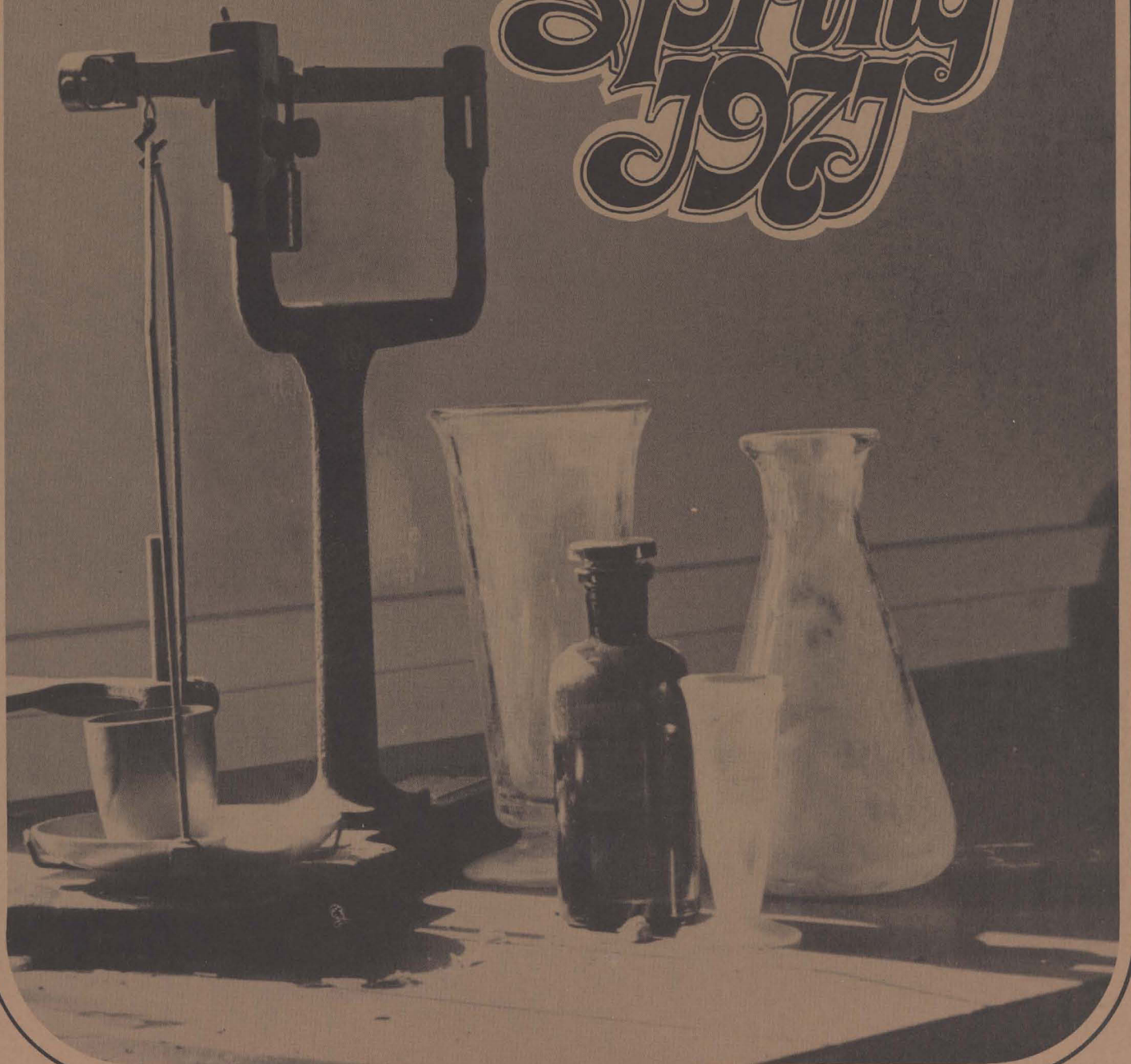


The Women & Pharmic Spring 1977

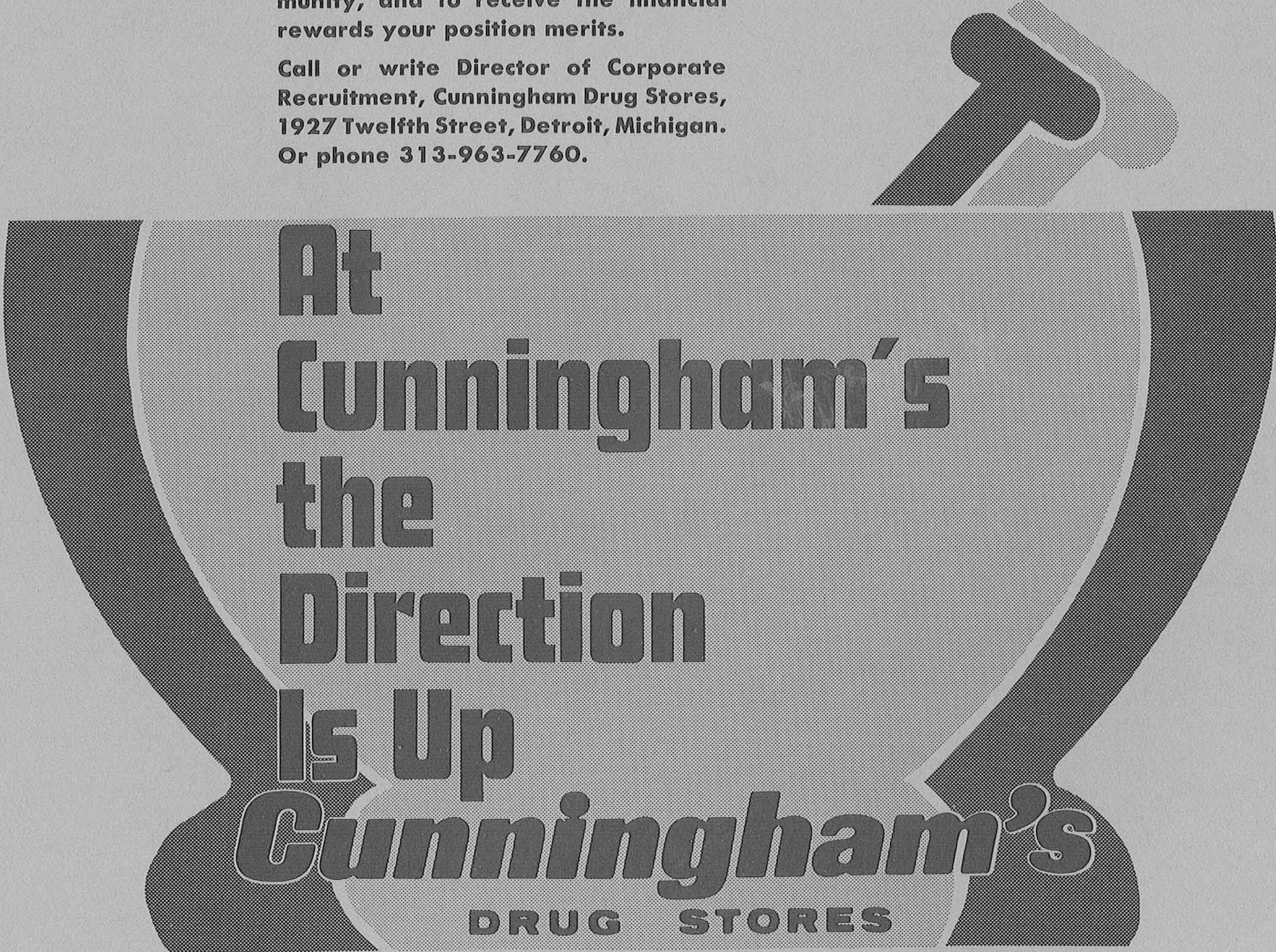


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The WAYNE PHARMIC

VOLUME 15 1971 NUMBER 2

The Wayne Pharmic is the official publication of W.S.U. College of Pharmacy, written by, for, and about Pharmacy students and graduates.

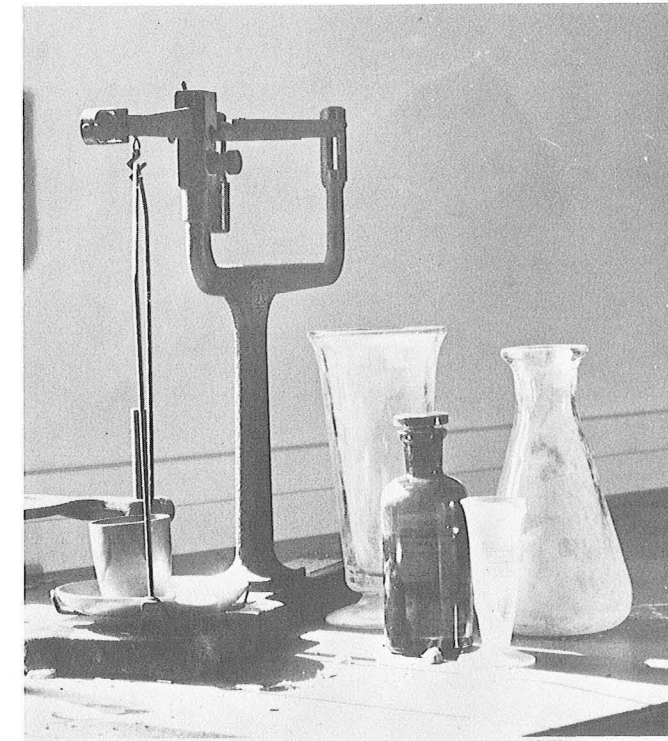
THANK YOU

The Pharmic staff wishes to extend its appreciation to Dr. Dunker for his invaluable assistance in forming this publication.

The staff would also like to extend special thanks to Clifford Sheats, Printing Department; Mrs. Virginia O'Brien, Publications; and Mrs. Margaret Hartz, Student Organizations Office, who have given enormous amounts of assistance.

HELP

The Pharmic would like to have YOU as a staff member. Please contact Frances Ptak, Dr. Dunker or leave a message in the Pharmacy Office.



COVER

Pharmacy has made great advances in both scientific and humanistic endeavors since the introduction of these early instruments.

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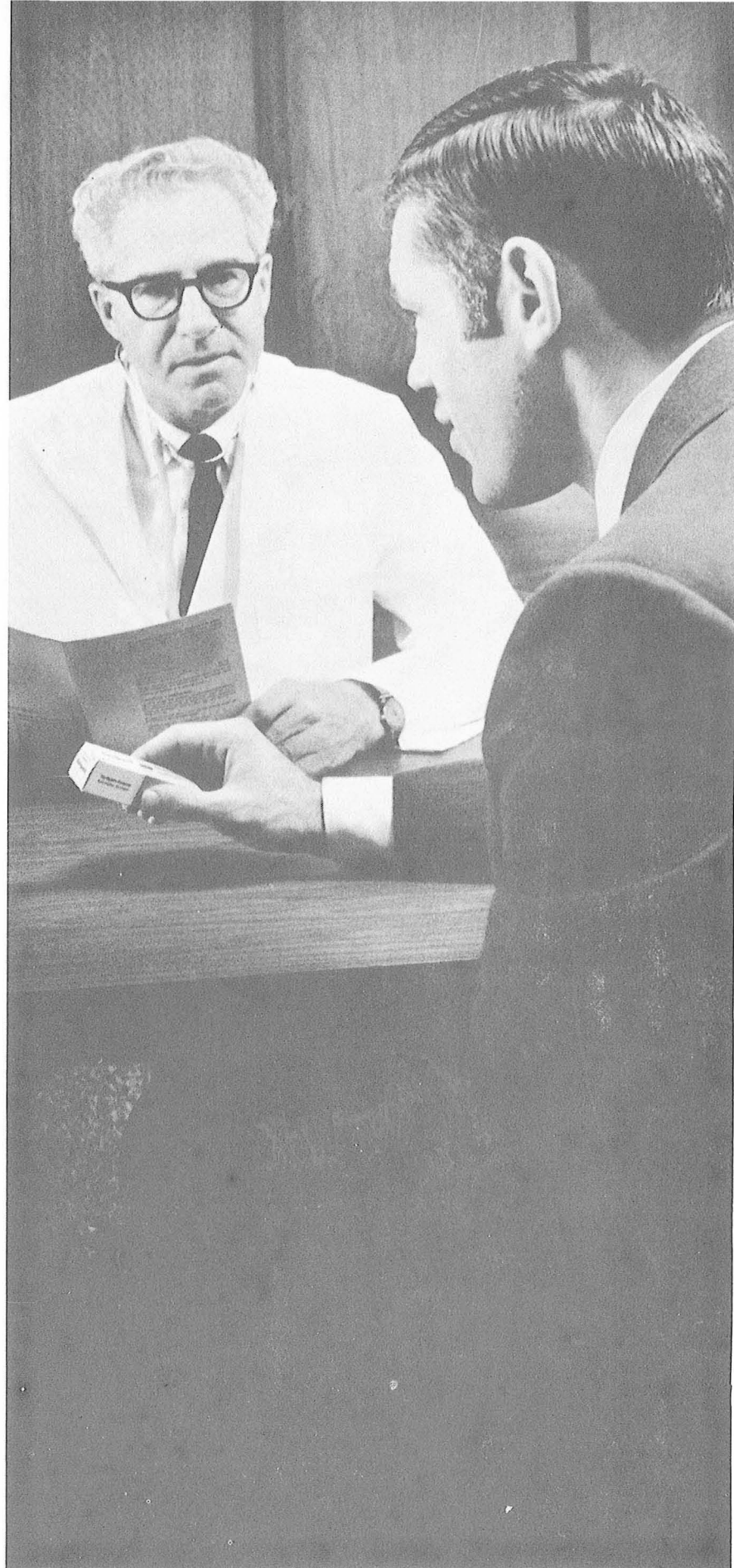
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From the Dean's Desk

Dean Martin Barr



Recently I was invited to address the Interim Session of the House of Delegates of the Michigan State Pharmaceutical Association. I chose as the title of my address: "Patterns of Evolution in the 1970's: Health Care, the Consumer and Pharmacy." I was honored to have that portion of my talk dealing with the future of pharmacy introduced by Senator Hubert Humphrey into *The Congressional Record*, March 19, 1971. Below is the brief summary statement which ended my address:

The United States is in a health-care crisis. Money alone is not its solution, but what appears to be needed is a major revamping of the health-care delivery system. There will be progress toward such a restructuring in the 1970's. Pharmacy must meet the challenges of the total patient-care team in future health programs. This will necessitate a concentrated program of continuing education for present-day pharmacists and additional revamping of the pharmaceutical curriculum so as to allow pharmacy students to be trained in a clinical environment together with other health profession students. The future for pharmacy will depend on its willingness to accept new roles and responsibilities in behalf of the Nation's future health-care system and its citizens.

Pharmacy must orient its practitioners to develop those roles which are required for optimum care of citizens in comprehensive health programs. In doing this, the profession must work with other health professionals and consumers in identifying and achieving their pharmaceutical needs. Pharmacy must make every effort to work with consumers, third party payors and governmental officials and in so doing to make them aware of the ability and willingness of pharmacy to take part in comprehensive health programs. The latter must recognize the importance of comprehensive patient-centered pharmaceutical services, demand them, and consider them in future financing programs for health care.

Obligations of Professional Service

Larrow Anthony Sivick

As groups become organized and seek to prepare themselves on an educational pattern or as they begin to practice a vocation according to set standards, they seek to obtain a certain status in society. As such, group consciousness leads to group protection, group activity and usually to group improvement.

Historically, the groups which have commanded the greatest respect in our society have been those which identify themselves as professions or professionals. In its original use, the term profession applied to the three learned professions of law, medicine and theology. These were the three educated groups, respected and revered as such. These recognized professions were clearly separated from, and ranked socially above, occupations of commerce and industry. The professions were practices without thought of compensation related to the value of the service rendered. Inherent in this service is a great and unselfish motivation; this is the most significant basic concept of a profession.

What is a profession?

A profession may be defined as: a calling requiring specialized knowledge, with often long and intensive preparation, maintaining by force of organization or concerted opinion, high standards of achievement and conduct, and committing its members to continued study and to a kind of work which has for its prime purpose the rendering of a public service.

Of Prime concern here is the element of service — service to the public.

How do we apply this definition today?

In recent years there has been a trend for any and every group

which develops a group consciousness to assume the title "professional." The tendency to establish national societies and to hold national conventions has contributed to the abuse of the term "professional." There is a danger today that the free and indiscriminate use of the term "professional" is weakening the true significance of the word. There is an even greater danger that groups will exploit the term for selfish reasons — to seek status and economic benefits without understanding the obligations and duties of a profession. Granted that a lucrative motivation and consideration of one's own interests are legitimate pursuits in the business world, but professional persons are expected to be less selfish; their talents and knowledge should focus on *unselfish* motivation inherent in *service to others*.

I further submit that true professionalism is a privilege, but it is a privilege which carries with it heavy responsibilities and duties — duties to one's coworkers and to one's fellow man. Professional status cannot be achieved by merely belonging to a professional group or society. Real professionalism is highly subjective and is concerned with personal achievement. In this vein, not every pharmacist is professional because he belongs to A.Ph.A. or A.S.H.P. Each individual must examine his own conscience and evaluate himself as to whether he measures up to the man he ought to be. One knows in his own heart whether he is of professional caliber.

In conclusion, real professionalism — similar to that found in the traditional professions of law, medicine, and theology — cannot be bought or gained through membership in a professional society. It is achieved by one's unselfish motivation toward rendering service and is measured by faithfulness and loyalty to a code of ethics.

Minority Recruitment

Charles Green

Minority Recruitment Video-Tape

The Minority Recruitment Tape is nearing completion. As outlined in the tape format, the show is basically divided into profiles of various minority people in pharmacy. Also to be completed is some filming at the high schools. This filming will be done on the Outside. Editing of the audio portions of the show has already begun. According to Mr. Corsen, our Director, the actual editing of the film portions of the show will take no longer than two days. The editing of the film will be handled by Jim Crossen, Bob Krupke, our film man and myself. We are very excited about the prospects for recruitment that this tape holds.

In order to get some idea of how minority groups will react to this tape we want to show it to three or four selected high school audiences. We hope that by doing this we will be able to obtain feedback from the students on how the tape affected them. We also plan to preview the tape before a group of minority students at Highland Park College.

Pharmacy Careers Clubs

The high school pharmacy careers clubs are starting to take more definite formation. The membership of the clubs at two of the high schools is starting to increase. But even more importantly the students are starting to become more involved in planning activities for the clubs. They have elected their own officers and at Cooley High School, they are starting to form their own club committees.

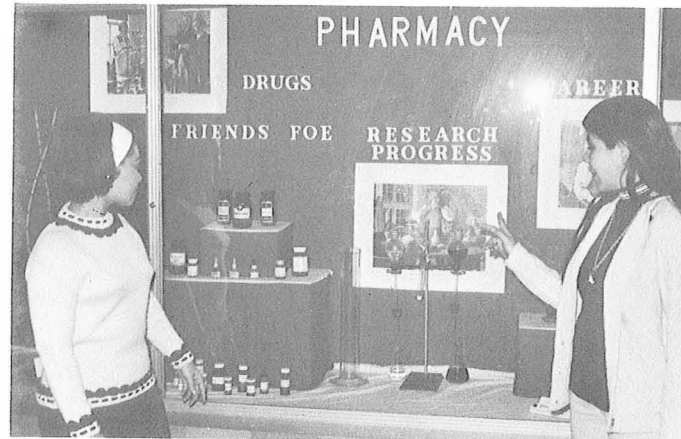
The students at Cooley High School have been most active and the membership of this club has greatly increased. Much of the credit for this increase in membership must go to Mr. Thomas Valentine, teacher-sponsor of the club. He has worked very diligently in drumming up student interest in the club at Cooley.

Field trips by the clubs have been taken to Lynn Hospital and Providence Hospital. Students who went on these trips toured not only the pharmacy departments of these hospitals, but they also got the chance to go through some of the lab areas. This opportunity helped to enhance their appreciation of the pharmacist's total role in the delivery of health care.

The students are presently planning activities that they can carry out to help raise money for club sweaters. They held their first fund raising activity - a combination bake sale and book sale on Wednesday, March 31. The club was able to raise \$40.00 as a result of this activity. Other fund-raising activities are now being planned by the students at Cooley. Similar kinds of activities are being planned at Chadsey and Western High Schools.

The high school Pharmacy Careers Clubs of Cooley, Chadsey, and Western went on a tour of the Upjohn Company in Kalamazoo, Michigan on April 7, 1971. The trip lasted all day and the students were provided with lunch by the Company. Altogether there were thirty-eight students on the tour. Also accompanying the group were three teacher sponsors, myself, and Mr. James Riley, my counselor aide.

The students were very impressed with the facilities at the Upjohn Company. As a result of the trip, three students at Cooley are going to construct an exhibit on drug abuse to go into their school showcase. They also plan to do an exhibit on ancient herbs and some of the early form of modern medicine.



The smaller two photos are of an exhibit on pharmacy put up at Western High School. The rest of the photos were taken at the Counselors Workshop, held at McGregor Center. The speaker was Dr. Robert Gibson of the University of California at San Francisco.

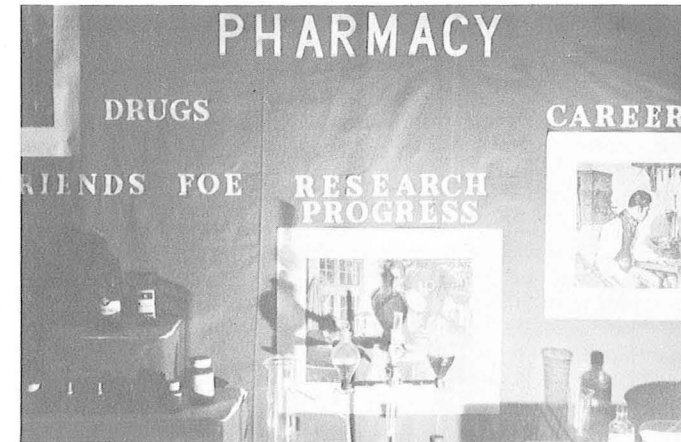
Community Colleges

The community colleges of Wayne, Oakland, and Macomb counties can be excellent sources for minority recruitment. At the present time we are working very closely with Wayne County Community College and Highland Park College. At both of these schools we have liaison counselors who act as contact people for us at these two schools.

We are planning to expand this concept of the liaison counselor to Oakland Community College. This is going to be our target school for the spring. To aid in our recruitment effort at community colleges we have had a number of posters made up. These posters will be displayed in prominent places throughout the campuses of various community colleges. The posters contain a variety of messages expressing the benefits to be gained from a career in pharmacy.

Also during the winter quarter we have been working closely with a Wayne State student organization known as the Association of Black Medical Students. As a partial result of our work with the organization it has become aware of the need for increasing minority representation in the health professions. Some of the members of the organization have volunteered to help us in our work with high school and community college students.

We have had correspondence with a student organization at the Orchard Ridge campus of Oakland Community College. This organization has agreed to arrange for us to make a presentation to an audience of minority students at Oakland. We will have the assistance of students from Wayne State's Association of Black Medical Students in making this presentation.



Pharmacy Careers - Summer Program

During the winter quarter we approached the directors of the Upward Bound program concerning a summer experience in pharmacy for some of their students. Both Mr. James Moore and Mr. Will Robinson of Upward Bound expressed an interest in having their students participate in such a program.

After the initial meeting, Mr. Robinson and I held another meeting to begin planning for the program. We enlisted the help of at least five minority pharmacy students to serve as supervisors for the Upward Bound students. It was decided that the Upward Bound students would be involved in only elementary pharmacy lab work during the summer. The program will run for a five week period. The number of Upward Bound students participating in the program will be limited. The reason for this is that we want to assign a small group of Upward Bound students to each of our pharmacy students. We plan not to have more than five Upward Bound students for each pharmacy student supervisor.

Dr. Willis Moore has been quite helpful in providing information on experiments that the students might want to work on. He has agreed to provide suggestions for experiments. As it now stands the student will be doing one experiment on the making of cold cream, two experiments in pharmacology (working with small animals), and two more difficult experiments will be performed by the pharmacy student supervisors. The last two experiments will give the Upward Bound students an opportunity to observe at close range and ask questions of the supervisors.

The Upward Bound students in the program will be chosen by the Upward Bound staff. They will be students who have expressed an demonstrated an interest in the science area. The program will be evaluated by the Upward Bound staff. Pharmacy supervisors will be asked to fill out an evaluation form for each of the students assigned to them. The Upward Bound students will be asked to evaluate the project in terms of what they gained from it, and how it can be improved for the future.

Also as a part of the overall Upward Bound summer program a 16mm color film will be made of the Upward Bound students and their summer experiences here on campus. The students working here in pharmacy for the summer will be a key part of the film. We hope to obtain a print of the film for use in our minority recruitment program. The film will be produced by Wayne State University's Center for Instructional Technology.

Counselors Workshop

A workshop for junior high school and community college counselors was held on Tuesday, April 6, 1971. The purpose of the workshop was to acquaint counselors with the opportunities available for students going into pharmacy.

The workshop was divided into two sessions. The morning session consisted of a tour of Shapero Hall and a speech delivered by Dr. Robert Gibson, Director, Pharmaceutical Technology, University of California at San Francisco. Dr. Gibson spoke on "The Challenge Facing Young Pharmacists of the 70's."

The afternoon session consisted of four workshop sessions. The workshops were in the areas of Community, Hospital, Industrial and Governmental pharmacy. The sessions were moderated by Mr. Lloyd McKnight, staff pharmacist at Kirwood General Hospital; Dr. Willis Moore, Associate Professor of Pharmaceutics; Dr. Wendell Hill, Associate Professor of Hospital Pharmacy; and Mr. Fred Kamienny, Instructor in Pharmaceutics.

There were forty counselors in attendance at the workshop. They represented all levels of education. The counselors were from Detroit junior and senior high schools, some suburban high schools, and community colleges from Wayne, Oakland, and Macomb counties. We received positive reactions from the counselors who attended the workshop. Many of them expressed the need for more workshops like this one.

Health Care Delivery System— Crisis or Challenge

Paul Zoller

The 18th Annual Stephen Wilson Seminar convened on February 28th with the theme "Health Care Delivery—Crisis or Challenge."

The crisis affecting America today was predicted by President Richard M. Nixon in July 1969 when he told the nation:

We face a massive crisis in this area (health care) and unless action is taken both administratively and legislatively to meet that crisis within the next two or three years, we will have a breakdown of our medical care system which would have consequences affecting millions of people throughout the country.

The challenge is of course, whether America will meet this impending crisis successfully.

Dr. Reuben Meyer, acting chairman of Community and Family Medicine at Wayne's Medical School, told the pharmacists at the seminar that we live in a crisis oriented society, and that the crisis facing health care delivery today is only one out of many in which man has historically acted only on the basis of crisis. Dr. Meyer went on to speak about the "Psychosocial Factors in Providing Patient Services."

The next speaker was Dr. Paul Q. Peterson, dean of the University of Illinois School of Public Health who spoke about "The Role of Government in Health Care."

According to Dr. Peterson the government is already deeply involved in health care. Its role will continue to grow at an accelerating rate on all levels: federal, state and local. He said that today it is highly probable that every health service provided by the health care team has some government money helping to make it available.

The necessity for a national health insurance to help forestall the impending crisis in health care is resulting in the immense pressure that's building up in Congress, at the White House and within the health care profession to radically change its health care system. The health care legislation that should pass the 92nd Congress and go into effect within the next few years will determine health care in American for generations to come.

Dr. Peterson said that it is imperative that health care professionals get involved in determining this legislation. He said that today's public is convinced that medicine and physicians are only interested in protecting their own economic interests. He stated that we must not emphasize economic interests but must build on the present strength of the health care professions. We must emphasize quality and accessibility.

He further stated that we are in a period of health reform and radical changes will be made in the present health care delivery system. The government is in the health business to stay and how the anticipated health care legislation will determine our role as health care professionals will depend on whether we are willing to take the lead.

Jere E. Goyan, dean of the University of California School of Pharmacy spoke next on the "Professional Practice in Transition."

Dean Goyan pointed out that Pharmacy as a profession is in danger due to the severe fragmentation within the profession itself. Chain drugstores that offer discounts and implement other modern business principles are a disadvantage to the profession. The pharmacist is rejected by everybody, according to Dean Goyan, and he is unsure of

his future. Impending national health care legislation will largely ignore drugs and Pharmacy.

There is a clear need for a new and better system of health care delivery. Dean Goyan sees new roles emerging for pharmacists. He foresees some pharmacists functioning as primary physicians dispensing certain legend drugs without a prescription. He also foresees drugstore-front clinics.

The present remuneration basis is totally inadequate. A pharmacist's income is tied to the drug product rather than to his knowledge. According to Dean Goyan a pharmacist should be paid for refusing to dispense a prescription if in his professional judgment that would be in the best interest of the patient.

This would be providing an important service to the patient in many cases.

Dean Goyan believes that the pharmacist should be paid on a prepaid capitation fee basis and that if this is socialized medicine — so be it. The pharmacist must supply increased O.T.C. drug advice services. He should stock only effective O.T.C. drugs and not stock objectionable remedies. He should be allowed to substitute generic drugs of good quality and thus lower the cost of dispensing a patient's prescription.

According to Dean Goyan it's time for the pharmacist to break out of his isolation and to return to the physician's side where he once was historically. The transition will be a painful and a traumatic experience for many pharmacists but it will be a necessary one if pharmacy as a profession is to be saved. This concluded the morning session.

The afternoon session opened with UAW President Leonard Woodcock speaking about the national health care crisis, labors health care role, the rising cost and questionable quality of health care and finally the health security program.

Mr. Woodcock stated that the four major aspects of America's basic health care problem were the following:

- (1) Solo physician practice of fee-for-service medicine which is outmoded and costly.
- (2) Hospitals which are increasingly expensive and inefficient.
- (3) The failure of private insurance.
- (4) The prescription drug problem.

Mr. Woodcock said that although the average cost of prescriptions has increased substantially in recent years, the increase has been relatively minor in comparison with other health care costs. He believes that appropriate use of generic drugs can bring about substantial savings in the nation's health care bills.

Mr. Woodcock believes that laws which encourage pharmacists to substitute appropriate quality generics should be supported strongly by pharmacists seeking to upgrade the profession of pharmacy. He further believes that an effective formulary should be also be supported by pharmacists as a further means of controlling costs and assuring quality.

Mr. Woodcock said that only a dispensing fee justified by true professionalism by the pharmacy can ensure the status of the pharmacist on the emerging patient-oriented health care team. Mr. Woodcock went on to say that pharmacy education and continuing education programs must recognize the growing professional role of the pharmacist as a drug information specialist. He encouraged the prospective use of "pharmacy aides" to handle the routine chores around the pharmacy.

Mr. Woodcock concluded that the overall practice of manufacturer administered prices results in profit margins of such size as to put the wealthy automobile to shame. The consumer pays for all the research costs of a pharmaceutical company. Most research Mr. Woodcock contended is not designed to produce new drugs but to produce supposedly altered products by molecular manipulation which improves the company's competitive position in the marketplace.

Finally Mr. Woodcock stated that the fundamental basis for affecting economics in drug programs is by controlling the prescribing habits of physicians. These must become more effective and economical.

University Clinics

Fred Kamienny, R.Ph.
Instructor in Pharmaceutics

In recent years, the American public has become acutely aware of shortcomings in the provision of health-care. Recognized as apparently contributory factors are the improper utilization of available manpower and a general health manpower shortage. In attempting to attack these problems, the University has proposed an ambulatory clinic teaching program and has committed itself to the innovative education of an increasing number of physicians and other health professionals. Considering the impact of such a facility, let us review the current status and some of the concepts of this proposed facility.

In February, 1970, the University officially formulated and recognized the Advance Planning Committee which was charged as follows:

- A. "To set forth in writing in more detail than now exists what the future health care delivery systems of the University Clinics and Medical Center should be and to provide for flexibility in evaluating alternative methods of health-care delivery.
- B. "To make projections of the new kinds of educational programs which will become possible within the framework of the new health-care delivery systems.
- C. "To present the projections to key individuals and groups in health related colleges, medical center institutions, and the community for their reactions, to involve them in refining the projections, and to obtain ratification of these statements as official policy and planning guides for the Medical Center.
- D. "To develop a plan for phasing from the present system to the projected system, a process which should begin while the present facilities are in use."

In the meantime, the Joint Capital Outlay Subcommittee of the State Legislature has directed the planning be organized into four phases:

- Phase I Inventory of Available Resources
- Phase II Projection of Needs Based on Educational Program Requirements
- Phase III Comparison of Resources with Needs
- Phase IV Clarification of Clinics Building Program Objectives."

Wilson Seminar (Ctd.)

Mr. Woodcock's speech was followed by a panel whose theme was "Community Health Care — A Team Approach."

Dr. Eugene Vayda of the McMaster University College of Medicine in Hamilton, Ontario, Canada spoke briefly on "Why Comprehensive Health Care Centers are Needed." This was followed by "Cross Disciplinary Collaboration for Health Care" by Michael Glary, the program coordinator for Model Cities.

Finally Fred Kamienny talked about "The Pharmacist's Role in a Comprehensive Health Care Program."

This panel was followed by a question and answer period which concluded the 18th Annual Stephen Wilson Seminar.

It is crystal clear that America's health care delivery system or "non-system" is rapidly approaching a crisis situation today. Whether or not we will be able to meet the challenge successfully and avert a massive national crisis will depend upon the efforts of Congress, the American people and the health care team. The results should be known within a couple of years.

Since that time, Phase I, retitled Educational Guidelines and Inventory and Phase II retitled Educational Program: Clinical Objectives and Experiences, have been submitted to the Legislature. Phases III and IV are still in the planning and preparative stages.

As a consequence of the conclusions reached in the Phase I report, it was recommended that

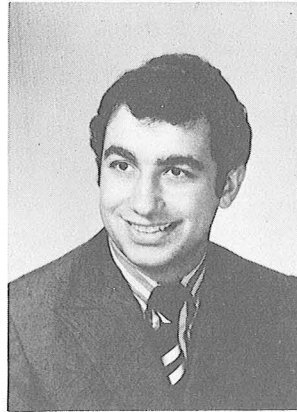
1. "a University Clinics Building be established as an integral part of Wayne State University to serve as the site of its family care ambulatory teaching program and as a major component of its specialty care ambulatory teaching program;
2. "the University vigorously pursue expansion of its affiliations to provide for specialty care education and to make maximum use of community resources."

When such a facility is completed, the interdisciplinary training of all health professionals could be accomplished in a single location in what is titled the "team approach" to health care. The members of the team could vary with the particular scope of the group. For example, a family care or general health maintenance group would encompass members from all areas of the health professions while a renal transplant group might consist of an internist, a surgeon, a urologist, a pharmacist, a social worker, and an immunologist. Likewise, a drug abuse group might consist of an internist, a psychiatrist, a pharmacist, a social worker, and a nurse clinician. The possibilities are only limited by the needs of the prospective patients and the innovative ability of the group members. This type of team would enable health professionals to begin their practice in an aura of mutual respect rather than cloaked mystery.

Lest we forget, the proposed facility is an ambulatory clinic. Obviously, hospital affiliation and availability is imperative for many functions but the clinic itself is proposed for ambulatory patients, those living their daily lives in their respective communities. Consequently, the scope of the pharmaceutical involvement could be from the initial suggestion from a pharmacist to the patient to visit the clinic, discussion with the patient in the clinic, and follow-up care by the pharmacist to the patient in the community.



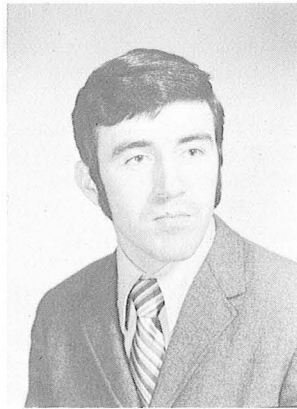
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APhA
MSPA Officer

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23, Married
APhA
Hospital & Community Pharmacy

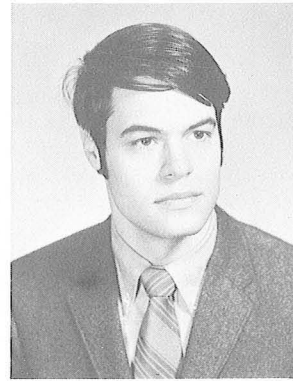
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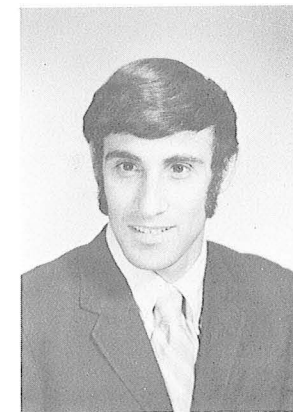
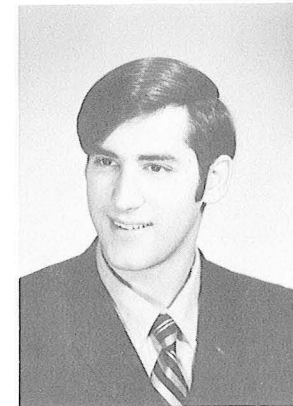
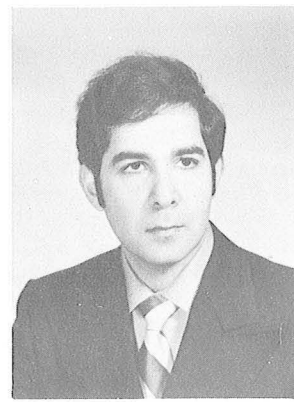
Alan Earl Goldfarb
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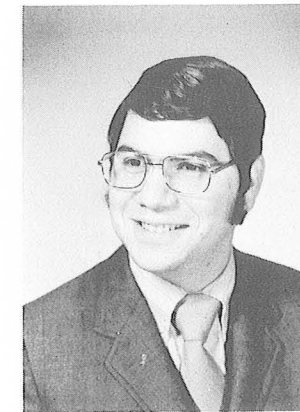
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The Wayne Pharmic



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Rho Chi Society
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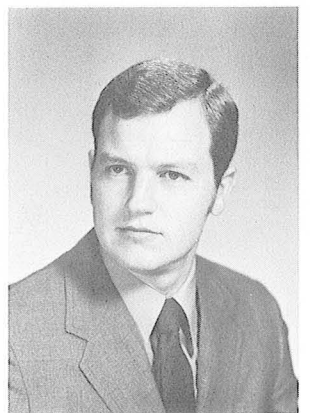
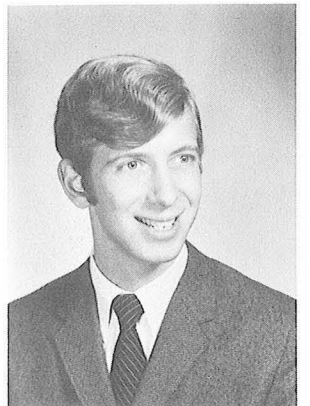
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MA-Pac
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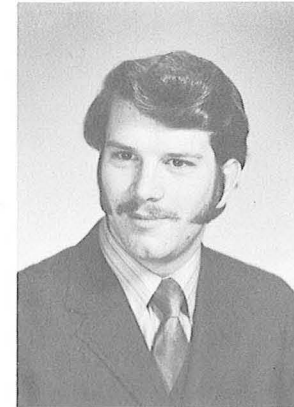




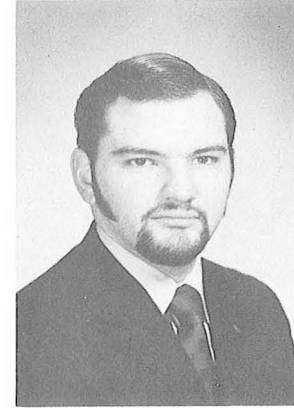
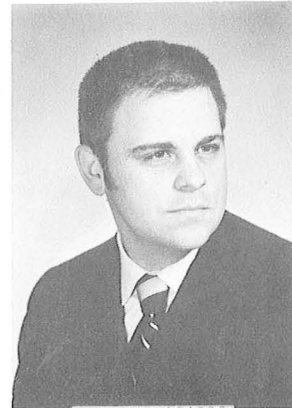
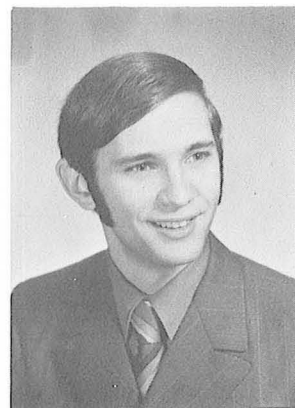
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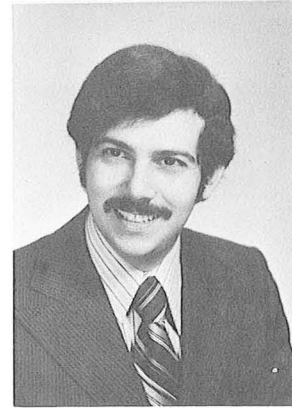
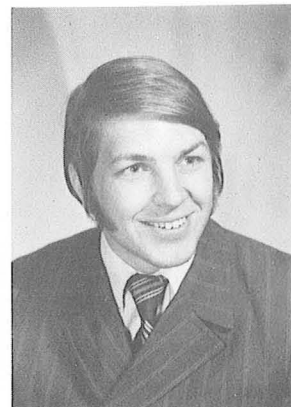
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Pharmacology

Section-- The Directed Study

Francis Ptak

The quest for learning takes many avenues where development of mind will reach its greatest attainment at a particular point in the maturity of an individual.

The classroom meeting and workshop type discussion are instrumental in helping the student to understand principles of studies learned. However, oftentimes a greater degree of study in a particular area brings into sharper focus the desired knowledge.

The directed study serves as the means whereby the student may enter into a facet of the desired subject at a more intense degree with guidance from the course instructor. It may be asked what might be some of the reasons a student may have for taking a directed study? To this end, two students enrolled in directed studies in Pharmacology were asked what their attitudes and opinions were.

"An undergraduate student working on a directed study," begins Marvin Siegel, "has an opportunity to correlate his previous knowledge with things visualized and interpreted in the experimental research, to increase his knowledge regarding drug therapy and to develop new laboratory skills.

"In pharmacy school each undergraduate student undertakes the study of the pharmacological disciplines. Since much stress is placed, today, on drugs which affect the central nervous system (CNS), this topic is thoroughly covered in order to make the future pharmacists aware of the alterations in the physiology of the peripheral and central nervous system.

"An undergraduate's participation in research activity allows him the chance to increase even further his storehouse of information in an area that interests him. For example, for the last two quarters undergraduate students have been working under the supervision of Dr. Mulvey and Cass Zalewski on the effects of drugs on the catecholamine levels of the brain and the relationship to alterations of normal behavioral responses in mice.

"The purpose of this experimental work is to correlate the effect of behavioral doses of major and minor tranquilizers, certain CNS stimulants and depressants on the catecholamine levels in the brain. From this, correlates are attempted relative to the behavioral aspects of the mouse - in particular, the drug's influence on the learning of a conditioned response.

"Measurements of the various catecholamine levels of the brain homogenates were made using a spectrofluorometric technique following a solvent extraction procedure.

"In addition, studies regarding the influence of these agents on locomotor activity were made using a glass tube device. Measurement of the effects of these various drugs on altering a conditioned response was conducted using a customized platform box connected to a computer for recording the responses elicited by the test animals. By applying statistics the significance of the results from all three procedures could

be obtained. The latter information provided further evidence in support of the behavioral effects induced by drugs and correlation with accepted concepts of drug mechanisms with particular regard to alterations of brain catecholamine levels.

"Experimentation of this nature is an attempt to establish drug-animal correlates with drug responses observed in humans. For this reason we used low doses of the various drugs, whereas, many experiments in the past used near toxic levels of the drugs. Based on this work with mice, hypotheses can be developed concerning the effect of therapeutic doses of these drugs on catecholamines in the human brain that would aid the understanding of behavioral patterns seen in individuals using these agents."

The second person interviewed was Alan Goldfard, who had these comments to make:

"In the College of Pharmacy there are many courses, each with its own degree of depth and practicality. But in the midst of this tangle of education, many questions that the student may encounter remain either partially or totally unanswered.

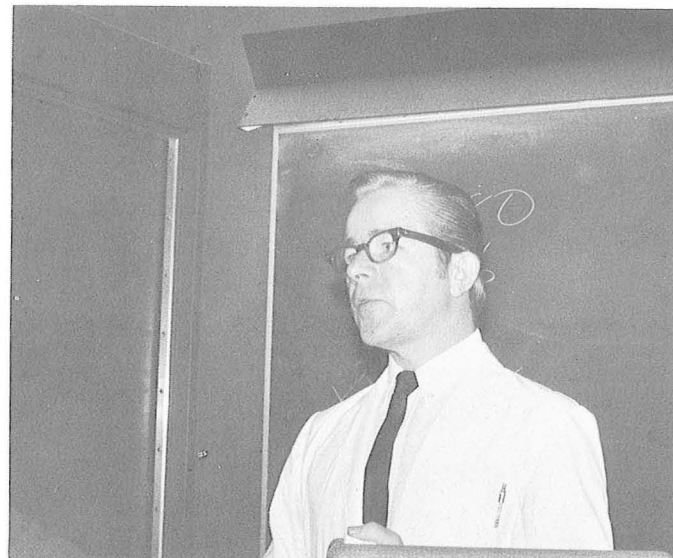
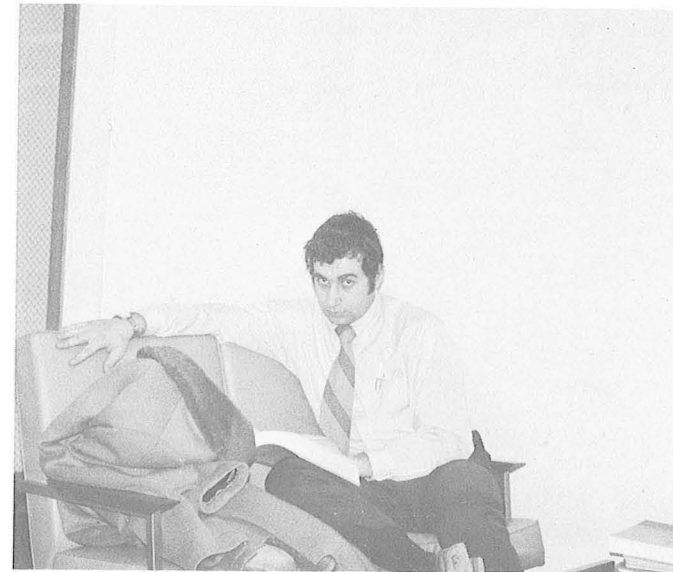
"Any student desiring to understand the basis of a specific educational field of interest should delve much deeper into that topic. It is not enough to say that one understands entirely a particular concept from his readings, because total understanding can only come from active participation.

"Because of my feelings toward complete comprehension through participation, I engaged myself in a directed study in the field of pharmacology. The objective of this study was the determination of the difference in the amount of antibiotic added to the intravenous solution and the actual percentage of this amount available in a stable form to the patient. Specifically, the stability of penicillin and ampicillin used both alone and in combination with other additives was the subject of this investigation. Antibiotics were added to both 5% Dextrose in Water and to Sterile Water. Other additives used were Multiple Vitamin Injection (MVI) and Potassium Chloride (KCl). Using various combinations of the above additives, the effects of pH were studied with regard to the alteration of stability of the antibiotic substances.

"In order to analyze the ampicillin and penicillin for stability two techniques were employed. The first involved the analysis of a sample of intravenous solution taken at chosen intervals and placed dropwise onto a sterile disk which was then placed upon a culture of virulent B-Hemolytic Streptococci on 5% blood glucose agar and incubated. After incubation, zones of bacterial inhibition were measured, compared and analyzed with respect to antibiotic activity. The second analytical method involved something altogether different. Due to a lack of an adequate procedure for quantitative analysis, an assay method had to be developed for a "backup" or confirming comparison with the biological method. From these procedures, a conclusion possibly could be reached as to the sensitivity of these particular antibiotics, and their therapeutic value to the patient when used alone or in combinations in intravenous solutions.

"Although some students, faculty, and administrators may have varied opinions on the worthiness of undergraduate research projects, it is felt by many that the only way that an individual can actually realize all of the work and preparation that goes into the finished product and the satisfaction that is derived from a "job well done," is to try it himself. Working directly with faculty and graduate students is much more beneficial than sitting in a lecture hall and then reading an assigned chapter from some standard textbook. An individual is much more motivated when he is encouraged to do things on his own, especially when these things are of interest to him both educationally and experience wise. Although research may be preferred to lectures, both are important and both serve a meaningful purpose.

"In conclusion, education is a time-honored institution and students always have been around and enthusiastic to learn, but learning is more than listening and taking notes, it should involve active participation. Students should not be required to participate in studies, but should on their own look forward to such participation. Learning is not necessarily understanding, but a combination of learning and understanding should be the goal of every student, and application of this knowledge - the self-satisfaction of each."



Student A.Ph.A.

Self-evaluation can be a very traumatic and yet extremely vital process: traumatic in the sense that a personal performance is being evaluated, vital in the sense that no organization can continue to survive without a review of its weaknesses. It is in this attitude that I offer a review of the S.A.Ph.A. for 1970-1971.

The basic scheme was:

1. Increase the student awareness of current problems facing pharmacy.
2. Increase the student awareness of his position in the para-medical approach to health care.
3. Increase the student participation in the various branch activities.

There can be no question as to the success of our chapter in the first two areas. The guest speaker program, C.H.I.P., and Jeffries Project offered the opportunity for student development.

The third area - increased student participation in various branch activities - was a failure. The reason is difficult to explain. Some say it was a lack of communication. I believe the failure was due to both communication and competition.

I define communication as a series of (duties). First the transmitter has a duty to transfer new knowledge to the receiver. Then, the receiver has a duty to analyze this knowledge and return his opinion to the transmitter. If either party fails in their duty, then no form of communication can exist.

The chapter has elected new officers, a new transmitter, but what about the receiver and his duty? Will the student body perform their function in the process of communication? The perennial interest around election time is not sufficient. There must be a total and cohesive communication during the entire school term.

The second "reason" was competition. Competition of the S.A.Ph.A. against the student's free time. The S.A.Ph.A. cannot compete against: Work - Circa - Verne's - ball games. The student body must sacrifice some of their free time and devote it to communicating with the officers of the S.A.Ph.A.

I believe our chapter can be totally successful. We have good Student Leaders, and hopefully an aware Student Body.



Talk & Travel

Just like the bather who is afraid to stick his foot in water he thinks is too hot, the pharmacist takes on new endeavors very cautiously and with a characteristic lack of confidence. The professional fee, unit-dose dispensing, patient profiles and pharmacy technicians are endeavors which the pharmacist only slowly implements. Progress comes about most rapidly when there exists a free exchange of ideas and information. The Student APhA Convention in San Francisco this March allowed this exchange to take place among students at the national level. Progress can be the only result.

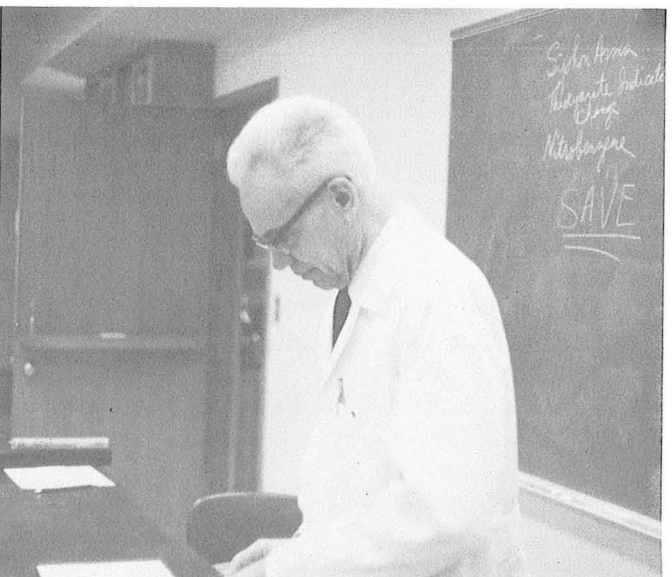
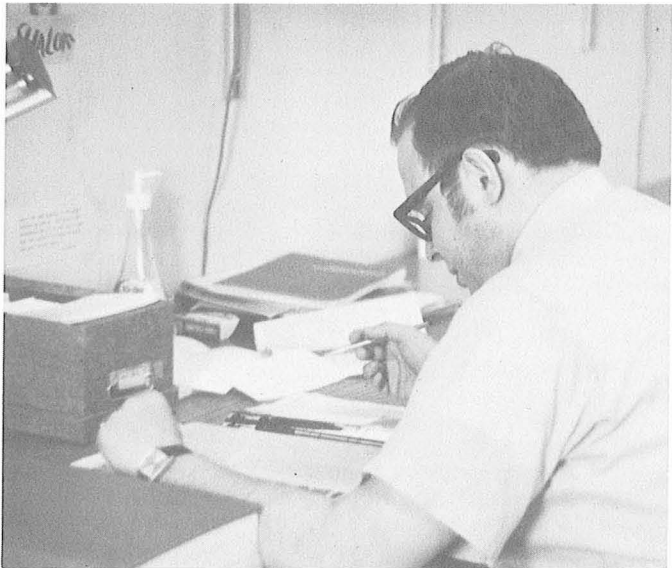
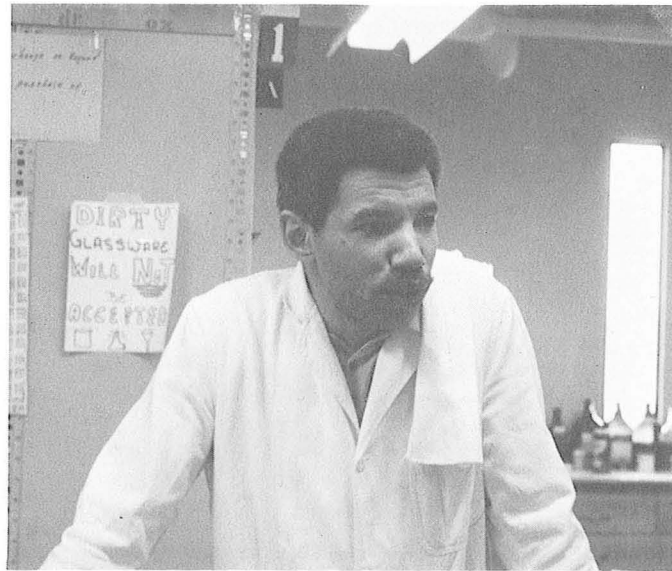
The national convention was the gathering at which 450 students from 70 schools had a lot of fun and, in spite of the effects of gallons of Seven Crown, came away with more than bloodshot eyes.

The work of the Student APhA consisted of workshops, rap sessions, and election of officers for the coming year. The workshops are discussions on subjects which concern the profession such as internship, national health insurance, and a national licensing examination. Out of these workshops come a consensus of student opinions which are communicated to the parent APhA by the student delegate-at-large. These workshops develop the voice of the pharmacy student in professional affairs. Rap sessions on topics such as drug abuse education and recruitment are informal discussions during which any student can contribute any information he wishes to other students. These are the sessions which allow the exchange of ideas between students. The election of officers concluded the work of the Student APhA. Meetings of students of the various regions were held to decide which candidates would receive the regional support. Michigan's Bob Cook of Ferris received the Region IV support for the office of delegate-at-large. The final day of the student convention the elections were held. The officers elected were Jack Nicholas from New York for President-elect, Anthony Rogers from Howard University for Vice-President, and Larry Patterson from California for delegate-at-large.

I should mention modestly the Student Papers Forum and one of the winners of the papers contest. The Forum was open to all pharmacy students to submit a paper on any subject pertaining to pharmacy. It is remarkable that of the five papers judged suitable for presentation, three were written by Michigan students. One of those winners was the author of this article with a paper dealing with the subject of drug abuse education.

The social functions of the convention provided the best medium for student interactions. At hospitality suites (a professional term for a place where the liquor is free), fraternity parties, dances, and plain old get-togethers, Michigan students met and talked with students from all over the country who had the same interests in pharmacy.

The Student APhA can provide rewarding experiences. But the chapter here at Wayne is plagued by a problem common to a number of chapters: namely, competition for student interest with jobs, fraternity and sorority activities, and homework. Suffice it to say that professional involvement through the Student APhA can be rewarding. At Wayne, the opportunities for involvement are abundant; it is an individual choice to take advantage of those opportunities.



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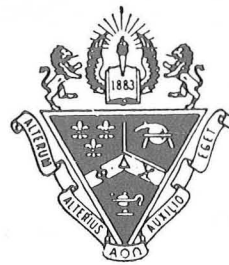
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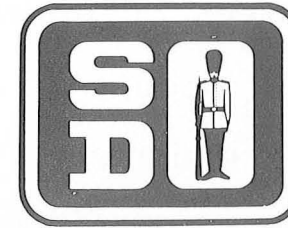


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