a department and produce viable research," predicted Dr. Kates.

### Nationally Noted

The chairman, considered an authority nationally on animal virology, is currently concentrating his research on the mechanisms of gene expression and its regulation in animal viruses and animal cells.

"Animal viruses are simple systems — fascinating creatures, actually — which are a tool to understanding higher cells," explained the young microbiologist who became so fascinated with research as a college senior that he switched career plans, declining an acceptance by a medical school to pursue graduate studies in Biochemistry at Princeton. Since 1967 Dr. Kates has received grant support from the National Institute of Health for his research on "Biochemistry of Pox Virus Gene Regulation."

The research areas of the other faculty members are varied. Dr. William Bauer is concerned with the structure, biosynthesis and interactions of nucleic acids.

"In particular, we are interested in the properties DNA and especially of the circular DNA's. These latter molecules are now known to be widely distributed in nature, in sources ranging from bacteriophage to human mitochondria," said Dr. Bauer.

Dr. Nicholas Delihias is working on ribosome and RNA structure and function.

"At the present time, more needs to be learned about ribosome structure, such as particle surface structure, amount and

nature of RNA exposed and RNA functions, to fully understand the mechanism and regulation of protein synthesis," he commented.

Dr. Delihias was granted an award in 1973 by the SUNY Research Foundation for this project on "Ribosome Structures — Analysis By Reaction With Kelhoxal." Cell Regulation

Cell regulation is Dr. Michael Gough's research area. "For several years I have been interested in the regulation of prophage P22," he said. By using the electron microscope and classical phage techniques, he is determining the function of the genes defined by P22



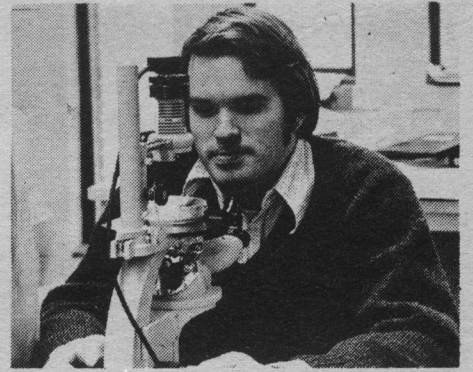
Dr. Michael Gough and Dr. William Bauer.

mutations. Dr. Kenneth Keegstra is concerned with the actual workings of the complex carbohydrates of the cell surface. He explained "it is widely accepted that changes in the complex carbohydrates of the cell surface occur as part of the alteration of the cell surface during malignant transformation. However, the carbohydrate structures involved in intercellular recognition have not been identified nor have the changes which occurred during malignant transformation been characterized in molecular detail.

"The objective of our research program," he went on "is to approach these problems by performing structural studies on cell surface carbohydrates with the goal of establishing structure-function relationships."

Dr. Charles Kim is working with the specific parasite which causes the disease called trichinosis, seeking to determine the mechanism of delayed hypersensitivity to the parasite.

"The real significance of the proposed experiments is that by creating an



Dr. Kenneth Keegstra

experimental condition that is identical to an infection the results can be interpreted to reflect the mechanism of the immune response following an actual infection," explained Dr. Kim.

### Significant

The research has both satisfactions and frustrations, and Dr. Kates emphasizes the former.

"Occasionally you find something new and really significant in a lab — usually a combination of luck and hard work. The excitement of such a discovery, where one learns something new about a living system, understand something in a different way, is a great experience," said the Italian-born scientist who once thought about becoming a writer.

### Early Interest

It was at age 14 while being educated by private tutors in Italy that Joseph Kates' interest turned to biological sciences.

"It came in the form of Don Ricardo Della Rovere, an unorthodox and eccentric priest who had a microscope and a large Triumph motorcycle. The motorcycle was used regularly for field trips into the surrounding countryside to observe flora and fauna in the field. Samples of dirt, pond water, etc., which we brought back were examined under the microscope. It was a profound experience."

Before coming to Stony Brook, Dr. Kates was on the faculty of the University of Colorado at Boulder. He is an associate editor of the Professional Journal "Virology."



Dr. Joseph Kates, chairman, (right) with Dr. William Bauer.

## Department of Pharmacological Sciences

# Drugs — Today's Medical "Revolution"

Everyone involved in the health professions today — physicians, dentists, and allied health personnel — has to have some knowledge of drugs and their effects.

Dr. Arthur Grollman, newly appointed Chairman of the Department of Pharmacological Sciences made this point, adding that pharmacology should be a major area of study for both students and physicians.

### Change

"Ten years ago," Dr. Grollman stated, "medicine emphasized diagnosis and relegated therapeutics to a secondary status. Today, diagnosis is largely routinized and a 'revolution' in medicine has come from the new drugs and therapeutic agents available for the treatment of disease. While diagnosis is less mysterious, therapeutics gets progressively more complicated."

Because the study of drugs and drug action have a broad scientific base, Dr. Grollman requested that his department be



Dr. Arthur Grollman

called not simply pharmacology, but Pharmacological Sciences. This field is part of a spectrum which includes medicinal chemistry, cell biology, physical chemistry and biochemistry — all directed towards a better understanding of the effect of drugs on man.

"We shall be recruiting faculty involved with various areas of drug research," said Dr. Grollman, mentioning specifically biochemistry, neurobiology, molecular biology, and endocrinology.

One teaching innovation

planned by Dr. Grollman, who has been organizing the department for the past six months, is to introduce pharmacological sciences on the undergraduate campus.

"Pharmacology has traditionally been associated with the medical curriculum. We don't think that it must necessarily be limited to those already in the medical profession," said the physician who received his M.D. from Johns Hopkins in 1959. "We plan to give an advanced science course entitled 'Pharmacology: Biochemical Basis of Drug Action,' and open this to selected undergraduate and graduate students."

The curriculum planned by Dr. Grollman includes a spring course in "The Principles of Pharmacology" which is offered to medical and dental students. Clinical Pharmacology will be offered to senior medical students. Dr. David Williams, an endocrine pharmacologist from the University of California at San Francisco was an early

appointment to the faculty.

### Varied Career

Dr. Grollman's career includes training in clinical medicine, two years of research with the National Institute of Health (1961-63), and after which time he moved to Albert Einstein College of Medicine where he did research on blood group substances and carbohydrates. "I moved into pharmacology at Einstein in 1968 after becoming interested in drug mechanisms

and drug action."

Pharmacological Sciences will be housed in the first floor of the biology building as the new department begins operations.

Dr. Grollman emphasized that major credit for much of the groundwork done in Pharmacological Sciences in the past month goes to the Departmental secretary, Sally Meaney, who's been "running the department full time" — his own words of praise.



The Basic Health Science secretaries at their once-a-year lunch get-together.



**Department of Physiology and Biophysics**

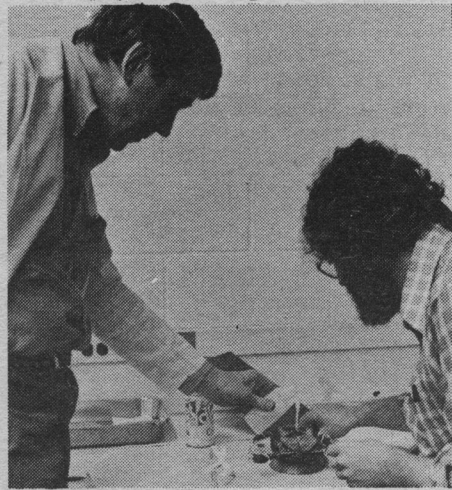
**Getting Down To (Body) Basics**

Friday lunches in Building E are get-together-time for the seven full-time faculty members of the Department of Physiology and Biophysics. Sitting with Dr. William Van der Kloot, chairman, the faculty offers input into the department's teaching and research needs, discussing programs, plusses, and minuses.

Yet, one problem hangs on. The department still hasn't figured out how to teach all the courses needed for students in Biological Sciences, Biomedical engineering, and the Schools of Medicine, Dentistry, Allied Health Professions, Nursing, and Basic Health Sciences, with so few faculty, all of whom are also deeply involved in research.

**Asset**

In spite of this problem, the Department of Physiology and Biophysics can capitalize on its greatest asset — "an over-committed staff," as it continues to offer a wide range of students a diversified program in which physiology and biophysics are taught side by side.



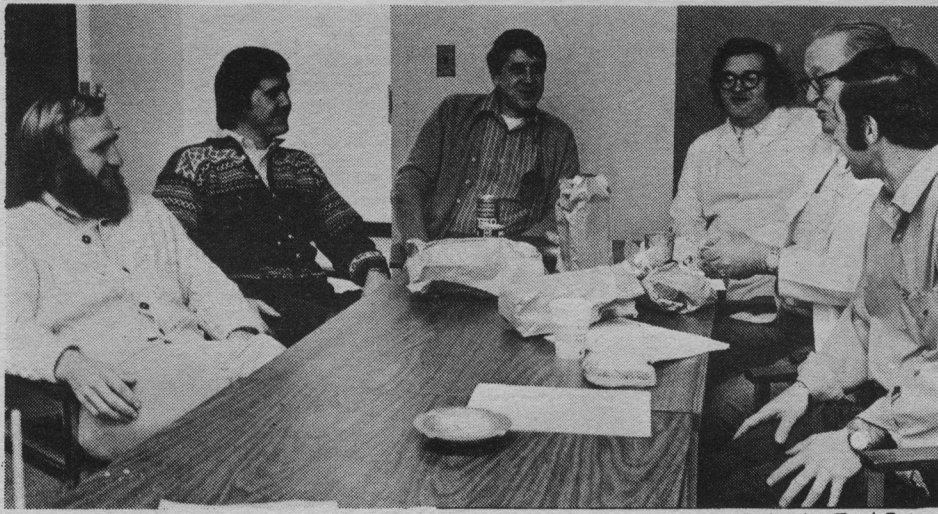
Dr. William Van der Kloot, with medical student

"In the old days, physiology covered more. As subject matter became more explainable, branches split off from physiology and became, for example, biochemistry and biophysics," explained Dr. Paul Lefevre, who holds the distinction of being the first person to be appointed as a faculty member of the Health Sciences Center.

"The task of physiology is to explain the functions of the body and all its parts in terms of the more elementary sciences, physics and chemistry. To reduce everything to an elementary level is considered progress," he added. "The farther down you go, the more you simplify things, and make them more understanding." He cited a molecule as an example.

**Joined**

Physiology and biophysics are joined as a department because the techniques of physics and engineering have been found



photos by Toni Bosco

Friday lunches are get-together time for the faculty. From left, Dr. Stuart McLaughlin, Dr. John Fara, Dr. William Van der Kloot, chairman, Dr. Harvey Levy, Dr. Paul Lefevre, and Dr. Stanley Masiak. Dr. Martin Mendelson is also on the faculty (photo below).

to be most effectively applied to investigating problems in medicine and biology at all levels of biological organizations.

Dr. Van der Kloot, who left as Chairman of the Physiology Department at the Medical School of New York University to come to Stony Brook 2½ years ago, sees his major responsibility to be the recruitment of faculty, as "we have to expand noticeably." In addition to Drs. Van der Kloot and Lefevre, the faculty members are Drs. Harvey Levy, Stanley Masiak, John Fara, Martin Mendelson and Stuart McLaughlin.



Dr. Paul Lefevre

"We offer two introductory courses for medical, dental, and graduate students, systems teaching for medical students, and introductory courses for campus undergraduate students in the Schools of Allied Health Professions and Nursing. We also gave a physiology course in the Biology Department and a series of graduate courses," stated Dr. Van der

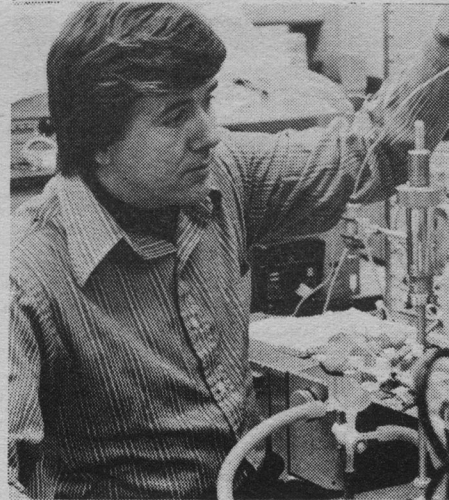
Kloot, who received his Ph.D. from Harvard.

**Graduate Program**

The department has also begun a new program in graduate training leading to a Ph.D. degree in Physiology and Biophysics, with five students now in the program.

The faculty are engaged in a variety of research projects in the following areas: muscle proteins; red blood cell membranes; central nervous control mechanisms; release of neural transmitters; control of gastro-intestinal blood flow; and cell membranes.

Dr. Lefevre is nationally known as a pioneer in the field of cell membrane transports. "This has to do with an attempt to explain in physio-chemical terms, the mechanism by which biologically important molecules move between, inside, and outside of cells. When I started concentrating on these 25 years ago, it used to be labeled



Dr. John Fara

miscellaneous physiology, but it grew into an enormous field by the mid-fifties," said Dr. Lefevre. He displayed a sense of humor, which quietly comes to the surface from time to time, by adding "I'd still like to solve the whole problem of how cell carriers work — maybe in the next 25 years!"

Assistant Professor Dr. John Fara, a graduate of UCLA, received a grant from the National Institute of Health in the spring of 1973 for \$70,000 to continue his research studies on the "Hormonal Control of Mesenteric Blood Flow."

"I have some publishable results ready," commented the young scientist, who prior to coming to Stony Brook received a grant for a year of postdoctoral study in Sweden doing cardiovascular research.

**Seminars**

The Department of Physiology and Biophysics offers its own program of seminars on such topics as cell membranes, gastrointestinal systems, and neurobiology.

"For the seminar series we initiated on the gastrointestinal system, we had local physicians, area clinicians, biologists, and people from the clinical campuses and the university all participating. We met once a month, alternately at the Stony Brook campus and at Nassau County Medical Center," said Dr. Fara, who used to be a ski instructor in California.



Dr. Martin Mendelson with students

Another seminar, lightly called "Friends of the Membrane" was put on by Dr. McLaughlin and attracted people from all over the campus. Dr. Van der Kloot is conducting a seminar series on neurobiology.

Dr. Van der Kloot, who specialized progressively in Zoology, Pharmacology, and Physiology, came to Stony Brook because the prospect of developing a new department with a different educational approach was appealing. Outside the laboratory and classroom, Dr. Van der Kloot's special interest is jazz.

The faculty of the Department of Physiology and Biophysics deserves a special citation for their contribution to easing the energy crisis. Most of them pedal to work, parking their bicycles in their laboratories.

**Bringing Glamour To The Physics Lab**

Dr. Catherine Wingate, Assistant Dean of the School of Basic Health Sciences, has returned to Stony Brook after a half-year's leave of absence which may have a future impact around the country — in better radiation protection for patients.

Dr. Wingate, also an Assistant Professor of Radiological Physics in the School of Medicine, was involved with the Environmental Protection Agency (EPA) in Washington, working on a special project aimed to find acceptable ways of reducing unnecessary medical radiation exposure.

**Challenge**

"I was invited by a former science colleague now at the EPA to work out a strategy for utilizing the authority of the former Federal Radiation Council given to EPA in 1970. They had never done anything with this and I found it an interesting challenge," stated the attractive professor who has a Masters from Radcliffe and a Ph.D. from Columbia.

Her work has resulted in an increased allotment of funds and manpower to the EPA for continuing the radiation protection project.

"The time I spent with EPA has given me good ideas to bring back to the medical school at Stony Brook," Dr. Wingate commented, referring specifically to projects currently under development by HEW and the American College of Radiology for improvements in patient gonadal protection and medical and dental education.

**Choosing**

Referring to her background as a "checkerboard"

career, Dr. Wingate mentioned that she might have gone into music as opposed to physics, and oceanography instead of radiological physics.

"I came from a family of singers who had known too many poor musicians, so I decided against that profession for practical reasons," she said, smiling.

Her first job, with the Radioactivity Center at the Massachusetts Institute of Technology, which she accepted in order to be close to her home town of Boston since her mother was ill, put her solidly into her

present career track.

Dr. Wingate joined Stony Brook in 1970, coming from Brookhaven Laboratories where she had been engaged in radiation research.

As the Assistant Dean, Dr. Wingate is concerned with curriculum and students, primarily.

**Duties**

"The School of Basic Health Sciences is largely a service school, outside of its Ph.D. program. My responsibility is largely in the area of undergraduate curriculum. I act as a liaison between us and the nursing and allied health programs and undergraduate science departments on campus."

While she is in an unusual field for a woman, Dr. Wingate believes there are "more women than one might think in this field — a ball park figure of five to ten per cent, with a significant number of British women."

She responds to experiences not primarily as a "woman" but as a "human being," she said, explaining:

"I am personally responsive to and motivated by expressions of appreciation or praise for a job well done." Dr. Wingate added that when she feels "put down, or ignored professionally, or find that my orders are countermanded," she is not hasty to ascribe this to anti-woman attitudes on the part of male co-workers.

"Sometimes I find being a woman has its own advantages," commented the glamorous professor-researcher.

When she has time, Dr. Wingate now sets her sails in a new direction — having discovered the fun of cruising in a sail boat.



Dr. Catherine Wingate



## Department of Biochemistry

# Studying Cells to Solve Human Problems

Dr. Melvin Simpson, Chairman of the Department of Biochemistry, admits to having been the kind of kid who built radios and did chemistry experiments in his basement.

Eventually this interest led him to work with Dr. Carl Cori, one of "the fathers of biochemistry" at Washington University at St. Louis, and to chalk up some professional moments to be proud of — like being involved in the very earliest work in in-vitro protein synthesis; discovering protein synthesis in mitochondria; and demonstrating DNA replication in isolated mitochondria, showing that this organelle could make its own DNA.

In the past seven years, Dr. Simpson, brought in from Dartmouth Medical School in September 1966 to be the first chairman of Biochemistry, has developed the Department of Biochemistry at the State University at Stony Brook to be highly research-oriented as well as excellent in teaching.

### Human Problems

"We're primarily interested in the application of biochemistry to human problems," Dr. Simpson stated, adding "the major problems of the future — cancer and heart disease, understanding the mechanisms

of memory and perception, how the brain works — all of these are problems of biochemistry."

Dr. Simpson described biochemistry as the study of all the reactions that occur inside a cell, including the manufacture of the structure of the cell itself. "Then, pretty obviously, anything that happens in the cell — healthy or diseased — is biochemical in nature."

The professor explained further that biochemistry also has a good deal to do with the relationship between cells and tissues.

"So if a hormone is produced in one place and affects a cell in another place, both the production of the hormone, the mode of transportation to the target, and the effect of the hormone on the target cell, would all be encompassed in biochemistry," he said, adding:

"You name the disease and there'll be a biochemical basis and involvement."

The Biochemistry Department, which is part of both the Division of Biological Sciences and the School of Basic Health Sciences, has been planned to have "three research strengths": (1) molecular biology, (2) detailed mechanisms of enzyme actions, and (3) membranes and neurobiology.

The chairman spelled out the present specific areas of interest in each research section as follows:

(1) Molecular Biology  
\*ribosomes  
\*DNA replication  
\*biochemical evolution  
\*regulatory mechanisms  
\*genetic recombination  
\*detailed functions of transfer RNA, the genetic codebook which acts as translator of the genetic code

(2) Detailed Mechanisms of Enzyme Action  
\*x-ray crystallography of protein structure  
\*structure, function, and relationships in hemoglobin — a deep understanding of how and why it works the way it does, including genetic diseases of hemoglobin, such as sickle cell anemia  
\*structure and interaction of muscle proteins

(3) Membranes and Neurobiology  
\*membrane structure  
\*role of membranes in cell division  
\*mechanisms of transport of sugars through membranes  
\*acetylcholine acceptor sites

(neurobiochemistry).

Biochemistry started at Stony Brook in 1966 when it was a section of the Biology Department. Under Dr. Simpson's direction, the Biochemistry Department initiated the Molecular and Cellular Biology graduate program in the fall of 1967. The Department of Biology formally became the Division of Biological Sciences in 1969. The division was subdivided into three departments: Biochemistry, Cellular and Comparative Biology, and Ecology and Evolution.

"In 1971, as a result of strong student pressure and faculty enthusiasm, the Biochemistry Department embarked on the setting up of an undergraduate major in addition to the graduate program. The biochemistry graduate major was an instant success and the enrollment is over 60 and rising," said Mike Taylor, administrative assistant.

### Students

Dr. Simpson said that teaching responsibilities in the Department of Biochemistry are increasing since the numbers of undergraduate majores — the majority of whom go on to medical school — keep getting

larger each year. The department also teaches medical, dental and allied health profession students, as well as 36 graduate students working for their Ph.D's.

The chairman sees "the challenge of biochemistry to be greater than any other science."

"Probably the hardest scientific problem in the world is the problem of memory and perception. That's where biochemistry is going."

He is also concerned about "the use to which science is put."

"Possibly the most dangerous ethical situation will arise and one has learned how to genetically alter animal cells," he suggested.

### Family

Dr. Simpson is also the father of "three interesting children," as he described his son David, 21, a Harvard undergraduate who plans to study cello in Paris next year; Kenny, 19, who would like to write, paint or sculpt; and Wayne, 17, now spending a year in a kibbutz in Israel.

Calling his hobbies "more a way of life," Dr. Simpson finds himself liberated from the mundane by music and sailing on his 35 foot sloop, provocatively named "precarious".

## "Skeleton" Staff And Funds

# Biomedical Museum at "Crossroads"

The Biomedical Museum is the brain child of Dr. Gabor Inke, Professor of Anatomical Sciences. It is a collection of thousands of bones, skeletons and anatomical models and specimens, designed to serve as an educational



photo by Toni Bosco

Dr. Nicholas Toldo

resource for university students, Long Island schools, and interested community people.

At the October 13 Open House to celebrate the 25th anniversary of the State University of New York, the Biomedical Museum was formally dedicated, drawing large crowds of visitors throughout the day.

The museum, which is sponsored by the School of Basic Health Sciences' Department of Anatomical Sciences is now operating in semi-permanent facilities in the medical laboratory office building (Surge I), but Dr. Inke sees the whole enterprise at a "crossroads".

### Need Help

"Either we get more help — money and personnel — or the museum will not develop. It will stagnate," said Dr. Inke, expressing a certain frustration. "The museum has no separate identity or

budget. We need some separate personnel for it. So far a few of us have been developing and running it. But we're too few people with too much to do."

Dr. Inke said that original plans for the museum, still unmet, called for it to be broadly related to health issues.

"But it is still more anatomical than medical. I also wanted a dynamic museum, a place open from 9 to 5 where visitors could do things, like hear the heart sounds in a torso, or do a blood pressure. We don't have that yet."

However, the Biomedical Museum does contain a sophisticated selection of specimens in models of parts of the human body. Dr. Nicholas Toldo and George Boykin, morphological technicians with the Department of Anatomical Sciences, have done the major work in preparing and arranging these specimens for display. The museum



George Boykin

also has an anthropological collection of materials which are a fossil record of man. Students from local schools have been able to utilize the museum as a learning resource.

## Department of Biomathematics Assessing Health Problems Via Statistics, Computers

At the moment, Biomathematics is a one man department. Dr. Charles Robinson, an assistant professor of Biomathematics and Health Sciences Communications, is the sole member of the department with an office in Building H.

"This is a relatively new field, not clearly defined," said Prof. Robinson, adding "Only a few universities are set up to give a doctorate in biomathematics. The Biomathematics Department here is not yet directly connected with any doctoral programs."

While one might wonder why mathematics is needed in the study of medicine, nursing and other health professions, an answer is found in the instructional content listed under biomathematics. This includes statistics; understanding, evaluating, and utilizing research material; biometry; operations research; management techniques; and computer applications. Computers, especially, are emerging as vehicles for biomedical research studies.

### Practical

Dr. Robinson explained that in the practical workaday health scene biomathematics could be applied in assessing the biological interests and problems of a community. For example, factual statistical information on epidemics could provide projections of importance to public health departments.

## The "First" Lady of Basic Health Sciences

Before there were any department chairmen in the School of Basic Health Sciences, there was an administrative assistant, and she's still there. Evelyn Landberg came to work for Dean Upton in September 1969 and claims he is "the greatest boss in the world."

Her duties over the years have been to help the school get started and to keep it going smoothly. This has included helping the Dean with all

personnel actions for the school, with budget preparations, and general administrative procedures.

"We are the largest in-house faculty of all the schools," said Mrs. Landberg.

She added that each of the departments has "its own personality and needs," which necessitated flexibility in adaptation within the Dean's office as each department got "tooled up" for research and

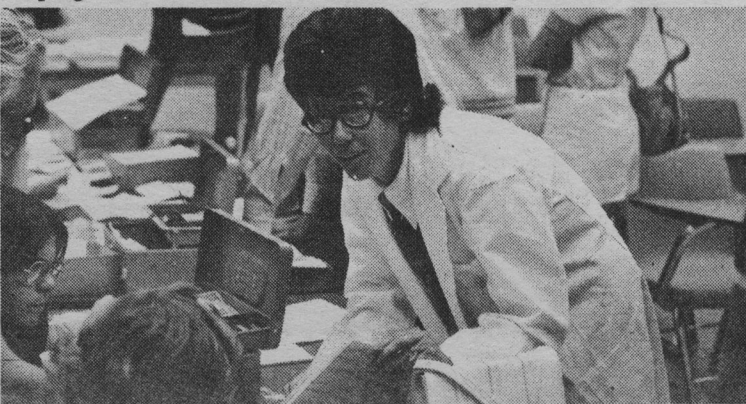
teaching.

Mrs. Landberg admitted to needing more patience at times to deal with the frustration spells because of "the inability of the State system to move quickly." But most of the time she managed to keep her sense of humor. She also worked on the Economic Opportunity Committee for the Health Sciences Center.

An attractive widow and mother of four children from ages 22 to 17, Mrs. Landberg has been able to manage job, family and course work. She is enrolled in the Health Services administration graduate program at the School of Allied Health Professions.

While raising a family alone has many difficulties, Mrs. Landberg sees a positive side to it.

"Out of necessity the kids have more responsibility and so they develop a modicum of independence that they would not otherwise have — a very important trait to have in life."



Evelyn Landberg

photo by Jay Schleichkorn



# Graduate Program Attracting Applicants

The graduate program begun by the School of Basic Health Sciences in 1972 is now well underway with 17 students enrolled full time and a large number of applications being received by the departments of Anatomical Sciences, Microbiology, Pathology, Physiology and Pharmacological Sciences.

Dr. Charles Kim, Associate Dean whose primary administrative concern is the graduate program pointed out:

1. This is an all-doctoral program. All enrolled students are Ph.D. candidates. No terminal master's program is offered by the School of Basic Health Sciences.

2. The Ph.D. degree is offered officially under the umbrella of the Division of Biological Sciences.

3. Accepted students do have some financial support in the form of tuition waivers and a small salary for their teaching assistants.

A graduate advisory committee of faculty and students works together to answer inquiries, process applications, review the candidates and the recommendations of each department. Each department has its own person named as a graduate advisor for the students accepted by this department.

"As an advisor, we talk to students who are inquiring about what we do and what he must do to get a graduate degree," said Dr. Stuart McLaughlin, graduate advisor

for the Department of Physiology and Biophysics. "After acceptance, we see to it that his program is arranged — formal courses, reading courses, lab experiments."

The Ph.D. candidates are also given a project which is really for training and understanding techniques, limitations and theoretical background helpful for pursuing a thesis research project.

Dr. McLaughlin envisages graduate education in the next ten years as concentrating on the exceptional scientist.

"We're trying to produce an extremely well-trained



photo by Toni Bosco

Dr. Stuart McLaughlin (seated)

and competent small cadre of people who have imagination and creativity," he said. "Their education will be more along the lines of individual study, a tutorial system with lots of discussion and independent work."

The Canadian-born physiologist feels that there is little value in having an "overproduction of Ph.D.'s, average-trained, with average ability."

In his opinion, a good feature of Stony Brook is that undergraduate students are allowed to do research work with the faculty in the laboratories, allowing an earlier outlet for the imagination and talent which he believes many young student-scientists possess.

Dr. Kim explained the philosophy of the graduate program as training students to be "investigators" so that in their future careers as teachers and researchers, their motivation to continue medical research will stay at a high.

"We would like to create an atmosphere here conducive to productivity. We also want the student to be happy during his years of study here" said the Tennessee-born son of Korean parents.

Dr. Kim added that as Dean, his role is sometimes that of "father-confessor".

"When students have problems from financial to academic to personal they need a place to go," he said, adding that he enjoys the counseling aspect of his job.

## Roaches Don't "Bug" This Student



photo by Toni Bosco

Dave Meyer

Dave Meyer is one Stony Brook student who's not complaining about cockroaches. In fact the little creatures are a collector's item for him, being simple enough subjects to help him garner hopefully some new information on how the nervous system works.

Dave, a Stony Brook graduate in biology and psychology, is now a 22 year-old graduate student working for his Ph.D. in Anatomy. His curiosity about, "What changes in cells accompany learning?" has him spending countless hours in research, constructing his own sophisticated machinery, and modifying equipment.

### Learning Base

"I'm interested in the cellular basis of learning. I want to do comparative work,

to see if models proposed for very simple systems will hold water in a system which displays 'true' learning behavior," he said, explaining his research theme. "Professionals studying abnormal behavior and consciousness, etc., have come to believe we won't get anywhere studying these until the base properties of cells are understood."

He added, "I want to understand more about plasticity, one of the properties of nerve cells."

Life as a graduate student is a packed-in week. Dave's schedule includes formal classwork taking one quarter of his week; independent research; continuous reading of literature in his area of interest; studying electron microscopy; attending seminars by

visiting faculty; and doing some laboratory teaching.

Each department has an advisor for graduate students and Dave explained the relationship between advisor and student.

"The advisor serves as a sounding board for ideas, directing my research, helping me with technical problems. I've got ideas, he's got experience; and so he helps me integrate my ideas to fruition. He is responsible for ascertaining whether I know my subject matter and making sure that I'm competent in other pertinent areas."

Dave, admitting that science "always turned me on," says he meets frustration in the lab, but this is far outdistanced by satisfactions. A Queens resident, he also finds time for his hobby, photography.

## Seminar Series Brings Noted Guests To Stony Brook

The seminar series sponsored by the School of Basic Health Sciences has now become a university tradition. Offered are in-depth presentations on topics covering a wide range of scientific subjects of current importance, given by visiting guest lecturers of outstanding reputations.

The 1973-74 seminar series continues in Building F, Room 147, at 4 p.m. according to the schedule below. The seminars are open to all interested persons. Come at 3:30 p.m. for an informal coffee half-hour.

### February 6:

Dr. Emanuel Farber, Fels Research Institute, Temple University School of Medicine, Philadelphia, Pennsylvania.  
"Repair of DNA Damage in Carcinogenesis"

### March 6:

Dr. Severo Ochoa, Chairman, Department of Biochemistry, New York University, School of Medicine, New York, N.Y.  
"Interaction of Eukaryotic Elongation Factors and Ribosomes"

### April 3:

Dr. H.K. Hartline, Rockefeller University, New York, N.Y.  
"Processing of Visual Information in a Single Retina"

### April 17:

Dr. Julian Chisolm, the Baltimore City Hospitals, Baltimore, Md.  
"Heavy Metals: Accumulations and Potential Effects in Humans."

## Internationally-Famed Brain-Researcher Addresses Packed Audience at HSC

Reaction to Sir John Eccles speech given at the Health Sciences Center on Dec. 5 ranged from "fascinating" to "controversial" to "provocative." His topic was "The Human Brain with Respect to its Speech and Musical Abilities" and the lecture, jointly sponsored by the School of Basic Health Sciences and the Sigma XI Society drew a packed audience of several hundred faculty, students, and visitors.

Dr. Eccles, Nobel Laureate in Medicine and Physiology, and presently Distinguished Professor of Physiology at the State University of New York in Buffalo, presented his latest observations relative to the brain's hemispheric dominance and the localization of specific neural functionings.

It can now be accepted as fact, Dr. Eccles stated, that the primary localization of speech is in the left hemisphere of the brain; musical abilities are located in the right hemisphere. The often speculated spherical dominance of the one half over the other from birth onward can now be accepted on the basis of empirical fact, concluded Dr. Eccles.

### Two Brains

The evidence supplied by brain researchers throughout the

world in support of these dual observations has been enormous. What remains now is how best to make use of these findings. What effect should they hold for education, for learning, for personality development, and how best are we to assess and to nurture these capabilities? queried Dr. Eccles.

The realization that as human beings we possess two brains, in essence, two minds, plus the more tantalizing knowledge that

one continues to be dominant throughout our lives are observations certain to provoke considerable thought and speculation. "They provide human beings with a whole new set of challenges," Dr. Eccles affirmed.

For those interested, a television tape of Dr. Eccles' entire address may be seen and heard at one's leisure in the H Building on the South Campus — Rm. 137.

## Minority Recruitment

(Continued from page 1)

these figures as requests for applications: 89 students for medical school; 18 for dental; 18 for social welfare; and 9 for basic health sciences, specifically for microbiology and biochemistry.

### Contacted

"Each student we met got a letter from us upon our return saying we were happy to have met him and asking for a resume and some indication of grades, career interest and experience. So far we've gotten at least a dozen transcripts."

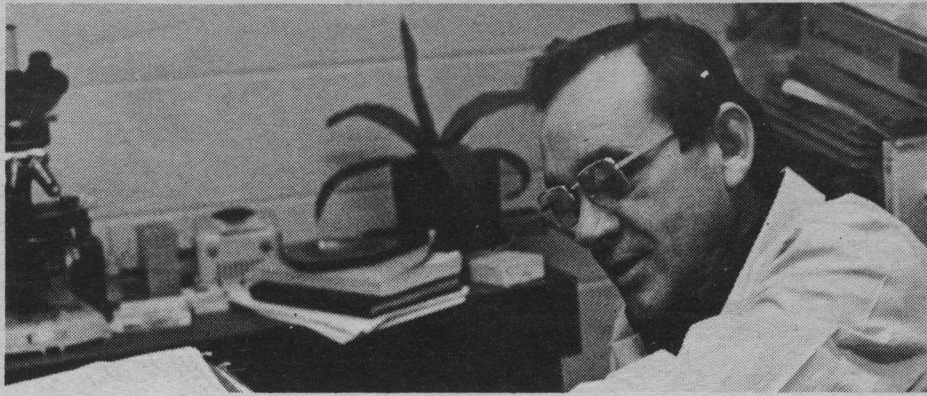
Questions students asked showed they were concerned mainly about how difficult it is to be admitted to a large school and about costs and financing.

"There were not as many questions on the racial situation as I expected. I guess black students are prepared that wherever they go they may have to face social isolation," Dr. Brown commented.

A native New Yorker and former high school science teacher in Pasadena, California, Dr. Brown earned an M.A. in Zoology and in 1966 a Ph.D. in Anatomy at Stanford.

After coming to Stony Brook in December 1970, Dr. Brown expressed an interest in minority affairs. He was invited to join the Economic Opportunity Committee and has been instrumental in making minority students and faculty recruitment a function of that committee.





Dr. Maynard Dewey, Chairman

photos by Toni Bosco



Dr. David Williamson with Dr. Madelaine Fusco

## Department of Anatomical Sciences

# A Knowledge of Body --In a Team Spirit



Dr. Gabor Inke

The Department of Anatomical Sciences is characterized by a team-oriented faculty. Currently some 250 undergraduate, medical, dental and graduate students are taught by the faculty. Four Ph.D. candidates are in the newly established graduate program. A broad spectrum of courses are given which include areas such as integrated human physiology and anatomy, comparative vertebrate functional neuroanatomy, cell biology and evolution of man.

"Faculty is particularly interested in students, spending an enormous amount of time developing teaching objectives, organizing course material and working directly with students," stated Dr. Maynard Dewey, Chairman.

The faculty are also most happy with the structure of the School of Basic Health Sciences where they can identify with other professionals in basic science teaching and research.

### Praise For Faculty

Dr. Dewey, formerly the Chairman of the Anatomy Department at the Medical College of Pennsylvania, spoke highly of his faculty calling them "a unique bunch."

"The Department is democratically run. Decisions on appointments are determined by consensus, and all the faculty are involved in recruitment. All course work is discussed and approved by the total faculty." Dr. Dewey went on, "though we're very varied in our scientific interests we have a lot of communication probably because of the kind of team teaching we do. The development of teaching objectives has sharpened the faculty's awareness in the depth of information covered by anatomical sciences."

Dr. Dewey explained that the department has developed an integrated teaching of anatomical sciences with a heavy reliance on self-instructional methods. A teaching method in gross anatomy imported by Dr. Gabor Inke from European medical schools is used, whereby specimens are prepared illustrating various parts of the body. This reduces the number of dissections students must do themselves and thus saves time.

### Departments

The Department of Anatomical Sciences has four sections: Macroscopic Anatomy, Neuroscience, Cell Biology, and Developmental Anatomy. Faculty members have been recruited for the first three sections while the section of Developmental Anatomy as yet has no faculty.

Dr. Gabor Inke heads the section of Macroscopic Anatomy, with his major interest in Physical Anthropology. He is also developing a Biomedical Museum (see separate story in this issue). This section includes: Dr. Norman Creel, a human geneticist and physical anthropologist working on the classification of primates; and Dr. Jack Stern, who will join the department this winter, a specialist in biomechanics of primates.

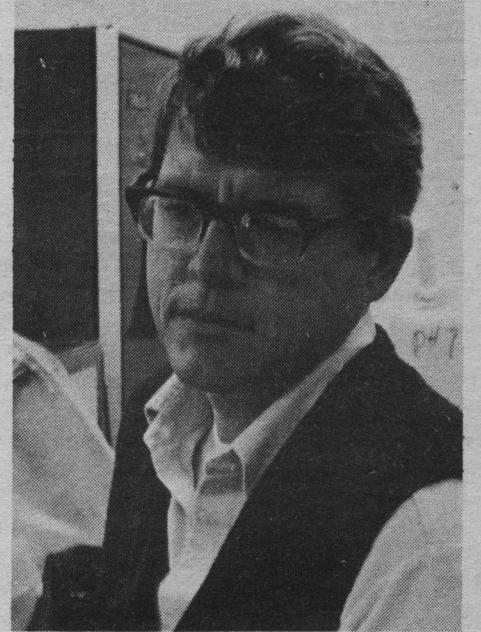
The Division of Neuroscience is headed by Dr. Madelaine Fusco whose interest is temperature regulation. Dr. Ronald Irving's research is in comparative structure of the auditory system and behavioral correlates. Dr. Leroy Brown's expertise is electron microscopy, focusing on the ultrastructure of the nervous system and mapping of pathways by ultrastructural techniques.

Dr. Dewey heads the Cell Biology Division. His primary interest is membrane structure and comparative contractile mechanisms in striated and smooth muscles. He is focusing especially on the contractile mechanism in the muscle of horseshoe crabs which "seems to be different from mammalian," he said. Dr. Ben Walcott is specializing in invertebrate visual systems and contractile mechanisms of invertebrate muscles. Dr. David Blaustein, formerly a practicing Long Island oral surgeon now entering a "second career" as a cell biologist, is studying the structure of the frog iris and localization of rhodopsin, a visual pigment. Dr. David Williamson, a cell biologist and geneticist, is interested in maternal inheritance, specifically in an organism found to eliminate male offspring in *Drosophila*.

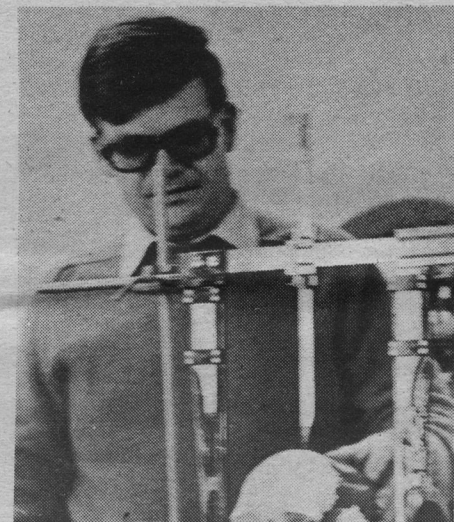
### Equipment

The Department of Anatomical Sciences has two electron microscopes and a fully equipped facility for image analysis and processing. Equipment for freeze cleaving and etching is also available, all of which are particularly important methods of analysis of membrane structure.

"We are also well equipped for electrophysiological studies and biomechanical studies involving ultrasound and stereomatic measuring equipment. In addition we have limited facilities for tissue culturing," said Dr. Dewey. The chairman also added that the department now has an excellent collection of the fossil record of man, and that the Department of Anatomical Sciences will play a major role in the teaching of physical anthropology for the University.



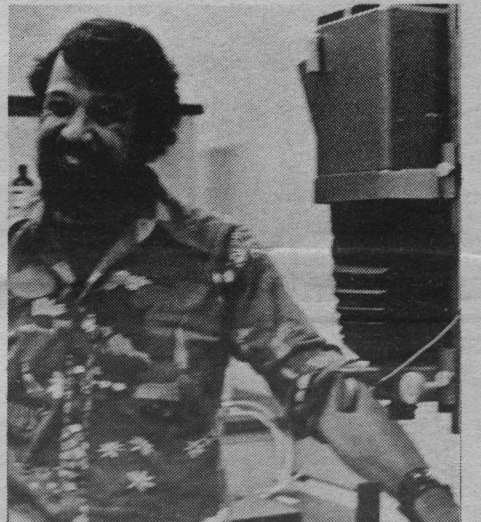
Dr. Ronald Irving



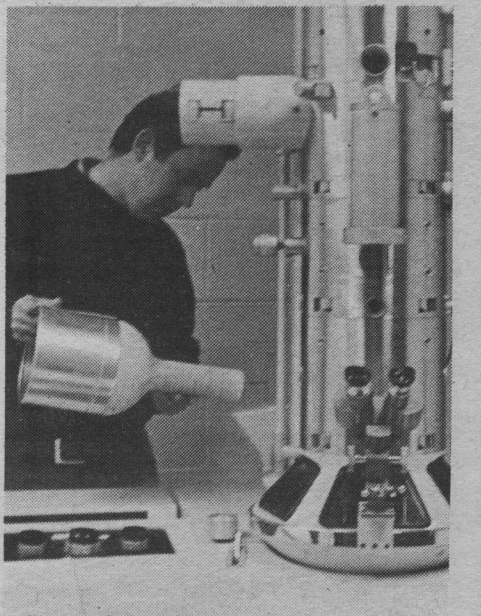
Dr. Norman Creel



Dr. Ben Walcott



Dr. David Blaustein



Dave Colflesh, Dr. Dewey's research assistant, at the electron microscope

## New Concept For Students Seeking Varied Careers

(Continued from page 1)  
outside their own discipline," Dr. Upton reflected.

He went on, "By assuming this responsibility of relating to, working with, and providing instruction to many students in many programs we also develop a healthy interrelationship among the faculty in all the departments."

Dr. Upton is convinced that the concept of having a separate school of basic health sciences is

valid.

### Levels of Instruction

"When you look at the developments within the health professions in life sciences and see the ever-increasing number of specialists of different kinds, the notion that every career track should have its own courses, seems to be totally unrealistic," he said. "Our goal will be to develop instruction in each discipline at different levels with our aim being to tailor the

level to the program and career goals of the students and not to the school from which the students come."

In explaining what he meant by providing different levels of instruction, Dr. Upton pointed to physical therapy, a health profession which requires a good knowledge of anatomy.

"A physical therapy student may need more specialized courses in anatomy than a medical student who is planning

to go into psychiatry," he said.

### Student Needs

A student complaint is often that they'd like to take certain science courses but something very detailed would be of no interest to them.

"We don't want that. We want a variety of dishes on the menu. We're planning to develop a series of courses with different levels of content open to all students with the approval of their advisor. This way they can

pick that course which is appropriate for them in terms both of what preparation each one brings and what each needs to take out of the course," Dr. Upton stated.

The faculty of the School of Basic Health Sciences consists of approximately 50 full-time people plus a large number of faculty on clinical campuses. Dr. Charles Kim is the Associate Dean and Dr. Catherine Wingate is the Assistant Dean.