

Washington University School of Medicine

Digital Commons@Becker

Outlook Magazine

Washington University Publications

1979

Outlook Magazine, Spring/April 1979

Follow this and additional works at: <https://digitalcommons.wustl.edu/outlook>



Part of the [Medicine and Health Sciences Commons](#)

Recommended Citation

Outlook Magazine, Spring/April 1979. Central Administration, Medical Public Affairs. Bernard Becker Medical Library Archives. Washington University School of Medicine, Saint Louis, Missouri.
<https://digitalcommons.wustl.edu/outlook/53>

This Article is brought to you for free and open access by the Washington University Publications at Digital Commons@Becker. It has been accepted for inclusion in Outlook Magazine by an authorized administrator of Digital Commons@Becker. For more information, please contact vanam@wustl.edu.



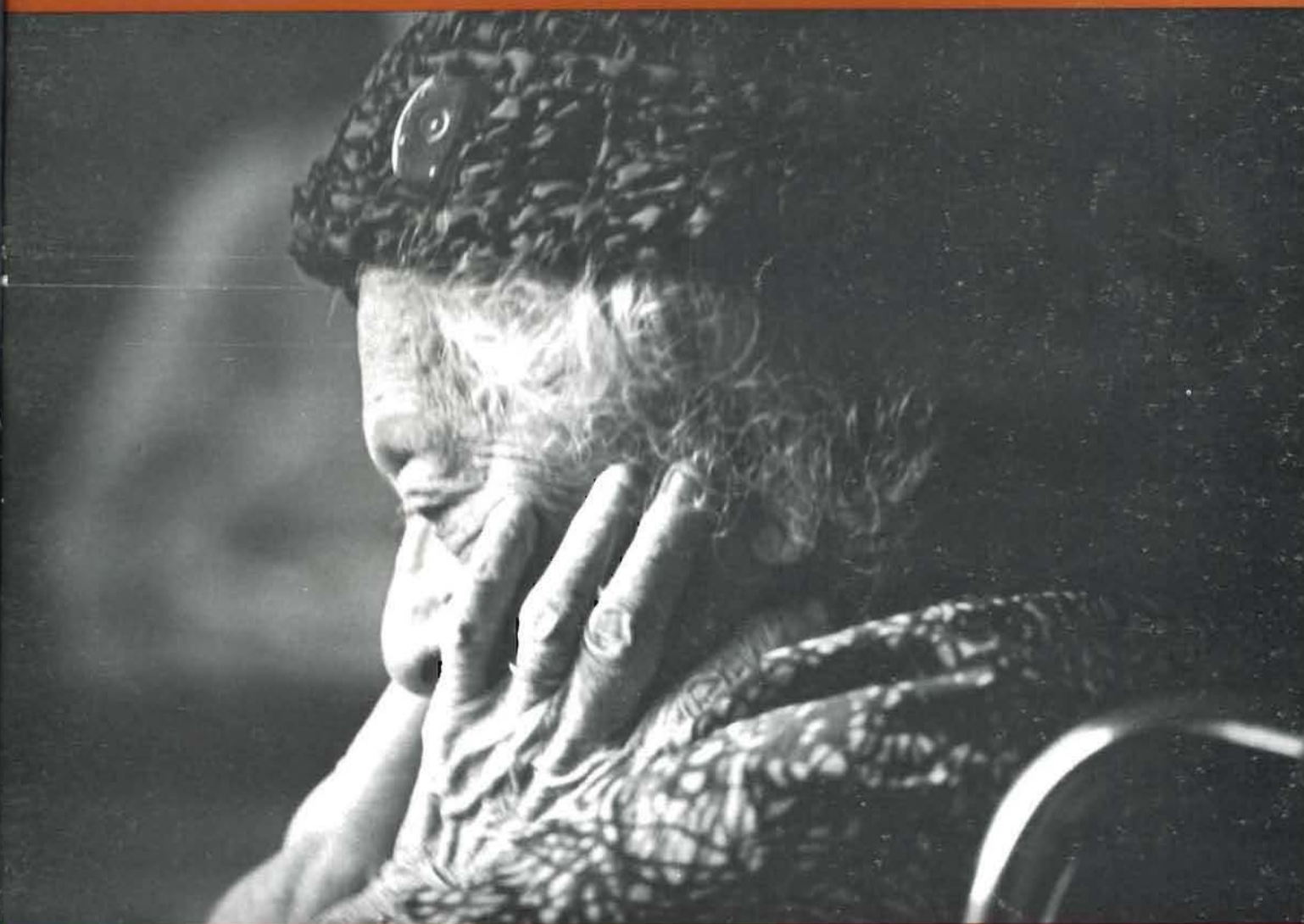
WASHINGTON
UNIVERSITY
IN ST. LOUIS

0.16 #1

Outlook Magazine

Washington University School of Medicine

Spring/April 1979



*"I fear vastly more a futile, incompetent old age than
I do any form of death."* — William Allen White

Outlook Magazine

Washington University School of Medicine

Contents

April/Spring
Volume XVI, Number 1



Achieving a healthier,
more hopeful
old age 1



Virginia Weldon:
Woman of
achievement 10



What is a neurophar-
macologist? 12



Endowed professor-
ships secure future,
contribute to quality
of school 16



West Pavillion nears
completion 19

April/Spring 1979
Volume XVI, Number I
Outlook (USPS 915-840) is published
quarterly by the Washington Univer-
sity School of Medicine at 1705
Dielman Rd., St. Louis, Mo. 63132.
Second-class postage paid at
St. Louis, Mo. Printed by Kohler &
Sons, Inc. Direct alumni news and all
other communications to the editor,
Outlook Magazine, WUMS, 660
S. Euclid, St. Louis, Mo. 63110.

ON THE COVER:

Researchers at Washington
University are working to help the
elderly avoid the physical and mental
decline commonly associated with old
age. See story on page one.

Editor

Sharon Stephens

Staff

Glenda King Rosenthal
Barbara Hebrank

Design

Stan Gellman Graphic Design

Achieving a healthier, more hopeful old age

By Glenda King Rosenthal

"And therefore if a man lives many years, let him enjoy all of them." — Ecclesiastes 11:8
This is precisely the goal of research which is currently underway concerning the physical, mental and social aspects of the aging process. Research on aging and understanding the needs of the aging has been, and in many ways continues to be, a neglected area in research and health care. But with the older population continuing to increase, this area is gaining more attention from researchers at Washington University and elsewhere. The aging process is, after all, a process which should concern us all.

"Come grow old with me!
The best of life is yet to be,
The last of life for which the first was made . . ."
—Robert Browning

Old age — the years when one can sit back and enjoy the culmination of a lifetime of work, realizing lifelong dreams and ambitions, holding a special place in one's family and community. However, these last years of life can be a time of intense loneliness, filled with poverty and loss of self-esteem and plagued with debilitating disease.

Americans are living longer than ever. But for many of them this extension of life merely means an extension of disease and diminished quality of life. At the beginning of this century, four per cent of the population in this country was over age 65. At the present time, that figure has grown to more than ten per cent, or more than 23 million people. Fifty years from now, one in five Americans will be age 65 and older.

These statistics emphasize the importance of planning ahead to deal effectively with the myriad social, economic, personal and medical consequences of this increase in our older population.

In 1974 Congress recognized society's responsibility toward the elderly by passing the National Research on Aging Act; from that the National Institute on Aging (NIA) was created. The primary goal of the NIA is not necessarily to lengthen life, but to improve it so that the elderly can remain active and useful. The advantages to this are obvious, not only for the elderly but for society as well.

"Loss or impairment of intellect is feared more than death by most people."

Older people suffering from mental illness are major clients of the country's health and social services. Approximately 15 per cent of the elderly in the United States suffer from mental impairment; five per cent have severe disorders.



"To be seventy years young is sometimes more hopeful than to be forty years old."
— Oliver Wendell Holmes

Many important questions are now being asked about the mental illnesses and abilities of the elderly. What brain diseases are more common to the elderly? Are they all treatable, if not curable?

Alzheimer disease-senile dementia is the most common of the primary central nervous system diseases that affects the elderly brain. Dementia and organic brain syndrome are equivalent terms indicating decline in brain function as measured by impairment of memory, orientation, learning and judgment. It is the progressive intellectual decline of a person.

"Half the cases of dementia in the elderly due to a primary brain disease result solely from Alzheimer disease," says Charles P. Hughes, M.D., assistant professor of neurology. "This disease has a specific pathology, is progressive, and has generally been present for some time when it is detected. The disease can

appear in a younger person, but it is usually more striking and requires the person to leave his job and seek medical help. An older person exhibiting symptoms is usually not brought to a physician as soon because there is a tendency to say it's simply 'old age.'"

Leonard Berg, M.D., '49, clinical professor of neurology, emphasizes the importance of recognizing the early signs of senile dementia. "Intellectual function is most easily measured by memory," he says. "Recent memory is more often disturbed, but memory of remote events can also be impaired."

Hughes says the patient being examined for memory loss should be evaluated through external reference points because the verbal, adept patient may be able to cover-up his memory deficit.

Disturbances in orientation is another symptom usually seen as dementia progresses. "Time

orientation usually fails first," Berg says, "and places often become misidentified. As the disease progresses, the patient experiences confusion recognizing people until ultimately no one is familiar. However, there is rarely a loss of self-identification."

The person suffering from dementia also undergoes a decline in his attention span and it becomes increasingly difficult for him to learn new material. However, Hughes does point out that the mild memory loss, known as "benign senile forgetfulness," which affects many older people, does not necessarily get progressively worse.

"If an elderly person occasionally forgets something, it does not mean he will ultimately become demented. We really don't know what causes these minimal changes," he says.

Alzheimer disease cannot be halted; it is a progressive disease which will eventually result in the afflicted person becoming de-

mented. However, both Hughes and Berg emphasize that its symptoms can be ameliorated and should never be ignored.

"Many things can be done to ease the symptoms," Berg says. "The environment can also be adjusted. With any mental dysfunction, some environments are obviously going to be more stressful and other environments will be more supportive. So, a lot can be done even though Alzheimer is referred to as a disease for which there is no treatment. There is no cure, but the person can be made more comfortable," Berg says.

Even with advancing Alzheimer disease, a great deal can be done to make the person and his family a lot happier and, by doing so, improve the quality of his life. "In many cases," Hughes says, "the right placement of the person or the control of his behavior by medication makes a tremendous difference in the lives of the spouse, family and patient."

"One thing that might take Alzheimers disease out of the course of aging," Hughes says, "would be if someone could definitely show that it was due to a virus infection or another external causative agent. If it could be proven, for example, that it was caused by a metal or radiation, then we could conclude it's not a normal process. At the present time, it is unlike heart disease for which preventive steps can be taken."

Hughes does say there appears to be a genetic basis for Alzheimer disease, whether or not this is the actual cause of it. There's no doubt there are some striking examples of families in which it occurs repeatedly, appearing to be a dominant disease affecting every generation.

"In general it is thought of as a dominant disease with poor penetrance," Hughes says. "This means not everyone who has the gene for it will get it. The evidence



"If wrinkles must be written upon our brows, let them not be written upon our hearts. The spirit should not grow old." — James A. Garfield

for this is supported by several Scandinavian studies.

"I feel the disease requires a genetic predisposition to get, but it also requires something else. Whether that unknown quantity is a metal, a virus, radiation or an immune deficiency is simply not known. It may well be a multifactorial disease; there is much research in this area yet to do," he says.

The only proof of the diagnosis of Alzheimer disease is at autopsy, "but it is suspected that someone has it when he has atrophy of the brain and undergoes mental changes unrelated to other diseases, such as cardiovascular problems," Hughes says.

Alzheimer disease accounts for approximately 50 per cent of the dementia seen in the elderly population. Another 15 per cent are afflicted with multi-infarct dementia; another 15 per cent have a combination of the two. "Both of these occur with increasing frequency in the elderly population, so it is inevitable that they will sometimes occur together," Berg says. "The two are responsible for 90 per cent of the primary organic brain syndromes in the elderly."

Multi-infarct dementia is a brain disease caused by multiple small vascular occlusions in the brain which causes the death of brain cells due to loss of blood supply.

"These small strokes are not necessarily obvious," Hughes says, "but there is real damage done, even though it may be minimal. The person who suffers one might not even be aware of what occurred."

A person suffering from a small stroke will not necessarily be mentally impaired. "A lot of brain tissue must be lost before a person is impaired," Berg says.

"Sometimes we might not even be aware that a person suffered from these until death and autopsy. They might have been thought to have Alzheimer disease when actually they had mul-

tle little strokes throughout the brain," Hughes says.

"The history we get of the person suffering from multi-infarct dementia, when he is finally brought to see a physician, is that his mental function is deteriorating rapidly. Sometimes the family can even remember that the patient grew worse on a particular day," Hughes says.

Berg and Hughes both agree that a person can lead a normal life after suffering from a small stroke. It does become a problem after several have occurred, however.

"Like Alzheimer disease, multi-infarct dementia is usually not treatable because one often knows about it only at autopsy," Hughes says. "Many of the people who suffer from this have diabetes or hypertension, so it is possible to treat it if the contributing cause is discovered soon enough."

The remainder of the older population who do not suffer from a primary organic brain syndrome

are not always free from memory and intellectual problems. A number of other problems affecting the elderly are a result of heart disease, which periodically contributes less blood to the brain than it needs, or lung disease which results in diminished oxygen supply.

"These conditions account for a lot of mental trouble in older people," Hughes says, "but these troubles often improve when the contributing primary condition is treated. So we regard these problems as treatable forms of dementia. Many times an older person may be brought to the physician for memory loss, but a casual investigation shows that he has congestive heart failure. When examining an older person with mental fall-off, it's extremely important to check other organ systems," Hughes says.

Berg emphasizes that older people are extremely susceptible to the effects of various medications which might cause confusion or other intellectual impairment

that mimics dementia. "Some metabolic problems, vitamin deficiencies and systemic diseases can also cause disturbed thinking, but are definitely treatable," he says.

Evidence suggests that ten to twenty per cent of all people over 65 suffering from dementia have a reversible form of the disease with an underlying, treatable cause that is simply not recognized by the physician. "This means that over 300,000 people in the United States could be restored to useful functioning through appropriate evaluation and treatment," Berg says. "Every patient with dementia should have as complete a history taken as soon as possible accompanied by a comprehensive physical examination."

There is an unfortunate tendency among many health professionals and laymen alike to ascribe mental decline in the elderly as a 'natural' result of aging. Because of this, many reversible dementias go untreated.



"If you take all the experience and judgement of men over sixty out of the world, there wouldn't be enough left to run it." — Henry Ford

"And even incurable, progressive dementias can be eased," Berg says. "The older population is unfairly stereotyped in people's minds and simply not given the care we would give younger people. Intellectual deterioration in the elderly should be responded to as quickly, carefully and as thoroughly as one would to a younger person suffering from unexplained chest pain. To not do so is to deny the person his right to as full a life as possible."

Hughes and Berg feel that most older people will undergo some change in mental function, but it is debatable as to whether that change should be viewed as deterioration.

"Mental function is complex and every time we point to an aspect of it that seems to decline with age, we can point to another aspect that seems to improve, such as judgement and ability to use information," Berg says.

Raw scores of healthy older people taking the Wechsler Intelligence Test were lower, and this single fact formed the basis for many peoples' opinions about the mental abilities of the elderly. "However," Hughes says, "more careful studies of older people indicate they may be able to perform most mental functions as well as they did at a younger age;

they simply take a longer time to do it, and in most cases retain the information as well."

It is an inaccurate and unfair generalization to say mental function necessarily declines with age. "This is another example of stereotyping the elderly," Berg says. "The physician and layman alike needs to ask himself is mental ability really declining or is it simply being used differently?"

"Depression is one of the more common psychiatric illnesses, but it is not a natural phenomena in the elderly."

It is also an inaccurate generalization to say that depression is a necessary consequence of age, says Ronald L. Martin, M.D., assistant professor of psychiatry.

Martin feels it is actually dangerous to overinterpret a depressive syndrome in the elderly, attributing it to a "natural" reaction to life's circumstances. "The physician may feel the older person has good reason to be depressed as a response to retirement, the death of loved ones, or declining personal health," Martin says. "And yet there are older people who experience the same events and do not become depressed, while others in very good circumstances will become depressed. A distinction needs to be made between elderly persons saddened in response to life events and those with a prolonged depressive syndrome."

Studies of bereavement indicate that a grieving person may temporarily exhibit some depressive symptoms (low mood, insomnia, loss of appetite) but this state is self-limiting, not prolonged, and does not cause the feelings of worthlessness and thoughts of death that are characteristic of a depressive illness.

"A prolonged depressive syndrome in a bereaved elderly person should not be ignored any more than it would be in a younger person," Martin says.

Depression as it occurs in the elderly can sometimes be difficult to recognize because it may present atypically. Often the complaint will not be of depression or low mood at all but of fatigue, a non-existent physical illness, or of memory problems.

"The subjective complaint of fatigue is very often a manifestation of depression," Martin says. "When an elderly person complains of fatigue it cannot be assumed that the patient is just old and doesn't have much energy. The physically healthy elderly have energy in the absence of psychiatric illness. Depression should always be considered when they do not."

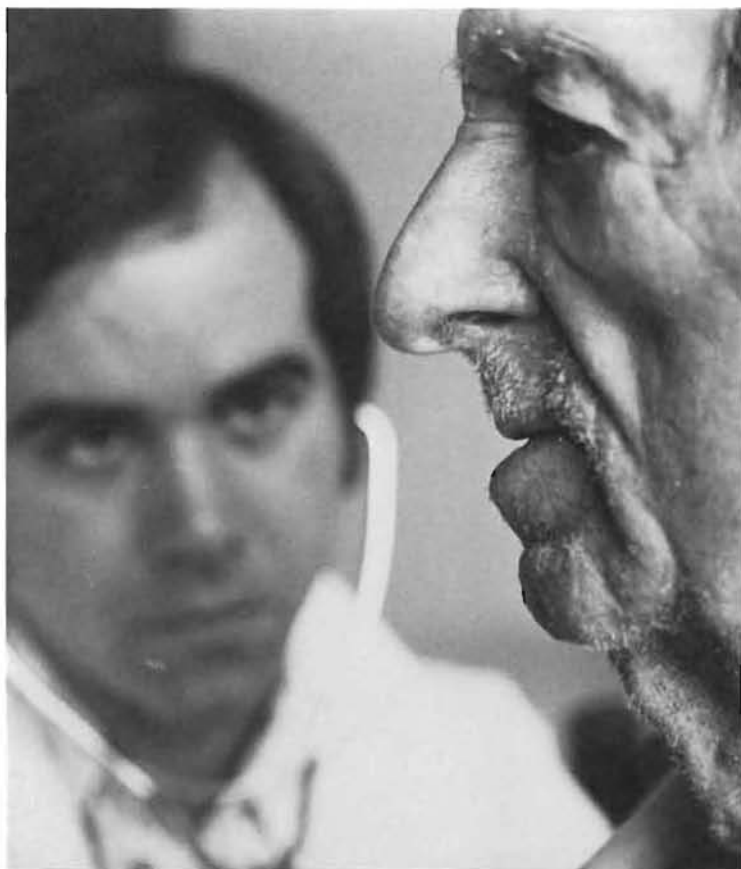
Martin says complaints of a non-existent physical illness can reach the point of a somatic delusion. "Patients with such delusions will report such ideas as 'I am already dead,' 'my blood has solidified,' or 'there is a rubber tube in my colon.'" These delusions will often respond to organic therapies for depression.

The association of memory problems with depression emphasizes the importance of differentiating between depression and dementia. A careful interview of the patient and the family is extremely important in making this distinction.

"Psychological testing an elderly patient is not as informative as a personal interview," Martin says. "The physician must look very carefully at the course of the illness to differentiate between depression and dementia."

"Dementia is characterized by an insidious decline in intellectual function that is very gradually progressive in nature. The impairment in depression generally has a recent and rather abrupt onset and then stabilizes."

With depression, the complaint of intellectual impairment is often more apparent than the observed decline. Actual impairment can occur, however, even to the point where the person appears to be demented, with a slowing of mental functioning as



***"The Old Ship is not in a state to make many voyages, but the flag is still at the mast and I am still at the wheel."* — Walt Whitman to his doctor after a stroke**

part of psychomotor retardation and such poor concentration that memory problems occur.

"Depression in the older person affects intellectual function more so than in the young," Martin says. "An elderly depressed patient with intellectual impairment as part of his depression is in danger of being institutionalized as irreversibly demented when in fact he has a treatable depression."

Martin recalls a striking example of this which occurred early in his training and taught him an important lesson. "An elderly woman was admitted to psychiatry and we really didn't know much about her. She was very non-communicative and no one was available to provide a

history. Many of the staff just assumed that her condition was explainable by the fact that she was old, alone, had irreversible brain disease and had nothing to live for. It was even suggested that intervention on our part would just prolong her misery. She refused food and finally had to be tube fed. At that point, however, we intervened with electroconvulsive treatment. With a few treatments she was a different person — vibrant, intellectually alert and interested in many things. With remission of this depression there was no doubt that she wanted to be alive and had positive feelings of self-worth and many interests. She had no significant mental impairment," Martin says.

Had this woman's depression not been recognized, she probably would have died or at best have been institutionalized. "It must be remembered," Martin says, "that depression in the elderly is a life-threatening illness. Over and above the risk of suicide, a depressed elderly person can die of dehydration, emaciation, or personal neglect of physical illness."

"The physician who treats an older person needs to get a very clear, longitudinal history of that person," Martin says. "He needs to understand the patient's past life as well as his present, his past personality as compared to the way he is now. It should never be assumed that a person is declining simply because he's old. If the elderly person has always been active and interested and no longer is, something is wrong, perhaps a serious medical illness, a dementia or a depression."

Psychiatric treatment of the elderly can be difficult. The elderly are often extremely sensitive to the side effects of psychiatric medication. Martin says medication should be used very cautiously with the elderly because medications themselves can sometimes cause mental syndromes.

"Elderly people are prone to medication-caused agitation or even delirium," he says. "This can lead to a vicious cycle of a worsening of a psychiatric symptom by a medication leading to a further increase in the medication to control the medication-induced symptom."

The various available treatment possibilities, including antidepressant medication and electroconvulsive treatment, should be considered when dealing with an elderly, depressed patient. Given the proper treatment, depression in the elderly is usually alleviated.

"Depressive illness in the elderly is not a necessary concomitant of advancing age," Martin says. "It does not occur in the majority of the elderly population, and when it does occur, it can be treated."

"There are many factors involved in aging successfully."

Jack Botwinick, Ph.D., professor of psychology, and Martha Storandt, Ph.D., associate professor of psychology, have received national recognition for their work on the psychology of aging. A portion of their research has centered around the problems associated with retirement and aging successfully.

In our society, a person's feelings of self-esteem and self-worth are intertwined with work and levels of productivity. A person's self-image can be lowered with retirement.

"Any major life change, such as retirement, can be unnerving and bring on feelings of doubt and confusion," Storandt says. "For this reason people should definitely plan for their retirement and begin this relatively early in their life."

For obvious reasons, people should plan for retirement from a financial angle. "People should make plans about annuity, pension plans and other options available to them," Storandt says. "Employers should offer some kind of counseling in this area and more and more corporations are doing just that. But even where the opportunity for counseling exists, some people are just not concerned."

In addition to counseling about the financial aspects of retirement, there is also a need for counseling in the area of retirement and psychological well-being. "During a person's 30s and 40s, he needs to examine options, things outside of work which interest him," Botwinick says. "People need to begin building on these interests so that



"A graceful and honorable old age is the childhood of immortality." — Pindar

they have a variety of experiences open to them later."

Both agree that work should never become a person's whole life. The person who devotes himself to his work, developing few if any outside interests, will face more psychological problems with retirement than the person who has developed other areas of interest.

"Generally, the professional 'workaholic' will retire less easily than the non-professional," Storandt says. "After all, the person doing lucrative, stimulating work will be less likely to enjoy giving it up than the person who has held a boring job all of his life. Regardless of the profession, however, the person who has outside interests will handle retirement better than the completely work-oriented person."

Until recent years, dealing with the psychological aspects of retirement has been a male problem. However, with more and more women working most of their lives, they also must deal with the problem.

"In earlier times women had very little adjustment to make in later years because they continued to do much the same things as they did when they were younger," Storandt says. "However, it's also important for the woman who does not hold an outside job to develop interests other than her home and children. After all, those children will not be around forever."

In addition to developing outside interests, Botwinick feels a transition period from the full work day to retirement could ease many of the problems. "I feel corporations could offer a 'phase down' program for people facing retirement in which they could work less than a full day," he says. "This would help to ease the abrupt change in lifestyle which leaves many people feeling at loose ends. I also feel role relationships within a corporation should change gradually."

The person with outside interests who deals positively with

retirement has a better chance of aging successfully. However, even with his health intact, a person can still be miserable about aging from a psychological perspective.

"This is especially true of the older person whose value system — what they see as important — is not congruent with old age," Storandt says. "For example, the woman who has always valued her beauty will inevitably get wrinkles and grey hair. If her beauty is what she has built her life around, she is going to experience major problems in old age no matter how many face lifts she gets."

From a psychological perspective, the person who develops a wide range of capabilities is going to be a lot better off in later years. The person who focuses his life around something that will inevitably deteriorate, such as beauty, is more apt to encounter problems.

"This could be one of the factors that makes the difference between successful and unsuccessful aging," Botwinick says. "It's not uncommon to see two elderly people who both have their health and no major financial concerns, one who is thriving and the other who has given up. The more successful, happier person probably developed strong interests and a good value system when he was younger."

Botwinick and Storandt emphasize the importance of recognizing personality changes when treating the elderly person. The pattern of an unhappy older person may simply reflect something that's been there since childhood or young adulthood.

"However," Storandt says, "if a person has been basically happy and outgoing all of his life and no longer is, something is probably wrong. For most people, their basic outlook on life doesn't change that much in old age. In other words, personality is basi-

cally stable throughout the adult life span. Any major personality change in the elderly indicates a physical or psychological problem and should be examined thoroughly."

"We know nutritional requirements change with the aging process, but the area still contains many unanswered questions."

Robert E. Shank, M.D. '39, Danforth professor and head of the Department of Preventive Medicine and Public Health, has had a long standing interest in aging, particularly in the nutritional aspects. He has been involved with the NIA since its inception and is currently editing the proceedings from an NIA conference on nutrition and aging.

"The field of aging has not been a popular area for investigators," Shank says. "But through research in aging we can hope to assist people in early and middle life to adopt dietary and living patterns which will promote better health. By doing so, people may enter old age with a smaller number of chronic diseases, and be better prepared to withstand the onslaught of acute illness when it does occur. The NIA's support of aging and nutritional research is directed at this objective."

Shank says nutritional requirements do change with advancing age, but there are still many unanswered questions as to exactly how much it does change. "The nutritional requirements of the older person are not drastically different from that of a younger person," he says. "The most important difference is in



"To resist the frigidity of old age, one must combine the body, the mind and the heart. And to keep these

reduced caloric requirements."

The reason for this difference lies in the fact that body composition changes markedly with aging; lean body mass decreases while fat increases.

"This change in body composition is presumed to be inevitable because of cell loss in organs and muscle," Shank says. "However, investigators in this department are conducting research to determine if planned programs of physical exercise can slow down or avoid the decrease in lean body mass and the increase in body fat that seems to be universally associated with aging."

This research project involves a group of men, age 55 and over, who have been or continue to be long distance runners. "The study is looking at two major things — body composition and response to exercise and stress,"

Shank says. "Is change in body composition an essential part of aging? At this point in time, most researchers in aging believe that it is inevitable that lean body mass decreases with the passage of time. It would be important new information concerning the aging process if the study can show that this change can be halted or slowed."

Because of the decrease in lean body mass, basal metabolic rates (BMR) and food requirements drops off. This decrease in the BMR coupled with reduced expenditure of physical energy in work and recreation, which usually occurs with advancing age, calls for a decreased intake of calories.

"There is a reduction in food energy requirements of about 20 per cent between the ages of 30 and 65," Shank says. In other words, as we get older we should

eat less. A person could eat the same and get the same amount of exercise as he did when he was younger, but still gain weight as a result of this BMR change."

Shank says the physician should tell the older patient there really is no need to eat as much as he did when he was younger. This means, however, that the older adult needs to select foods with a greater nutrient density which can require rather careful dietary planning.

"For instance," Shank says, "it's difficult to plan a diet which has around 1,400 calories a day that contains enough iron and thiamine. As caloric requirements drop with age, the older person needs to be more selective in food choices in order to get all of the required nutrients he needs in his daily diet."

Shank feels the physician should take the time to explain and discuss dietary requirements with the older patient. However, it is not uncommon for the physician simply to advocate vitamin pills rather than paying close attention to food choice. "Of course there is nothing terribly wrong with this," Shank says, "as long as the vitamins selected are the appropriate ones and are not given at therapeutic levels which have the potential of being toxic."

Along with cell death which causes the change in body composition, various organ systems also undergo change as aging progresses. These changes in organ systems also are significant in determining how and what the older person should eat.

Of all the organ systems, the gastrointestinal tract is most likely to be symptomatic among the aged. "The GI tract is the site and cause of concern for many older people," Shank says. "Atrophy of the gastric and intestinal mucosa in older persons decreases rates of absorption of essential nutrients and reduces the quantities of intestinal secretions. Intestinal motility also becomes less active and constipation is likely to be a frequent complaint."

These problems in older people may account for modification of long established food habits and for diets which may not be nutritionally adequate. "The older person's choice of foods may be determined by comfort or discomfort following a meal rather than what is nutritionally sound," Shank says.

Eating foods that provide bulk can ease the discomfort of constipation the older person often faces. Soft foods of low fiber content may make the person uncomfortable and cause him to lose his desire for food. "So it is important for the older person to eat fruits and vegetables and other foods that provide fiber," Shank says.

Like the gastrointestinal system, the renal system also undergoes changes with increasing age. Shank says a person is endowed with a given number of nephrons in the kidneys at birth and the number decreases with time.

"We can only hope we have enough to last us," he says. "If there is significant compromise in overall kidney function, particularly if blood urea increases, this food choice achieves even greater importance in the elderly. If this occurs, it would not be wise to eat as much protein because of the extra load this places on the kidneys. Moreover, as energy requirements decrease, the older person simply does not need as much protein."

Problems develop in the cardiovascular system, with coronary artery disease in particular occurring more frequently in later life. However, there has been a recent decline in mortality rates from ischemic heart diseases and cerebrovascular disease. Shank says this decline may be attributed to earlier recognition and more effective treatment of hypertension and possibly to changes in American diet which favors reduced intake of animal fat and cholesterol. Weight con-



in parallel vigor one must exercise, study and love."
— Charles de Bonstetten

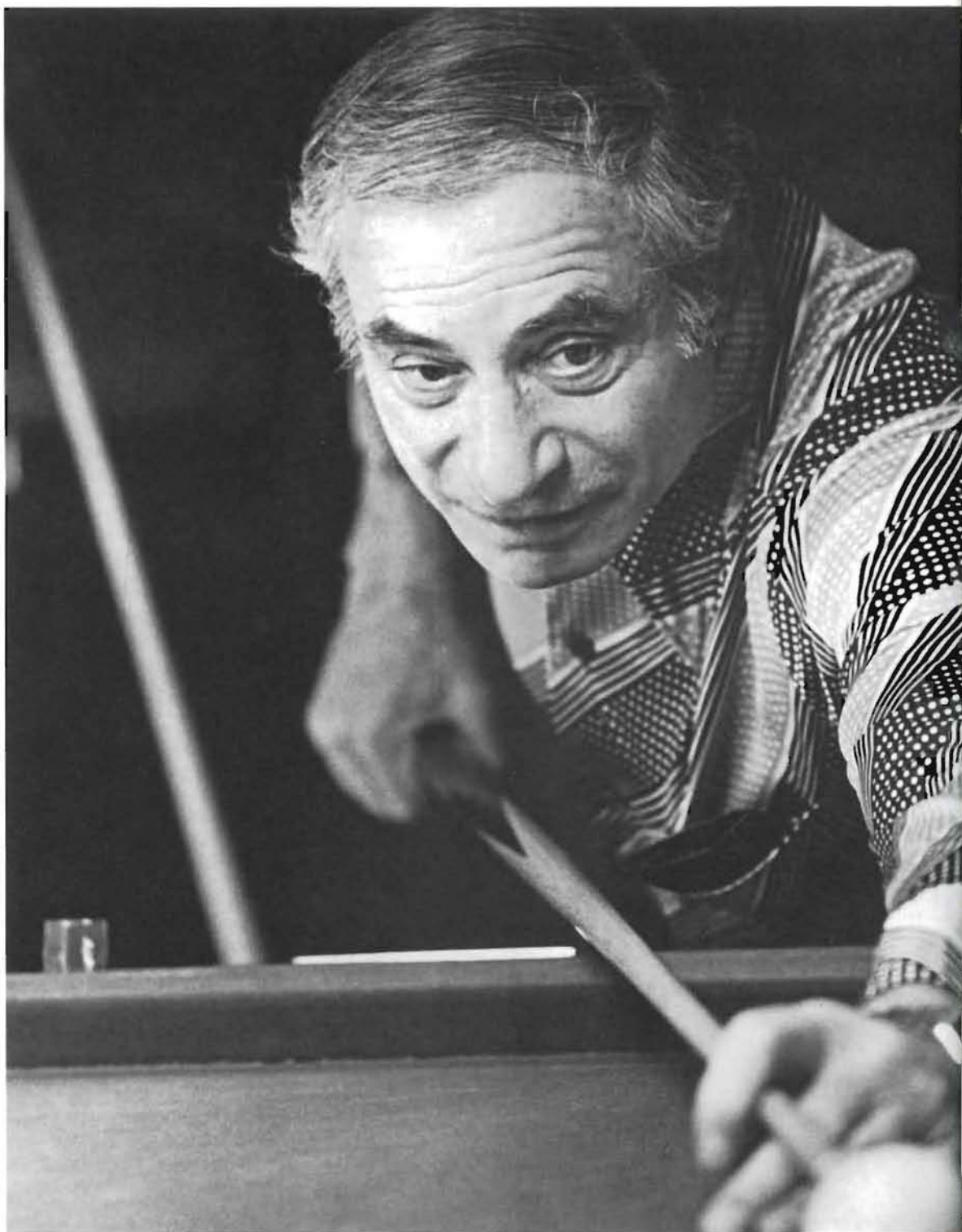
trol in earlier life and the correction of obesity may also contribute to this decline.

"There are many unanswered questions in the role cholesterol plays in coronary disease and the role of salt in the management of hypertension," Shank says. "We have no conclusive evidence that the increasing prevalence of hypertension with age is related to salt intake. We do think we can ease the toll of coronary artery disease by getting people to modify their diet and to exercise earlier in life, but we don't know if doing this once the changes have occurred is effective. These gaps in our knowledge are well worth pursuing because they could bring significant benefits to the older population."

Research in bone demineralization is another important area that could benefit the elderly. As a person ages, his bones lose calcium, a process known as osteoporosis. "This is why the bones of older people break more easily," Shank says. "Although demineralization of the skeleton is a very common event with aging, we don't know if it is an essential component of the aging process. Since the jaw reflects this process early on, periodontal disease may be a first expression. A recent conference on aging suggested that the jaw should be given more attention in the study of the process of osteoporosis."

At the present time there is no perfect treatment for osteoporosis, although physical activity may delay some of the bone demineralization. However, it is appropriate to suggest to people who are developing osteoporosis that they take in more calcium in the form of milk and dairy products.

"There is a modicum of evidence that by doing this an increase of calcium in the bones may occur in some individuals even after the process has started," Shank says. "In addition to increasing the calcium intake, taking a little fluoride may ease



"While one finds company in himself and his pursuits, he cannot feel old, no matter what his years may be." — Amos Alcott



the pain associated with severe forms of osteoporosis even though it does not greatly increase the rate of recalcification."

Like calcium, dietary zinc is another trace mineral which may be of significance to changes associated with aging and nutritional research. Zinc has an important role in maintaining sensory perceptions of taste and smell, which are often depressed in the elderly and lead to reduced food intake and anorexia.

"If the smell and taste sensations are lost or greatly reduced, particularly with people aged 75-80, appetites become depressed, the best food doesn't taste good, and eating is not a pleasurable experience," Shank says. This problem obviously impedes good eating habits, and if the elderly person is also lonely, it's very difficult to get food into him.

"There is some question as to whether this change is neurological in origin or induced by something else. Zinc does appear to be one nutrient which, if it is deficient, can affect taste and smell sensation. Taking in a little zinc might help some older persons regain these sensations and possibly improve their eating habits."

Eating well is especially important for the older person because dementia is frequently associated with weight loss and inadequate food sources. "We know very little about the possible nutritional or metabolic events which might contribute to dementia," Shank says. "But the care of the older person should involve appropriate and healthful diet. Often a little attention given to older persons who are lonely or hospitalized, encouraging them to eat, will bring about a clarity in mental function that didn't exist before."

It is obvious that the elderly have particular nutritional characteristics and health needs that

the health professional needs to be aware of. As in all areas of aging, more research is necessary in the nutritional aspects of the aging process.

"There is a likely possibility that nutritional factors and diet itself will prove to play significant roles in the process of aging or turn out to be actual determinants of longevity," Shank says. "Research throughout the next decade should bring more effective use of nutritional knowledge for healthful living and function in old age."

Of course there is no guarantee that the person who eats well, stays mentally and physically active will live a long life. "However," Shank says, "it can't hurt. I do think the person who eats well, exercises and enjoys life will live a happier and, maybe, a longer life. Mental well-being definitely affects one's physical well-being. A good, positive outlook on life, staying active and having many interests can't help but make the older person feel better. And a happy life is usually a longer one."

"There is no single place in this area organized so that the older person can get a social, psychological and medical evaluation."

At the present time there is no formalized, comprehensive center at Washington University which deals exclusively with the health problems of the elderly. There is a group representing different specialties who meet informally and share ideas. However, many people feel strongly that there is a need for a center on aging, such as the one at Duke University funded by the National Institute on Aging.

"There are obviously problems that, if not unique, are highly accentuated in older people," says Charles Hughes. "The elderly often need more attention than one practicing specialist is willing or able to give them."

"The Center on Aging at Duke University offers a comprehensive form of health care for the older person with physicians and support staff from different specialties interacting. Older people are referred to the Center from all around the area and receive a complete evaluation, including help with financial problems from social workers. Most of the time their follow-up care rests with their referring physicians. Much of what we know about older people comes from studies generated by this center. Many of us here feel this is an ideal arrangement for evaluating and treating older people and gaining information for future studies," Hughes says. "We have the brainpower and facilities here and the need is obviously great."

Lacking a comprehensive center, there is still a lot the individual physician can do to improve the quality of care delivered to the elderly patient. "Time is the key word here," says Leonard Berg. "The physician must be willing to spend time with the older patient, listening to his needs, taking a careful history, understanding what he was like before in order to detect changes and talking with his family. To simply attribute mental and physical problems to 'old age' is unacceptable medical practice."

The goal of researchers in aging is to insure that the growing older population does more than just survive. Lengthening the useful and active lives of the elderly and improving the quality of those lives is the challenge.

Researchers and laymen alike should be concerned about the future; we all have to spend the rest of our lives there. Quality care in the later years of life is something we should strive for to benefit our parents, our loved ones and ultimately ourselves.

Virginia Weldon, M.D.: Woman of Achievement

By Sharon Stephens



Virginia Weldon, M.D., is where she wants to be. She's happy with both the professional and private aspects of her life. She has no regrets and that's an accomplishment within itself, but it is certainly not the only one for Virginia Weldon, an associate professor of pediatrics at Washington University School of Medicine.

Her most recent honor is being named a Woman of Achievement by the St. Louis Globe-Democrat newspaper.

Toronto born and later a U.S. citizen, Weldon attended Smith College and graduated cum laude in 1957. "I majored in chemistry," Weldon says. "Then upon graduation the choices were either to teach chemistry in high school or work in the chemical or drug industry. Or I could have obtained an advanced degree in chemistry and done the same things. I did not consider any of those options a very satisfying career plan."

Wanting to consider medicine, Weldon decided to work for a year before committing herself. She went to work at the Peter Beut Brigham Hospital for George W. Thorn, M.D., a distinguished endocrinologist and Harvard Professor.

"That year really did it," she says. "It proved to me that medicine was something I would never lose interest in and that would always be challenging."

At the University of Buffalo School of Medicine, Weldon first considered surgery. "My first clinical rotation was in surgery," she says. "I just loved it. It was very definitive. My next rotation was pediatrics. Pediatrics is similar to surgery in some ways and I decided that it would be easier to combine a pediatric career and a family. You have to try to make decisions and at the same time keep some of your options open."

After graduation Weldon then went to Johns Hopkins where she was greatly influenced by Robert M. Blizzard, M.D., and Claude J. Migeon, M.D. They led her to pediatric endocrinology which is still her area of interest.

Weldon says coming to Washington University in 1968 was a career highpoint. "This is an outstanding university. When you are shoulder to shoulder with people who excel it gives you the incentive to want to do the same thing."

"There have been all kinds of opportunities created for me here. Working for Dr. Dodge (Philip R. Dodge, M.D., head of the Department of Pediatrics) has opened so many doors. He has created an environment in which it is possible to work with a great deal of enthusiasm."

"Dr. Guze (Samuel B. Guze, M.D., vice chancellor for medical affairs) created another challenging opportunity for me when he asked me to become his assistant." Weldon's major responsibility in this position is to be an advocate of the School to the government.

"The government is taking up more and more of our time," she explains. "The Medical School needs to be aware of what the government is proposing to do that will affect us so that we can comment and be part of the process."

Weldon scans the Federal Register which is published daily in one or two volumes to report proposed rules from all government agencies. When she finds a proposal which affects the Medical School she studies it. "I think our comments sometimes help in changing a proposed regulation which we feel would be detrimental," she says.

"The Executive branch seems to have reached the point where they feel responsible for everyone's behavior," Weldon says. "The

government is getting involved in how we function on a day-to-day basis and this is a great concern to all of us here. This problem became quite clear to us when we reviewed recent regulations regarding research on human subjects and on how our Institutional Review Board should function. The regulations are so detailed that they leave no room for local discretion."

Weldon continually monitors governmental actions and keeps the Medical School administration informed as to what issues may affect the School.

"One of the great pleasures of this aspect of my responsibilities has been the opportunity to work with Bill Danforth and Bob Blackburn (Director of Governmental and Community Relations for Washington University).

Created in 1975, Weldon's position requires many trips to Washington, D.C., to represent the interests of the Medical School, which in turn decreases the time she can spend in research activities.

But she still finds time to pursue a major research interest: mechanisms in growth. She works closely with William H. Daughaday, M.D., professor of medicine, and is most interested in children who have abnormalities of growth hormone. Weldon is also chairman of the CRC Advisory Committee at WUMS and is a member of the General Clinical Research Centers Advisory Committee, NIH. She has also recently been elected to the Administrative Board of the Council of Academic Societies, AAHC.

Weldon credits much of her success to a supportive husband who

can relate first hand to the problems of academic medicine. She is married to Clarence S. Weldon, M.D., head of the Division of Cardiothoracic Surgery at the School of Medicine.

Weldon says being a woman has not hindered her career. "In the past, I may have had to argue for equal pay but that's probably been the only difficulty," she says. "I guess the major area in which women still have to prove themselves in medicine is in getting promoted to the highest ranks," Weldon says. "There are relatively few women who are department or division heads nationally.

"I think some men may still have some difficulty in thinking a woman can do that kind of a job well.

"However, I think it's ridiculous to think that we should try to eliminate the differences between men and women. I don't want to be treated like a man. I do want to be respected for working hard and doing a job well. I think it's time we all realized that a woman may do a certain job equally as well or better than a man, but it is likely that she will do it with a somewhat different style."

Virginia Weldon is quite satisfied with doing things differently and perhaps that is why she is well-liked and respected among her colleagues, both male and female. She faces each day with excitement and even if she had the opportunity to go back and do things over, she "wouldn't change a thing."



“People are always asking just what is a clinical neuropharmacologist?”

By Katherine S. Robbins
and Sharon Stephens

“I have a T-shirt that indicates I am a clinical neuropharmacologist, and people ask just what that is,” says James Ferrendelli, M.D.

Ferrendelli is the only professor of clinical neuropharmacology at the School of Medicine and holds an endowed chair established in 1976. The establishment of the chair of clinical neuropharmacology was the first recognition given to the subspecialists who call themselves neuropharmacologists and a premonition of a division to be.

The five clinical neuropharmacologists, Ferrendelli and four others who hold positions in neurology, have during the last few years formed the framework of an informal division aimed at research, teaching and patient care. “I anticipate that we are going to become formally acknowledged as the Division of Clinical Neuropharmacology sometime during the 1979 fiscal year,” Ferrendelli says.

Clinical neuropharmacology is a subspecialty of clinical pharmacology. “There’s confusion about each of these fields,” Ferrendelli explains. “Basically clinical pharmacology deals with the use of drugs in the treatment of disease, drug induced diseases and a variety of other problems dealing with the use of drugs clinically.”

“What distinguishes clinical neuropharmacology is that it deals with those drugs that affect the nervous system,” Ferrendelli says. “Its focus is drugs used to treat neurological and psychiatric illnesses and conditions.”

Several years ago some consideration was given to forming a division of clinical pharmacology. “However,” Ferrendelli says, “it wasn’t appropriate for this school at that time to try to develop such a division because there weren’t enough interested people to cover the many branches of the specialty. We thought specific areas of clinical pharmacology could be developed, however,” he says.

Ferrendelli and some others were particularly interested in neuropharmacology and it became apparent that this would be an appropriate way to become involved in clinical pharmacology.

Both William M. Landau, M.D., professor and co-head of the Department of Neurology, and Philip Needleman, Ph.D., professor and head of the Department of Pharmacology, supported the initiation of the subspecialty as a collaborative effort between the two departments.

“It was such a nebulous thing,” Ferrendelli says, referring to the formation of a division. “The idea could have easily died on the vine without fruition, but Landau and Needleman realized the viability of neuropharmacology and provided tremendous support.”

Ferrendelli has been associated with the two departments since joining the faculty in 1970. Trained in neurology with a background in chemistry, he came to Washington University to work with Oliver Lowry, M.D., then head of the Department of Pharmacology.

“I started to learn more and more about drugs. I became interested in how drugs work and how they cure and control diseases. It was apparent that a patient’s response to a drug not only depended upon its mechanisms of action, but also was markedly influenced by the drug’s route of administration and its fate in the body.

“As time went on I realized this field was the way I could correlate my research with my interests in clinical neurology. I think this is a delightful way of developing and intermingling my two major interests: neurological disorders and pharmacology.”



James Ferrendelli, M.D., professor of neuropharmacology in his lab.



It has only been in the past decade or two that people have identified themselves as clinical pharmacologists, although basic scientists in pharmacology have been recognized for a long time. Pharmacologists are interested in all aspects of drugs and how they work. Clinical pharmacologists take this information and concentrate on the use of drugs in the treatment of patients.

"They usually get involved in difficult therapeutic problems or patients who don't respond appropriately to drugs," explains Ferrendelli.

In addition to dealing with problems associated with drug therapy, clinical pharmacologists are also especially interested in toxic effects of dosage and drug induced diseases.

Clinical pharmacology involves not only learning to use the drugs that are currently available more effectively, but developing and testing new drugs.

"Many physicians question the need for clinical pharmacology to be a separate specialty in medicine," Ferrendelli says. "After all, every physician who prescribes drugs is, in a sense, a clinical pharmacologist.

"However, we have been learning for the past several years that there is more to drug prescription than knowing the most appropriate drug for the disease or disorder being treated. It is also necessary to know how well and how rapidly the drug is absorbed from various routes of administration and what influences their processes.

"It is important to know how a drug is distributed in the body, its rate of elimination and, how it is eliminated," he says. All of this information is necessary to determine the frequency and amount of drug necessary for a patient, and to determine when a drug will produce maximal effectiveness.

"Many failures of drug therapy are not due to using the wrong dosage, but are a result of using the drug incorrectly or inadequately," Ferrendelli explains. "Although most physicians are aware of the many problems associated with drug prescriptions, more education about this subject is needed both at a pre-doctoral and post-doctoral level."

"... we have been learning for the past several years that there is more to drug prescription than knowing the most appropriate drug for the disease or disorder being treated."

Another issue that scientists are just beginning to understand is that drugs behave differently in individuals. "We are beginning to learn that to achieve optimal therapeutic benefits we have to reach certain dosage concentrations in the body," Ferrendelli says. "A drug dose which will produce adequate levels in one individual may or may not be appropriate for another because the rate of drug absorption and excretion varies from person to person.

"If the same amount of drug is prescribed to 100 people, because of individual variability, some will have almost no levels of the drug in their blood, while others will have remarkably high levels," he says.



There are five neuropharmacologists involved in the formation of the new division. They are George F. Wooten, Jr., M.D., (left), James Ferrendelli, M.D., Eric Lothman, M.D., Robert C. Collins, M.D., and W. Edwin Dodson, M.D., (not shown).

Clinical pharmacologists also may become involved with patients who have problems resulting from drug interactions and drug toxicity.

"There are several thousands of drugs available to the practicing physician," Ferrendelli says. "Instead of taking a single drug for a single disease, many patients end up taking many drugs especially if they are seeing different specialists for different problems. We run into the problem of the drugs not only interacting with the patients' physiological and biological processes but interacting with each other. To complicate the matter even further many drugs produce undesirable side effects," Ferrendelli says. "Although physicians try to prescribe drugs so that undesirable side effects are minimized, sometimes these side effects require treatment with other drugs."

Ferrendelli envisions a nationwide computer system as a possibility for controlling the problem of drug prescription, toxicity and interactions. "There would be a computer terminal in every nurse's station in hospitals and every physician's office where, when a drug is

entered in the computer system, relevant information would appear on the screen: the drug's half life, its therapeutic levels, its significant toxic side effects, how it interacts with other drugs and so on," Ferrendelli says.

In the meantime, the primary resources for drug information are textbooks and medical journals. "Many of these only describe the average dose for individual drugs. Hopefully, in the future, guidebooks will become available which will contain much more information especially about pharmacokinetic properties, therapeutic and toxic levels and drug interactions," he says.

"There is little doubt that problems associated with drugs or drug therapy constitute a large portion of medical practice. Some people claim that 10-30 per cent of patients in hospitals, especially large referral medical teaching hospitals, have some problems related to drugs," Ferrendelli says.

"I think the need for clinical pharmacologists, as well as a better

understanding of drug therapy by all physicians is a real need in modern medicine," he says.

The drugs that Ferrendelli is most interested in are those which affect the nervous system. As a neuropharmacologist he investigates the mechanisms of action and effective use of drugs that are used to treat neurological and psychiatric disorders, including tranquilizers, sedatives and anticonvulsants.

Currently, he spends the majority of his clinical and research time investigating epilepsy. His major area of research involves studying how anticonvulsant drugs work. These drugs act by reducing the sensitivity of the central nervous system, and thus preventing the onset of seizures. He is concerned with determining the basic molecular mechanism of anticonvulsant drug action in the brain to stop or prevent seizures. "That information is important in order to determine the cause of seizures," Ferrendelli says.

In addition, knowledge of how currently available drugs work would help in designing and developing new drugs; specifically highly effective drugs that have few toxic side effects. "The drugs we use now are all fairly effective," he says, "but they are all toxic. When we prescribe these drugs we walk a tight rope between beneficial and adverse effects."

For example, the drug phenytoin (Dilantin) is commonly used in the treatment of seizures. At certain dosages it stops seizures, at higher dosages it may cause incoordination, drowsiness and may even produce coma. "Naturally we want the beneficial effects of the drug without any of the undesirable side effects. Ideally we would like to design such a drug," Ferrendelli says.

"I think the need for clinical pharmacologists, as well as a better understanding of drug therapy by all physicians is a real need in modern medicine."

Prior to 1940 there was little drug therapy for epilepsy other than bromides which cause rashes and psychoses. Phenobarbital, introduced in 1922, brought with it, drowsiness as its major side effect. A number of anticonvulsant drugs, which controlled seizures enough to permit many people to live normally, were introduced between 1933 to 1960.

Although few anticonvulsant drugs have been introduced since then, there is concern that the existing drugs are not doing an adequate job in the control of seizures. By determining how anticonvulsant drugs act in the brain, Ferrendelli hopes to improve the effectiveness of existing drugs, and develop new drugs.

Ferrendelli is also active in getting drugs which have been shown to be worthwhile approved for use in the United States. He and others recently helped convince the Food and Drug Administration to legalize the use of sodium valproate. "This drug has been used for ten years in Europe," he says. "It's a very unique anticonvulsant drug; it doesn't have very many toxic side effects and it seems to work in many kinds of seizures."

Ferrendelli's other research interest involves determining the mechanisms of seizures; specifically, why certain drugs prevent seizures and others cause seizures. "With the advances that are being made in neuroscience, perhaps we will be able to determine what

starts seizures and why they stop spontaneously," he says.

The clinical angle of Ferrendelli's work is practiced, for the most part, at the Washington University Epilepsy Center, which is concerned with the diagnosis and treatment of seizure disorders. Of the patients who frequent the Center, 98 per cent are treated with anticonvulsant drugs which require diligent use in order to derive optimal effects.

"The best way to improve patient care and decrease seizure frequency is to follow each patient on an individual basis. We must be able to determine how the prescribed drug behaves in their body to avoid toxic side effects," Ferrendelli says.

The Epilepsy Center, as most others, is not located in a cohesive unit. Individuals involved with the Epilepsy Center are located in many places — City Hospital, St. Louis Children's Hospital, Barnes Hospital, the Departments of Pharmacology and of Neurology and Neurosurgery. "I have a sign that reads Washington University Epilepsy Center. I carry it around with me and put it up wherever I happen to be. We practice wherever we are," Ferrendelli says.

In addition to Ferrendelli, there are four neuropharmacologists involved in the new division: Robert C. Collins, M.D., W. Edwin Dodson, M.D., George F. Wooten, Jr., M.D., and Eric Lothman, M.D. They each hold positions in the Department of Neurology and Neurological Surgery. Each of them pursues his own research and clinical interests while maintaining a collaboration which is beneficial to everyone.

Ferrendelli is excited about the prospects of neuropharmacology at Washington University. "As our group of clinical neuropharmacologists identify ourselves more to the medical community, we will begin to see an increasing number of patients by referral or be called upon by our colleagues for consultations," Ferrendelli says. "At this point there is tremendous informal interaction among the five of us."

Ferrendelli has plans for his Division of Clinical Neuropharmacology. He also has plans for educating medical students about clinical pharmacology and neuropharmacology. "In the near future, I would like to introduce a formal course in clinical pharmacology for senior medical students and residents interested in the special problems of drug therapy," he says. "It would be designed to teach them a comprehensive understanding of absorption, distribution, metabolism and excretion of drugs, the aspects of drug interaction and drug induced diseases.

"The problems that drugs can cause are of such magnitude that I believe such a course would be a welcome addition to the curriculum."

Ferrendelli's efforts on behalf of clinical neuropharmacology are not restricted to Washington University. He is chairman of the Neuropharmacological Drugs Advisory Board for the FDA and is on the Board of Scientific Consults for the NIH. He is anxious to spread the word about his specialty. "I wander around the country talking and giving speeches about clinical pharmacology," he says. "It's an important specialty and as people realize that more and more, it's going to grow."

Endowed professorships secure future, contribute to quality of School

By Sharon Stephens

"The Corporation of the University, becoming convinced that in no other direction could greater service be rendered than through a great, modern medical school, has determined to reorganize the School and to place it in the front rank of American medical institutions. It has called as the heads of a number of the leading departments the ablest men it could secure, who shall give their time to teaching and research, providing each with a staff of permanent assistants, who likewise shall give their time to instruction and research, and has associated with this staff, groups of the strongest men in the medical profession in St. Louis."

Robert S. Brookings
1910

In July, 1910, this statement appeared in the Washington University School of Medicine academic bulletin. That same year four prominent St. Louis men each made financial commitments to the School of \$150,000 or more to insure the future of the School.

The previous year Abraham Flexner surveyed 155 medical schools and reported that most were terribly inadequate. Of the situation at Washington University he reported, "The department must be either abolished or reorganized."

Robert S. Brookings, president of the Board of Directors of the University responded with determination. He set a standard of excellence for the School and aspired to put the School on firm financial ground. Consequently, in 1910 he and three other wealthy St. Louis businessmen entered a joint agreement to contribute funds for the endowment of chairs in the Medical Department (School) of Washington University.

The evidence of these contributions is seen today in the W.K. Bixby Professorship of Surgery, the Edward Mallinckrodt Professorship of Pathology and the Adolphus Busch Professorship of Medicine. Brookings' contribution went to the establishment of the John T. Milliken Department of Medicine.

These men realized that endowed income, in which only the income and not the principal of the money is used, was imperative to secure and retain the most qualified people in medicine as faculty for the School.

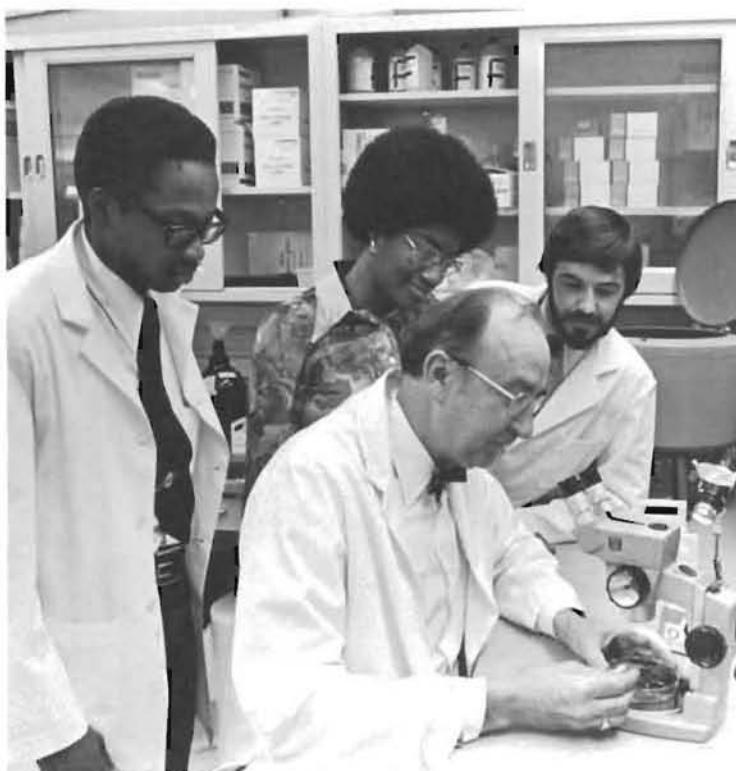
Today, endowed income is even more important as the cost of meeting the goals of excellence rapidly and steadily rise. Currently, there are 23 endowed professorships, but many more could be utilized.

Samuel B. Guze, M.D., '45, vice chancellor for medical affairs, explains the problem:





Endowed professorships insure the quality of patient care, teaching and research.



"While the School has a good endowment, the relative contribution of endowment income to our operating budget has slipped over the years.

"Endowment income hasn't kept up with inflation for about ten years," he says. "Consequently, each year the contribution to our budget from endowment has fallen, in relative terms, not in absolute dollars."

Guze and other leaders of the School realized the problem must be faced with determination before the situation worsened and the future stability and excellence of the institution was jeopardized.

The solution to these problems was realized in the establishment of the Alumni Endowed Professorship Program.

"I think this program is something the alumni can rally around," says Guze. "We are asking alumni to pledge \$1,000 a year." One hundred alumni contributing \$1,000 annually for five years will, with interest, provide the \$600,000 required to establish one Alumni Endowed Professorship.

“We have about 4,500 living alumni," Guze says. "In my judgment, probably half of them are in a position to afford that amount a year if they can be persuaded that this is a good thing to do.

"They can afford it; because of the income tax situation, the government would pay most of it," says Guze. For example someone in Missouri who is in the 50 per cent bracket would spend only about \$440 as he/she would be saving \$560 in taxes.

"If half of our alumni would agree to do this, in five years we would have enough money to establish an alumni endowed professorship in every department in the Medical School. That is the goal," Guze says.

"Such a professorship in every department would be tan-

gible and visible evidence of the interest and support of the alumni and it would be extremely helpful to the School."

An annual donation of \$1,000 or more qualifies the donor for membership in Washington University's William Greenleaf Eliot Society.

The Eliot Society provides those interested in the University an opportunity to become involved in its programs and its plans. Activities of the Society include campus film and lecture series, the use of the University Libraries and an annual dinner at which a prominent citizen is honored. Members may also join Whittemore House, the faculty luncheon and dinner club.

A steering committee chaired by Thomas Ferguson, M.D., clinical professor of surgery is recruiting alumni for the Alumni Endowed Professorship Program. "We are going to do this by fanning out," Guze explains. "Each person who gets involved will be asked to get two or three other people to join. Then each of those donors will be asked to recruit two or three more."

As enough money is donated chairs will be established and the committee will decide the order in which departments receive alumni chairs.

"A great thing about this program is that it makes it possible to support the preclinical departments as well," Guze says.

"We do not have as many endowed professorships as do institutions with which we compete," Guze says. "However, I'm confident that this program will be successful in establishing a chair in every department."

Those interested in participating in the program should contact Samuel Guze, M.D., Washington University School of Medicine, Box 8106, St. Louis, MO 63110. (314) 454-3013.



The goal of the Alumni Endowed Professorship program is to fund a chair in each department.

West Pavilion Nears Completion

The dream of Robert A. Barnes for a "modern, general hospital for sick and injured persons" has been realized many times over. When construction began in 1977 on the West Pavilion, his dream of developing Barnes into one of the world's best hospitals continued to be fulfilled.

Plans for the West Pavilion underwent intense scrutiny. Local and state medical and administrative agencies reviewed the

proposed plans, and all agreed that the West Pavilion was necessary to meet the medical needs of the St. Louis area.

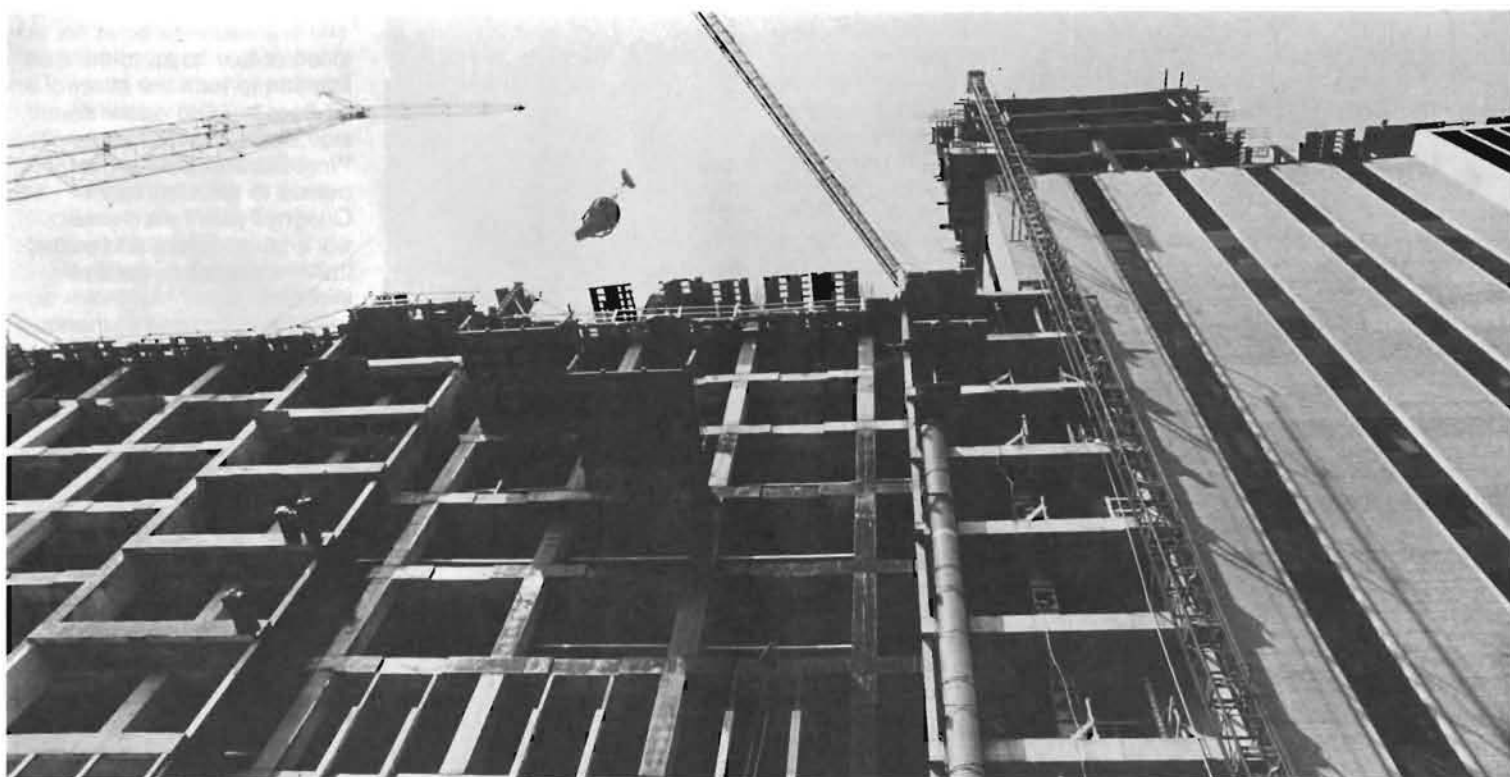
The West Pavilion project, projected to cost approximately \$50 million dollars and scheduled for completion in 1980, consists of three parts. The first is the West Pavilion building situated between Queeny Tower and the East Pavilion, consisting of 17 floors and connected to the East Pavilion.



The second step is the addition of four floors to the East Pavilion to form the effect of one 17-floor building on the south side of the Medical Center. The West Pavilion also will be connected to the 17th floor of Queeny Tower by a skywalk. This will enable visitors and patients to have access to the dining facilities.

The third facet of the West Pavilion project consists of connecting the building with the





original Barnes building and Rand-Johnson.

The project will not increase the number of beds at Barnes, but it will centralize existing services and make more space available for modern treatment and for new, sophisticated medical equipment. Approximately 250 patient care beds will be available in the West Pavilion, replacing beds now in Renard and Wohl hospitals.

The first floor will house admitting, pharmacy, accounting and some administrative offices. The second floor will be devoted to cardiothoracic surgery, complete with operating rooms, recovery room, intensive care unit, rooms for pre- and post-operative patients and some special procedure rooms.

Operating rooms, which will replace older ones in Rand Johnson, will be housed on the third floor. The fourth floor will consist of a new burn unit, sleeping quarters for house staff physicians, classrooms and closed circuit

television rooms. Kidney transplant surgery and an intensive care unit for general surgery will be accommodated on the fifth floor.

Floors six, seven and eight will be for general and orthopedic surgery patients as well as those with severe lung problems. Mallinckrodt Institute of Radiology will occupy floors nine and ten. The 11th floor will be reserved for future expansion and the 12th floor will contain mechanical and electrical system controls.

Extensive recreation and treatment facilities for psychiatric patients will be located on floors 14 and 15. Additional faculty offices will be on floors 16 and 17.

The West Pavilion will provide a centralization of facilities which will help to save time and money and will ensure that patients will continue to receive the high quality of care they expect at Barnes.



\$100,000 gift makes new dialysis method available

Spending three mornings a week on a kidney machine, is a lifesaving necessity to kidney failure patients. However, it does require major lifestyle changes. Through the continued support of the Chromalloy American Corporation, a revolutionary new method of hemodialysis, known as continuous ambulatory peritoneal dialysis (CAPD), is now available at WUMS.

CAPD totally frees patients from long, wearying sessions on a kidney machine. They can walk about, work and perform daily tasks while their blood is being cleansed. Rather than being filtered by the kidneys, the wastes are filtered by the thin membrane lining the abdominal, or peritoneal cavity. A small permanent opening is made just below the navel through which a tube is implanted which leads through the peritoneal membrane into the cavity itself.

The cleansing process involves attaching a small plastic bag containing two liters of a blood cleansing fluid to the tube, and allowing it to drain into the peritoneal cavity. Then the tube is clamped off, and the empty bag is folded up and worn beneath the clothing at the waist.

For the next five hours a process similar to conventional hemodialysis takes place. Then the bag is unwrapped, unclamped and the waste-laden fluid drains out. The procedure must be repeated at four to eight hour intervals every day.

Peritoneal dialysis is not for everyone who suffers kidney failure. Some object to the prospect of a permanent hole in the abdomen. Others are not careful enough with the dialysate bags which must be handled with extreme care to avoid abdominal infections.

Although CAPD is not designed for every hemodialysis patient, there are several distinct



Hershel Harter, M.D., director of the Kidney Center, talks with patient Margie Briggs and Leon Toups, president of Chromalloy American Corporation.

advantages to the procedure. The patient can safely sleep through the procedure without the risk of bleeding to death if a tube is disconnected, and CAPD puts less strain on the heart, as no blood ever leaves the body.

The Chromalloy American Kidney Center was established in 1969 with a quarter of a million dollar grant from the Chromalloy American Corporation and private funds of the late Joseph Friedman, then chairman of the board at Chromalloy.

Friedman was very interested and involved in the establishment of a kidney center. He

considered such a facility to be needed by the community and believed it was part of his community responsibility to help fill that need.

He started a relationship between the Chromalloy American Corporation and Washington University School of Medicine that has been continued by his successor, Wesley J. Barta.

Chromalloy's president, Leon Toups, recently presented a check for \$100,000 to Hershel Harter, M.D., medical director of the Kidney Center. In January, the company commissioned the Missouri Concert Ballet to perform Serge

Prokofiev's "Cinderella" as a memorial tribute to Joseph Friedman, the late board chairman of Chromalloy, and announced that all proceeds would go to the Kidney Center.

"We began our joint adventure in 1969 with the ability to treat two patients. Now we can treat more than 100 here and have an active home hemodialysis training program in addition to peritoneal dialysis. This unit also makes kidney transplants possible by maintaining outpatients' health until a suitable transplant becomes available," Harter says.

Scholarship fund honors Koetter

The School of Medicine has received a gift of \$150,000 to establish an endowed scholarship fund in honor of the late Albert F. Koetter, M.D.

The contribution was made by Dr. Koetter's daughter, Mrs. Stella Koetter Darrow, who received a bachelor of arts degree from Washington University in 1931.

Dr. Koetter, who died in 1921, was the Chief of the Medical School's Otology Clinic from 1916-1920. He received his medical degree from the old Missouri Medical College in 1892 shortly before that institution merged with Washington University's School of Medicine.

The gift will provide at least one full tuition scholarship annually for a student in need of financial support. This person must have demonstrated academic

ability and shown outstanding promise in the field of medicine. The awards will be called the Albert F. Koetter, M.D., Scholarships and will provide support until the student has completed his or her medical education in good standing.

In accepting the gift on behalf of Washington University, Vice Chancellor for Medical Affairs Samuel B. Guze, M.D., said, "Mrs. Darrow has always been interested in the welfare of our Medical School, and we are sincerely grateful for her generosity and interest. It is civic-minded and generous citizens such as Stella Koetter Darrow who provide the support we need to assure the success of the Washington University School of Medicine. We are most grateful to her."

Mrs. Darrow has provided several gifts to Washington University in memory of other members of her family, including her sister Wilma Koetter, for whom an annual lecture is named.

Before her retirement, Mrs. Darrow was a librarian at the St. Louis Public Library.

Placement service begun for alumni

For the first time the Medical Center Alumni Association is establishing a Placement Information Service for its members. The service will offer help to house officers who are seeking opportunities in private practice. Likewise, it will serve alumni who are established and may be seeking additional associates.

According to Jack Barrow, M.D., '46, past president of the Association and chairman of the Alumni Placement Information Service, information cards will soon be distributed. House officers, who are interested, will be asked to list their qualifications and practice preferences. Alumni and former house officers will receive "practice opportunity cards" and give appropriate position descriptions if available.

Cards should be returned to the Medical Center Alumni Office, 660 S. Euclid, St. Louis, MO 63110. The alumni office staff will coordinate the service.

"When the office receives requests for potential candidates for openings, the appropriate information will be provided from current files," Barrow explains. "House officers will also be encouraged to review the practice opportunity descriptions on file in the alumni office, room 107, Wohl Hospital."

Information cards will be distributed at least annually and will be available at any time on request. Those with any questions about the program may call the office (454-2823) for information.

"The program has been established in response to urging by several alumni," Barrow says. "Most notably Richard Windsor, M.D., '52, a member of the Medical Alumni Executive Council from Sheboygan, WI, is very enthusiastic about participating in the service."

"We think it will be of great service to alumni and current house staff."

Seniors receive internship matchings

This year 136 medical students participated in the National Intern and Resident Matching Program. Thirty-three graduates or about 23 per cent will participate in residency programs in St. Louis area hospitals. Fifty-two graduates chose medicine residencies; 23-surgery, 11-pediatrics, 11-flexible, 8-pathology, 7-obstetrics and gynecology, 7-psychiatry, 3-diagnostic radiology, 2-orthopedic surgery and 2-urology.

Arizona

Phoenix

Good Samaritan Hospital
David Robinson, Family Practice

Tucson

Tucson Hospitals
Christopher Blodi, Flexible

California

Fresno

Valley Medical Center
Donald Gregory, Internal Medicine

Long Beach

St. Mary's Hospital
Douglas McKenzie, Internal Medicine

Los Angeles

L.A. County-U.S.C. Medical Center
Jeffrey Cichon, Orthopedic

Surgery

Lee Darrah, Diagnostic Radiology
Kathryn Johnston, Flexible
Robert Larsen, Internal Medicine
Patrice Leonard, Internal Medicine
Carol Mitchell, Psychiatry

Merced

U. of California (Davis) Affiliated Hospitals
William Fitts, Family Practice

San Diego

U. of California, San Diego Affiliated Hospitals
Diana Marquardt, Internal Medicine

San Francisco

Letterman Army Medical Center
Jeffrey Coe, Flexible



Robert Findlay, Flexible
U. of California Hospitals
(Herbert C. Moffitt Hospital)
Neil Derechin, Pediatrics
Joseph Miletich, Internal
Medicine

Colorado

Denver
St. Luke's Hospital
Richard Stiverson, Flexible
U. of Colorado Affiliated
Hospitals
Susan Babcock, Internal
Medicine
Ralph Fillingame, Family Practice
Bruce Molitoris, Internal Medicine

Connecticut

New Haven
Yale-New Haven Medical Center
Theodore Kaczmar, Surgery
Daniel Weaver, Pathology

Norwalk

Norwalk Hospital
Gail Lowenstein, Internal
Medicine

Waterbury

St. Mary's Hospital
Donald Opila, Internal Medicine

Waterbury Hospital
Gregory Weltin, Flexible

District of Columbia

Bethesda Naval Medical Center
Gerald Burger, Obstetrics &
Gynecology
Children's Hospital
John Mulroy, Pediatrics
George Washington University
Hospital
Barbara Shoback, Internal
Medicine
Catherine Stuart, Internal
Medicine
Howard University Affiliated
Hospitals
William Beatie, Surgery
Walter Reed Army Medical
Center
Erik Gregorie, Surgery

Florida

Miami
U. of Miami Affiliated Hospitals
William Forstate, Internal
Medicine
George Stergis, Internal
Medicine

James Weinstein, Internal
Medicine

Georgia

Atlanta
Grady Memorial Hospital
Stephanie Brown, Internal
Medicine

Hawaii

Honolulu
Tripler Army Medical Center
David Dooley, Flexible

Illinois

Chicago
Michael Reese Hospital
Garry Willer, Psychiatry
Northwestern U. Medical School
Barry Sidorow, Internal Medicine
U. of Chicago Clinics
Arista Garnes, Obstetrics &
Gynecology
Kathy Liu, Surgery
U. of Illinois Affiliated Hospitals
Raymond Roden, Internal
Medicine

Springfield

Southern Illinois U. and Affiliated
Hospitals

Bruce Johnson, Family Practice
Steven Langguth, Family
Practice

Indiana **Indianapolis**

Indiana University Medical
Center
Debra Cook, Obstetrics &
Gynecology

Iowa **Iowa City**

University of Iowa Hospitals
Gary Smith, Psychiatry
William Williams, Urology

Kansas

Kansas City
U. of Kansas Medical Center
Robert Sayre, Internal Medicine

Massachusetts **Boston**

Beth Israel Hospital
Brian Mercer, Internal Medicine
Martin Shapiro, Internal Medicine
Boston Hospital for Women
Howard Silverman, Obstetrics &
Gynecology

Massachusetts General Hospital
Roger Perlmutter, Internal
Medicine

Peter Bent Brigham Hospital
John Clark, Internal Medicine

Michigan **Detroit**

Wayne State University
Augustine Attiah, Internal
Medicine

Minnesota **Minneapolis**

Northwestern Hospital
George Chaitkin, Internal
Medicine

U. of Minnesota Hospitals
Robert Connor, Pathology
Leslie Fishman, Pediatrics
Gene Karwoski, Internal
Medicine

Rochester

*Mayo Graduate School of
Medicine*
Steve Kunkel, Internal Medicine
Shirley Yeh, Obstetrics &
Gynecology

St. Paul

St. Paul-Ramsey Hospital
Robert Lund, Family Practice

Missouri **Columbia**

U. of Missouri Medical Center
David White, Family Practice

St. Louis

Barnes Hospital
Kendall Barker, Pathology
John Gibson, Internal Medicine
Gregory King, Pathology
James Owen, Internal Medicine
Mary Rudloff, Pathology
Steven Sheffner, Obstetrics &
Gynecology
Margaret Shipp, Internal
Medicine
Brock Whittenberger, Internal
Medicine
Thomas Winokur, Pathology
The Jewish Hospital of St. Louis
Jeffrey Craver, Pathology
Thomas Dumler, Surgery
Scott Frankel, Internal Medicine
Frederic Gorin, Internal Medicine
Charles Grassie, Internal
Medicine
Patrick King, Internal Medicine
Nancy New, Surgery
Timothy Patton, Surgery

Ken Pischel, Internal Medicine
Philip Schmitt, Surgery
Marlys Schuh, Surgery
Wanda Terrell, Internal Medicine
Craig Wehrli, Internal Medicine
Jeffrey Wright, Internal Medicine
St. Louis Children's Hospital
Barry Wershil, Pediatrics
St. Louis University Hospitals
Stephen Piercy, Urology
St. Luke's Hospital
Robert Rosenberg, Internal
Medicine
Anne Trout, Internal Medicine
*Washington University Affiliated
Hospitals*
Brent Allen, Surgery
Dale Anderson, Psychiatry
Renee Demers, Psychiatry
Lorenzo Spratt, Psychiatry
Richard Sundermann, Psychiatry
John Thalgot, Surgery

Nebraska

Omaha
*University of Nebraska Affiliated
Hospitals*
Mark Secor, Orthopedic Surgery

Nevada **Reno**

University of Nevada
Mark Dambro, Family Practice

New York **Manhasset**

North Shore University Hospital
Kenneth Hoffman, Internal
Medicine

New Hyde Park

Long Island Jewish Hospital
Kenneth Friedman, Internal
Medicine

New York City

Montefiore Hospital Center
Andrew Goodman, Pediatrics
The New York Hospital
Thomas Armbruster, Obstetrics &
Gynecology
Roosevelt Hospital
Michael Estridge, Internal
Medicine

Rochester

Strong Memorial Hospital
Sandy Fogel, Surgery
University of Rochester
Associated Hospitals
Alice Ackerman, Pediatrics

Cynthia Sortwell, Pediatrics

Syracuse

Syracuse Medical Center
Frank Barber, Surgery

North Carolina **Chapel Hill**

North Carolina Memorial Hospital
William Fricke, Pathology

Durham

Duke University Medical Center
Thomas B. Ferguson, Surgery

Winston-Salem

North Carolina Baptist Hospital
John Bartmess, Internal Medicine

Ohio

Cincinnati

Cincinnati General Hospital
Nancy Doan, Pediatrics

Columbus

Ohio State University Hospitals
Arthur James, Pediatrics

Oklahoma

Oklahoma City
University of Oklahoma Hospitals
John Frame, Surgery

Oregon

Portland

Emanuel Hospital
David Rowell, Flexible

Pennsylvania

Bryn Mawr

Bryn Mawr Hospital
Jack DiMarco, Flexible

Philadelphia

Children's Hospital
Michael Georgieff, Pediatrics
*Hospital of the U. of
Pennsylvania*
John Hanson, Internal Medicine
Danny Jacobs, Surgery
Temple University Hospitals
Dawn Wheeler, Internal Medicine

South Carolina **Greenville**

Greenville Hospital System
Kenneth Scissors, Flexible

Tennessee

Chattanooga

*U. of Tennessee Educational
Center*
Frances Lloyd, Family Practice

Nashville

Vanderbilt University Affiliated

Hospitals

Robert Bechtold, Diagnostic
Radiology
James Zakem, Diagnostic
Radiology

Texas

Dallas

*S.W. Medical School (Parkland
Hospital)*
Kurt Brotherson, Flexible

Houston

*University of Texas Affiliated
Hospitals*
Bruce Kraemer, Surgery

San Antonio

*Wilford Hall U.S.A.F. Medical
Center*
Richard Bell, Pediatrics

Utah

Salt Lake City

*University of Utah Affiliated
Hospitals*
Stephen Bradley, Surgery
Cecil Holliman, Surgery
Stephen Ratcliffe, Family
Practice

Virginia

Charlottesville

University of Virginia Hospitals
Susan Kolb, Surgery
Christopher Maret, Internal
Medicine
William Sando, Surgery

Richmond

Medical College of Virginia
Edward Miller, Internal Medicine
Erik Swensson, Surgery

Washington

Seattle

*University of Washington
Affiliated Hospitals*
Michael Kimmey, Internal
Medicine
Virginia Mason Hospital
Kenneth Melman, Internal
Medicine

Wisconsin

Milwaukee

*Medical College of Wisconsin
Affiliated Hospitals*
David Brusven, Surgery

Canada

Vancouver

Vancouver General Hospital
David Hu, Internal Medicine

The Alumni Report

Kona 1979: or "The Plane Ran Out of Gas"



The author Harold Rapp ('47) and friend.



The Luau

We went to the Candlenut Tree State, Hawaii, and left home on Candlemas Day (also called Groundhog's Day). So, Candlemas to Candlenut set the theme for the '79 W.U. Medical Alumni Conference at the Kona Hilton, Kailua, Hawaii.

Back home a smart old groundhog had already returned to the burrow for six more weeks of winter. Not so the W.U. group from St. Louis, who were flown-over, diverted, delayed (unscheduled gas stop in Albuquerque), trans-shipped, and ultimately transported to Honolulu several hours too late for the connection to Kailua. They deserve credit, these alums, for they arrived at the hotel early the next morning smiling and happy after a short night's sleep. Being a groundhog offers no challenges.

A superb cocktail party started the activities that first evening. It was enhanced by carnation and plumeria leis and the opportunity to see old friends as well as to meet new ones.

Clinical programs began on Monday, and were all well presented and accepted. Dr. John Bergmann, president of the Medical Center Alumni Association, presided. Dr. Jon Pegg gave two lectures on "Clinical Aspects of Gas Transport Systems in Going Up, Down, or Out," and "Common Problems in Diving Medicine." Dr. William R. Fair spoke on "Management of Prostatic Cancer," and later in the week, on "Diagnosis and Treatment of Urinary Tract Infections." Dr. George Winokur talked about "Types of Depressive Illness," and with Dr. Bergmann, on "Clinical Management of Depression." Dr. Elmer Brown informed us of "Continuing Medical Education at Washington University Medical School — Current and Future Prospects;" and Dr. John H. Scaff, Jr. gave talks on "The Immortal Runner" and "Everything You Wanted to Know About Running but Were Afraid to Ask."

The last session, a filmed inter-



Sue Schultz, Betty Winokur, Ann Stricklin, J.A. Stricklin, George Winokur, Robert Schultz ('55)



President John Bergmann ('54)

view with Henry G. Schwartz, M.D., the August A. Busch, Jr. Professor of Neurological Surgery at Washington University, was a fitting denouement to the program. Almost all of us have had contact with him at one time or another and we hold him in great esteem.

Well received, informative, and with something for everyone — that probably says it best.

What about the fun times? No Hawaiian visit is complete without a luau. Ours had all of the foods including poi and roast pig, shell leis for everyone, beach boys and hula dancing. Several members of the group, who should forever remain nameless, joined the hula ladies on stage. All enjoyed it, including co-operative participants.

A spirited and competitive tennis tournament was held; a round-robin mixed doubles contest. The

winners were Judy Garfinkel, John Denman, Hanna Evens, and Ray Frederick.

Golf tournament competition was played at Keauhou Golf and Country Club. Winners were: Mel Goldman, Marv Levin, John Nelson, and yours truly. Mel is making a habit of winning. We think he needs more professional competition.

A tour of the City of Refuge (which now has an official and totally unpronounceable Hawaiian name) and a tour trip to Mauna Kea, the volcano, the beaches, and orchid gardens are a part of every memory.

The Outstanding Performance Award goes to Richard Sakimoto and his wife, Edna. They are a very charming, hospitable couple. Without them the trip would have been good; because of them it was excellent. His fishing cruiser "Kamome," complete with crew, was available for fishing trips at all times when scientific meetings were not in session.

Things that come to mind during the week: We departed the bus with cameras in hand, over shoulders, and at the eye focusing. I thought a new group from Japan had landed.

We'll take a picture of anything, won't we? I walked around in the rain, burning up film rapidly. The lighting seemed perfect. I saw one fellow focusing a close-up on a nut on a candlenut tree. It was "a camera nut taking a picture of another nut."

The psychiatrists lectured *to* me but not *about* me. I was pleased; usually it is the other way around.

Why did so many of the wives attend the psychiatric sessions?



President Bergmann with speakers Elmer Brown ('50), Judson McNamara ('61), Joh Pegg, William Fair, George Winokur



Russell Blatther ('33), Don Silsby ('32), Robert Rutherford ('36), Richard Sakimoto ('33)



Mark Levin ('51)

Are doctors' wives depressed, or do they want to know about diagnosis and treatment of depressed husbands?

If I had someone put a microscope on my chromosomes to see if I inherited depression, and if they increased the power, would the blob on that chromosome read out: "HEW"? "cost-effectiveness"? or "Teddy Kennedy"?

What with the gas transfer problem in diving, the code phrase should be "SOS" — meaning "Stay on Surface."

The extent of carcinoma of the prostate is not easily diagnosed; nor is it effectively treated. Therefore, don't get one.

In re: the "Immortal Runner": the quickest way for me to become immortal is to start running.

Because the Hawaiian people have lovely, placid and serene personalities, I did not overhear a single argument while in the Islands.

Accolade Department: Claire MacConnell, Director of Medical Alumni Affairs — superb job under some trying circumstances. We appreciate her efforts; she is one of our special people. The Kirkland Travel Agency — Ann Kirkland, Betty French, Ron Storm, and Harry Aiu all did extra duty. None of us really knows the number of times that they checked on transportation, luggage, and reservations. No group could be more cooperative. Whenever and wherever they wish to lead, I am willing to follow.

If the bad news is weather, so is the good news. The sunny days were superb, the company was great, the food was fattening and people cooperative.

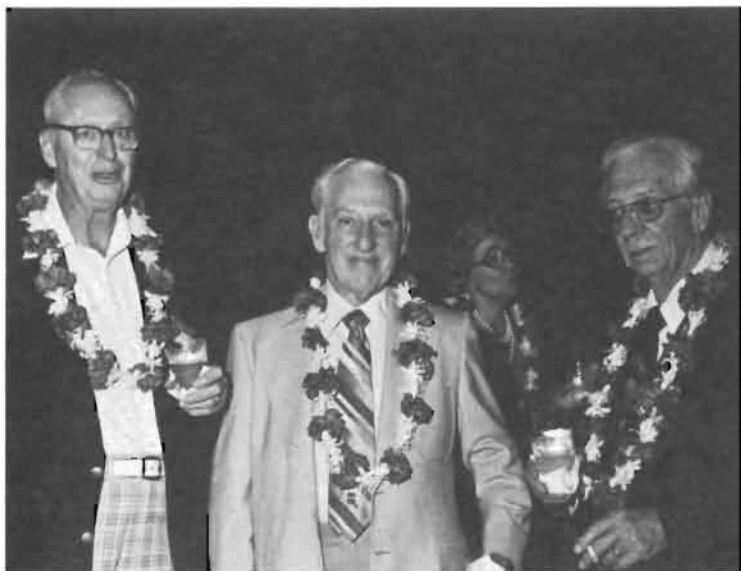
Aloha '79; I'm ready for Bienvenidos in '80. Ixtapa! Here I come.

Mahalo nui.

Harold B. Rapp, M.D. '47



Richard Myers ('65), Mel Goldman ('43M)



Walter Tillman ('42), Don Silsby ('32), Raymond Conrad ('35)



Dottie & John Herweg ('45), Dee Lansche



Joseph Kendis ('33)



St. Louis Children's Hospital has served hundreds of thousands of children since it was established in 1879. It has earned and maintained a world reputation for excellence. This year the hospital is celebrating 100 years of service. The School of Medicine is intricately involved in this celebration. It has played a role since it became affiliated with the hospital more than 80 years ago. The Department of Pediatrics is headquartered in St. Louis Children's Hospital and much of the research and patient care is a joint effort. The next issue of *Outlook* will examine the history, research, teaching and patient care at St. Louis Children's Hospital.

Washington University
School of Medicine
660 South Euclid Avenue
St. Louis, Missouri 63110

