As we wind up another term here at Waterloo, there are many things that I should call our alumni’s attention to. The recent announcement by the BC Government, More Choices for Eye Health dated March 30, does cause concern for all of us in the Canadian optometric profession. I have spoken to members of the British Columbia Association and the CAO to indicate that the School is willing to provide whatever support is needed in dealing with this issue.

On the brighter side, I am pleased to report that Dr. Irving Baker will receive an honorary Doctor of Laws at this Spring’s Convocation here at Waterloo on June 18. This award will recognize the long standing efforts that Irving provided in the professional development of Optometry within Ontario and Canada as a whole. These contributions were largely achieved through a tireless and scholarly pursuit where independent thinking was a requirement given that there were few teachers and advisors who could point the way.

Recently, our building campaign was given a great lift through two large corporate donations from CIBA Vision and Johnson and Johnson Vision Care. Combined they have generously committed $750,000 toward the expansion.

Through these donations and the support of other industrial partners Alcon, Innova, Advanced Medical Ophthalmics, TLC and an increasing number of alumni donors, we have now exceeded $2 million in campaign donations.

In the following pages, you will see that we have an exciting two-day CE programme scheduled for June based around the theme of systemic diseases. First, I would encourage your attendance. Second, I would like to say to the profession that many faculty here in the School would like to be doing more to meet the CE needs of the Canadian optometric profession. We could be providing more. A lot more. I know there is the desire and expertise here in the School. However we would need more regular opportunities to dispense CE beyond our annual program. I would encourage the CAO and provincial associations to consider approaching the School for their CE needs.

As always, we in Optometry live in interesting times. I wish you all an enjoyable summer.
Challenges and Opportunities of the Optometric Electronic Medical Record (OEMR) at the School of Optometry

The School of Optometry, as reported in the first two articles of this series, began a project to identify and implement an optometric electronic medical record system. Our progress to date has been good albeit somewhat slower than we had hoped. We are taking a methodical and thorough approach to ensure we identify our legitimate and justifiable requirements, evaluate all viable commercial products selecting the most suitable for our needs, and determining a feasible implementation strategy. This installment in the series provides the reader with a synopsis of what we have discovered during the first year of our project.

The OEMR promises to solve the many problems related to the patient paper record. Problems like legibility, accessibility, availability, efficiency, will finally be overcome, and the record freed to support management and high quality patient care. In spite of these well-known benefits, finding the right system that satisfies the various needs of all the specialty clinics at the School of Optometry is a challenge. We need an OEMR system not only to support current work practices but also to provide better services and facilitate our mission in delivering high quality teaching and research. In this article we discuss the nature of optometric examination data and how they should be stored electronically. Also we discuss the variation in the clinical eye examination in the different specialty clinics.

First, clinical examination data can be captured and stored electronically in an OEMR system essentially in two formats: `semi-structured data' and `structured data'. The first is mainly text-based, captured with various types of text notes which are partially structured descriptions of the clinical findings. The second can be captured through a framework such as a “form”, within which data can be collected. Examples of structured data are the numeric, alphanumeric values, selection from drop down lists, checked checkboxes, etc.

Data storage and retrieval are important features of the OEMR. Freeform text is easier and cheaper to implement where data can be stored and sometimes searched, but difficult to preserve or represent relationships with other stored information. In contrast, structured data has a great value when efficiently collected and stored. It can populate a relational database that can be easily quantified and evaluated in relationship to other data elements. The structured data can be easily “mined” to provide useful information for teaching and research as well management of the operation.

The motive for creating this kind of distinction is that each type of data is treated differently and requires different technology for storage, transfer, searching and retrieval of the information. Freeform text is generally useful for viewing or printing, while structured data is more amenable to analysis and searching as well as providing greater consistency. Having clinical information stored electronically as text will only have limited advantages over the paper record, with its legibility issues, etc. Other types of medical data are graphical data such as images, diagrams, and data captured from various optometric instruments. Integrating these data into the electronic medical record is important for patient care and of increasing interest to researchers.

For our teaching and research environment at the School of Optometry, it is essential to have as much as reasonably possible of the patient data and all the associated clinical information stored in a structured format. Fortunately, optometric examination data is primarily `parameter-based' and structured data. It is essential to have an OEMR system that supports storage and retrieval with the ability to “mine” the data in order to develop high quality information. This feature can be implemented in an OEMR system through:

1. **User Interface**: provide a framework within which numeric, selection from lists, etc. data can be captured.

continued on page 7
E.A. Baker Lecture presented by Graham Strong

The 2003 CAO Meeting in Halifax was the venue of the inaugural E.A. Baker Lecture in Low Vision. The lecture, which is sponsored by the E.A. Baker Foundation, was presented by Graham Strong. Dr. Strong, the previous Director of the School of Optometry and Director of the Centre for Sight Enhancement (CSE) at the University of Waterloo since 1987, has made many contributions to the field of low vision. The CSE is Canada’s only low vision service to be accredited by the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped (NAC). Dr. Strong also directs UW’s Sight Enhancement Equipment Pool and Assessment Centre (SEEPAC), a provincially sponsored service specializing in the assessment and provision of high technology sight enhancement devices for people with low vision.

Dr. Strong is active in local, national and international low vision research forums. Since 1972, he has served as leader of the Vision Research Team for the Ontario Rehabilitation Technology Research Consortium (ORTC). The ORTC is a large government-sponsored research collective, whose mission is “to enhance the lives of persons with disabilities, their families and communities by conducting research and development into technology based products and services”. ORTC-sponsored research has led to the development and commercialization of many new award-winning rehabilitation products. In recognition of these achievements, Dr. Strong’s Sight Enhancement Engineering (WatSEE) lab received a Computerworld Smithsonian Award in 1999 and Dr. Strong became invested as Computerworld Smithsonian Laureate.

The E.A. Baker Foundation for the Prevention of Blindness, which is operated by the Canadian National Institute for the Blind, provides fellowships and research grants to scientists and clinicians. Dr. Strong also presented a lecture entitled “New Sight Enhancement Technologies for Low Vision rehabilitation”. An award plaque was presented to him by Dr. Don Farrell, Chair of the E.A. Baker Foundation.

Czech Contact Lens Society honours Desmond Fonn with the Wichterle Medal - Alisa Sivak

In November 2003 the Czech Contact Lens Society (CCLS) awarded the very first Wichterle Medal to Desmond Fonn and Brien Holden. Dr. Fonn is the founder and Director of the University of Waterloo’s Centre for Contact Lens Research (CCLR), an organization that has grown to be highly respected and internationally renowned for its expertise and innovation in investigating the ocular response to contact lens wear. Dr. Holden is the founder of the Cornea and Contact Lens Research Unit and Deputy CEO of Vision CRC, located in Sydney Australia.

The medal was awarded in recognition of the role both men have played in the development of the art and science of contact lenses. It was presented at the CCLS Tenth Annual Congress, which was held in cooperation with the Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic. This year’s congress was dedicated to the foundation’s tenth anniversary as well as the 90th anniversary of the birth of Otto Wichterle, the Czech scientist who developed the first soft contact lens.
CE 2004 - The Eye in Systemic Disease including The Essentials of Diabetes Care

The University of Waterloo School of Optometry is pleased to announce our annual continuing education programme for June 12th and 13th, 2004. See the registration form on page 12.

In response to requests, we have organised an interesting continuing education weekend with an emphasis on the eye and systemic disease. First and foremost is a thorough review on Diabetes, both retinal and non-retinal complications. Featured will be issues relevant to optometrists regarding diabetic control, complications and management. Included will be the impact on eye and health care of recent multicentre trials related to both Type 1 and Type 2 diabetic patients. On the second day, interesting and relevant issues around the Eye in Systemic Disease will be presented and the role of optometrists in this expanding area of practise will be highlighted. A full 14 continuing education hours will be offered.

Keeping up to date with the surge of basic and clinical science related to eye and vision care is a challenge for all of us. Evidence-based optometry is quickly re-defining our approach to problem solving in our practices and, despite the increased availability of information sources, can be daunting due to the sheer volume of emerging research. This year, a workshop highlighting the essentials of Keeping Current with the Journal Literature will walk you through the ways the information systems have evolved to help a busy practitioner to keep current and to find information quickly, related to novel developments in patient care. Space is limited in this timely workshop!

Once again, we present two Distinguished Lectures as part of our Annual Continuing Education programme (see article on page 11 for details). As the Distinguished Woodruff Lecturer, Dr. Alan Cruess of the Department of Ophthalmology at Dalhousie will speak on “Epidemiology and Public Health Impact of Diabetes”. Dr. John Lovasik of l’École d’optométrie, Université de Montréal will present this year’s Bobier Lecture in Vision.

The School is pleased to again welcome Optometric Assistants with a value-packed programme. Join us for 6 credit hours of relevant lectures and workshops on Saturday June 12th in areas including contact lenses, spectacle lens materials & coatings, office etiquette, diabetic patients and more!

A repeat of our well-received Trade Show ‘tent event’ will feature a variety of exhibitors highlighting educational materials, equipment items and resources over a festive lunch on Saturday, June 12th. After a full day of CE, please join us under the big top again for an optometric entertainment treat! Stick around Saturday evening and enjoy live music and great food at an evening event for all registered optometrists and optometric assistants. By popular demand, the Lost Faculties return for an encore performance!

Please don’t miss an opportunity to catch the CE lectures of Dr. Anthony Cullen and Dr. T. David Williams, both retiring this year.

Return to the USA - Dr. Debbie Jones

May 2004 will see a return to US sites for our 4th year clinical interns. Part of the 4th year students’ clinical training away from the School of Optometry includes a full 15-week term placement where the main focus of this training is in the area of Ocular Therapeutics. Interns work closely with ophthalmologists and TPA licensed optometrists to gain valuable practical experience. Following the events of September 11th 2001, a joint decision was made by the UW School of Optometry and the University administration to voluntarily suspend clinical placements to the US. This suspension provided an opportunity to develop and garner sites within Canada for our students. We have been fortunate enough to be able to place our students in excellent Canadian sites and the experience gained has been outstanding. May 2004 will see the resurrection of some of the US based activity. Our students will be equally split between sites in Canada and sites in the US. When we approached the sites to ask if they would be willing to take our students again we were met with much enthusiasm. It seems that the Americans just love our Canadian students. We are delighted to be able to offer such opportunities to our students and to be able to give them the choice of staying on home ground or travelling further a field for their experience.
TLC is pleased to announce the appointment of Dr. Hugh Jellie to Medical Director of TLC Waterloo. Dr. Jellie has an ophthalmic practice in Kitchener-Waterloo and he has been performing refractive surgical procedures at TLC since 1999.

TLC Waterloo is excited to offer commercial custom technology. Our centre recently completed a 3-year FDA custom study involving our sponsor Alcon, and the Centre for Contact Lens Research.

Our dedicated staff, including our Executive Director, Michele McLaughlin, is made up of 7 team players. Our optometrists are Dr. Lisa Willms, Clinical Director & Dr. Chris Surdykowski. The other key players are Marie Upton, Adriana Peste, Laura Sole and Suzanne Helmke. Bonnie Hoffmann is our Professional Relations Consultant.

Time has gone by rather quickly. We will be celebrating our fifth anniversary within the school in May. It has been a pleasure to work with the faculty, staff, and students during these past years.

Farewell, Marilyn Smith – Dr. B. R. Chou

On 31 October 2003, Marilyn Smith left her position as Manager of Optical Services to become Vice President, Sales & Marketing at C&C Optical Laboratories Inc. The School of Optometry’s “Queen of Dispensing” came to UW in 1988 after a successful career in optical sales, to become the instructor in mechanical optics upon the retirement of the late Hartley Thompson. Marilyn’s cheerful but disciplined approach to mechanical optics and dispensing soon made her many friends among students, staff and faculty. She has made many contributions to both the educational and social activities of the School of Optometry over the years, serving as the School’s representative in UW’s fundraising programmes, organizing optical fairs at the annual continuing education weekend, arranging door prizes for the fairs and many other UWSO social events, and making educational presentations to optometric assistants.

The Clinic lunch room was filled to overflowing on the afternoon of 30 October, as staff, students and faculty joined to recognize Marilyn’s contributions to the School and wish her well in her new position. Dr. William Bobier, Director of the School, praised Marilyn’s unflagging support for the School, and presented her with a gift on behalf of the entire UWSO family. Sharron Dawe read a poem she had written for the occasion, and presented a framed handwritten copy to Marilyn. The celebration ended with the cutting of a cake decorated with reminders of Marilyn’s trademark red shoes.

Although no longer involved with Optical Services in the Clinic, Marilyn is not leaving UWSO entirely. She is continuing as a part-time instructor in mechanical optics labs for Optometry 216, 246 and 346. Many readers in Southern Ontario can expect a visit from Marilyn in her new capacity over the next few months. We wish her success in her new venture.
Good News from the Centre for Contact Lens Research – Alisa Sivak

The Centre for Contact Lens Research (CCLR) is pleased to announce that its status has been renewed for another five years by the University of Waterloo Senate Graduate and Research Council.

The CCLR has experienced tremendous growth and development over the last five years, further developing its international reputation for expertise in research geared towards understanding the ocular response to contact lens wear and other forms of refractive correction. The Centre is currently also at the forefront of the development of techniques aimed at translating clinical assessments into measurable parameters.

The Centre’s expertise in these areas has attracted an increasing number of industry partners that provide funding for specific, directed projects, the majority of which are related to clinical performance. An increasing number of companies have also opted to become affiliate members of the CCLR, entitling them to benefits over and above those offered through research contacts and providing the Centre with support for expanding its infrastructure and extending its investigations beyond clinical trials. The list of affiliate members currently includes: Alcon Laboratories, Bausch & Lomb, Johnson & Johnson Vision Care, CIBA Vision, and Ocular Sciences.

As a result of this growing interest, opportunities to perform both basic and clinical studies have snowballed, particularly in the last year. In 2002-2003, the CCLR performed 16 studies in total – more than double the number of studies it performed in 1998-1999.

In addition to clinical trials investigating the performance of contact lens solutions as well as the overnight wear of novel Silicone Hydrogel materials, CCLR research has focused on:

**Ocular Surface Sensation**
- use of a Belmonte esthesiometer, adapted to measure ocular surface sensitivity using mechanical, thermal, and chemical stimuli and investigate the differences between corneal and conjunctival sensitivity
- adaptation of a photometer to more precisely measure conjunctival redness
- development and use of an instrument designed to measure ocular comfort and redness continuously and simultaneously

**Anterior Segment Physiology**
- use of Optical Coherence Tomography and optical pachometry to investigate the corneal response to overnight wear of contact lenses

**The Tear Film and Symptoms of Dry Eye**
- in vitro and in vivo studies characterizing the biochemical composition of the tear film
- use of Optical Coherence Tomography to assess tear film volume and flow and to measure precomereal tear film thickness
- impact of eye-viscosity on the length of time a solution stays on the ocular surface and the volume of tears in the lower tear meniscus
- impact of novel rewetting drops on the deposition of protein on Silicone Hydrogel contact lenses and in-eye comfort
- quantification of mucomimetic tear film components in patients that commonly report dry eye symptoms, including soft contact lens wearers, post-menopausal women, patients with inflammatory Sjögrens Syndrome and patients who have recently undergone refractive surgery

**Biocompatibility**
- dehydration rate of Silicone Hydrogel materials compared with conventional materials
- uptake and release of pharmaceutical agents from contact lens materials
- uptake of lipids and proteins onto model polymer substrates
- development of novel materials able to sample the human tear film in a non-invasive manner

**Visual and Subjective performance indicators**
- development and modification of a number of tests designed to quantify vision and characterize distortions using wavefront technology and other techniques for measuring light scatter
- development of ways to better characterize the eye’s appearance
- development of methods to gauge the accuracy and repeatability of subjective scales as they relate to vision, comfort and ocular appearance

**Survey based research**
- documentation of contact lens wearers’ attitudes toward daily and continuous wear and corresponding replacement schedules

CCLR studies have grown enormously in size and scope, progressing from simple studies employing routine ocular assessments to more complex research using state-of-the-art equipment and requiring increasing numbers of participants. The number of hours taken up by data collection alone has quadrupled since 1998. The Centre has responded to this increased demand by doubling its workforce over the last five years, including an increasing number of graduate students (11 currently), and anticipates even more growth in the near future.

For more details, have a look at the CCLR Five Year Report online, at www.cfclr.uwaterloo.ca
Optometric Electronic Medical Record - continued from page 2

2 Underlying database schema: to store the data in relational form. The fields in the framework are represented as columns in database tables with their corresponding data types.

The second challenge in adopting an OEMR at the School is that the current examination records and forms are quite different varying in their structure, data flow, and the number of parameters captured in each specialty clinic. Each specialty clinic has its own unique and significantly different paper examination record tailored for their specific encounters. How will or could these examination records look electronically?

The author had the opportunity to see an OEMR system designed for a US school of optometry. The design objectives for this US school were to accommodate all their specialty clinics’ needs regardless of how obscure or infrequently they would be used. This design approach tried to imitate their paper records and transfer them to electronic forms. There are drawbacks to this design approach; most significantly is that the resulting system can and did become too complicated and difficult to manage and maintain, resulting in an interface that users had great difficulty coping with.

Our evaluation is leading us to the conclusion that for ease of training, implementation and use, standard/common formats should be used across all clinics. The benefits of having a standard or common format are:

> Provides a common format of the eye examination across specialty clinics.
> Allows for the integration and the standardization of eye examination protocols.
> Facilitates rapid training of all users.

The fields in the framework are represented as columns in database tables with their corresponding data types. The School has reviewed that product and while it met most of our extensive requirements, the initial product lacked the ease-of-use requirement that is so critical in our environment.

Most of the available OEMR systems on the market today are developed specifically for use in small practices as that is the most significant market for the software vendors. These systems capture a very limited numbers of parameters and provide a freeform text area to allow clinicians to write additional information in a text format. These types of systems fail to support the extensive clinical requirements of the School of Optometry. In addition, the OEMR systems are delivered “as is”, with the reality being “what you see is what you get”, and users being unable to ask for any modifications, changes or additions to the system.

As reported in prior installments of this series, we have evaluated a number of commercial systems offering OEMR functionality. Most of these systems simply do not meet the School’s extensive requirements. The School, as you may know, uses P&P Data Systems’ CIS (Clinic Information System) to support calendaring, billing and financial reporting. P&P has several EMR products for health professions including physicians, dentists, and chiropractors and has been developing an optometric EMR for the past several years. As the School already uses their CIS product, many implementation issues would be addressed if their OEMR product is a suitable fit.

P&P Data Systems developed its initial OEMR module of the Clinical Information System (CIS) based on the School’s clinical procedure guidelines. It captures the clinical examination data in a structured format and stores the data in a relational database. The School has reviewed that product and while it met most of our extensive requirements, the initial product lacked the ease-of-use requirement that is so critical in our environment.

Responding to that issue and to the needs of the larger OEMR market, P&P has begun a redesign. This redesign is primarily a change to the navigation through the software. The new approach is much simpler and mimics common
Many of you tell us that you often get questions about the Doctor of Optometry program from your patients. In response to this we developed and updated a School of Optometry poster and admission brochure. These were distributed to all optometrists in a recent mailing. The poster is “eye-catching” and provides our website address which will direct prospective applicants to the relevant admission information on our soon-to-be-updated website. We’ve had a lot of positive responses already.

“Thanks much for this excellent poster and booklet. It will be most helpful for us to market the profession and the School to our patients.”

SCOTT MUNDLE – Optometrist, President, Canadian Association of Optometrists

We hope that you will display the poster where it can be seen by your patients.

THANK YOU FOR ASSISTING US.
Collaboration and Cooperation:  
The Optometry Learning Resource Centre and the Association of Vision Science Librarians  
- Jackie Stapleton, Librarian, Optometry Learning Resource Centre

The Optometry Learning Resource Centre at the University of Waterloo is a small, specialized library, serving the only English-speaking School of Optometry in Canada. Though part of the larger University of Waterloo Library system, we have individualized needs and services which can lead to a rather isolated existence. However, there are many other libraries across North America with the same purpose as us, to support the teaching and learning in optometry and vision science programs. Through our membership in an association called the Association of Vision Science Librarians (AVSL), we belong to a larger collective of vision science libraries across North America and the world.

The AVSL is an international organization founded in 1968 at the meeting of the American Academy of Optometry. Membership includes individuals who work within libraries that serve educational institutions, eye clinics and hospitals, and private companies with an interest in eye or vision-related products and services. Members of this association have a need to keep in close contact with both the optometric and librarianship professions. To this end, AVSL is a Special Interest Group of both the Association of Schools and Colleges of Optometry and the Medical Library Association.

Through participation in the AVSL, the OLRC is able to accomplish many things which would be impossible on our own. These include participating in cooperative activities among the member libraries; maintaining an awareness of new library programs, services, and resources which are being offered at other vision science libraries; and liaising with other libraries and librarians with similar needs and interests.

Examples of AVSL projects include:

1. AVSL members assist in handsearching the vision science literature for the Cochrane Eyes and Vision Group of the Cochrane Collaboration, an international organization that prepares systematic reviews of the effects of healthcare interventions.

2. Several AVSL librarians have worked to provide pre-formulated search strategies and automatic PubMed searches for evidence based literature in support of Healthy People 2010, a project of the NLM, Public Health Foundation and the National Network of Libraries of Medicine in the United States.

3. The creation of a set of standards for vision science libraries which includes such things as staffing levels, services, budget and technology. See Bulletin of the Medical Library Association, 2000 Jul, 88(3): 234-38.

Through collaboration and cooperation, the OLRC is able to take advantage of a much larger network of libraries, librarians and library staff, all specializing in vision science resources and services. For further information, the AVSL maintains a web page at http://optometry.berkeley.edu/library/AVSL.HTM. Through this web page you can find basic information about the association such as the purpose, history, and membership as well as links to valuable publications and resources prepared by the group.
What is particularly exciting is that while it is very simple to use, the new version records structured data. The School’s extensive requirements are likely to be fully met through a drill-down (a button to access another screen) to record additional parameters that are not always needed in private practice. This design philosophy will allow P&P to offer an OEMR product to private practice that has the same look and feel as the software that the School will likely implement.

We are currently re-evaluating the design model of the new system to determine its completeness and the possibility of satisfying all our clinics’ requirements. Our hope is that if the re-evaluation proves favourable, the implementation will start in the pre-clinic in the winter term of 2005. Subsequent implementation phases will follow in other areas of the pre-clinic in the fall term of 2005 year and into the clinic for patient care in the Spring of 2006.

Maher Shinouda
EMR Project Leader

New Optometry Faculty with a Fishy Perspective

Dr. Thomas Singer was appointed a new assistant professor in the School of Optometry on September 1st 2003. He brings a “Fishy” perspective to the school’s ever-expanding molecular based research program. Tom has been involved in a wide range of fish related studies including tracking Atlantic salmon by helicopter in Newfoundland to characterizing the cystic fibrosis gene he cloned from a killifish.

He received his BSC (1987) and MSc (1990) degrees from the University of Guelph’s Zoology Department. Tom was awarded a DPhil from Oxford University in the Department of Clinical Biochemistry (1997) for his cystic fibrosis doctoral research initiated at Toronto’s Sick Children’s Hospital. His first Post Doctoral fellowship took him to Vanderbilt University in Nashville, Tennessee where he examined co-transporter proteins in the brain. He returned to Canada and the University of Waterloo in 1999 where he has spent the past four years as a Research Associate in the Department of Biology studying epithelial transport and stress-related gene expression in fish.

Tom brings with him an extensive background in molecular biology. He has published 16 articles in scientific journals, presented over 20 oral and poster presentations at conferences in Europe and North America and given numerous teaching lectures related to his molecular studies. He is very excited about working on a new set of challenges related to vision and looks forward to the opportunity to prepare Optometry students to be a part of the Genomics revolution.

Tom’s initial research program is focused on the role of gene regulation in maintaining proper vision. He plans to use a comparative approach by studying the lens and cornea from his favorite animal model, the killifish, to understand the molecular basis of human cataract formation. His studies of other animal models has taken Tom around the world to investigate Atlantic Salmon in Norway and recently to establish a research project examining the vision of cichlid fish from Lake Malawi in Africa.

Dr. Singer invites fellow Optometry faculty, staff and students to drop by and discuss research and teaching opportunities or just to commiserate about the “fish that got away!”
The School of Optometry

Continuing Education programme is proud to present two named lectures honouring two of our most significant faculty, Dr. Emerson Woodruff and Dr. Clair Bobier.

Dr. Emerson Woodruff

Dr. Emerson Woodruff is a widely known and highly respected Canadian optometrist, educator and scientist. After practicing optometry in southern Ontario from 1950 to 1962, Emerson left private practice to teach and pursue a PhD degree in physiological optics at Indiana University. He joined the faculty of the School of Optometry in 1967. Emerson was Director of the Optometry Clinic from 1967 to 1974 and Director of the School from 1975 to 1981. He was instrumental both in the formation and growth of the clinical program as well as the establishment of the MSc and PhD graduate programs in vision science. Before his retirement, Emerson published over 70 scientific and professional articles, mostly dealing with the epidemiology of visual anomalies. He served on a number of government agencies and commissions and received a number of awards form the profession of optometry. The annual Woodruff Lecture was established in 1994 to recognize Dr. Woodruff’s many contributions to the School of Optometry and the profession he loves.

Dr. Alan Cruess currently holds the appointment as Professor and Head of the Department of Ophthalmology and Visual Sciences at Dalhousie University and District Chief of Ophthalmology for the Capital Health Region, Halifax, Nova Scotia. Dr. Cruess remains active in several clinical trials of new therapies for age-related macular degeneration and diabetic retinopathy, and has an interest in ocular imaging and in improving diabetic eye care for Canada’s First Nations people.

Clair Bobier

Clair Bobier had a profound influence on the profession of optometry in Canada. Clair, born in Moosomin, Saskatchewan, received his Diploma of Optometry in 1948 from the Ontario College in Toronto. Within the year, while also in private practice, he began sharing his methodical, analytic approach to clinic practice with students at the College. He appears to have retained throughout his life, the common sense, thoughtful approach of the prairies.

Clair was one of the first Canadian optometrists to undertake postgraduate research in vision science. He studied at Ohio State University under Professor Glenn Fry for his MS degree and his exposure to an eminent optometric researcher shaped his views on the importance of the scientific approach to the optometric profession.

After receiving the MS degree in 1956, Clair returned to teach at the Ontario College and continued to do so at the University of Waterloo after the move there in 1967, until his retirement in 1982. How many hundreds of Canadian optometrists have carried with them into practice Clair’s habit of asking why, and his patient tenacity in searching for answers?

At the University of Waterloo, Clair was instrumental in pushing for a scientifically-based curriculum and research-oriented faculty. These ideals were passed along to university and government officials in many influential briefs which did much to ensure the respect and funding necessary for the future growth of the profession. The School of Optometry building itself, which Clair guided to completion as Chairman of the Building Committee, embodies in its interface of clinical and research facilities, Clair’s concept of what the profession should be: excellence in modern vision care, built on a firm base of scientific understanding.

In establishing the annual Clair Bobier Lectures in Vision, the School of Optometry, University of Waterloo recognizes Clair’s varied and immense contributions to the profession. Most importantly, we recognize his vision for the future of optometry in Canada.

On Saturday, June 12th, 2004 at 5:00 pm, the 15th annual Clair Bobier Lecture in Vision will be presented by Dr. John Lovasik.

John V. Lovasik obtained his OD at the School of Optometry, University of Waterloo and then pursued his interests in the neurophysiology of vision through MSc and PhD research also at the University of Waterloo, receiving the Pearson Gold medal for excellence in PhD research. Currently, Dr. Lovasik is professor at l’École d’optométrie, Université de Montréal. His research into the neurovascular coupling and hemodynamics in the human retina is unique in Canada and recognized internationally. This research is directed at elaborating the pathophysiology of diseases like age-related macular degeneration and glaucoma, both leading causes of blindness in North America.
### CE 2004 - The Eye in Systemic Disease & The Essentials of Diabetes Care REGISTRATION

- A fee of $375.00 will be charged for the two-day course. A late fee of $50.00 will be applied to registrations received after May 14th.
- The lab “Keeping Current with the Journal Literature” is an additional $50.00.
- Contributors to the Watfund who are current members of the Waterloo 500 Club are granted a $50 discount on fees. Members of the President’s Committee are granted a $100 discount on fees. These members are asked to identify themselves when applying in order to facilitate proper processing.
- Part-time clinical supervisors at the School of Optometry (including external programme supervisors) receive a 40% fee reduction in regular fees. This discount cannot be extended to workshops.
- There is no fee for the Bobier and Woodruff Lectures.

### REFUNDS

The registration fee, less a $25 service charge, will be refunded only if cancellation of registration is received at least 24 hours before the programme begins. Workshop registration is non-refundable after May 14th.

### Registration Form – CE 2004

Please complete the following form as soon as possible and submit along with your method of payment. If more than one form is required (more than one registrant), please photocopy form. Please make cheques (CDN$) payable to the UNIVERSITY OF WATERLOO. No post-dated cheques please.

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<td>Regular programme per day (7 hours)</td>
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To accommodate the increasing enrolment of students the 4th floor, laboratory space of the Optometry Building was extensively renovated from May until August 2003. Work began in September 2002 when a Task Force was created from the Administrative Council to spearhead the project. The Task Force members were Trefford Simpson, Associate Director; Gary Marx, Administrative and Financial Officer; Marie Amodeo, Undergraduate Administrative Assistant and Patricia Hrynchak, Faculty Member.

The goal of the project was to redesign the space to accommodate the full target enrolment numbers of 90 without increasing the number of sections that needed to be taught. Input was solicited from the course instructors and laboratory demonstrators and the design process was begun. With the expert help of Gary Kosar, university design consultant, a plan was developed which improved the utility of the space while at the same time increasing the efficiency.

The pre-clinic was expanded to 24 booths from the previous 16. It now includes a demonstration lane where techniques can be demonstrated to large groups of students via the use of a video camera projecting the images onto a screen. The lane includes data projection for PowerPoint presentations, DVD and video projection as well as a white board. There is a slit lamp video system that projects slit lamp and fundus images onto the screen for teaching purposes. Each lane is now enclosed for optimal lighting control, has mirrored projection and includes a full console of cabinetry as well as a sink. Each booth has internet hook-up to facilitate the teaching of electronic medical record keeping in the future. The design of the booths is based on that of the mirrored rooms in the Primary Care Clinic.

The optics laboratory space was renovated and updated to improve functionality. The number of laboratory rooms has increased from 12 to 17. There is space for equipment set-up and storage. The rooms have partitions with independent lighting in each section to facilitate different experiments being performed in the same room.

The pathology/physiology laboratory was changed to a multipurpose laboratory to accommodate the teaching of the pathology/physiology, contact lens and mechanical optics laboratories. This has allowed maximal use of the space. The room has two benches that each accommodate 24 student stations. The stations have independent lighting and storage. There is a raised demonstration bench with a data projection system for PowerPoint presentations, video microscope projection, water supply and a white board. This space has a large preparation room with a fume hood, refrigeration and storage.

The design of the 4th floor also includes a meeting room, office space for the laboratory demonstrators and improved washroom facilities for women. The equipment for the laboratories has been updated and supplemented to accommodate the increasing student numbers.

A wine and cheese reception was held on January 12, 2004 to celebrate the opening of the 4th floor.

Dignitaries attending the open house included David Johnston, University President; Amit Chakma, Vice President Academic & Provost; George Dixon, Dean of Science; Laura Talbot-Allan, Vice President, University Relations; and Morris Tchir, Associate Dean of Science. The response to the renovations has been very positive from students, laboratory demonstrators and visitors.

A company representative recently touring the school commented that we now have the most well designed and functional pre-clinic of any School of Optometry in North America.
The UW School of Optometry community was well represented at the rally organized by the Ontario Association of Optometrists at Queen’s Park on March 31, 2004 to protest the Ontario government’s inaction regarding OHIP fee negotiations. By rescheduling lectures, tests and clinical assignments, the faculty and staff was able to arrange for almost the entire second- and third-year classes, and a good part of the first- and fourth-year classes to participate. Only graduate students and faculty who were already committed to the University’s annual Graduate Student Research Conference that day, were unable to ride the buses.

Four buses left Waterloo with over 165 members of the UWSO and a few local optometrists. After 2 hours on the wet, congested highway, we arrived at Queen’s Park and collected our signs and “I’m an eye care fan” fans.

The OAO President, Dr. Judy Parks, spoke about the OHIP fee issue (it has not risen in 15 years), how optometrists are subsidizing each and every eye examination, the unfairness that other professions have been granted increases during that time, and how this affects the quality of eye care in Ontario. A number of MPPs were in attendance and spoke in support of optometry. Shelley Martel of the NDP mentioned the rising costs of eye care and our lack of support from previous governments; Cam Jackson (PC) cited personal examples of the dedication of specific optometrists who have made a significant impact on eye and health care; Peter Kormos (NDP) spoke of TPAs and how optometry had been let down in this regard in the past. Conservative MPP Garfield Dunlop (chief whip of the opposition) also made comments in support of optometry. Michael Prue of the NDP was also present when Mr. Jackson read the statement supporting optometry that he was to present in the Legislature that afternoon, and Mr. Kormos announced his plan to reintroduce his private member’s bill to amend the Optometry Act, 1991 to give optometrists the use of TPAs. Waterloo MPP Elizabeth Witmer was seen to have popped out from the Legislature just after noon, as the rally was winding down. During and after the rally, OAO volunteers met with some of the members of the Legislature.

At its peak, over 500 members of the Ontario optometric community were present at the rally, with the students, faculty and staff from the School scattered throughout the crowd. There were various media present – Global television reported on the rally on their 5:30 news with Dr. Patricia Hrynchak up front in her “Fair Share for Eye Care” t-shirt and very bright pink hat. The Toronto Star was there too – a short report of the rally appeared on its website and in the Ontario edition, but not in the Metro edition that is distributed in the Greater Toronto Area.

The UWSO community’s support was greatly appreciated by our colleagues in practice. Thanks go to Tim Maillet, past-President of the Canadian Association for Optometry Students, for his work in organizing his colleagues. We all appreciated the OAO’s diligent arrangements for the buses and post-rally refreshments, and Doug Sandercott of Centennial-SOLA for the plentiful supply of Timbits and water during the rally.
The Lost Faculties started out about five years ago as the brainchild of Drs. Peter Waind and John Flanagan. As many local KW musicians are aware, Dr. Waind is a gifted guitarist as well as a busy ophthalmologist and at that time he held a part-time faculty position at the School of Optometry. The idea of forming a band started with the realization that a surprising number of faculty and staff members at the School had had some previous experience as musicians and stage performers. What’s more, Skit Night, the traditional “talent showcase” held at the School every year, seemed to be a natural venue for a faculty/staff rock band to make its debut performance. The concept was too tempting to resist, and after a few rehearsals the Lost Faculties took Skit Night by storm with a high-energy set that electrified the student audience, who were surprised and thrilled to see their previously mild-mannered professors suddenly transformed into “rock stars with attitude”! The night was a roaring success and the Lost Faculties haven’t looked back since.

Unfortunately, the relentless demands of maintaining a bustling surgical practice soon forced Peter Waind to leave the group, but by then the band’s momentum had been well established. Boasting an impressive roster of eight musicians, the impact of a Lost Faculties show comes not only from the “wall of sound” that such an exceptionally large band can produce but also from the versatility of its individual members. On Bass and Vocals, Dr. John Flanagan got his start at high school playing and singing in pub bands, DJing and performing solo in Yorkshire folk clubs. Later he co-founded the Midland Revue Company, a comedy and music troupe that enjoyed considerable success in the Birmingham area and at the Edinburgh Festival (BBC Pick of the Fringe). Although that was some twenty-odd years ago, he jumped at the chance to pick up the bass and play in a band again.

Bruce Irvine, the band’s virtuoso guitar soloist, was a busy professional musician in the early 1980’s, touring the UK and Europe with such well known bands as the Tyla Gang and the Lightning Raiders as well as being in demand in the recording studio. He is now kept busy at the School as a Database Administrator with the Centre for Sight Enhancement and is enjoying the opportunity to return to the musical spotlight. Playing Saxophone, Keyboards,
Pennywhistle, and whatever else needs playing. Dr. Ken Hadley has been a semi-professional musician since he was 13 years old. After practicing optometry for six years he took a year off to study music at Humber College in Toronto before joining the clinical faculty at the School. Since then he has played with many diverse groups across southern Ontario, in styles ranging from jazz and rock to classical and country. On Electric and Acoustic Guitar, Dr. Rodger Pace played in several garage bands in his high school days and has since studied jazz, blues, and classical guitar. He owns an impressive collection of guitars and has even built a guitar and a mandolin (which recently made its debut on stage)! On Vocals, Percussion, Flute and overall Good Taste, Dr. Natalie Hutchings’ background has primarily been in classical flute and choral works, but she jumped at the chance to make some more contemporary music and in fact has been known to try anything, at least once. On Keyboards, Guitars, Vocals and Heavy Equipment, Walter Mittelstaedt’s roots are in the Christian Rock movement in the 70’s and 80’s and he has always played ‘just for the love of music’. A Psychologist and Director of Mental Health services at the Lutherwood Agency in Waterloo, he is one of the two people in the band who is not employed by the School of Optometry. However, being the husband of Dr. Patty Hrynchak definitely put him on the “inside track” when the band was being formed, especially in view of the goldmine of musical ability (and equipment) that he could offer. On drums and vocals, the other “non-optometry” person in the band, Herb McNeill, covers everything from blues to Bach and all stops in between. Being a friend and colleague of Walter Mittelstaedt at Lutheranwood as well as a respected musician in the KW area he was quickly invited to join the ranks (especially considering the fact that no one at the School could play drums). Last, but definitely not least, the band features Dr. Lyndon Jones on lead vocals, who made his singing debut as a Welsh choir-boy at age 11. However, he changed his musical direction drastically at age 14 when he began life as a DJ, working clubs and radio stations around South Wales from the late 70’s until 1985, when he decided it was time to get a “real job”! He started singing with the Lost Faculties because no one else really wanted to, but his natural charisma with a crowd soon made him an indispensable part of the band’s show.

In addition to the “core” personnel, on several occasions the Lost Faculties have been privileged to have many notable guests appear on stage with them, including Dr. Graham “Wild Thing” Strong (an extraordinary lyricist when songs need to be “adapted” for Skit Nights), Drs. Lisa Prokopich and Michelle Senchyna (the notorious Shania Twins), Ms. Marilyn Smith, and even Dr. Bill Bobier (who will sometimes agree to do an awesome Elvis impersonation, on the condition that his microphone is kept off)! Also among the following is Ellen Hadley, a musician and songwriter in her own right, who manages the sound board and (on occasion) will add a touch of accordion just for spite. Not to be overlooked is Dr. Kathy Dumbleton, who has managed the light show on many occasions. The “next generation”, Michael Pace and Owen and Avory Hadley, have also frequently provided invaluable assistance, particularly when heavy things have needed lifting and various knobs have needed twirling. At times, Owen Hadley has even been called upon to fill in for Herb on drums.

Crowds never fail to respond to the band’s energetic mix of classic rock tunes from the 60’s, 70’s, 80’s, and 90’s – everything from the Beatles and the Rolling Stones to AC/DC, the Tragically Hip, Bruce Springsteen and even Spirit of the West. They brought the audience to its feet during the School of Optometry’s Continuing Education Program in the spring of 2003 and recently at the Annual Symposium of the Ontario Association of Optometrists in Hamilton. By popular demand they will also be featured at the School’s upcoming CE festivities on June 12th. If you’re in the neighbourhood, don’t miss this chance to catch one of the hottest acts on the Canadian “musicians-in-opticare” scene!
Rank Prize Awarded

Dr. Melanie Campbell was among four scientists who were recently awarded the Rank Prize from the Rank Foundation at the Royal College of Physicians in London, England. The Rank Prize is awarded to “individuals who have made a significant contribution to the sciences, on the one hand of human and animal nutrition and crop husbandry and, on the other, optoelectronics, where an initial idea has been carried through to practical applications that have, or will, demonstrably benefit mankind.”

Dr. Campbell received the award for her research article “Multifocal lenses compensate for chromatic defocus in vertebrate eyes” which was published in the Journal of Comparative Physiology in 1999. Campbell’s article describes the distribution of the refractive index within the crystalline lens of fish raised in bright light versus fish raised in dim light. The fish were raised by Dr. Ron Kröger as part of his Post Doctoral research at the School of Optometry. Dr. Campbell notes that “It’s one of the first pieces of evidence of an optical specialization: the fine structure of the optics of the eye is influenced by the environment.” The article was written in collaboration with researchers at Lund (Sweden), Tübingen (Germany) and Stanford. The Rank Award includes a prize of £50,000 which will be shared by Campbell and three other researchers for their personal use.

Upcoming Retirements

Dr. T. David Williams will be taking early retirement on July 31st, 2004 after a thirty-three year career at the School; he will be followed by Dr. Tony Cullen on the November 30th, 2004.

More details will be included in the next Newsletter.

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**A Tribute to Dr. Edward Fisher**

- Dr. T.D. Williams

**Dr. Edward J. (Ted) Fisher** was the second Dean at the former College of Optometry of Ontario, following the death of its first Dean, J.C. Thompson, in 1948. Dr. Fisher died on December 22, 2003, in Guelph, Ontario, Canada, shortly after celebrating his 90th birthday.

During his years at the College of Optometry of Ontario, Dr. Fisher worked with dedication and to good effect in both administrative and academic areas. Dr. Fisher taught virtually every subject in the curriculum. Involved in optometric education since 1937, he taught the majority of the older practitioners in Canada. He was intimately associated with nearly all of the advances made in optometric education in Canada. During his deanship, enrolment at the College of Optometry of Ontario expanded greatly, especially in the immediate post-World War II years; the building location was changed, physical facilities were much enlarged and improved; the course was lengthened from three to four years; and the first Doctor of Optometry degrees were granted.

Dr. Fisher practised in Lindsay and Toronto, Ontario from 1934 to 1967.

He played a central role in the events which led to the integration of the former College of Optometry of Ontario with the University of Waterloo, where it now continues as the School of Optometry, within the UW Faculty of Science. His appointment on July 1st, 1967 as the Director of the new School of Optometry at the University of Waterloo saw no abatement in the energy and dedication which he devoted to the interests of national and international Optometry, and Optometric education specifically. With his colleagues Drs. Clair Bobier and Wally Long, Dr. Fisher played an important role in the planning and construction of the UW Optometry building, which opened in 1974. He stepped down as Director in 1975. Dr. Fisher was one of the pioneers in Canadian contact lens practice, both as a wearer and as a consultant, and as a result of his interest, experience, and knowledge in this field became one of the leading contact lens experts in Canada and the world, participating in numerous congresses and seminars, national and international. His articles on clinical optometry, contact lenses, and optometric education have appeared throughout the ophthalmic literature.

An amateur musician of considerable talents, Dr. Fisher was interested in church music and for over 45 years held positions as organist and choirmaster at several churches. He was a member of the Royal Canadian College of Organists.

I have had the pleasure of knowing Dr. Fisher in several capacities for the past forty-one years. I first knew him as a teacher, then as a mentor during my years in graduate school. After I joined the University of Waterloo in 1971, I had the pleasure of knowing Dr. Fisher and working with him as a colleague.

Dr. Edward J. Fisher made signal contributions to eye care on a global scale. In concert with the Canadian International Development Agency, Dr. Fisher organized eyecare visits by teams of optometric interns and supervisors to numerous countries in the Caribbean, particularly the Turks and Caicos Islands and Dominica.

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teams in Dominica in 1974: during that visit, we provided eye examinations and corrective glasses for all of the schoolchildren on the island. No matter how far afield we went, we knew we could rely on Dr. Fisher to assist with sage advice and guidance. He was a frequent speaker and instructor in the continuing education programs sponsored by almost every Canadian province, many American states, and at International Congresses held in England, Ireland, and Greece. For ten years, he spent two months of the year in Benin, Nigeria, assisting in the establishment and development of a School of Optometry there.

Dr. Fisher served from 1968 to 1970 as president of the American Academy of Optometry, the first Canadian to do so. This organization is dedicated to promoting excellence in standards of optometric practice and encouraging the pursuit of research in optometry and related sciences. Dr. Fisher had the fortunate ability to forge a wide ring of friendships, and this international recognition enabled him to strengthen and expand his contacts in the profession.

From his earliest days in the profession, Dr. Fisher was involved in optometric history, and he was the founding curator of the Museum of Visual Science and Optometry, the only museum of its kind in North America. He was an active member of several international bodies which are interested in ophthalmic history, including the Optometric Historical Society and the Ocular Heritage Society (both based in the US), as well as several similar groups in the United Kingdom. Dr. Fisher was involved in writing a history of Optometry in Canada.

Dr. Fisher and his late wife Eleanor had one son (deceased) and two daughters. He had ten grandchildren. His wife, Eleanor, made generations of students welcome in their homes: the kindness and hospitality of the Fishers will be remembered with fondness.

In all of his activities, Dr. Fisher manifested a characteristic generosity of spirit and selflessness. I believe his greatest pleasure lay in enabling others to achieve their highest potential. Dr. Fisher certainly enriched the lives of generations of optometrists and, through them, those of countless others.

Did you know that you can access the Museum’s archives through the Internet? It is now possible to search for items in our collection from the museum’s website, http://quark.uwaterloo.ca/~museum/. CHECK IT OUT!