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From the Editors' Desk

In recent months the image of the medical profession has plummetted in the public view with the relevation of criminal acts and other transgressions committed by physicians. Although many varied investigations have been reported in the proceedings of the Discipline Committee of the College of Physicians and Surgeons of Ontario since they were opened to the media, none have caught the public attention like the cases of sexual assault of patients.

One such case involved a psychiatrist, who in the course of treatment of a female patient pressed her face into his groin as a form of therapy on several occasions. The Discipline Committee felt that the doctor's behaviour was reprehensible, but due to a combination of factors was unable to recommend that he be stripped of his license to practice. Following the adverse publicity that the case received, the CPSO set up a Task Force to investigate sexual assault by doctors and to recommend ways of dealing more effectively with complaints.

Thus far, the task force has heard from many patients who have been assaulted at some time by a physician. While there are no figures about the prevalence of assault by physicians, it is estimated to be much higher than previously estimated.

Certainly, no one asks to be sexually assaulted. Why does it happen? We are advised that becoming sexually intimate with a patient is considered misconduct, regardless of how consenting the patient is. Even sending a patient to another physician before beginning a relationship may not be acceptable. Some might say that in general we are not taught about sexuality and relationships in medical school. In addition, many physicians have been on a fast-track into medicine and residency programs without having time to experience meaningful relationships and normal social interaction. Suddenly let loose on society, well-respected without necessarily having personally earned respect can be a heady experience. Is the answer that we are egocentric and have poor impulse control?

Physicians have always had a tendency to believe they know what is best for the patient regardless of what the patient wishes. That is the paternalistic approach, and basically, well-educated and informed patients have rejected it. However, we must remember that many patients have always inherently trusted their doctors and do not expect to be part of the decision-making process. These same patients may be most vulnerable to mistreatment by physicians.

Sexual misconduct by a physician in reality is no different than that by any other individual in a position of authority, such as an employer or a teacher. The difference is that physicians are more often in situations that are conducive to it occurring. We see many patients alone each day, in variable stages of undress. We perform many pelvic and rectal examinations and patients in general find them embarrassing, uncomfortable, demeaning and beyond their control. Add in any component that might make the experience seem at all sexual, and physicians may find themselves accused before the College and possibly the courts, as did one physician in Woodstock.

Sexual assault of a patient is a loathesome crime which should be punishable by all means available to the College and the courts. We must remember that our patients have rights that they do not give up when they take their clothing off. Each patient has the right to be treated with respect and with professionalism. The same way that we would like to be treated if the roles were reversed. ⌟

Connie Nasello Paterson, Meds '91
Editor

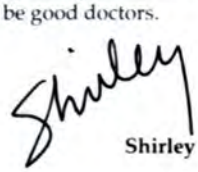
What makes a good doctor? This became the latest topic of controversial U.H. cafeteria conversation the other day while I was sitting around with some fellow classmates. It all started out so innocently, with everyone blissfully discussing their rosy future plans for after graduation. However, differing views quickly became apparent when we began to discuss how we wanted to practice medicine, and what our priorities would be.

In order to be a good doctor, we all agreed that medicine requires a certain dedication in wanting to do your best (as is the nature of most of us type A individuals in meds or else we wouldn't be here), and that in order to be good, that one had to like their work. One individual then used the example of a physician he knew who worked seven days a week, as well as two emergency shifts, who had three kids, whose patients loved him, **and** who loved his work. Someone then quickly jumped in and asked - What about his family? To which the individual replied that he spent time with his kids on Sundays. Hmm, somehow something here just doesn't seem quite right. This of course immediately triggered an onslaught of opinions on what was more important -family or work? That is, how can one be a good doctor unless one puts 110% into it, and makes it their number one priority, without sacrificing everything else, including family? This is a disturbing question, as it implies that you can't be a good doctor unless you put everything else secondary to it.

Some people argue that as individuals, we are diverse in our talents. That is, the skills that we use in medicine are not necessarily the same ones that apply to being say, a good parent, or good at any other activities, be it golfing, drawing, or playing a musical instrument. Therefore one can be equally as good at more than one thing.

Unfortunately, we have this concept called **TIME**. Time only allows us 24 hours a day to achieve all the things we would like to do; this is when one has to make choices on what really matters to them. Physicians, often have difficulty with this, as they are, as a group, generally used to taking on challenges and succeeding at them. Therefore they find it hard to say no when people ask them for help (I'm sure you're all looking at each other at this point and saying, "Who is she talking about? Certainly not moi"). But seriously, in a profession that is as demanding as medicine is, time is precious.

So, in a way you can't win. We do have to make choices. But hopefully each of us will make decisions to suit our own individual needs, striking an equilibrium that works for us....and **still** be good doctors. ⌟



Shirley Lee, Meds 92
Editor

On the Cover

The Ego is the center of all our basic functions and desires, as Freud would say — broaden your horizons and turn to our article on page 12 to "expand your ego."
Design: David Fisman, Meds '94

The **University of Western Ontario Medical Journal** is published 4 times per year by the students of the U.W.O. Medical School. Established in 1930. Articles, letters, photographs and drawings welcome from the London medical community. Submissions should be typewritten and double spaced, or submitted on computer diskette. Correspondence should be directed to U.W.O. Medical Journal, Health Sciences Centre, U.W.O., London, Ontario, N6A 5C1.

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Letters

"R E S P E C T"

Dear Editors:

I object to the pedantic and presumptuous tone of Leslie Wright's article. I do not wish to take up the argument as to whether or not alcoholism is a biological trait or should be medicalized more than it is, but I object to the attack on one of the teachers of the University, who is a well respected specialist in liver disease. No matter how strongly Leslie Wright feels about alcoholism as a treatable disease (which often it is not), he should not lose sight of the obligation to respect a teacher and a senior colleague. I think Dr. Ghent is owed an apology. ❑

Andrew Kertesz, M.D.
Clinical Neurological Sciences
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Editors' Note:

It is the editorial position of the ***Medical Journal*** *that in a University where independent thought and free speech are encouraged, that professors must be prepared to have their point of view challenged and to respond to it. That is the basis of fundamental change and creative discovery in academia.*

Alcohol Abuse — Disease or Risk Behaviour?

Dear Editors:

I was surprised to read the comments about my "old ideas" regarding alcohol abuse and alcoholism by Leslie Wright in the November 1990 issue. As a teacher, I am flattered that I stimulated enough thought about the subject to provoke this response. However, I also realise that I failed in my purpose in the seminar which was to encourage students to think in a consistent and logical manner about the complex interaction of human behaviour with human disease. The essence of ethics is sound logic and consistency; the faulty logic in Mr. Wright's article requires a reply.

I can perhaps take some consolation in the fact that Mr. Wright not only regards my ideas and old (and therefore presumably invalid), but also regards all diagnostic criteria arising before 1987 as equally old and invalid. the DSM-II criteria of 1985 are considered outdated by the "more recent" DSM-III-R. This implicit faith that something new is ipso facto better is totally without any scientific basis and is hardly justified when applied to a problem which has plagued mankind since fermentation was first observed. Such worship of the present mode of thinking fails to consider the wisdom of centuries of thinkers, moral philosophers, religious leaders and mystics who have done more to put alcohol abuse and alcoholism into perspective than have modern arbitrary medical criteria.

Mr. Wright extols the virtues of the "inherent flexibility" of the modern era criteria for diagnosing alcoholism (or is the correct modern term alcohol addiction or alcohol abuse or "alcohol use problems"). He, however, objects to my suggestion that this "inherent flexibility" in the hands of "the physician ...trained to accept a patient's history at face value" leads to a large element of subjectivity in the labelling of someone as having this "disease".

Mr. Wright feels that it is inappropriate for me or families or social agencies to express any anger about the behaviour of an individual who is addicted to alcohol, as the recognition of the behaviour as "conflicted", whatever that means, should remove any need for emotional responses or value judgements. Such psychobabble should not be used to judge ordinary human responses to human behaviour as inappropriate. I would argue that after establishing rapport, my controlled anger about the behaviour mixed in appropriate proportions with empathy for the individual, is practically the only therapeutic tool that I have to treat this "disease"; it is much more effective if I, as a physician, have a tangible disease such as alcoholic cirrhosis to treat. I can then enlist the help of the individual to modify the underlying risk behaviour i.e. alcohol consumption. Without a real physical disease as a consequence of the risk behaviour, I as a physician have no more resources to treat the behaviour than does anyone else. Indeed, Mr. Wright acknowledges that lay people such as members of AA, with no particular medical training are more effective in treating alcoholism than are physicians, but illogically then insists that this is a "disease". The logical extension of this labelling is that physicians are the only professionals qualified to diagnose and treat alcoholism, even through they do so less effectively than do non-professionals.

The issue of whether alcohol use, in whatever quantities or patterns are considered risky by a particular society at a particular point in time, should be considered a disease is central to the debate. In the traditional medical diagnostic approach, a disease is usually a physical ailment, whether caused by an individual's behaviour or not, or a clearly identified constellation of psychiatric symptoms. Mr. Wright acknowledges that there is usually no identifiable psychopathology underlying alcoholism, than argues that because of this absence of psychopathology, it should be considered as "a primary clinical syndrome in its own right". This same absence of underlying psychopathology has been used in other situations to remove the label of "disease" from other human behaviours, e.g. homosexual practices. By extension of the kind of logic used by Mr. Wright with respect to alcohol, anyone who ever did anything that posed a risk to their health should be considered as having a disease that caused that behaviour. Anyone eating excessive amounts of cholesterol could be considered to have a disease, rather than simply risking a disease. All playing of contact sports would have to be considered as a manifestation of disease. I would argue that we as professionals should consider alcohol use in excess as a risk factor for the development of disease, rather than a disease itself, in exactly the same way that we refuse to label homosexuality as a disease (because of the absence of underlying psychopathology), but recognise it as a risk factor for the development of certain diseases. What is the difference? Everyone acknowledges that a gay man may risk developing disease because of his behaviour, and that society and medical professionals have an obligation to such individuals to educate and warn them about the risks. We have the same obligation with respect to alcohol use by our patients, but we do not need to provide them with a convenient medical diagnosis to relieve them of responsibility for their risk behaviour.

We, as professionals, must practice consistency and sound logic in defining and treating diseases. ❑

C.N. Ghent, M.D.
Associate Professor of Medicine

The Neuroradiology of AIDS

by Iris De Odorico, Meds '91

Acquired immunodeficiency syndrome (AIDS) is a disease of extensive and diverse manifestations. It is an increasingly important disease that has become a social phenomenon. Although the therapeutic options for treating AIDS patients may be limited at present, radiologic investigation is often of critical importance in determining the extent and stage of opportunistic infections and neoplasms. Neurologic signs and symptoms are common in patients infected with the human immunodeficiency virus (HIV). Approximately 39% of patients have neurologic symptoms and 10% of these patients present with neurologic

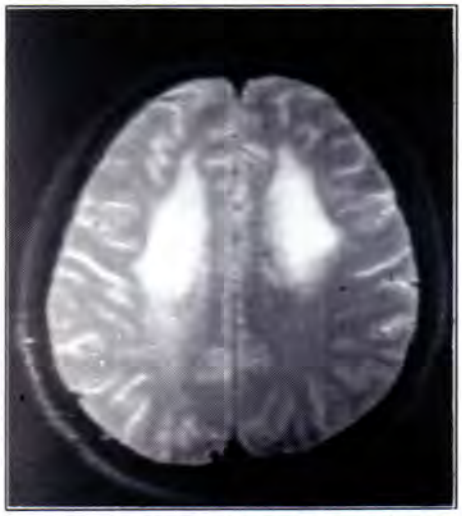

Figure 1: HIV encephalitis. This T2-weighted MR image is that of a 41 year old AIDS patient. It shows extensive areas of abnormal high signal intensity, representing areas of white matter demyelination.

symptoms before other manifestations of AIDS (1). Neuropathologic evidence of central nervous system (CNS) disease is even higher. Numerous autopsy series have shown CNS pathology in up to 80% of all patients (2). A wide variety of infectious and neoplastic diseases have been found in these patients. Likely the most important form of infection is the HIV virus itself, which has been shown to be "neurotropic", directly attacking brain and spinal cord tissue (3). As well as the direct effects of the HIV virus on the CNS, AIDS patients are also predisposed to develop opportunistic infections and neoplasms. The radiologic manifestations of the various diseases that affect the brains of AIDS patients fall into 4 categories. These 4 common patterns of CNS disease are demonstrated by computed tomography (CT) or magnetic resonance imaging (MRI). The most common finding is diffuse cortical atrophy, while the second most common finding is white matter disease, generally caused by viral infection. One or more mass lesions comprise the third most common finding. The least commonly observed pattern is leptomeningeal (pia mater and arachnoid) or ependymal disease, caused by either infection or metastatic tumor. Each of these patterns and the disease entities that produce them will be discussed.

Cerebral Atrophy

Diffuse cerebral atrophy is very common in AIDS patients, occurring in greater than 30% of those patients with neurologic symptoms (4). As mentioned earlier, HIV is a neurotropic virus, directly invading brain cells and causing a loss of brain substance. When it attacks brain tissue, it may produce a syndrome characterized by impaired memory and concentration, with a psychomotor retardation that progresses to dementia. The syndrome has been termed the subacute encephalitis syndrome and the "AIDS dementia complex" (5). Dementia is a common clinical finding in AIDS patients that occurs in greater than one-half of all cases. At autopsy, there is evidence of gross cerebral atrophy. Other disease processes such as Cytomegalovirus (CMV) infection, systemic dehydration and cachexia may also result in diffuse cerebral atrophy but it is likely that the AIDS dementia complex caused by HIV infection is the most common cause for atrophy. Both CT and MRI are useful for demonstrating diffuse cerebral atrophy characterized by enlargement of the sulci and ventricles. Both supratentorial and infratentorial atrophy may be present. The extent of atrophy present typically correlates with the degree of intellectual impairment. However, some patients with severe dementia may exhibit little or no atrophy on CT or MRI studies. Patients with cerebral atrophy appear to be at greater risk for subsequent development of intracranial mass lesions (4). Recent studies suggest that early in the course of HIV-dementia, treatment with Zidovudine (Retrovir) may reverse some of the signs and symptoms of this illness.

White Matter Disease

Pathologic changes in CNS white matter, which are very common in patients infected with HIV, are more often seen at autopsy than clinically evident. These changes are usually due to viral encephalitis. Although HIV is the most common pathogen, CMV, herpes simplex virus, papovavirus, varicella-zoster virus and others have been implicated. Another less common cause is ischemic encephalopathy, which has been seen at autopsy in patients with severe hypoxia from opportunistic pneumonia (2). Radiologically, T2-weighted MRI is the most sensitive modality available for detecting white matter changes in AIDS patients. The demyelination produced by diseases of white matter manifests itself as high signal intensity on T2-weighted MRI and contrasts markedly with normal, low signal intensity white matter (Figure 1). CT Scans and T1-weighted MRI do not demonstrate white matter lesions well. CT may show white matter changes as areas of low attenuation without significant mass effect or contrast enhancement (6). The pathologic hallmark of HIV encephalitis is the presence of multinucleated giant cells that are especially prominent in the cerebral white matter. The giant cells are associated with focal areas of demyelination and white matter vacuolation (2). The most severely affected area is the subcortical white matter of the cerebral hemispheres - the centrum semiovale. However, any white matter tract may be involved, including the brainstem and cerebellum. The cerebral cortex is usually spared. At autopsy, these changes are evident in approximately 28% of all AIDS patients (2). Although there has been no radiologicopathologic correlation in patients with HIV encephalitis, it is likely that HIV accounts for much of the white

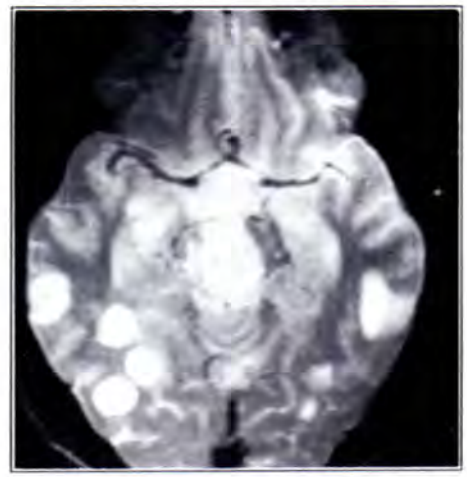

Figure 2: Toxoplasmosis. This T2-weighted MR image is that of a 33 year old AIDS patient. A large rounded mass lesion is identified in the midbrain (center) and several smaller rounded mass lesions are seen in the temporal lobes bilaterally.

matter disease seen on imaging studies. Unfortunately, there are no distinguishing features yet described to distinguish the white matter changes of HIV encephalitis from other white matter diseases in patients with AIDS (6).

Another viral infection that may cause white matter disease in AIDS patients is progressive multifocal leukoencephalopathy (PML). Its incidence ranges from 2% to 7% in AIDS patients, which is much lower than the incidence of HIV brain infection. PML is caused by a papovavirus, the J-C virus. It results in demyelination and necrosis of the white matter. As with white matter disease related to HIV encephalitis, the centrum semiovale is frequently affected, but extension into the cortical and subcortical areas of the cerebral hemispheres is more common with PML. Diffuse and focal neurologic findings may be seen, depending on the site of white matter involvement. Focal neurologic symptoms are common and include visual loss, aphasia and hemiparesis. The disease is relentlessly progressive and usually leads to death within 4 months. T2-weighted MRI is again more sensitive than CT in detecting the extent and number of white matter lesions. T2-weighted MRI shows areas of high signal intensity in the subcortical white mat-

Continued on page 5

ter and centrum semiovale that are single or multiple, asymmetric and progressive on sequential studies. With CT, lesions are of low attenuation without contrast enhancement. The findings are usually more striking with MRI than with CT and MRI may show areas of involvement not seen with CT (6).

CMV is a common cause of encephalitis and white matter lesions in AIDS patients. Pathologically, it may produce glial nodules in the gray and white matter. Frank tissue necrosis is rare with CMV. For this reason, symptomatic CMV encephalitis is uncommon. Patients with documented CMV encephalitis usually have a normal CT or MRI. However, demyelination secondary to CMV has been reported and CT has shown demyelination in a severe case of CMV encephalitis.

Herpes simplex virus (Type I and II) and varicella-zoster virus are unusual infections occurring in 2% or fewer of AIDS patients at autopsy (2). Both viruses may produce white matter abnormalities. The acute encephalitis seen in otherwise healthy patients with herpes simplex infection is only seen in more immunocompetent patients with AIDS-related complex. The more immunosuppressed AIDS patients usually have a less acute, diffuse encephalitis that may be associated with white matter lesions on MRI (6). As well as causing a multifocal encephalitis affecting primarily white matter, varicella-zoster infections may produce a vasculitis in patients with ophthalmic zoster skin lesions. This vasculitis may result in cerebral infarcts.

Mass Lesions

Intracranial mass lesions due to infections or neoplasms commonly occur in AIDS patients. With neuroimaging studies, more than 20% of AIDS patients with neurologic symptoms are found to have mass lesions (4). Approximately 23% of autopsied patients have macroscopic focal masses with toxoplasmosis being almost twice as common as primary brain lymphoma (2). Other focal lesions are much less common and include Candida abscesses, tuberculosis, cryptococcosis, herpes, Kaposi sarcoma and bacterial abscesses.

Toxoplasmosis affects 10% of all AIDS patients throughout the course of their disease and is, by far, the most common treatable cause of CNS disease (1,2). **Toxoplasma gondii** is an obligate intracellular protozoan that is ubiquitous in the environment and causes a mild, subclinical infection in up to 70% of some general adult populations (1). In AIDS and other immunosuppressed patients, life-threatening illness results from reactivation of the previously acquired infection. In the brain, it causes a necrotizing encephalitis that may be focal or diffuse. Clinically, focal neurologic findings correspond to the portion of the brain that is affected, especially late in the disease. However, early in the disease, diffuse symptoms such as confusion and somnolence may be present in addition to the changes in mental state of the AIDS dementia complex. CT and MRI are useful for imaging patients with suspected toxoplasmosis. MRI may be slightly more sensitive but is not more specific than CT. Generally, T2-weighted MRI is the optimal screening technique. With CT, the lesions almost always enhance following intravenous contrast administration. Thus, the delayed double-dose contrast technique (using up to 80 gm of iodine intravenously) is more sensitive than the single-dose technique (using 40 gm of iodine intravenously). Ring or nodular enhancement is the most common pattern (7). With MRI, toxoplasmosis lesions are usually of low signal intensity on T1-weighted images and medium to high signal intensity on T2-weighted images (Figure 2). The surrounding vasogenic edema is of high signal intensity on T2-weighted images and may obscure the margins of the lesion. With both CT and MRI, multiple mass lesions with significant surrounding edema are usually seen. Solitary lesions are less common. The most common locations are the cerebral cortex and subcortical gray matter (basal ganglia) but any portion of the brain, including the cerebellum and brainstem may be involved (6). Biopsies are not routinely performed on patients with suspected toxoplasmosis and are reserved only for those who have failed to respond to antimicrobial therapy or have atypical clinical findings. Most patients with focal mass lesions, even with somewhat atypical radiographic features such as solid enhancement, are empirically treated with antibiotics because toxoplasmosis is the most likely cause and because the other sources have a grave prognosis. Toxoplasmosis is effectively treated with sulfadiazine and pyrimethamine, combined with anticonvulsants and corticosteroids. This usually leads to rapid clinical improvement and partial or complete resolution of radiologic abnormalities within 2 weeks (6). Therapy must

Continued on page 6

AIDS *continued from page 5*

continue for the duration of a patient's life to prevent recurrence.

Primary CNS lymphoma is the next most common mass lesion found in AIDS patients. It is found in approximately 6% of all AIDS patients at autopsy (2). Primary CNS lymphoma is so rare in immune competent individuals that it constitutes presumptive evidence of AIDS even when a

Figure 3: Primary CNS lymphoma. This CT scan, following intravenous contrast administration, is that of a 42 year old AIDS patient. There is uniform enhancement of the lesion. Surrounding vasogenic edema is present.

patient's HIV status is unknown. Clinically, diffuse and focal neurologic findings may be found, depending on the site of involvement. The prognosis is extremely poor with death occurring in less than 2 months in most patients. Radiation therapy may produce tumor regression but it has not significantly changed the poor prognosis. In non-AIDS patients with primary CNS lymphoma the "classic" CT appearance is that of a solitary mass with an attenuation equal to or greater than that of surrounding tissue on scans obtained prior to the administration of contrast material. The mass enhances homogeneously after intravenous administration of contrast material (8). Ring enhancement and multiple lesions are less common. In AIDS, only about half of lymphoma lesions show uniform enhancement, while almost half show ring enhancement with central low attenuation from necrosis (Figure 3). Up to 50% of affected patients have multiple lesions. Most lesions are located peripherally in the supratentorial white or gray matter. Basal ganglia involvement is less common, especially in AIDS patients. In a minority of patients, lymphoma may spread diffusely along subependymal or white matter routes. With MRI, primary CNS lymphoma is low signal intensity on T1-weighted images and medium to high signal intensity on T2-weighted images (Figure 4). The borders of the lesions may be obscured by high signal intensity of surrounding vasogenic edema, which is usually of moderate severity (6).

Fungal infections, mycobacterial infection and metastatic tumors may occasionally present as mass lesions in AIDS patients. Fungal infections may occur in as many as 15% of all AIDS patients (2) but these infections usually appear as meningitis as opposed to mass lesions. There have been reports, albeit rare, of fungal abscesses found at autopsy (2, 3). Most of these lesions are small and are not diagnosed before death, hence the scarcity of radiology literature on the imaging characteristics of fungal abscesses in AIDS. Tuberculomas and tuberculous abscesses are also rare in AIDS patients but they have been reported, primarily in intravenous drug abusers. With CT, ring-enhancing lesions with vasogenic edema are seen. The MRI appearance of a tuberculoma has not been described. Intracranial metastatic lesions in AIDS patients are unusual. The most common neoplasm metastasizing to the brain is non-Hodgkin's lymphoma, occurring in approximately 2% of cases (2). Kaposi's sarcoma only rarely metastasizes to the brain (1).

Leptomeningeal and Ependymal Disease

Leptomeningeal and ependymal disease is the least commonly observed neuroimaging pattern in AIDS patients. However, pathologic evidence of disease of the leptomeningeal and ependymal linings is common and accounts for symptoms such as meningismus, photophobia, headache and nuchal and lumbar tenderness in AIDS patients. Contrast-enhanced MRI is more sensitive than contrast-enhanced CT in detecting leptomeningeal and ependymal disease (9,10). If positive, contrast-enhanced MRI shows exaggerated enhancement of the leptomeninges, usually at the base of the brain, or of the ependymal lining of the ventricles. Meningeal disease can result in communicating hydrocephalus due to obstruction of the arachnoid granulations and infarcts from occlusion of arteries at the base of the brain. Hydrocephalus and infarcts are both detectable with CT or MRI (6). The most commonly identified cause of meningitis is a fungal infection, usually caused by **Cryptococcus neoformans**. Cryptococcal meningitis occurs in approximately 15% of all AIDS patients (2). Diagnosis is confirmed by elevation of cryptococcal antigen titers in serum and cerebrospinal fluid (CSF) and the organism is identified on microscopic examination of CSF. Treatment consists of intravenous amphotericin B. This may control the infection but must be continued for the patient's lifetime. It is limited by a high cumulative toxicity.

Aseptic meningitis is diagnosed in as many as

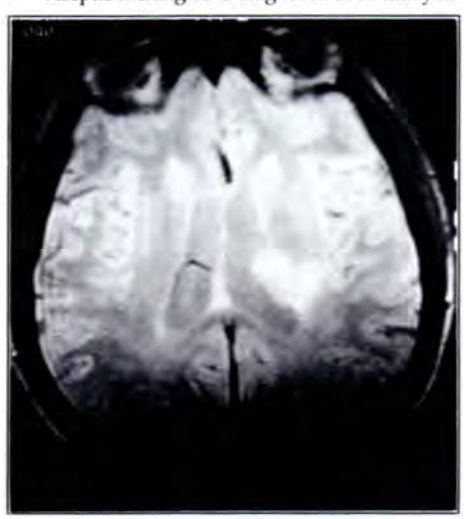

Figure 4: Primary CNS lymphoma. This proton density MR image is that of a 42 year old AIDS patient.

13% of AIDS patients and HIV is likely the responsible pathogen as it is frequently cultured from CSF (1). Mycobacterial infections can produce meningitis in AIDS patients, especially in intravenous drug abusers. Other viruses and fungi are uncommon causes of meningitis and do not respond well to existing therapies.

Lymphoma, leukemia and carcinoma may also cause leptomeningeal or ependymal enhancement. Peripheral non-Hodgkins lymphoma may metastasize to the brain and spread along leptomeningeal or ependymal pathways, as may primary CNS lymphoma. Although the pattern on CT or MRI may suggest meningitis, clinical meningitis is rarely due to neoplasms.

Summary

The radiologist and clinician are faced with an enormous challenge when it comes to the management of patients with AIDS. The spectrum of radiological abnormalities and the many organ systems that may be involved are overwhelming. It is humbling to come to the realization that much remains to be learned and that further advances may render these observations superficial and incomplete. ❑

Acknowledgement: *I am grateful to Dr. David Pelz and Dr. Alan Fox for reviewing the manuscript and to Dr. Don Lee for providing the figures.*

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Future Health vs. Future Destruction

by Les Wasilewski, Meds '92

At the present time, the end of the Cold War notwithstanding, the world's superpowers - the United States, USSR and Great Britain - along with the rest of the world, continue to spend close to 900 billion dollars a year building and developing military arms (including nuclear weapons). There still exists on Earth the firepower equivalent of 15 billion tons of TNT - 3 tons of TNT for every human being alive on the planet.

As the world's wealthier countries continue to commit large portions of their Gross National Product towards military overkill, money that can be used to provide better health care, school education and preservation of the environment is lost. A startling example of this waste of funds is the realization that only half a day's military spending could pay for the full immunization of all the world's children against the common infectious diseases.

Medical Students for Social Responsibility (MSSR) would like to highlight a local example of the need for diversion of military funds to the area of health care.

The Neonatal Intensive Care Unit at St. Joseph's Health Centre currently faces a shortage of government funding over the next five years. MSSR would like to raise approximately $5000 to pay for the upgrading of services offered by the NICU. The money will be used to furnish a "quiet room" where the parents of a sick infant can go to be alone or to talk with their child' doctor. During crucial times of decision in the care of infants it is important that families be in a warm, supportive and private environment rather than in the harsh atmosphere of a hospital corridor. In this way dignity is maintained at all times for both the family and their sick child.

By raising much-needed money for a local health care project, we hope to show how $5000 can be more wisely used for the benefit of our society rather than for the possible destruction of it. We are presently holding a raffle with several special prizes being offered, including a free weekend for two at the Radisson Hotel, a CD player, a mountain bike and clothing vouchers. For ticket information please contact the people listed below:

Les Wasilewski, Meds '92 433-3984 Elyse Lackie, Meds '93 433-6446
Gillian Buckley, Meds '94 438-1524 ⌟

Leeches, lister and liver

by Shobhana Patel, Meds '94

Where does one find a Lister Antiseptic Atomizer, mortar and pestle and leeches all under one roof? How about in your 19th century doctor's office? Comforting thought, isn't it? These items, along with other interesting medical artifacts, are housed in University Hospital, Room 1-AD54.

The Medical Museum has exhibitions that will attract anyone interested in the history of medicine. It is set up as a Victorian physician's office of the late 19th - early 20th century. These early physicians performed the tasks of pharmacist, bookkeeper, nurse and surgeon. The sign on the front door displays the office house: 8-10 a.m., 1-3 p.m., 6-8 p.m. Not mentioned are the house calls and hospital visits made after 8 p.m. (There was no time to even think about golf, let alone play it.) Medical equipment of that century was portable, since much of the medical care occurred in the patient's home. Consultations cost $2-$4, not including mileage charges - $1 for the first mile and $.50 for every additional mile. These doctors worked for peanuts! Well, maybe not peanuts, but turnips, chickens, etc. For many patients this was the form of payment.

As you walk through the museum, don't miss the examination chair designed for vision testing, gynecology, dentistry, major and minor surgery. The surgery equipment is also of interest. During the 19th century, operations were usually amputations. The Lister Antiseptic Atomizer sprayed carbolic acid on the physicians hands and instruments to reduce infection. Chloroform was used as an anesthetic. Major operations cost $25-$200. Included in the exhibition is a 90-year-old wooden leg, to replace a lost limb. Another must is the display of bleeding instruments, which included leeches. These creatures were used in illnesses such as cholera and congestive heart disease. This method of treatment was used until the early 20th century! The use of medical leeches after microsurgery is a practice revived from our medical ancestors.

One can spend hours in the Medical Museum learning about history. It is amazing to see how medical instruments and equipment have evolved. It is truly an enlightening experience. ⌟

TACHY '

As I looked at my calendar the other day I w
shocked to discover that February and Tachy '
were now in the past! For whatever reason - the fa
approaching LMCC's, all of my new-found spa
time or simple repression - Tachy seems like a lo
time ago. I had always wondered what it would fe
like to do the last show. Sad? Happy? Proud
Relieved? Empty?

Tachycardia was a big success both onstage a
off. I would like to reflect on that success and
thank all of those who participated. The mont
preceding Tachy were riddled with famili
headaches: bookings, rehearsals, advertising, tick
sales, programmes etc. However, I was impresse
with the relative preparedness of most of the class
compared with previous years. I, nontheless, che
ished an impending sense of doom the week befo
the show.

Meds '94, what can I say? It was funny, had
scene changes, was cleverly written, well-acted a
choreographed - what can I say? All this, desp
the fact that you guys were over the 20 minute ba
rier! Meds I, well done, you are destined for gre
things.

Meds '93 put on an impressive and elabora
version of "Sweeney Todd". This was somewhat
a departure from the traditional Tachy productio
utilizing vocal and acting talents, costumes, cho
ography and set design and a whole bunch of lit
fake meat pies that seemed to turn up everywhe
backstage. It was evident that they put in a lot
hard work and long hours to pull off something th
grand. Congratulations. In the years to come, bi
ger things may be expected (except of course
terms of stage props!) Just keep in mind that ha
ing fun is the main thing.

Meds '92 battled the time constraints of cler
ship call to produce "Doc Tracy", their slimy vie
of mafia medicine. Effective sets, some great or
liners and the much loved cheap visual effec
helped to make it part of a very strong second ha
Whatever you guys are dreaming up for next ye
I'm sure it'll be good...slimy, but good.

Well, that leaves my classmates, Meds '91, w
really came into their own this year with an impr
sive and very entertaining "Little Shop
Hormones". The Costumes were great as were t
visual effects, choreography and sets. There we
some very strong individual performances, but t
real strength of the show was in the long hours p
in by more than a few and a big turnout overa
I'm sure few will forget that brief instant wh
Jimmy thrilled the audience and drove the scoot
hog directly into the plant people, laying it down
the finest Knievel fashion, and then pulled up
leather collar, and got up to sing. Yes, we've com
long way, but then again, we had a long way to g

As people become more involved with Tac

1

by Matt Millard, Tachy Host

hey realize the enormous impact that the "behind-he-scenes" personnel play in the ultimate success f the production. This year was no exception, and vhile I'd like to thank everyone who helped out in ach class in this manner, quite a few people also leserve special mention for their part in the show. They are: Gary Burt, Connie, Derrick, Jeff, Dr. Nisker, Barb H., Bob K., Al G., Tim, Akira, Allison, acqueline, Steve B., Tracy, Scotty, the Tachy band, nd Ambrose. To all those mentioned, and to veryone who participated from all the classes, hanks from Jeff and myself.

Speaking of Jeff Stal, I can truly say it was great o have such an enthusiastic, hard-working and reli-ble co-host. It was also with just reward that I watched" him 'shit his pants' and sink into despair luring the Monday night rehearsal, much like I had lone a year before. While we clearly have different tyles (organized vs disorganized - guess who's vhich), Jeff was easy to work with both offstage nd on. I feel confident that I leave the show in his apable hands - mostly because he has already done ust about everything for next year - good luck Jeff, t was fun.

Yes, it was fun. God knows it wasn't always fun hough, and I'm sure many of you know that too. Tachy can be hard work, no doubt about it, and as he show improves each year, the work required to out do" the previous year becomes greater. Han-lling hundreds of med-school sized egos, classes, xams, sets, costumes, rehearsals, call, sleeping and ating seems a bit overwhelming. That Tachy has rogressed to such a professional level is truly a ribute to all who were involved.

Tachy gives the faculty of medicine a lot of posi-ive exposure in the community. It is the main undraiser for the Hippocratic Council and spon-ors charities. It brings people from each class out nd gets them to meet other classes and even other aculties. it is the main source of non-academic nteraction between faculty and students. It is omething that Western Meds have become known or, other than being a very good academic medical chool, and it is responsible for many of the best nemories we will have of our time here. I guess vhat I'm trying to say is that as popular and impor-ant as Tachycardia has become, the most important hing is to just get involved, have a good time and njoy yourself. As I ponder leaving medical school nd becoming a doctor, and never again being on a tage facing hundreds of people, I realize, as we all vill, that Tachy was a unique and challenging expe-ence. I'm sad, relieved, proud and happy, but the mptiness is dissipating to be replaced by the satis-ction one usually feels after having been involved n a rewarding event. Thanks to everyone who ade this one of the strongest shows ever and to all ne merrymakers for their hard work.

Class Reports

The JJ Report

by Justin Amann & Jeffrey Politsky, Meds '94

Jeff: Okay Justin, this is our big chance as class reps and journalists—to report objectively on all things of relevance we have been privy to since our career as medical students began.

Justin: I think we should fabricate as many mistruths as possible—leading our readers into a frenzied state of disbelief.

Jeff: Fair enough. First question: To date what has been the highlight of your first year?

Justin: It hasn't happened yet, but it will have happened by the time this thing goes to print.

Jeff: What's that?

Justin: The end of histology; I used to like pink. And you?

Jeff: Quite simply, pubs. Big pubs, little pubs, any pub at all; they're always highlights. There is something incontestably gratifying about waking up on the weekend in a haze, with a curious urge to consume as much of Ontario's water supply as possible.

Justin: Speaking of drink and merriment, in the past few months, I haven't witnessed anyone achieving the level of innebriation that Ted L. managed during the Christmas semi-formal. Boy, what a prize he was that night, acting up in the emergency department like he did.

Jeff: I'm sure he'll be thrilled by your amazing recall.

Justin: Next question: What's been the most difficult concept for you to grasp so far this year?

Jeff: That would have to be the thermo-regulatory capacity of people who wear meds jackets. At first I thought that they wore the jackets to let everybody know they were in medicine—but in the medical sciences building? Probably not! Then I thought those truly fashionable garments were worn to woo women. But as our cohort Zane has so profoundly stated on numerous occasions: "Chicks dig style." Thus, I eliminated this possibility as well.

Justin: Zane also thinks chicks "dig" raindrops, being called sugar plum, the snowy-tailed egret, and the Heimlich manoeuvre.

Jeff: Gosh, I hope it rains. Anyways, it finally came to me; they wear them because they're cold. After all, they wear them in class, in the histology lab, in the cafeterias, and inside bars. These are places most people opt not to wear such articles of clothing.

Justin: I wonder how they survived before they got into medicine. They probably sat next to medical students for body heat. To change topic, isn't it amazing how tedious studying becomes as exam time approaches?

Jeff: Quite. I often sit with my anatomy notes in front of me only to begin wondering what I could be doing instead of what I should be doing...suddenly a goddess appears before me; she snatches my anatomy notes and whirls them into the Thames river; she seductively takes my histology slides and crushes them under her spiked heels; she grabs my nasal insuffulator bulb in a way I'd never imagined (I cannot again think of Welch Allyn as merely diagnostic); she smiles at me—I smile back; she winks—I wink; she gazes piercingly into my eyes—I look away coyly...only to marvel at the awe-inspiring feat I see through my window of a squirrel scaling the seemingly smooth wall of a neighbouring apartment building. I look back for my goddess, but alas, all I see is a veritable smorgasbord of cranial fissures, foramina, fossae, nerves, vessels, and fibbledygoop, complicated by a heaping helping of sexually oriented pneumonic devices, which is bloody well what got me off track in the first place.

Justin: Woa there young buck. You might want to get that problem checked out—I don't usually have my fantasies interrupted by a rodent. You might also want to get rid of that insuffulator bulb. Anyway, what did you think about Tachy?

Jeff: Of everything, I enjoyed listening to the medley of songs performed by Jacqueline, Allison, and Akira. He's an incredible pianist. Of the plays, I was partial to Doc Tracy.

Justin: Even despite that rap thing they did?

Jeff: Nothing's perfect. They're clerks—their minds are cluttered, they're confused, and they've lost their objectivity. We'll be just like them in two years.

Justin: Well, I must be loyal. I liked our play the best. It had everything—comedy, song, suspense, murder, suicide, dead people that laughed, magical daggers, a bewildered Hamlet with an odd personality configuration, and of course, women, lustful women. Oh, how I long to meet a lady named Elizabethan.

Jeff: Psyche! On that note I think that that's all the space we have. Until next journal, Justin.

Justin: Good day, eh. ⌟

Clerkship here we come!

by Barry Love, Meds '93

Those of you keeping tabs on Meds '93 know that we are wearing a perpetual smile now. Just a few short months of second year left and then CLERKSHIP. We are most looking forward to running around in green pyjamas all day!

To reminisce a little on the last few months... February was an exciting month for our class. Our class certainly enjoyed working hard on Tachy. Many of us had our first opportunity to sing without a bar of soap in one hand and a washcloth in the other. Meds '93 owes a big thank-you to our merrymakers Steve Goddard and Doug Bergstrome who managed to turn our entropy into a show of which we could be proud. We hope you who had the opportunity to see our performance enjoyed the show as much as we enjoyed putting it on.

February excitement also included the Ontario Medical Students' Weekend (OMSW), held here in London. OMSW was a welcome chance to meet students from other medical schools and listen to some interesting talks on medical subjects that are not covered in the standard medical school curriculum. Letting loose at the social events didn't hurt either! Many thanks to Elyse Lackie, Kathy Wise, and Stephanie Winsor from Meds '93 who chaired the weekend - we appreciate all the hard work you three put in!

In more personal class news... We will have a new addition to our happy Meds '93 family. Congratulations to Lisa Fischer the proud soon-to-be-mother. In other good news — to James and Corinne Francis, congratulations on your marriage.

That's all the news for now. Stay tuned to this Journal for further updates. In the next exciting episode: Meds '93 rocked by four marriages in one summer - where did all the singles go? ⌟

Ann Slanders

Dear Ann:

I'm coming up to the homestretch of my clerkship and I still have palpitations every time the beeper goes off. I am, however, getting very good at ordering Tylenol and Ativan. And I know that I've been in the hospital for too many hours when I go out to dinner and follow the signature on my credit card slip by "Meds III'. It's become a part of my being!

Choosing fourth year electives and selectives has been a traumatic event. It essentially amounted to choosing the direction of my career...choosing what I want to do for the rest of my life! Psych? Paeds? Medicine? Surgery? I'm too young to have to make these decisions!

When will I get to the point where I feel more like Dr. Ben Casey and less like Doogie Houser?

Joe Clerk

Dear Joe:

Cheer up. You're probably (ever so slight-

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ANN SLANDERS *continued*

ly) more competent than you make yourself out to be. There is no one event that makes you suddenly feel comfortable with major decisions and responsibilities, but rather the whole process of clerkship. Take, for example, the collective life experiences of your classmates from this year.

More babies! Now **that's** responsibility. Congratulations to Ed White and his wife on the birth of their boy, Noah Aaron; Rob Briggs and his wife on the birth of their girl, Courtney Nicole; and Rob Eddington and his wife on the birth of their (the tie-breaker) boy, Phillipe Michael.

Another season of Tachycardia has come and gone. Here's to all class members involved in Doc Tracy and to Meds '92's own, Jeff Stal.

Spring Break saw many of the Crew (including Dave's Winnebago Vacation Enterprises Inc.) bronze their bodies in the southern climes. And with the start of the excellent weather in sunny London, Ontario, they'll even be able to keep up their tans. Ah, yes, life is sweet! (Now if you can only have a weekend without call to soak up those rays.)

And a few more things to look forward to: The Meds Formal, being organized by Bob, Dave and Rosalie's "social get-together", and fourth year. Maybe by that time you'll feel like a doctor. If not, I hear they're looking for a star for a new TV sitcom... **Ann**

❑

LMCC Countdown...

by Allan Garbutt, Meds '91

Well, we were back, and now we're gone again. Some were happy to see the classroom again, while others are ecstatic to be back on the wards. Regardless, we all got experiences last fall that will last us a lifetime.

We dispersed widely last fall, with some of the more exotic locales including Angola, Papua New Guinea (watch out for mosquitos and malaria, eh Bevin?), Australia, and Hawaii. Others went to Detroit, Waterloo, and Toronto. Many members of Meds '91 visited the western meccas of Calgary and Vancouver. We dealt with problems ranging from sunburn to gunshots, from URTI to TB; and we learned. Boy, did we learn.

Then, back to the classroom for the first time in 18 months. What a change. Regular hours, no beepers, no consultants, no patients; and the major problems were how to squeeze a bit of studying around the Tachy preparations, and the occasional pub (for a good cause, of course). We obviously struck the right balance, as we pulled off a great Tachy presentation with less than two months to prepare. We even managed to defeat classes that had been slaving over their roles for 8 - 10 months.

Most of the class were heavily involved in a myriad of tasks that helped make our adaptation of "Little Shop of Horrors" the smash hit of Tachy '91.

At the same time, we were busy with interviews for those all- important PGY1 slots (more familiarly called internship positions). As those finish, we agonized over our CIMS rank order lists, LMCC applications (and costs), and worried about where we will be living in only three months. If you saw the fourth year students climbing the walls in early March, you know what worrying about the CIMS Match can do to you. Now, we're all allocated, and the final departures are rapidly approaching. Within months, we'll be spread from one side of this country to the other.

Many of us also heaved large sighs of relief when we learned that we will not be affected by the coming changes in LMCC exams, pre-licensure training requirements, and the like. That is, unless you plan to practice in Alberta, Saskatchewan, or Quebec. Then, you may have the pleasure of being the first group to be subjected to the brand-new Q5 portion of the LMCC.

While most of us have been busy with the academic/clinical side of life, a few of the class have somehow found time for personal pursuits. A number of the members of the class have become engaged, and two even got married. Congratulations are in order for Margie and Brian (and no, they didn't marry each other).

As you can tell, fourth year is a time of multiple activities and concerns. However, it all ends on May 8 and we are turned loose on the world as full-fledged interns in June. Somehow it is hard to believe that four years of effort will be successfully completed in only two or three months. ❑

Ego Expandability: a Neologistic Investigation

by Jeffrey Politsky, Meds '94

It has long been known that Egos can, over time, grow and develop. A problem that has perplexed scientists, however, is where the Ego performs this so-called developmental expansion. It has been found that the Ego, which grows in accordance to arbitrarily defined positive-life experiences, first binds to receptors in the hypothalamus and subsequently expands to occupy a position in the universe. Accumulation of Egos beyond the degradative capacity of the system may jeopardize the universe.

In psychoanalytical terminology, the Ego is that part of the psyche which, developing from the id, experiences the external world through the senses and consciously controls the impulses of the id. Supposedly, in its principle role, the ego acts as a mediator between our instinctual urges and the surrounding environment. The Ego decision is dictated by realistic considerations rather than by moral judgement. Philosophically speaking, the Ego is the self, variously conceived as an absolute spiritual substance on which experience is superimposed—the series of acts and mental states introspectively recognized.

Combining these two schools of thought, it is conceivable that the concept of the Ego develops in accordance with how well or how poorly the Ego operates as a mediator. In the normal condition, integrity of the Ego is maintained by accurate perceptions of the Ego decision. Although inaccurate assessments of the Ego decision have been observed on numerous occasions, the underlying mechanism of such judgemental errors remains unclear. One possible result of such misinterpretations is an inflated Ego. Thus, an investigation of the events leading to an inflated (or inflamed) Ego would be helpful to further understand this component of the conscious subject. Are the processes leading to an inflamed Ego pathological, psychological, or both? Furthermore, how does the environment cope with the inflated Ego?

Because the development of the Ego rests on the perception of the Ego's ability to mediate between urges and societal norms, it may be assumed that the Ego is an aspect of the conscious mind (rather than the body). Not only would a discussion of mind and body interactionism yield little more than an epistemological nightmare, but, fortunately, such rhetoric is beyond the scope of this medical student as well. Suffice it to say that the infrastructure of the brain consists of numerous cellular components that constitute matter and that mental processes (e.g. thoughts) are produced as a result of the complex interactions of this brain matter. Perhaps the whole issue is best left to the satirist's tongue: "What is mind? No matter. What is matter? Never mind."

Previous research has shown that the Ego expands to fill the volume of the universe in relation to positive life experiences. [For the purposes of our discussion, it is necessary to assert that there is no such thing as a negative experience, only varying degrees of positivity.] The standard unit of the Ego is the "F," where 1 F = 1 Inflation (30 Inflations = a lot). With each positive life experience, the Ego expands accordingly and eventually, at an undefined stage of development, takes to occupy an area of space in the universe. Interestingly, there is a critical level of positivity, the Egoex threshold, below which no expansion occurs. The measure of positivity is the "Puff" (not to be confused with that nutty dragon), where 12 Puffs is the Egoex threshold. Thus, when a positive experience measures 12 Puffs, for instance, the Ego expands proportionately by 1 F. As an example, consider an individual who is assertive, confident, and successful (such as a newly graduated law student who has just been hired by the second largest law firm in Chicago for a ridiculous sum of money). Such a person will likely be exposed to many positive experiences measuring many Puffs, causing the Ego to expand at a rapid rate to a size of many Inflations and therefore occupy a large area of the universe.

Before the Ego can occupy a space within the universe, it must first be present as a physiological entity in the brain. Just as there are neurotransmitters (e.g. amino acids) and neuromodulators (e.g. catecholamines), so is there a neuroexpansive (i.e. the Ego). It has been shown that there is a bimodal distribution of neuroexpansive receptor densities in brains of Ego-compatible individuals. Binding studies performed on post-mortem brain tissue from 252 subjects, 247 of which were Ego-compatible (leaving 5 controls), revealed that in these 247 subjects there was a bimodal distribution of hypothalamic neuroexpansive binding sites (Politsky et al., J. Scientific Confabulation, 1990). No such distribution was seen in control tissue, or in other brain regions. One mode occurred at 36% above the control density, and one occurred at 1.9 times greater than the control density.

The low density mode may be a population of E_2 receptors that is normal but elevated by long-term Ego development. [There are also E_1 receptors, but their function remains unclear.] It was also found that there were two flip-flop states of E_2 receptors. The $E_{2\text{-High}}$ receptor (K_D = 7.3 nM) occupies a position on the pre-synaptic membrane. The $E_{2\text{-Low}}$ receptor occupies a position on the post-synaptic membrane and has a lower affinity (K_D = 0.95 μM). Apparently, by binding the Ego in high concentration (and with high affinity) in the pre-synaptic membrane, only a low concentration of neuroexpansive is capable of being transported across the synaptic cleft and binding to the $E_{2\text{-Low}}$ receptors and subsequently becoming free Ego and expanding into the universe. In other words, we have an internal preventative mechanism against Ego-toxicity.

Various research and field studies have shown that levels of free Ego in the universe are tightly controlled by a negative feedback mechanism, much like body temperature. When Egos first enter the universe they move about randomly. As more Egos enter the universe, the Ego molecules begin to collide with increasing frequency, proportionate to the amount of Egos present. The unit size of the Ego has a large bearing on the collision rate. Large Egos repel each other, as do small Egos repel each other. When universal space becomes limited, however, larger Egos have the ability to adjoin to smaller Egos, until one enormous Ego Gigantocellular Complex (EGC) is formed (Politsky et al., Can. J. Neuropathopsychotoxipharmacologicus et Acta, 1990). This occurs because the smaller Ego molecules have tiny surface projections (E-cell markers, comprised of glycoprotein, hydroxyapetite, string, sealing wax, and other fancy stuff) which are successfully probed by the larger Ego molecules. As universal space fills to capacity, the metabolic system of the universe biodegrades the oldest and innermost layer of Ego molecules (some texts refer to this as the "Leggo my Ego" process). Degradation is facilitated by the fact that as Ego molecules age, they lose affinity for the EGC. The enzyme responsible for carrying out this formidable task is the "helpiminadase" enzyme. Varying reports (and they do vary) suggest that "helpiminadase" can breakdown 52 million Ego molecules/day. The rate of 52 million Ego molecules/day is represented by the SI unit of 1 "Wow, You've Got To Be Kidding" (WYGTBK, on your FM dial). The end-stage of this lysis involves excretion of senile Egos by trans-mogrification of the paleocomplex into a miasma. The exact mechanism by which this effluvium materializes is completely unknown (to date no researcher has been willing to find out—a decaying Ego is after all rather smelly).

The possibility exists that the degradative capacity of the universe may be exceeded by a rapid influx of Egos. Such an event may also cause obstruction of the excretory mechanism. Unfortunately, there is no such thing as a Maytag Repairman or a Liquid Plumber in the universe. Without a functional excretory system, the EGC will grow to toxic levels of near permanency. This was illustrated, reliably, in an in vitro experiment in which the lifespan of three samples of universe were examined. In the control sample (intact universe without Ego) the universe survived indefinitely. In the second sample (intact universe plus Ego complexes) the universe also survived indefinitely. In the third sample, however, where the excretory system of the universe was destroyed by electrocauterization followed by the addition of Ego complexes, the universe died (Politsky et al., unpublished). Mean lethally toxic Ego levels ranged from 13-16 Phooeys, where 1 Phooey is 1 unit of space-time (in or out of the lab). In the ante-mortem period, the universe entered a state of general senility accompanied by hallucinations, delusions of grandeur, contralateral rigidity, increased rates of apomorphine-induced rotation, and sudden outbursts of remixed rap versions of *"If I were a Rich Man."* It is assumed that these symptoms signal impending fatality. The contribution of the latter symptom toward the progression of senility is dubious, however, as a number of research scientists (all classified as mentally coherent) have been observed to engage in uncontrolled vocalizations of the subtle rifts and lyrical nuances of the tune *"It's Slinky, it's Slinky, it's fun, it's a wonderful toy...."* Nonetheless, this period of ante-mortem senility is the last stage where therapeutic intervention may be successful,

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EGO *continued from page 12*

as shown when a universe transplant was performed on sample 3. In this instance, provided that there were no post-operative complications or an immunological graft-versus-host response, the universe survived after a short recovery period.

Many intriguing questions have arisen from this research. Could it be that the universe will come to a catastrophic ending if either the normal homeostatic mechanism of the universe breaks down or Ego complexes become so prevalent that an impending breakdown is inevitable? What does the future hold? Will we be reduced to mere ids (although the thought of immediate gratification does seem quite intriguing)? Until further answers are provided, prophylactic mechanisms must be implemented—use the Ego sparingly. Laboratory data suggest that Ego growth in excess of 30 inflations/day may have deleterious effects on the environment and universe as a whole.

Although current research on the role of Ego Complexes in the maintenance of universe homeostasis is intensive, under-funding from federal and international levels of scientific jurisdiction limits investigative approaches (raw materials are rather expensive you know). Basically, we need money—lots and lots of money. Please send your healthy research donations to:

Save the Universe Fund; c/o UWO Meds Journal; London, Ontario.

Thank you for your patronage. Nutrition information available upon request. [union made]

Acknowledgements: I would like to thank all those little people with big egos, who made this research possible.

1989-90 UWO Scholarships and Awards

FIRST YEAR

VERDA TAYLOR VINCENT SCHOLARSHIPS
Awarded annually to the students achieving the highest, second and third highest standings in the examinations at the conclusion of first year Medicine.
Highest standing $700 - Lisa Y-Yee Yip
Second highest standing $450 - Narendra Armogan
Third highest standing $200 - John Chia-Hua Yang

THE ALAN C. BURTON MEMORIAL PRIZE IN BIOPHYSICS
Awarded to the first year medical student obtaining the highest marks in the course in Biophysics. $250
Lisa Y-Yee Yip

J.B. CAMPBELL MEMORIAL SCHOLARSHIP IN PHYSIOLOGY
Awarded to the first year medical student obtaining the highest marks in the examinations in Physiology. $250
Craig Markle

THE HIPPOCRATIC COUNCIL ANATOMY AWARD
The Hippocratic Council Award shall be awarded to the student in First Year Anatomy who demonstrates lab performance as evidenced by marks and enthusiasm. $75
John Yang

C.V. MOSBY COMPANY SCHOLARSHIP AWARDS
A book to the value of $50 will be given to the student obtaining the highest standing in each of the following first year subjects:
Biochemistry - Robert Stuparyk
Histology - Narendra Armogan

LANGE AWARDS
Prizes of books published by Lange Medical Publications to each of two outstanding students in each year.
Michael McGinley
Glen Pederson

THE DR. MARVIN L. KWITKO SCHOLARSHIP IN ANATOMY
Awarded to the student with the highest grade in first year of Anatomy at the University of Western Ontario. $300
Lisa Y-Yee Yip

SECOND YEAR

PROFESSIONAL ASSOCIATION OF INTERNS AND RESIDENTS OF ONTARIO (PAIRO) TRUST FUND AWARD
To be awarded to a student at the end of Second Year of the Program in Medicine who has demonstrated academic achievement and has made a significant contribution towards improving the general welfare of medical students. $1,000
Saurin Popat

THE RACHEL SLOBASKY KAPLAN SCHOLARSHIP
Awarded annually to the student achieving the highest standing in the examinations at the conclusion of second year of the medical course. $500
Irvin Kumar Pathak

THE MARTIN AND MARY LEBOLDUS AWARD
Awarded annually to the second year student showing the most promise as a Clinician, as demonstrated by performance in Clinical Science, Clinical Methods and the Introduction to Clinical Clerkship. $300
Irvin Kumar Pathak

THE ALEXANDER HOTSON MEMORIAL SCHOLARSHIP
Awarded to the student achieving the second highest standing in the examinations at the conclusion of the second year of the medical course. $350
Joan Elizabeth Lipa

THE UPJOHN ACHIEVEMENT AWARD IN PHARMACOLOGY
Awarded to the second year student who obtains the highest marks in the Basic and Clinical Pharmacology course. $500 and a plaque
Wendy McCurdy

THE MERCK, SHARP AND DOHME AWARDS IN THERAPEUTICS
Awarded to three second year students, on the basis of performance in the course Therapeutics as determined by the Therapeutics Course Committee. Tied
Sharon Laurie Zikman
Judith Mary Hindson
Susan Catherine Noble

THE CIBA PRIZE
This prize, consisting of a set of the Ciba Collection of Medical Illustrations, is awarded to a student in the second year, at the discretion of the Council of the Faculty
Irvin Kumar Pathak

THE M.D.S. HEALTH GROUP LTD. PATHOLOGY PRIZE
Awarded annually to the medical students with the best performances in the course in Pathology in second year. $300 and $200
1st prize- Catherine Cagiannos
2nd prize- Judy Hindson

THE DEAN RUSSELL PRIZES IN NEUROSCIENCES
Combination of Opthalmoscope and Otoscope sets are given annually to the two second year students obtaining the highest standings in Neurosciences.
Judy Hindson
Irvin Pathak

THE LANGE AWARDS
Prizes of books published by Lange Medical Publications to each of two outstanding students in each year of the medical program, as selected by the Council of the Faculty. Two books.
Bradley Michael McCuaig
Catherine Cagiannos

THE CLASS OF '43B AWARD
Awarded annually to the student obtaining the highest final mark in the course in Clinical Methods at the end of second year. $100
Joan Lipa

C.V. MOSBY COMPANY SCHOLARSHIP AWARD
A book to the value of $50 will be give to the student obtaining the highest standing in Microbiology.
Caroline Meyer

ROWNTREE PRIZES
Awarded annually in memory of the late Dr. L.G. Rowntree, for essays in medical history. $125
Saurin Popat

THIRD YEAR

THE BENJAMIN WEIDENBAUM AND CECELIA ROTSTEIN SCHOLARSHIP
Awarded to the students with the highest and second highest standings in the Third Year. $700 and $400
Sheldon Levy
Paul Kursell

THE MARTIN AND MARY LEBOLDUS AWARD
Awarded annually to an outstanding Clinical Clerk in Third Year. Selected by the Council of the Faculty. Established by the late Dr. Martin LeBoldus. $300
Brenda McMullin

THE CHARLES E. FROSST MEDICAL SCHOLARSHIP
Awarded by Charles E. Frosst and Company, at the end of the Third Year, to the medical student who has shown most promise in the field of therapeutics. $500 and a Bronze Medal.
Hamza Khan

THE ROBERT K. ANNETT MEMORIAL AWARD
Awarded to a third year medical student who during the clincial clerkship has best demonstrated awareness and concern for co-workers, as well as empathy and compassion for the physical and emotional needs of patients. Recommended by the Undergraduate Medical Education Committee on the basis of nominations received from the class. Donated by the family and friends of Dr. Robert K. Annett in memory of his efforts to promote professional conduct of this kind. $400
Mark Maslovich

THE CLASS OF 1951 FRANK R. CLEGG MEMORIAL AWARD
Awarded annually to the third year medical student achieving the best balance of high academic standing and those qualities of compassion and personal commitment generally regarded as essential to fulfillment of a role as a good physician, as judged by the Departments of Family Medicine, Medicine, Obstetrics and Gynaecology, Paediatrics, Psychiatry and Surgery. Established by the Class of 1951 in memory of Dr. Frank R. Clegg. $450
Louise Parker

THE DR. V. CAROLINE GRAHAM AWARD
Awarded to a female student standing in the top ten of Year Three as selected by the Dean. $200
Lori McFarlane

THE CARLETON C. WHITTAKER MEMORIAL SCHOLARSHIP IN PSYCHIATRY
Established by the late Miss Edith M. Whittaker, and awarded to a student in the third year of Medicine with high standing in Psychiatry and other evidence of interest in the subject. $240
Sheldon Levy

THE LEONARD SUTCLIFFE MEMORIAL SCHOLARSHIP
Awarded to the medical student with the highest standing in Obstetrics & Gynaecology in third year. $250
Robin Lee

THE DR. I. W. MANN AWARD
Awarded to two third year medical students showing superior achievement in studies in Family Medicine, and demonstrating personal monetary need. $250 each
Warren Cantor
Craig Lauer

THE JOHN C. RATHBUN MEMORIAL PRIZE IN PAEDIATRICS
To the third year student who receives the highest evaluation at the completion of the Clinical Clerkship in Paediatrics. $150
Janet Little

THE C. C. ROSS MEMORIAL PRIZE IN SURGERY
Established by the colleagues and friends of the late Dr. C.C. Ross, and awarded to the third year student showing the most proficiency in clinical signs and symptoms leading to diagnosis in Surgery. $100
Paul Kursell

THE BRISTOL PRIZE IN MEDICINE
Awarded annually by Bristol Laboratories to a third year student selected on the basis of meritorious performance in Clinical Medicine. (books to the value of $250)
Samuel Gutman

THE ELENA B. WOLF MEMORIAL AWARDS
Awarded annually for essays in the field of cancer research or treatment submitted by students in Third Year. Awards will be presented for the two best essays as judged by a special committee appointed by the Dean of Medicine. Essays are to be submitted to the Office of the Dean of Medicine on or before June 30th of each year. In memory of Mrs. Elena B. Wolf. $200 and $100
Paul Dowdy
Margaret Beingessner

SCHOLARSHIPS *continued*

THE ISHIYAKU EUROAMERICA, INC./PICCIN NUOVA LIBRARIA BOOK AWARD
Awarded to a student in the Faculty of Medicine who ranks in the top 10% of the class at the end of Third Year and has demonstrated outstanding clinical skills as judged by the Dean of Medicine. Book award
Paul Kursell

THE J.A.F. STEVENSON MEMORIAL SCHOLARSHIP
Awarded for academic excellence, tenable in the Faculties of Arts, Music, Social Science and Professional Faculties. (These Scholarships were established by The University of Western Ontario Faculty Association.)
Sheldon Levy

FOURTH YEAR

THE MEDICAL ALUMNI GOLD MEDAL. Gold Medal
Mark Andrew Crowther

THE ALPHA KAPPA KAPPA GOLD MEDAL. Gold Medal
Donna Lynn Robinson

THE DR. F.R. ECCLES SCHOLARSHIP
Mark Andrew Crowther

THE CLASS OF '55 PRIZE $550
Mark Andrew Crowther

THE KINGSWOOD SCHOLARSHIP $275
Elizabeth Anne Cummings

THE CLASS OF 1917 PRIZE $200
Monique Sabina Starok

THE ROWNTREE PRIZES IN MEDICAL HISTORY
2nd - Monika Eva Schwab $100
3rd - Kelly Rae Cranstoun $75

THE DR. ARCHIBALD MCCAUSLAND MEMORIAL PRIZE IN PSYCHIATRY $400
Clare Jeanette Cormier

THE J.B. CAMPBELL MEMORIAL SCHOLARSHIP IN PHYSIOLOGY $225
James Douglas Awde

THE DR. FRED N. HAGERMAN MEMORIAL PRIZE IN SURGERY $350
Judith Andrea McCart

THE DR.MARTIN L. KWITKO SCHOLARSHIP IN OBSTETRICS AND GYNAECOLOGY
$250 Philip Leon Vandewalle

THE IVAN H. SMITH MEMORIAL PRIZE $200
Glen Stuart Bauman

THE DR. HENRI BREAULT AWARD $200
David Buckle

THE ABBOTT PRIZE IN ANESTHESIA
Ronald James Butler

THE HORNER MEDALS IN OPTHAMOLOGY AND OTOLARYNGOLOGY. Silver Medals
Monique Sabina Starok
Ralph E. Bassett

THE ANDREW D. MASON MEMORIAL AWARD $150
Alistair John Ingram

THE LANGE AWARDS Book Prize
Donna Lynn Robinson
Theresa Anne Podrebarac

THE ONTARIO MEDICAL ASSOCIATION PRIZE IN PREVENTIVE MEDICINE. $100
David Hwei Lee

THE UNIVERSITY OF WESTERN ONTARIO AWARD IN CARDIOLOGY $80
Kristine Jane Roberts

THE RADIOLOGISTS OF WESTERN ONTARIO AWARD IN DIAGNOSTIC RADIOLOGY $200
Frederick John Smith

THE HEWLETT-PACKARD TOP MEDICAL GRADUATE AWARD
Mark Andrew Crowther
Donna Lynn Robinson
Elizabeth Anne Cummings
Monique Sabina Starok
Theresa Anne Podrebarac

THE SANDOZ BOOK PRIZE $150
Jeffrey Dennis Tschirhart

THE COLLINS MEMORIAL PRIZE IN GERIATRIC MEDICINE $150
not awarded this year

THE W.H. MCGUFFIN SCHOLARSHIP IN RADIOLOGY$275
Frederick John Smith

THE DR. G. EDGAR HOBBS MEMORIAL SCHOLARSHIP $3000
Mark Andrew Crowther

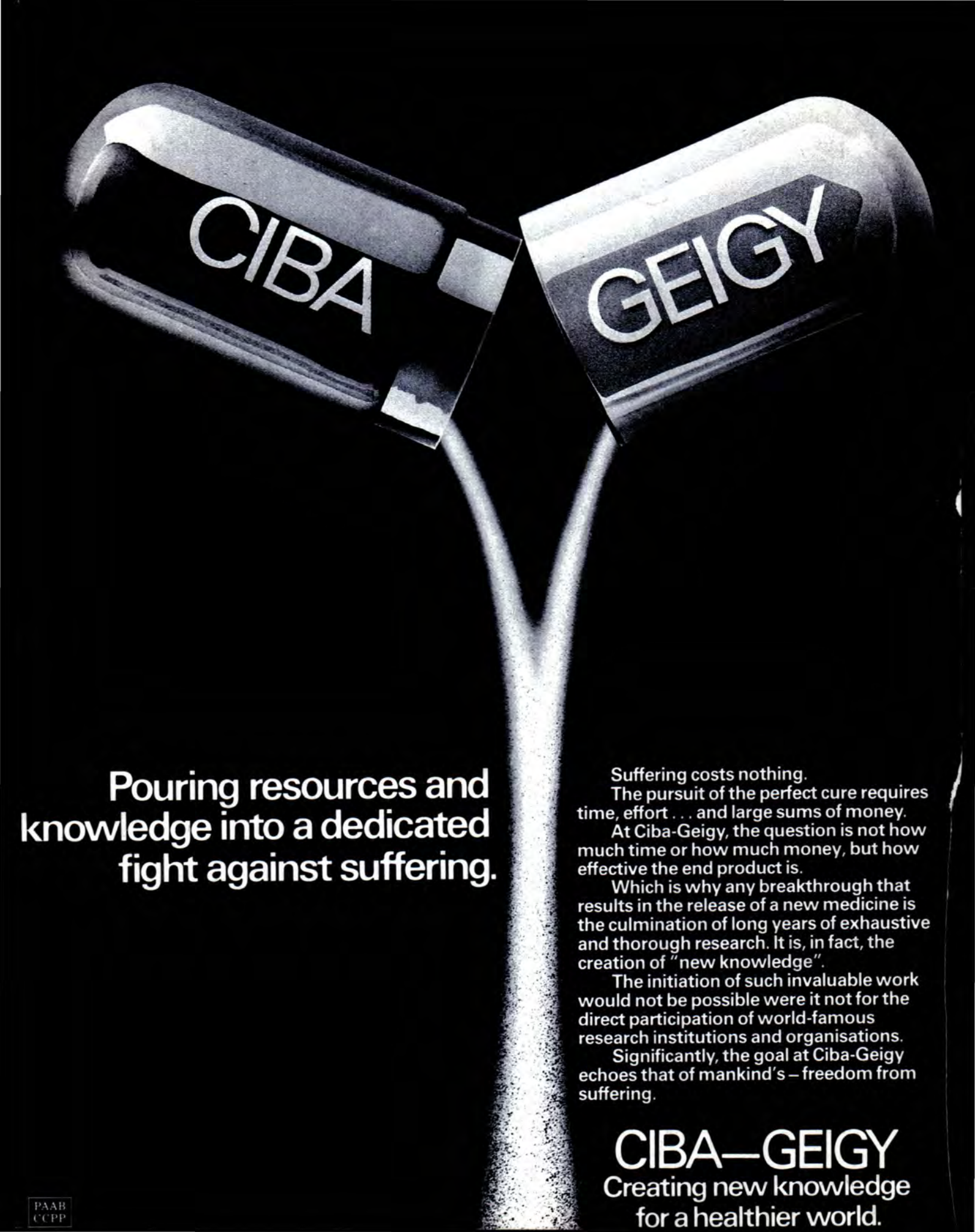
THE DR. GLEN S. WITHER MEMORIAL AWARD $1,100
Philip Leon Vandewalle

THE ROBIN MIDDLETON MEMORIAL AWARD $825
Warren David Teel

THE JOHN WILLIAM ROHRER MEMORIAL AWARD $650
Dorian King
Cheung Lo

THE BILL MOOD MEMORIAL AWARD $500
David Buckle

THE ROCHE SCHOLARSHIP $50
Bradley Jon Dibble



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