



UNIVERSITY OF OREGON  
HEALTH SCIENCES CENTER

# NEWS

*Health Sciences Center News is published by the University of Oregon Health Sciences Center to inform students, employees, faculty and friends of the institution of programs, activities and events of interest to them.*

## New section of medical oncology joins cancer battle

Chemotherapy has improved the life expectancy of cancer patients more than any other treatment in this decade, according to Dr. George Porter, chairman of the School of Medicine's department of medicine.

Recognizing the importance of chemotherapy today in the battle against cancer, the department has established a new section of medical oncology within its division of hematology and medical oncology.

Medical oncology is the branch of oncology that deals with management of tumors by the internist, who is concerned with treatment of systemic disease. It usually involves chemotherapy, the administration of medications to kill cancer cells.

Heading the new section is Dr. Samuel Newcom. He comes to the UOHSC from the University of California at San Francisco, where he was chief of the medical oncology clinic and research associate of

the Cancer Research Institute.

The new section fulfills a longtime goal of the department chairman, Dr. Porter.

*"Cancer is the second leading cause of death, and a large number of the cancers are actually detected and managed by primary care physicians."*

"Historically," Dr. Porter said, "this institution has been respected as one of the leaders on the West Coast in both hematology and oncology. Unfortunately, the medical side of oncology has been unrepresented since Dr. William Goldman left in 1972. Prior to Dr. Newcom's coming, we were probably one of a handful of medical schools in the United States that did not have a bona fide medical oncologist on the faculty."

Dr. Porter continued, "Cancer is the second leading cause of death, and a large number of the cancers are actually detected and managed by primary care physi-

cians. Since our department is responsible for oncologic training of a majority of primary care physicians here on the Hill, our lack of an oncologist was a very serious defect in our training program.

"Also, we feel it's very important to provide the community with both leadership in oncology and a hospital facility which it can refer its difficult problems to and know they will get the best and most current form of management."

In medical oncology, Dr. Porter pointed out, a physician must strike a delicate balance between destroying tumor cells and salvaging the normal, healthy cells. "It's that kind of knowledge and extremely complex management that characterizes modern-day medical oncology," he said.

Dr. Newcom is board certified in internal medicine as well as hematology and medical oncology. He received his M.D. from the University of Southern California, took his house staff training in New York and Los Angeles, and did his hema-

tology/oncology training at the University of California at San Francisco. He served on the full-time faculty at UCSF from 1974 to 1979.

In seeking a section chief, Dr. Porter said, "We were particularly searching for a person who had the combined strengths of clinical expertise and research productivity. We found those in Dr. Newcom."

Dr. Newcom's main research interest lies in angio-immunoblastic lymphadenopathy, a disease of the lymph nodes which appears to be a pre-malignant proliferation of lymphocytes. Left untreated, it results in a non-Hodgkins lymphoma called immunoblastic lymphoma.

"It's of interest because, number one, if it's treated early, we seem to be able to prevent development of lymphoma. But more important, it gives us an idea of how a certain kind of cancer can develop from noncancerous tissue," said Dr. Newcom.

The setting for the section chief's re-

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## Grants to HSC will help elderly enjoy ripe old age

More and more gray hairs are appearing in the U.S. population.

As health care has continued to improve, so too have Americans' life expectancies.

The over-65 population in the United States is edging toward 29 million by the year 2000. In Oregon, the number of peo-

ple over 65 has burgeoned 23.5 percent in the last decade.

To help meet the complex physical and psychosocial needs of this ever-growing group, the University of Oregon Health Sciences Center has received two federal grants totaling nearly \$750,000. The grants are being used to prepare physicians and

nurses who will have special knowledge about the health care needs of the elderly.

In the School of Nursing, a new graduate offering in gerontological nursing is being incorporated into the medical-surgical nursing major at the master's level. The program, two academic years in length, results from a three-year grant of

\$470,000 from the Department of Health, Education and Welfare's Public Health Service Advanced Nurse Training Program.

Graduates of the program will be eligible for a master of nursing degree and certification as a geriatric nurse practitioner in Oregon. Applications are now being accepted for entry into the program spring quarter.

"The dearth of well-prepared nurses in gerontological nursing at top levels makes it mandatory for us to prepare well-qualified practitioners and educators," said Phyllis Michaelson, associate professor of community health nursing and author of the grant.

Nurses traditionally have been much more attracted to the pediatric set than to the elderly, Ms. Michaelson noted. "As a result, there are few nurses prepared in gerontological nursing to act as role models for nursing students to emulate."

The new program satisfies both the nursing profession's call for more master's-prepared nurses and the School of Nursing's long-range goal of a gerontology curriculum.

"The demographic data indicate that there will be increasing demands for health care services of a maintenance and restorative nature for an already underserved population," said Ms. Michaelson.

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Visiting with Rosie Jones, resident of a Portland high-rise housing unit for elderly persons, is Phyllis Michaelson, author of the gerontological grant for the School of Nursing. Students in the graduate program will gain clinical experience in a variety of settings, including senior housing units.

# Stress grinds away at more and more mouths today

Stress. It can frazzle your nerves, erode your fingernails and cramp up your intestinal tract.

It also may be doing a number on your teeth.

The problem is called bruxism, and most everybody does it at some time or other. Bruxism is the habit of unconsciously clenching, gritting or grinding the teeth, especially during sleep — and usually because of stress.

It's a syndrome that is exacting its toll in more and more mouths in these tense times, according to Dr. William Howard, chairman of the School of Dentistry's department of fixed prosthodontics.

"I tell patients frequently," Dr. Howard explained, "that our muscles tighten as we become tense, and that this includes our chewing muscles which bring our teeth together. Then we start to brace on our teeth or rub them or clench them. This can be the beginning of some very serious problems."

By literally grinding away parts of a tooth or teeth, bruxism can cause malocclusion, imperfect alignment of the teeth when the jaw is closed — which in turn can contribute to worse problems.

And those problems are more than a mouthful.

They include morning fatigue in the

jaw; sensitivity to cold in the teeth; pain when the teeth are clenched in a certain way; breaking and loosening of teeth; pain in the jawbone; clicking of the temporomandibular (chewing) joint; sensitivity in the gum area to toothbrushing; muscle spasms by the ear and along the side of the head; headaches; and sore muscles in the neck and upper back. Many dentists believe that bruxism contributes to problems in the periodontium, the gums and bones supporting the teeth.

"I've treated people who were suicidal" because of severe pathological effects, added Dr. Howard.

*"In dental school in the 1940s we were taught that bruxism was common to schoolteachers. But goodness, nowadays in our society the stresses of our jobs and personal relationships and so forth all contribute to it."*

Although it is impossible to know how many people suffer from ill effects of bruxism, said Dr. Howard, "Most people brux; no question about that. We see evidence of it in most clinical patients we see here. Children even do it."

He noted, "In dental school in the 1940s we were taught that bruxism was common to schoolteachers. But goodness, nowadays in our society the stresses of our jobs and personal relationships and so forth all contribute to it."

Another reason dentists find more bruxism today is simply that they are more aware of the problem and are watching for it, Dr. Howard said.

Through continuing education classes, the School of Dentistry teaches practicing dentists how to deal with bruxism. Dental students learn about occlusion in classroom and clinic.

Dentists often can treat bruxism successfully through mechanical means. But because the syndrome is so closely tied to stress, Dr. Howard pointed out, some patients may need to seek a psychiatrist's couch as well as a dentist's chair. The nature of bruxism "makes it important to realize that these are people, not just teeth," he said.

According to Dr. Mario DeStefanis, a Milwaukie dentist who teaches continuing education classes in occlusion at the UOHS, there are three major dental techniques for treating bruxism.

One is selective grinding of "high spots" on the teeth. Even one high spot, an area out of harmony with the other teeth, can throw the whole occlusion out of kilter, Dr. DeStefanis explained.

"One has to be extremely cautious with selective grinding," the dentist said. The technique requires painstaking analysis of the teeth and their relationship to the jaw movement. Done properly, selective



In a lesson on how to treat the effects of bruxism, Dr. John Muenchrath (left) of Coos Bay takes a configuration of the patient's jaw movement with an apparatus called a face bow. The face bow then is transferred to an articulator, which simulates the movement of the jaw. Overseeing the procedure is Dr. Marvin Kocks of Ashland, instructor. The dentists were participating in a study club class on occlusion, part of the School of Dentistry's continuing education program.

grinding can help correct malocclusion caused by bruxism.

A second way of dealing with bruxism is the plastic bite plane, or night guard, which a patient wears during sleep to prevent tooth grinding. Probably 90 percent of tooth grinding occurs while a person is sleeping, said Dr. DeStefanis.

Worn over the upper teeth, the night guard is made to match the lower teeth in closure and movement. "It's a quick and inexpensive method to equalize the pressures on the teeth," said Dr. DeStefanis, who was a pioneer in developing the device. The technique helps prevent damage and alleviates the patient's discomfort.

The third major method of treating bruxism — used in more serious cases — is reshaping or reconstructing the biting surfaces with crowns or inlays.

This complex technique involves reshaping the functional surfaces of the teeth so they are in harmony with the temporomandibular joint. Casts of the patient's teeth are placed in an instrument called an articulator which simulates the movement of the patient's jaw. By working on the casts with wax crowns and inlays, later cast in gold, the dentist is able to effect a custom correction.

Besides these three techniques, dentists occasionally use drug therapy, prescribing tranquilizers or muscle relaxants for tem-

porary relief.

Bruxism has become epidemic in this country, Dr. DeStefanis asserted.

Yet why hasn't the public, so well versed on the perils of tooth decay, heard more about bruxism?

Neither Dr. DeStefanis nor Dr. Howard really knows, but Dr. Howard did point to a sign that the syndrome is coming into the open — more and more dental insurance claims are mentioning it.

"I really feel," he said, "that economics may well bring bruxism more to the attention of the public."

## China trips offered

The People's Republic of China is the destination of two trips in May sponsored by the School of Medicine Alumni Association.

Planned with Canadian Pacific Airlines, the trips are limited to 25 participants each and are open to alumni, faculty, staff, students and friends of the Health Sciences Center.

The first trip leaves May 10 and returns May 30; the second departs May 24 and returns June 13.

The cost of \$2,999 per person covers meals, transportation, tours, guides and entrance fees to scheduled activities. Not included are meals and activities in Tokyo (two nights) and Hong Kong (one night).

Interested persons may contact the School of Medicine alumni office, 225-8231.

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## Grants mean health help for aged

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In the School of Medicine, geriatrics will be introduced into the curriculum over the next five years so that all students will have a better understanding of aged persons and their particular needs.

The expanded curriculum will deal more specifically than before with the biology, demographics and psychiatric aspects of aging; medical problems of the elderly; and community resources available to the aged. Also, more electives in geriatrics will be available to medical students and residents.

Funded by \$272,015 from HEW's National Institute on Aging, the program is coordinated by Dr. Richard U'Ren, associate professor of psychiatry. Dr. U'Ren said, "We are fortunate to have this opportunity to introduce geriatrics into the medical school curriculum. We would like to develop a program which will enhance every graduate's ability to serve the needs of an aging population."

Students in both the medical and nursing school programs will gain firsthand experiences in care of the aged.

For example, selected School of Medicine house staff and students will rotate through a newly established geriatrics ward at the Veterans Administration Hospital.

Students in the School of Nursing graduate program will gain their clinical experience in a variety of settings including the Veterans' Hospital as well as senior housing, walk-in clinics, nursing homes, day care centers for the aged, and acute-care hospitals.

The need for a sharper focus on health care for the aged is manifest as Americans live longer.

Five out of six people 65 and over have at least one chronic health condition, Ms. Michaelson pointed out. Care of the elderly requires understanding, support and patience on the part of health professionals.



Fruitful was the word for this year's apple sale at the Crippled Children's Division. At last tally, the Dec. 4 sale had raised \$5,600 for CCD. Behind the effort was CCD's unorthodox benefactor, "Grandpa" Lee Canady, shown taking a break with grandson Christopher Stover. Grandpa Lee and his cohorts from Hood River hauled in some 765 boxes of donated apples for the sale, and all of them were bought up. CCD also will be receiving a check for 5,400 pounds of apples that went for juicing.



Dr. Samuel Newcom, head of the new section of medical oncology, checks on a patient in University Hospital. Dr. Newcom comes to the Health Sciences Center from the University of California at San Francisco, where he was chief of the medical oncology clinic and research associate of the Cancer Research Institute.

## Oncology program fulfills vital need

(continued from page 1)

search will be the Osgood Memorial Laboratories, which are being remodeled to better serve the new medical oncology section. Dr. Newcom's clinical research interests include treatment of lymphomas and lung cancer.

Besides the programs in research and clinical care, the section will provide needed education for medical students and residents. Two more faculty members are being recruited for the section.

The program in medical oncology will complement the HSC's cancer-fighting programs of surgical oncology and radiation therapy. Dr. Newcom is working closely with Dr. William Fletcher, head of the department of surgery's division of surgical oncology.

"Oncology," Dr. Porter said, "is a discipline that cuts across a wide variety of departments up here, and we now can supply our appropriate share of the joint responsibility and expertise."

Dr. Porter added, "Oncology is an excellent example of a field combining the talents of surgeons, radiologists and medical people, along with a dedicated staff of nurses and paramedical personnel, to substantially improve life expectancy."

## Research winners revealed

The results are in from the School of Medicine's first Biomedical Research Support Grant (BRS) Fund Awards Competition.

Six individuals and one department have been selected to share the more than \$50,000 in award monies. The competition drew 34 applications.

Launched by Dr. Ransom Arthur, dean of the School of Medicine, the competition for faculty members was intended to support pilot research projects, assist in starting new laboratories, and help purchase new or replacement equipment. The monies are federal funds and each award was to be no more than \$10,000.

"I am extremely pleased with the results," said Dr. Arthur. "It really is a tribute to the imagination and creative energy of the faculty that there were so many good applications."

The following winners were chosen by the School's Research Committee:

— Dr. Susan Bagby, assistant professor of medicine and nephrology, \$10,000 for "Mechanisms of Hypertension in Neonatally Induced Coarctation Hypertension."

— Dr. Robert Koler, head, division of medical genetics, \$9,367 for "Postsynthetic Modification of Hemoglobin in Diabet-

ics."

— Dr. George Pantely, instructor of medicine, \$9,310 for "Oxygen Delivery to Ischemic Myocardium."

— Dr. Eric Orwoll, assistant professor of medicine, \$9,200 for "Vitamin D Metabolites in States of Altered Thyroid Function."

— Department of microbiology and immunology, \$6,130 for "Upgrading of Departmental Fluorescence Microscope."

— James Hare, assistant professor of biochemistry, \$5,450 for "Alterations in the Cellular Concentration of Mitochondrial Oxidative Enzymes During In Vitro Culture of Hepatocytes: Need for a Sensitive Double Beam Spectrophotometer."

— Dr. Charles Faust, assistant professor of surgery, \$3,270 for "Molecular Structure of Immunoglobulin Genes of Mouse, Rat and Man."

Dr. Arthur added that he will try to arrange for funding of several other projects that were rated highly in the competition.

The dean noted that promoting research is a "strong priority" of his. He hopes the research competition will become an annual event but added that it depends on BRS funding, "which is always in jeopardy."

## Employees take a bow for thousands of years of service

More than 4,665 years of service to the Health Sciences Center were represented by the UOHC employees honored at this year's service anniversary convocation.

Three-hundred-thirty-two staff and faculty members received recognition at the Nov. 7 event in the library auditorium.

Participating were Bill Kribs, director of personnel, and Dr. Leonard Laster, HSC president, who passed out service anniversary pins. The women also were rewarded with roses.

In addition to the 264 10- and 15-year employees who received pins were the following 35-, 30-, 25- and 20-year honorees:

35 years — Lena Hillsman, Crippled Children's Division, and Dr. Kenneth Swan, ophthalmology.

30 years — Russell Anderson, physical plant; Fred Arfmann, physiology (School of Medicine); Dr. John Brookhart, physi-

ology (School of Medicine); Mary Campbell, nursing service; Elizabeth Drapeau, School of Dentistry dean's office; Marie Duerst, biochemistry (School of Medicine); Irene Engeldinger, clinical pathology; Leonard Grubowski, physical plant; Barbara Jacob, hospital/clinics administration; Martha Kastner, dietary; Dr. Elton McCawley, pharmacology (School of Medicine); James Phillips, photography; LeAnn Poole, nursing service; Gale Rankin, hospital/clinic nursing; Bernice Setere, nursing service; Louise Taylor, food service.

25 years — Robbie Bagley, nursing service; Shirley Carey, purchasing; Dr. Tyra Hutchens, clinical pathology; Elaine Jendritza, anatomy; Dr. Robert Koler, medical genetics; Dr. William Krippaehne, surgery; Teresa Pietrok, purchasing; Dr. Donald Porter, pedodontics; LaVerne Rydman, ophthalmology; Dorothy Wehtje, medical genetics; Gloria Yarne, operative dentistry.

20 years — Lucy Bennett, operating rooms; Monna Bennett, parking; John Benson, gastroenterology; Nancy Beshear, dietary; Ina Blair, clinical pathology; Dr. Robert Blakeley, Crippled Children's Division; Dr. Robert Bruckner, oral pathology; Gladys Cage, operating rooms; Enid Clinton, nursing service; Wilhemena Cobbs, operating rooms; Otha Cunningham, nursing service; Bernice Dacy, clinical pathology; James Day, clinical pathology; Claudia Dudley, clinical pathology; Jerome Furth, physical plant; Dr. M. Roberts Grover, School of Medicine dean's office; Betty Harris, nursing service; Mary Hoppert, nursing service; Margie Hurley, oral radiology; George Johnston, instrument and safety service.

Others honored for 20 years' service were Jean Kimsey, nephrology; Jean Matsumoto, cardiology; Dr. Victor Menashe, Crippled Children's Division; Dr. Ernest Meyer, microbiology; Paul Miller, photography; Regina Mockmore, Outpatient Clinic admitting; Marie Owens, anesthesiology; Helen Peterson, obstetrics and gynecology; Sarah Peterson, nursing service; Dr. Bernard Pirofsky, immunology and allergy; Gladys Pruitt, nursing service; Kenneth Puckett, clinical pathology; Opal Sanford, dietary; Dr. Frederick Sorenson, oral radiology; Frances Starr, medical records; Betty Stephens, cardiopulmonary surgery; Elizabeth Stewart, food service; Judson West, clinical pathology; June Woods, Outpatient Clinic admitting.

Among the employees honored for 30 years of service to the Health Sciences Center were (clockwise from large photo at upper right) Martha Kastner, food service worker; Elizabeth Drapeau, administrative assistant and secretary to the dean, School of Dentistry; Russell Anderson, plant maintenance repair worker, physical plant; Fred Arfmann, research lab technician in physiology, School of Medicine; James Phillips, supervisor of photography; Bernice Setere, head nurse, University Hospital (south) 8A; Dr. Elton McCawley, professor of pharmacology, School of Medicine; Marie Duerst, research associate in biochemistry, School of Medicine; and Leonard Grubowski, superintendent of operations, physical plant.



# Would-be writer unfolds true story of inner ear

How did a woman who majored in English and sociology and thought she wanted to be a writer end up as one of the world's outstanding ear researchers?

Pretty much by chance, according to Dr. Catherine Smith, who was professor of otolaryngology at the HSC's Kresge Hearing Research Laboratory since 1969. She retired Sept. 30 but is still doing research and teaching.

Following graduation from college, Dr. Smith worked in a clinical laboratory and later found a job as a researcher at Washington University in St. Louis, Mo., after deciding she couldn't earn a living as a writer. There, her supervisor during her master's program ignited the spark that led her to dedicate the next 30 years of her life to basic research on the structure and function of the inner ear.

She has conducted research at the Kresge Lab under grants from the National Institute of Neurological and Communicative Disorders and Stroke.

Dr. Smith, like most others involved in basic research, builds on what other people have done.

"You build on other people's work," she said. "Only a few people are privileged to put on the 'top block.'"

Dr. Smith considers an early study, "Electrolytes of the Labyrinthine Fluids," her most significant work. The inner ear contains sensory or hair cells, nerve endings and nerve fibers which transmit auditory messages to the brain. It has two main parts: the cochlea, or inner ear, which contains approximately 16,000 hair cells, and the vestibule, which is involved in maintaining equilibrium.

At the time of her study, scientists knew

that the inner ear contained extracellular fluids in two separate areas, but didn't know the composition of the fluids.

Dr. Smith found that the two fluids (endolymph and perilymph) did have different compositions, and that these exact chemical concentrations were necessary for the ear to function.

*"You build on other people's work. Only a few people are privileged to put on the 'top block.'"*

In projects called "Innervation of the Cochlea," she examined the distribution of nerve endings on the hair cells in the cochlea and clarified the "sensory" and "efferent" innervation patterns, the two peripheral patterns known to exist.

"The efferent system is a feedback mechanism whereby information goes into the brain stem and some sort of neural activity goes back out to control the sensory organ," explained Dr. Smith. "But we don't know just how this works."

"A person has to have nerve fibers in order to transmit messages from the cochlea to the brain," she continued. "We need to know how many there are and where they go."

Increased knowledge of these innervation patterns would help doctors and researchers to better understand how the inner ear and nervous system perceive pitch, volume and loudness.

Greater understanding of how the normal ear functions will help doctors to identify more accurately, and eventually treat more effectively, hearing impairments.

"If you don't know how a cell or organ functions normally, you can't treat it in a disease situation," said Dr. Smith.

Currently, the prolific researcher, in association with Dr. Robert Brummett, is concluding an investigation of the drug ethacrynic acid (EA), a diuretic used in treating extreme cases of kidney dysfunction.

Patients treated with EA sometimes experience hearing losses. Although most of these losses are temporary, in some instances — such as when EA has been used in combination with an antibiotic, as is done in severe kidney conditions — permanent deafness has occurred.

In the first phase of the experiment, guinea pigs were injected with very large doses of EA. The drug caused considerable edema (watery swelling) in the cochlea, resulting in temporary cochlear dysfunction. However, usually within two days after the drug was discontinued, the cochlea returned to normal.

In the second phase of the experiment, the guinea pigs were given much smaller doses of EA for 10 days, then were allowed to rest for one week. At the end of the 17-day period, they showed normal cochlear structure and function.

In this study, as with all her research, Dr. Smith said, "My goal has always been

*Dr. Catherine Smith, shown with models of ciliated sensory cells from a pigeon's inner ear, has won international recognition for her ear research. She received the Award of Merit of the American Otological Society in 1975, and the George E. Shambaugh Prize in Otolaryngology of the Collegium Oto-Rhino-Laryngologicum in 1977.*

to do good basic research which could be used at some time in clinical practice, something that could be used to better understand and treat diseases."

An award-winning and internationally respected scientist, Dr. Smith has traveled extensively in Europe and Asia, studying and presenting her research to various medical schools and organizations.

Besides research, Dr. Smith's interests include the outdoors, hiking, speaking, writing, and membership in the Audubon Society and the Oregon Native Plant Society.

"Science," she said, "has been a nice combination of observation, writing and talking — all the things I enjoy."



## Dental students become comfortable with handicapped kids

People say that kids get the jitters around dentists. But sometimes dentists feel the same emotion around children — specifically, handicapped children.

How do you transfer a child with cerebral palsy from a wheelchair into a dental chair? What do you do about a youngster who cannot control his saliva? Faced with these quandaries, some dentists would rather not treat handicapped children at all.

Yet handicapped children need dental care as much as any other children.

The School of Dentistry and the Crippled Children's Division, along with University Hospital, work cooperatively to teach dental management of children with a variety of handicapping conditions. Graduate students in pedodontics, dental hygiene students and some undergraduate dental students receive special training and education.

"When pedodontic graduate students finish the program here, they're going to feel comfortable in working with these children," said Dr. Arthur Retzlaff, chairman of the department of pedodontics. "They're not going to turn handicapped people away because they are afraid of them or don't know how to deal with

them."

Pointed out Dr. John Gullikson, associate professor at CCD: "Dental management of handicapped children is really not much different from that of other children, once one understands the handicap and its various ramifications."

As part of their training, graduate pedodontic students spend a three-month residency at the Crippled Children's Division, where they learn about interdisciplinary care of handicapped children and how to diagnose and treat their dental needs. They also work with handicapped youngsters at the School of Dentistry's pedodontics clinic. Their rotation at University Hospital exposes them to children with severe handicaps as well as medically compromising conditions.

Dental hygiene students discover how to perform dental hygiene services for handicapped children through a 20-hour rotation at CCD.

In addition, some senior dental students opt to spend one-half day a week for one quarter working with children at CCD.

In clinic and classroom, the graduate and dental hygiene students learn about the nature of various handicaps, parents' attitudes regarding their handicapped children, and the importance of preventive dentistry for such children. And, they learn some vital techniques for treating handicapped young patients.

"We try to tailor the approach to the child's problem and the resident's personality," emphasized Dr. Retzlaff. "What may work for you or me in dealing with handicapped children, or children in general, may not work for someone else."

What are some of the approaches dentists can use?

A bean bag chair comes in handy for a dentist who is treating a child with cerebral palsy. Plopped into the dentist's chair, the cushion creates a comfortable sitting position and counteracts the child's involuntary movements. Some dentists may wish to use sedatives to help the child relax. Mouth props and an extra pair of hands also may help.

Because some cerebral palsy children have problems with salivary control, Dr.



*Dental hygiene students Julie Bussard (left) and Carol Sue Cummings develop a rapport with a developmentally delayed youngster during their rotation at CCD.*

Gullikson noted, "One will find it is helpful to perform dental services with the child in a more upright position instead of a lying-back position, so that gravity itself can help in the control of the saliva" and the patient is less likely to gag.

Dentists working with mentally retarded children are advised that "the only real problem is communicating with them at their level of development and having realistic expectations for the child as his level of retardation indicates, not above or below that particular level," Dr. Gullikson said.

When a child with epilepsy arrives at the dentist's office, the dentist should make sure he has a thorough knowledge of the child's medications and history of seizures. If the child has a seizure in the dental chair, the dentist should try to make him comfortable and keep him from

falling. Everything should be removed from the mouth.

Children with impairments in vision or hearing require special sensitivity on the dentist's part. For example, it's important that the dentist clearly show a deaf child what is about to happen in the dental chair.

Equipped with new understanding and skills, the HSC students find that caring for handicapped children isn't as scary as they might have thought.

"The training program in dentistry at CCD has been successful," said Dr. Gullikson, "for there's no longer a problem in making referrals to private pedodontists throughout the state."

### Wanted: resident papers

The UOHSC School of Medicine Alumni Association is offering a \$500 award for the best paper on any subject of general interest to practicing physicians. Residents in any of the Portland metropolitan area hospitals are eligible to submit papers.

The award-winning paper will be presented at the Alumni Association's annual scientific meeting in conjunction with the Sommer Memorial Lectures April 16-18.

Papers, to be 30 minutes in length, must be submitted by Feb. 1 to the School of Medicine alumni office, UOHSC, Portland 97201.

For more information persons may contact Dr. Robert Gray, program chairman for the Alumni Association, 234-7259, or the alumni office, 225-8231.

# Researcher seeks master switch of immune system

Dr. Marvin Rittenberg believes in getting back to the basics.

What the UOHSC professor of microbiology and immunology stresses is not the three R's, but the two B's — as in B lymphocytes.

*In his School of Medicine laboratory, Dr. Marvin Rittenberg discusses his research with graduate student Sandra Chang, one of his assistants.*

Lymphocytes, the lifeblood of the body's immune system, are white blood cells which produce antibodies to fight off infection and disease.

Dr. Rittenberg and his assistants were among the first in the world to identify two types or families of B lymphocytes, basic components of the body's machinery of defense. And that machinery some-

times goes awry.

"Before you can design any kind of rational strategy for repairing any kind of machinery," said Dr. Rittenberg, "you have to understand the component parts and how they relate to one another."

"What we're trying to do is understand the relationship of one set of parts, B cells, and how they develop, how they relate to one another, and what kinds of influences affect their development."

With the help of basic research like his, Dr. Rittenberg hopes, scientists some day may be able to control diseases by "turning on" or "turning off" the appropriate parts of the immune system.

"That's a long way down the road," he said. "That's what everyone working in cellular and molecular immunology would like to achieve some day. But you can't do it until you really understand the developmental pathways and the control mechanisms" of B lymphocytes.

"Turning on" parts of the immune system, Dr. Rittenberg explained, would help combat diseases like cancer — in which certain cells multiply wildly, overpowering the efforts of the body's defense mechanisms to control growth.

Chemotherapy, used to slow or halt the cancerous spread, can have a negative effect because it can also inhibit the production of healthy white blood cells, stifling the immune system's ability to fight off infection and disease. But if those white blood cells could be "turned on," they could keep up their battle against infectious agents.

On the other hand, "turning off" parts of the immune system could fight an "autoimmune" disease such as arthritis, in which antibodies attack other molecules in the body, which then stick in the joints and cause inflammation and pain.

The key to the master switch is understanding how lymphocytes interrelate in the immune system.

Using mouse spleen cells, Dr. Rittenberg is beginning to learn about the origins and behaviors of B lymphocytes.

Both known families of B cells appear to develop from early, unspecialized stem cells that come from the body's bone marrow in adult humans and animals.

One type of B lymphocyte, called B2, apparently is dependent on a signal from another type of cell, the T lymphocyte, which helps it recognize and react to an antigen.

(One type of T cell apparently tells the B cells to turn on or speed up, while another type gives the order to turn off or

slow down.)

A second type of B cell (B1) is not so responsive to the T cell's influence. "It appears not to require the T cell's help to produce antibodies and thus provides a reservoir of immune capacity which is relatively independent of fluctuations in the T cell family," Dr. Rittenberg said.

For each type of antigen molecule that exists, there is a particular family of lymphocytes that can identify it, according to Dr. Rittenberg. Although antigen molecules may differ widely in structure, a specific antibody molecule can be found that conforms to each distinct feature of the antigen molecule's outer structure.

A factor that determines which family of lymphocytes becomes involved appears to be the "backbone" inner structure of the antigen molecule, which may vary greatly from the corresponding structure of other antigens, despite a similar exterior structure.

In 1967 Dr. Rittenberg developed a technique for detecting a single lymphocyte that is producing antibody against a simple chemical molecule.

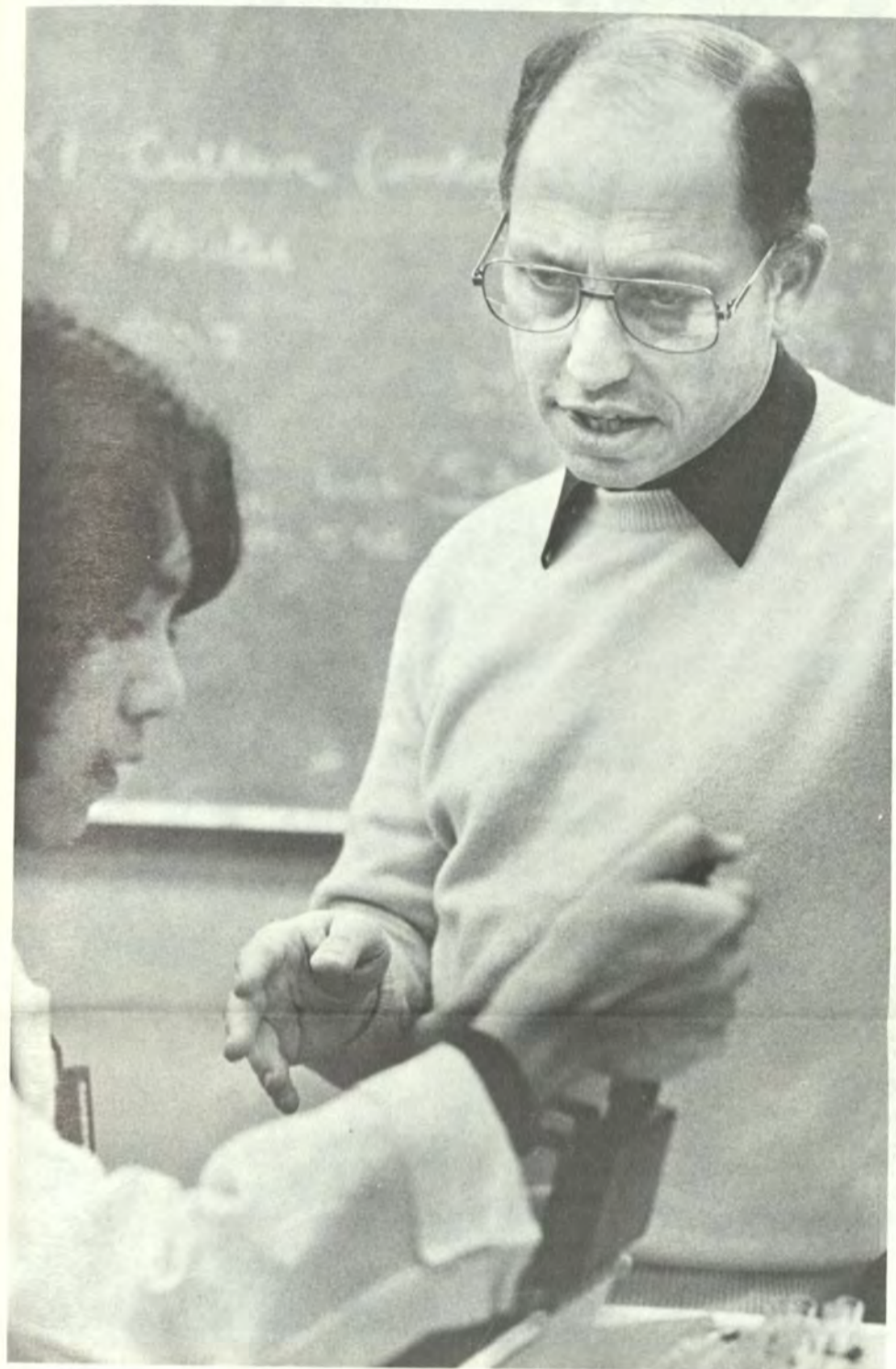
He has since found that different lymphocytes will respond to that original simple chemical if the molecular structure to which it is attached is altered. By controlling the molecular surroundings of the chemical used in the lab test, different lymphocytes can be made to respond. The design of these molecules constitutes "markers" identifying various populations of lymphocytes, thus opening up the study of their interrelationships.

This technique developed in Dr. Rittenberg's laboratory is now used throughout the world in the challenge to understand the immune system.

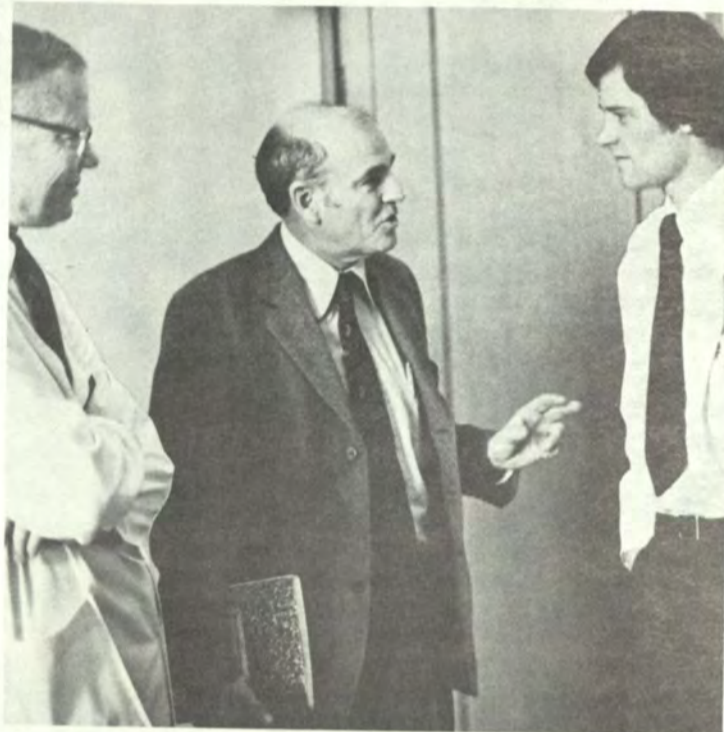
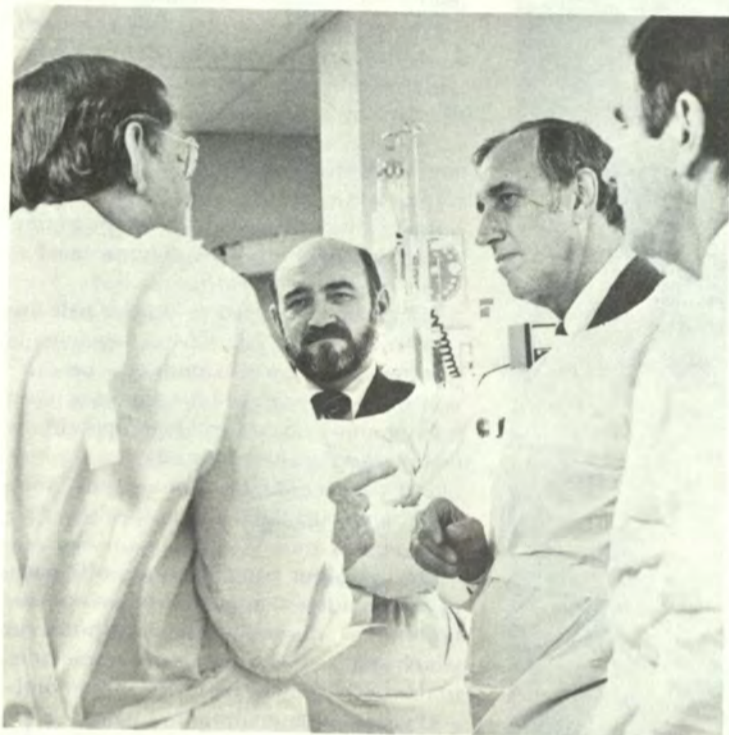
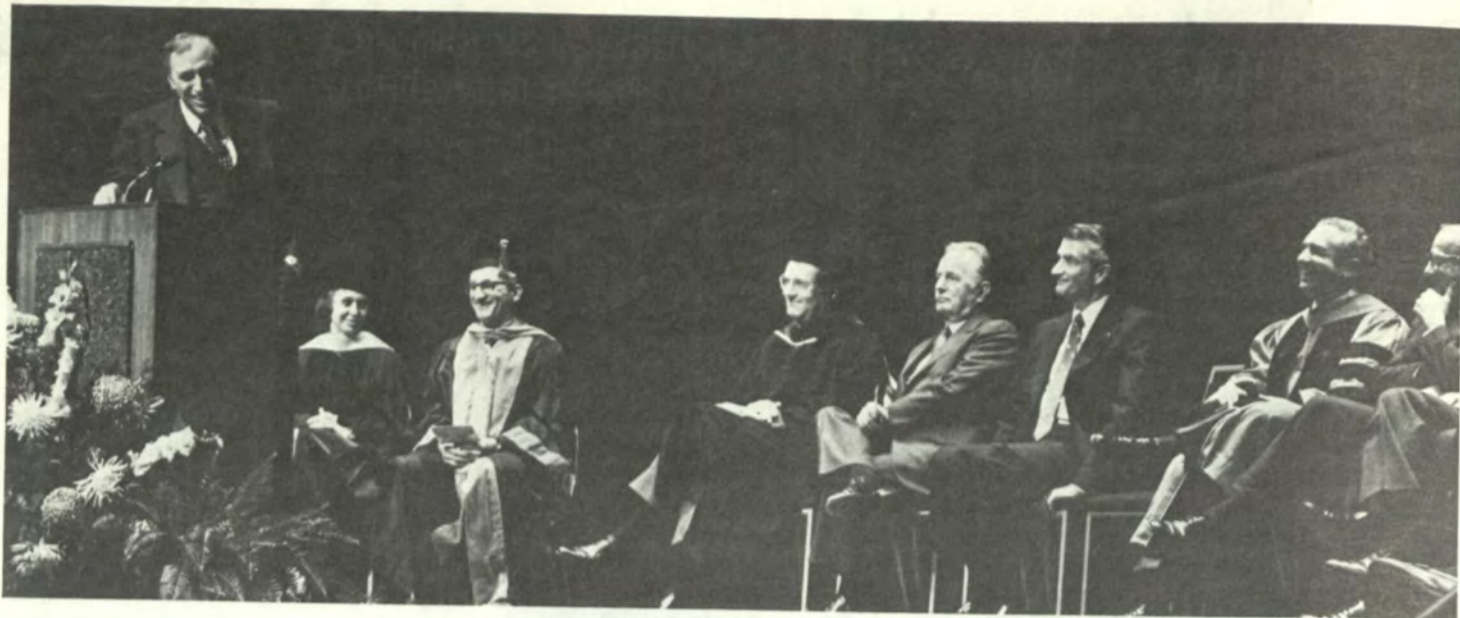
Problems in treating many diseases may be overcome, the scientist feels, "if drugs can be perfected for selective 'turn-off' or 'turn-on' of the particular antibody in question."

This can be achieved only with better knowledge about the particular families of cells involved and about how the immune system functions or malfunctions. And the starting point is to understand the basics.

*Numerous organizations shared their Christmas spirit at the UOHSC this year. Here, Shirley Geis (right) and a fellow shopper sample the goods at the HSC Holiday Bazaar, coordinated by the volunteer services office and sponsored by several groups. Proceeds will benefit University Hospital. Volunteers and community groups gave gifts, sang carols and decorated trees for hospital patients. A Portland radio station held a toy drive for Doernbecher Memorial Hospital for Children, and the Southwest Rotarians put on their annual holiday party for kids at the Crippled Children's Division.*



*With the landing of Emanuel Hospital's Life Flight helicopter, the Health Sciences Center launched the dedication Dec. 18 of its new, \$50,000 helipad. The helipad, located across SW Gaines Road from the Crippled Children's Division, will provide critically ill patients with faster and more direct access to University Hospital. The hospital serves as a major state and regional health care facility for many cases in which time is a critical factor: kidney transplant and dialysis, high-risk pregnancy, traumatic injuries, and specialized children's critical care services. Speakers at the dedication ceremony were Portland Mayor Connie McCready; Dr. Leonard Laster, HSC president; and Dr. Donald Kassebaum, vice president for hospital affairs, shown at left releasing balloons at the end of the ceremony.*



## Happy fifth anniversary

Cake and a convocation helped the University of Oregon Health Sciences Center celebrate in November the fifth anniversary of its founding.

At an all-day party Nov. 15 in the University Hospital (south) cafeteria, staff, faculty and students consumed 35 gallons of coffee and nine large sheet cakes in celebration of the anniversary.

The next night, faculty in full regalia, staff, students and friends of the University feted the anniversary by attending a special convocation in Portland's Civic Auditorium. A reception closed out the evening.

Guest speakers at the convocation were Nathan Stark, new undersecretary of the Department of Health, Education and Welfare, and Dr. Baruch Blumberg, winner of the 1976 Nobel Prize in medicine.

Earlier in the day, Mr. Stark and Dr. Blumberg had been on the UOHSC campus for tours, luncheons and news conferences.

A highlight of the convocation was the awarding of the UOHSC's first Citation for Distinguished Achievement to Dr. Roy E. Lieuallen, chancellor of the Oregon State System of Higher Education. In making the presentation, President Leonard Laster said Dr. Lieuallen was receiving the award as the representative of those who helped

to create the Health Sciences Center five years ago.

Flanking the stage at the convocation were two large banners in the HSC's new school colors of sky blue, forest green and white.

Displays depicting the past five years at the Health Sciences Center were placed around the campus.

It all started on Nov. 22, 1974, with the signing of the charter establishing the University of Oregon Health Sciences Center.

For his role in helping to create the Health Sciences Center five years ago, Dr. Roy E. Lieuallen (right) was awarded the Center's first Citation for Distinguished Achievement at the convocation. Dr. Lieuallen, chancellor of the Oregon State System of Higher Education, received a brass medallion engraved with the HSC's insignia from President Leonard Laster (left). Dr. Lieuallen recommended to the State Board of Higher Education that the University of Oregon Medical School, Dental School and Nursing School be consolidated under a single administrative head. He was the first to sign the charter establishing the UOHSC.

Photos at far left, top to bottom: Edith Green, member of the State Board of Higher Education and former member of the UOHSC Advisory Council, visits during the reception after the convocation. President Leonard Laster (right) and Nathan Stark, HEW undersecretary, head up the aisle during the recessional. HSC staff members sample the anniversary cake at the all-day party. Above photos, clockwise from top: Nathan Stark, HEW undersecretary, takes the lectern at the convocation. During his visit to the Center, Nobel laureate Dr. Baruch Blumberg pauses to talk with Dan Phillips, senior medical student, while Dr. Ransom Arthur, dean of the School of Medicine, looks on. Faculty members in full regalia march out after the ceremony. The Neonatal Intensive Care Center is the setting as Undersecretary Nathan Stark (second from right) and Bernard Kelly, HEW's principal regional official, Seattle, are given a tour by Dr. Donald Kassebaum (left), vice president for hospital affairs, and Dr. John Reynolds (right), director of the NICC.



# Nursing Alumni Association breaks out of doldrums

School of Nursing alums have given their Alumni Association a shot of adrenalin.

Long in the doldrums, the association seems to be healthy and thriving now, with activities ranging from research conferences to reunions.

"The Alumni Association had experienced ups and downs for a number of

years. Then, in 1976, a group of alumni got together and reactivated the organization," said Michaelle Ann Robinson, Class of 1965, president of the association. She is an assistant professor of psychiatric/mental health nursing at the UOHSC.

"This year our major thrust is to involve more alumni in School activities and in the organization," said Ms. Robinson. "We are trying to build a strong and sustained organization so that our activities are relevant to the membership and so we can strengthen the ties between all our alumni and the School.

"There have been so many progressive

changes in the School. Nursing is a very exciting place to be right now. Many of our alumni are aware of the changes, and are asking to be involved."

*"The School of Nursing is enriched by, and needs the input and involvement of, its alumni. Our common goal is to provide high-quality nursing practice and education."*

One burgeoning area where Ms. Robinson is pleased to see the alumni getting involved is nursing-practice research.

With the School of Nursing, the Alumni Association sponsored the first Research Day in the fall of 1978, which brought three nationally known nurse researchers to campus to present their clinical research. The association followed up with a series of three sessions on the research process and how to develop research proposals. Another Research Day is coming up in March, co-sponsored by Sigma Theta Tau, national nursing honorary.

"The goal is to provide opportunities for interested alumni to become more familiar with and more involved in nursing research, and to provide supportive consultation if they wish that," said Ms. Robinson. "All nurses should be asking questions about what we see and do, and should develop studies — and they don't have to be big; they can be small — to search out the answers to those questions."

Giving alumni a chance to keep current on nursing issues is the annual Spring Professional Seminar. The event features a national nursing leader speaking on some issue critical to professional nursing; last spring the focus was power and the health care delivery system.

The association also has been venturing into the political arena. Last winter, alum-

ni and School faculty invited several state legislators to dinner to discuss nursing practice and health-related legislation, and the organization has been urging alumni to write to their state and federal legislators.

In an event mixing business with pleasure, the Alumni Association held its annual meeting Oct. 30 at the School of Nursing. Alumni renewed acquaintances over dinner, then heard Dean Carol Lindeman and President Leonard Laster discuss the Alumni Association's relationship to the School of Nursing and the Health Sciences Center. The Class of 1944 chose the occasion for its 35th reunion.

Besides a number of class reunions, other social events include a breakfast at the Oregon Nurses Association convention and a hospitality room at the American Nurses Association convention in Houston, Tex. Also planned are events in Eugene and La Grande, two sites of the School's outreach programs.

The vehicle for getting the word out to nursing alumni is *Alumni Continuum*, a quarterly newsletter with a circulation of 2,400.

"The School of Nursing is enriched by, and needs the input and involvement of, its alumni," said Ms. Robinson. "Our common goal is to provide high-quality nursing practice and education."

"I think that our School is providing and will continue to provide real leadership within the state, but also increasingly at the national level. We're going to see that happening more and more in the next five years. Many of our alumni are part of that leadership."

Serving with Ms. Robinson in the Alumni Association are Cathy Knox, '77, vice president and treasurer; Lydia Metje, '78, secretary; and Polly Fisher, '72, Leslie Carveth, '79, and Marlene McKenzie, '79, board members.

*Alums sample the dinner spread at the School of Nursing Alumni Association's annual meeting Oct. 30 at the School. The Class of 1944 chose the occasion for its 35th reunion, which drew alumni from as far away as Florida.*



## Newsmakers

Ann Hoffstetter, assistant business manager of the UOHSC, was elected vice president of the National Association of College Auxiliary Services at a meeting in St. Louis, Mo. The association comprises administrators and finance officers from universities across the nation. Ms. Hoffstetter is past president of the Western Association of College Auxiliary Services.

Dr. Carol Lindeman, dean of the School of Nursing, received an honorary doctorate Sept. 21 from the College of Nursing, University of Akron, Akron, Ohio, for her "positive influence" on nursing professionals. She received the honor at the dedication of the College of Nursing's new building. Dr. Lindeman also holds an honorary doctorate from the University of Colorado.

Selected as the Oregon Medical Association Doctor-Citizen of the Year for 1979 was Dr. David Kliwer of Corvallis, an assistant clinical professor of medicine at the UOHSC. An internist who specializes in oncology, Dr. Kliwer serves as the volunteer medical director of the Benton Hospice Association, a home care support system for terminally ill patients. He has been a volunteer physician and counselor for Sunflower House, a free youth outreach clinic for drug abusers and others with acute medical problems. Dr. Kliwer donates time to the Benton County Family Planning Clinic and serves on the board of directors of the local YMCA as well as on boards of the American Civil Liberties Union and the NAACP.

Dr. David Mahler, chairman of the department of dental materials science, presented a paper at the World Annual

Dental Congress of the Federation Dentaire Internationale Oct. 22-24 in Paris, France. His subject was research methodology used in evaluating silver amalgam restorations in clinical service.

Two faculty members of the Crippled Children's Division have been awarded the Honors of the Association, highest honor given by the Oregon Speech and Hearing Association. They are Dr. C. Donald Nelson, speech pathologist and long-time member of the association, and Dr. Christopher Williams, associate professor of pediatrics, a non-member honored for his work with the association, which comprises speech/language pathologists and audiologists.

Dr. Frederick Fraunfelder, professor and chairman of the department of ophthalmology, has received the American Academy of Ophthalmology's Honor Award for outstanding service and contributions to his profession. He was honored for his voluntary contributions to the academy's continuing education program.

Dr. Robert A. Campbell, director of the HSC's pediatric renal-metabolic program, has been appointed to the editorial board of the new *International Journal of Pediatric Nephrology*. He was recently appointed to the board of directors of the Albertina Kerr Center for Children, Portland, and the National Research Advisory Committee for the Kent Waldrep International Spinal Cord Research Foundation, Inc., Arlington, Texas.

Dr. Leonard Laster, HSC president, has been named to the board of directors of Blue Cross of Oregon.

Dr. William Moss, professor and chairman of the department of radiation therapy, has been elected second vice president of the Oregon division, American Cancer Society.

Steve Pino has been appointed manager of surgical services for University Hospital. After a three-month internship at St. Vincent Hospital and Medical Center in Portland, he completed a one-year residency in hospital administration at University Hospital last June.

Dr. Merle Pennington, director of the HSC family practice clinics, has been named to the American Medical Association's new committee that will supervise the institutional accreditation for continuing medical education programs of the national organization. Dr. Pennington is chairman of the Oregon Medical Association's Council on Medical Education.

A faculty member and a graduate of the UOHSC have been named to the State of Oregon's new Rural Health Coordinating Council. They are Dr. Laurel Case, professor and chairman of the department of family practice, representing the Health Sciences Center, and Dr. John H. Kilian of Gresham, a 1975 graduate of the School of Dentistry, representing the Oregon Dental Association. The 14-member council acts in an advisory capacity to the State Office of Rural Health in the State Health Planning and Development Agency.

Providence Child Center in Portland has named its educational program for medically-at-risk preschool children in honor of the late Elizabeth Kelly, R.N. Miss Kelly was head nurse in the Doernbecher Memorial Hospital for Children nursery from 1947 to 1964 and later served on a multidisciplinary diagnostic clinic at the Crippled Children's Division. She served on Providence Child Center's Community Advisory Board from 1967 until her death in 1971.

Doris Julian, associate professor of family-centered child nursing, School of Nurs-

ing and Crippled Children's Division, was co-chairman of the 25th biennial convention of Sigma Theta Tau, national nursing honor society, in November in Seattle, Wash. Also participating was Dr. Carol Lindeman, dean of the School of Nursing.

Robin McFadden, a 1974 graduate of the School of Nursing, is the new assistant director of nursing for patient care at the Rolling Hill Hospital and Diagnostic Center in Philadelphia, Pa. Ms. McFadden, who holds a master's degree in nursing administration from New York University, spoke recently at the American Nurses' Association conference, "Nursing's Contract with the Future: Practice and Research," in Nashville, Tenn. Her topic was "Promoting Parental Attachment to the Neonate Hospitalized at the Regional Referral Center: A Model for Care Delivery."

Two staff members in the Office of University Relations recently won awards. Katherine Keniston, managing editor of HSC News, won first place in the newspaper category of the International Association of Business Communicators' District 6 awards program. HSC News also recently was awarded two citations for photography from the Oregon Communicators Association. Marlys Levin, publications officer, received an OCA citation for her design of a series of brochures on the School of Nursing graduate program.

Dr. Richard T. Jones, chairman of the School of Medicine's department of biochemistry, traveled recently to Hamburg, Germany, to present a paper at the meeting of the International Society of Hematology, European and African division. Dr. Jones spoke on arthrocytosis due to abnormal hemoglobin function, an area of study in which the HSC is considered a world leader. Co-authoring the paper was Dr. Tzu-bi Shih, research associate in Dr. Jones' laboratory.

Jolly old St. Nicholas for the children's holiday party Dec. 17 at the Health Sciences Center was the HSC's own Laurie LaVoie, superintendent of technical services facilities planning. This was the second year he's served as Santa at the party, hosted by President and Mrs. Leonard Laster for children and grandchildren of HSC staff, faculty and students. Mr. LaVoie began his Santa Claus routine after growing a beard for the Bicentennial that came out white. At the HSC party, he said, "Kids realized it is an original beard so they didn't tug on it. I had one little fellow, though, who pulled my hat off about four times." Mr. LaVoie played Santa for "at least" 20 holiday events this year. "Grownup ladies ask for Porsches, \$5,000 in cash or handsome boyfriends," the jovial gent observed. "The kids are more realistic and sincere."

### Waiting room dedicated

In memory of a 22-year-old patient who died of kidney failure, a new waiting room has been dedicated in University Hospital (south).

The room, adjacent to the patient day room on the 7C wing, was dedicated Dec. 7 as a memorial to James H. Bryce Jr. He died Aug. 24, 1978, at the hospital.

Family and friends of the patient donated funds to remodel and furnish the room, intended as a private waiting area for families and close friends of intensive-care patients.

Young Mr. Bryce was the son of Mr. and Mrs. James H. Bryce of Salem. He was a graduate of South Salem High School and had attended Oregon State University.

"He was very well liked, and young, active, friendly and helpful," recalled one University Hospital nurse who had known the patient. Said another nurse, "Jim just had a lot of strength through his whole illness. His attitude was admirable."



## Figures bring nursing history to life

Go up to the UOHSC School of Nursing and you'll meet St. Francis of Assisi, Clara Barton and the "Lady with the Lamp" herself, Florence Nightingale.

They are all part of a collection of 42 handmade figures depicting nursing through the ages.

In a special feature of the School of Nursing's annual Wassail Dec. 14, the collection was dedicated as a permanent display in memory of the late Guhli Olson, professor emeritus. Miss Olson, who died last June, had donated the collection to the School when she retired. She had used the figures as teaching aids in her classes on nursing history.

The colorful figures were designed and handmade between 1955 and 1960 — and recently refurbished — by Mary Toy of Corvallis, former nursing faculty member and close friend of Miss Olson. "It was a labor of love for Guhli Olson," said the 80-year-old Mrs. Toy.

It all began when Miss Olson, wishing to perk up her nursing history classes, asked her artistic friend to make a figure of Florence Nightingale. Mrs. Toy agreed and before she knew it, she had created a bevy of nurses in authentic costume spanning the years from 350 A.D. to 1950.

Quipping that "I assure you, I'm no Grandma Moses," Mrs. Toy said, "I never attempted to achieve anything great. I just wanted to do something to help the girls be more interested in the history of nursing."

Mrs. Toy constructed the flexible bodies from wires and wrapped each section with very thin strips of nylon hose to make the contours. "The whole body was wrapped very carefully and very tightly with floral tape and then rubbed with a silver spoon to create the effect of skin," said the artist. "Then they were glazed and the faces were oil painted. Artificial hair was applied."

"The figures then were dressed according to paintings, etchings, sketches or text-book illustrations I could find so that each

one is an authentic representation."

Representing the variety of the historical collection are Fabiola, founder of the first free Christian hospital (400 A.D. in Rome); St. Francis of Assisi, 1182-1226, who established the Franciscan Brotherhood of Nursing; Queen Isabella of Spain, 1500, one of the historic royal nurses; Sairey Gamp, 1849, a character in Charles Dickens' expose of nursing's Dark Ages, "Martin Chuzzlewit"; a mission nurse in South Africa, first country to establish registration for nurses, 1891; U.S. Army, Navy and Air Force nurses in World War II; and nurses from Oregon's first five schools of nursing.

And the redheaded student nurse from 1925 is none other than Mrs. Toy in younger days.

Mrs. Toy gently corrects those who call her creations "dolls." "Dolls are something you play with. These are just little historical figures," she said. "They look like little people. To me, each was a personality; when I was working with them I had to bring out that personality."



"The detail on the figures is what astounds me," said Henrietta Doltz Puhaty (left), shown looking over some of the figures with their creator, Mary Toy. Mrs. Puhaty, former director of the School of Nursing, helped arrange for the permanent display.

## HEALTH SCIENCES CENTER NEWS

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