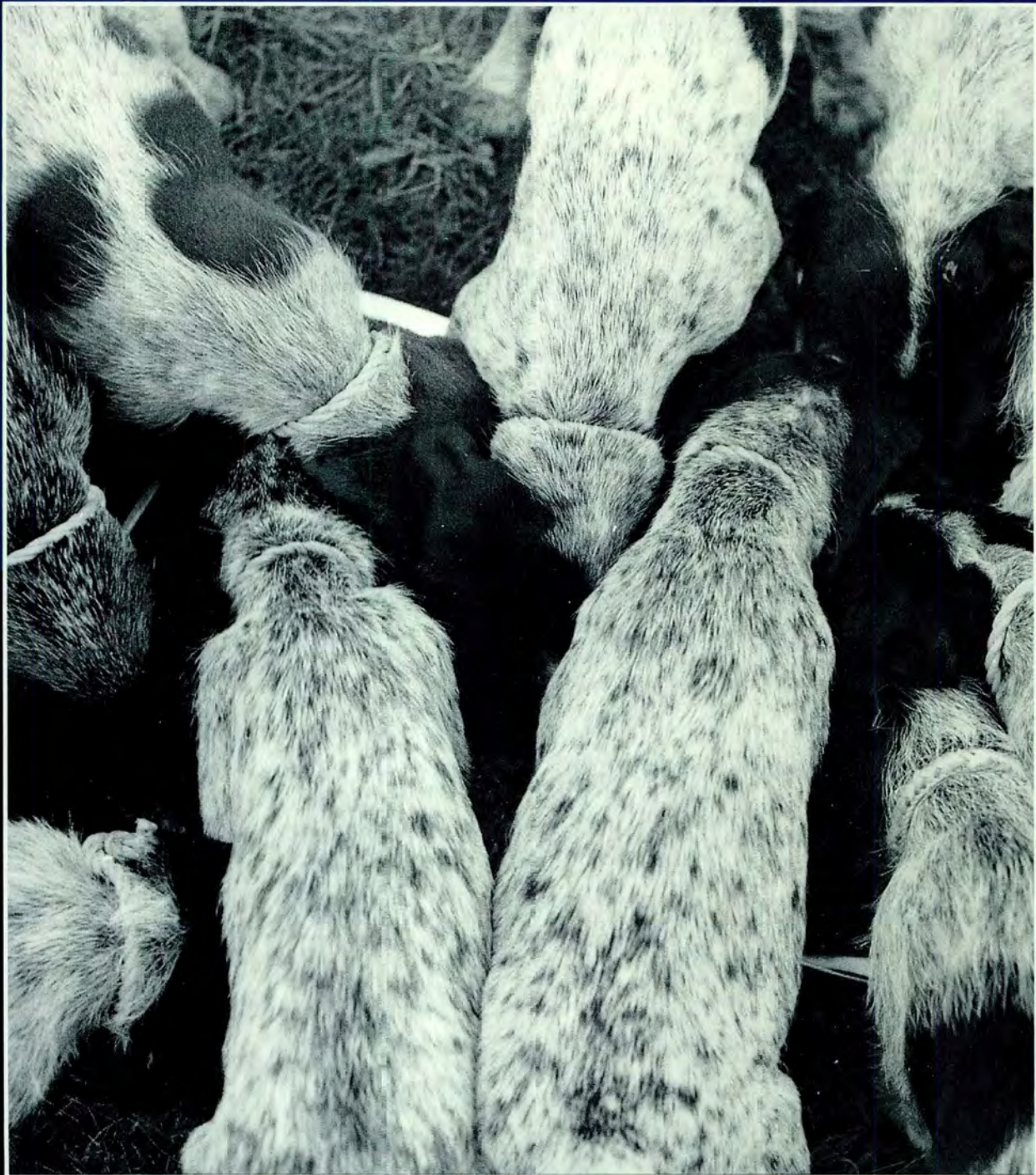


CJO RCO



VOL. 53 No. 3

AUTUMN / AUTOMNE 1991



In this issue: Souvenirs of Manitoba Magic

Ci-inclus : Souvenirs de Magique Manitoba

GOOD NEWS!



Now you can dispense
complete monthly vision care
in a single package.
All you need to do, is call
1-800-668-7510.

The Canadian Journal of Optometry is the official publication of the Canadian Association of Optometrists / La Revue canadienne d'optométrie (CJO/RCO) est la publication officielle de l'Association canadienne des optométristes: Suite 301 — 1785 Alta Vista Drive, Ottawa, Ontario, K1G 3Y6. (613) 738-4412; Fax: / Télécopieur (613) 738-7161.

The Canadian Journal of Optometry • la Revue canadienne d'optométrie (CJO/RCO) is the official publication of the Canadian Association of Optometrists (CAO). However, opinions and commentaries published in the CJO/RCO are not necessarily either the official opinion or policy of the CAO unless specifically identified as such.

The Canadian Journal of Optometry • la Revue canadienne d'optométrie (CJO/RCO) welcomes new advertisers. In keeping with the CJO/RCO's goal of advancing the awareness, education and professionalism of the members of the Canadian Association of Optometrists (CAO), any and all advertising material may be submitted, prior to its publication, for review by the National Publications Committee of CAO. CAO reserves the right to accept or reject any advertisement submitted for placement in the CJO/RCO.

The Canadian Journal of Optometry • la Revue canadienne d'optométrie (CJO/RCO) est la publication officielle de l'Association canadienne des optométristes (ACO). Les avis et les commentaires publiés dans la CJO/RCO ne représentent toutefois pas nécessairement la position ou la politique officielles de l'ACO, à moins qu'il en soit précisé ainsi.

The Canadian Journal of Optometry • la Revue canadienne d'optométrie (CJO/RCO) est prête à accueillir de nouveaux annonceurs. Dans l'esprit de l'objectif de la CJO/RCO visant à favoriser la sensibilisation, la formation et le professionnalisme des membres de l'Association canadienne des optométristes (ACO), on pourra soumettre tout matériel publicitaire avant publication pour examen par le Comité national des publications de l'ACO. L'ACO se réserve le droit d'accepter ou de refuser toute publicité dont on a demandé l'insertion dans la CJO/RCO.

**Chairman, National Publications Committee /
Présidente, Comité national des publications**
Dr Pasq Marcantonio

Senior Editor / Rédacteur en chef
Dr Mitchell J Samek

Academic Editors / Rédacteurs académiques
University of Waterloo: Dr B Ralph Chou
Université de Montréal: Dr Pierre Simonet

Case Study Editors / Rédacteurs des cas
Dr Lorne G Hart
Dr Mark Pogue

Managing Editor / Rédactrice administrative
Heather L Ebbs

**CAO Director of Communications /
Directeur des communications de l'ACO**
Michael J DiCola

Printing / Impression
Love Printing Service Ltd

Translation / Traduction
Tessier Translations / Les Traductions Tessier

Advertising Agency / Agence publicitaire
Tom Cowell Media Services (514) 695-1048

Cover / Couverture

by / par Dr Dale Mulholland, Winnipeg

First prize winner in "The Magic of Black and White" category in CAO's 1991 Biennial Congress photo contest. Our Managing Editor couldn't resist the obvious title: "Spots before your eyes?"



Editorial / Éditorial

Editorial: Vigilance

MJ Samek

79

Éditorial: Vigilance

MJ Samek

79

President's Podium: Third-party plans – A new priority for CAO

J-M Rodrigue

81

Mot du président: Les régimes de tiers – Une nouvelle priorité pour l'ACO

J-M Rodrigue

81

Letters / Courrier

Vision care donations needed (PJ McGuigan)

83

Missionary program seeks support (EA Lautenschlager)

83

Articles / Articles

Puissance prismatique effective: Analyse paramétrique

André Lachance

84

Clinical / Clinique

Clinical Comment: Defensive contact lens practice

J Sévigny

90

Book Reviews / Lu pour vous

91

Features / Rubriques

Magique Manitoba Magic

1991 Biennial Congress photo contest

92

Drs Langer, Basman and Finkleman receive accolades

94

Tea with the Wizard attracts hundreds

96

A 1991 Biennial Congress photoplay

98

Vision Care News / Actualité oculo-visuelle

109

Calendar / Calendrier

115

CIBA Vision™

*1981 - 1991
The Best in Sight*

A reputation you can build on.

Since 1981, we at CIBA Vision have been unwavering in our commitment to provide eye care professionals with innovative, high quality products and exceptional service.

As a result, we are now Canada's leading name in contact lenses and lens care products... preferred by practitioners and patients alike.

Our reputation is one you can build on.

CIBA Vision, 2150 Torquay Mews, Mississauga, Ontario, L5N 2M6
(416) 821-4770, Ontario, 1-800-268-5892

Western & Atlantic Provinces, 1-800-268-3968

CIBA Vision, 205 Bouchard Blvd, Dorval, Quebec H9S 1B1
(514) 631-2830, Quebec, 1-800-361-2434



Vigilance

Recent events in Ontario, notably a review of legislation respecting health service delivery, have created considerable concern among a number of health professions.

In part, this concern is due to a singularly unusual approach to the control of health service delivery by placing limits on specified "acts" that are deemed to be potentially harmful to the public. Only a limited number of authorized professions will be able to perform these controlled acts. One of the acts, which has perhaps been the most controversial, is the communication of a diagnosis.

The Review Team, comprised principally of lawyers, has proposed for Optometry a scope of practice that denies an optometrist's ability to diagnose diseases and disorders. Furthermore, the proposal would prevent optometrists from communicating to the patients the cause of symptoms if the cause is a disease or disorder (for example, cataracts).

In a somewhat unique occurrence, the Section on Ophthalmology actually indicated its belief that the scope of practice definition for Optometry was "too restrictive". Their subsequent recommendation warrants no comment.

The implications of such a restrictive definition are far-reaching. The effects upon the School of Optometry at the University of Waterloo would reverberate across Canada. The clinical and educational program would be hampered by this proposal, irrespective of the optometric scope of practice in other Canadian jurisdictions.

At a time when the health care system is being assailed as too costly, inefficient and less responsive to alternative delivery systems or providers, it gives one pause to attempt to rationalize these events.

The paranoid might question the approach of the Review Team who, after repeated presentations from Optometry (over a period of eight years), chose to ignore what we deem to be fundamental to our "diagnostic" process and ultimate communication with our patients.

However, the overpowering question that races through my mind is: **Has Optometry failed itself?** Have we written our diagnoses, whether provisional or definitive, in our patient files and reported them to the family practitioner? Do we indicate our diagnosis in our referral letter when sending a patient for surgical or medical consultation? Do we practice to the fullest possible extent of our ability and of the law? And most importantly, have we counselled our patients effectively concerning their ocular health status, whether referred or not?

Given these dramatic events in Ontario, each of us should examine his or her own mode of practice. Providing and recording exemplary care for our patients promotes this profession to the public, to other health care providers and to government policy makers.

Even in this era, *especially* in this era, professional vigilance is a must!

MJ Samek, OD, FAAO
Senior Editor

Vigilance

De récents événements survenus en Ontario, notamment une révision des lois sur la prestation des services de santé, ont suscité une inquiétude considérable chez certains professionnels de la santé.

Cette inquiétude est causée en partie par une démarche extraordinaire visant à contrôler la prestation des services de santé et qui consiste à limiter des «actes» définis que l'on considère comme un danger latent pour le public. Un nombre limité seulement de professions agréées seront habilitées à poser ces actes contrôlés. L'un de ceux-ci, peut-être le plus controversé, est la communication d'un diagnostic.

L'Équipe de révision, principalement formée d'avocats, a proposé pour l'optométrie un éventail de pratiques qui interdisent à un optométriste de diagnostiquer des maladies et des affections. De plus, la proposition empêcherait les optométristes de communiquer aux malades la cause des symptômes s'il s'agit d'une maladie ou d'une affection (par exemple, des cataractes).

Pour une fois, la Section d'ophtalmologie a-t-elle indiqué que la portée de la définition de l'optométrie lui semblait «trop restrictive». Sa recommandation subséquente ne mérite aucun commentaire.

Les conséquences d'une définition aussi restrictive ont une portée considérable. Les effets sur l'École d'optométrie de l'Université de Waterloo se répercuteraient dans l'ensemble du Canada. Le programme clinique et didactique serait entravé par cette proposition, sans égard à la portée de la pratique sur l'optométrie dans d'autres juridictions canadiennes.

À une période où le système de soins de santé est attaqué en raison de son coût exorbitant, de son inefficacité et de son incapacité à s'adapter aux systèmes de prestation ou aux fournisseurs parallèles, une tentative de rationaliser ces événements laisse pour le moins songeur.

Les paranoïaques pourraient mettre en doute la démarche de l'Équipe de révision qui, après de nombreuses représentations par les optométristes (depuis huit ans), a choisi d'ignorer ce que nous considérons comme fondamental à notre processus «diagnostique» et à la communication ultime avec nos malades.

La question qui ne cesse toutefois de m'assaillir est la suivante : **L'optométrie a-t-elle causé son propre malheur?** Avons-nous rédigé nos diagnostics, probables ou définitifs, dans les dossiers de nos malades et les avons-nous signalés à un médecin de famille? Avons-nous mentionné notre diagnostic dans la lettre qui dirige un malade vers un chirurgien ou un médecin pour une consultation? Pratiquons-nous dans toute la mesure où l'autorisent nos compétences et la loi? Et, plus important, avons-nous donné des conseils efficaces à nos malades au sujet de leur état de santé oculaire, qu'on les dirige ailleurs ou non?

Étant donné ces événements dramatiques en Ontario, chacun d'entre nous devrait examiner son propre mode de pratique. Des soins exemplaires fournis et répertoriés à l'endroit de nos malades assurent la promotion de cette profession auprès du public, des autres fournisseurs de soins de santé et des décideurs gouvernementaux.

Même dans ce domaine, *particulièrement* dans ce domaine, la vigilance professionnelle est une nécessité!

MJ Samek, OD, FAAO
Rédacteur en chef

LUXOTTICA[®]
G R O U P

**The
Sensible
Choice.**

LUXOTTICA ☆☆☆

Sferoflex[®]
FOR LUXOTTICA

GIORGIO ARMANI
OCCHIALI

MIRARI[®]
FOR LUXOTTICA

GENNY


byblos

valentino

les Lunettes

YVES SAINT LAURENT



Third-party plans—A new priority for CAO

At the conclusion of Interaction 1991, this year's Canadian optometric leaders' meeting held in Winnipeg in conjunction with our 22nd Biennial Congress, I made a pledge to our corporate members: **“CAO, beginning immediately, is going to co-ordinate a national third-party vision care program.”**

The entire day's proceedings had been devoted to an intensive examination of the whole issue of third-party plans. Canada's optometric leaders heard from a provider—Ontario Blue Cross; we heard from another health care group—the Canadian Dental Association—which is managing a very successful national program of third-party dental care; we heard from a beneficiary—Petro-Canada—which is under contract with the optometrists of Alberta for their occupational and industrial safety eyewear; and, finally, we heard from two of our own corporate members who are irrevocably committed to third-party vision care plans in their respective provinces, British Columbia and Quebec.

The day's clearest message to CAO from those leaders came at the conclusion of the plenary session that followed the workshops:

1. **Co-ordinate the development of uniform national billing codes and a billing form for third-party programs.**
2. **Develop a national guide to third-party vision care.**
3. **Develop a strategy and plan for communicating with third-party providers and industry about the services Optometry offers.**
4. **Develop a national network for timely communication within Optometry.**

Millions of dollars at stake

In other words, the importance of a nationally co-ordinated, *optometrically managed* third-party vision care program in Canada cannot be overstressed.

For the past few years, we have seen a growing volume of vision and eye care dollars—hundreds of *millions* of vision and eye care dollars—flowing through the accounts receivable departments of our competitors. But what independent Optometry is losing is much more than just dollars and cents. We are losing control.

CAO has already begun the process of recovering our control

Even as you read this, just weeks after the end of the summer, CAO Council has already begun the process of realizing the directions issued by Interaction 1991. At our fall meeting in late October, we will have initiated several steps, including the authorization of a working budget for this new body, the President's Committee on Third-Party Vision Care Plans.

Third Party: Much more than safety eyewear

In the meantime, I encourage, even *urge* those provincial Associations that have no third-party program to take step 1 and appoint a co-ordinating body or Chair through whom CAO's information can be distributed to your members. At the same time, for those optometric organizations whose programs

Les régimes de tiers—Une nouvelle priorité pour l'ACO

À la fin d'Interaction 1991, lors de l'assemblée des dirigeants de l'optométrie canadienne qui a eu lieu à Winnipeg dans le cadre de notre 22e Congrès biennal, j'y ai pris l'engagement suivant **«À compter d'immédiatement, l'ACO va coordonner un programme national de soins de la vue en régimes de tiers payeurs.»**

La journée avait été consacrée à un examen poussé de toute la question des régimes de soins visuels payés par les tiers. Les dirigeants de l'optométrie canadienne ont écouté un fournisseur, la Croix bleue de l'Ontario; un groupe de fournisseurs de soins de santé, l'Association dentaire canadienne, qui gère avec beaucoup de succès un programme national de soins dentaires en régimes de tiers; ainsi qu'un bénéficiaire employeur, Petro-Canada, qui a un contrat avec les optométristes de l'Alberta pour ses lunettes de sécurité professionnelle et industrielle; et, enfin, nous avons écouté deux représentants d'associations optométriques irrémédiablement engagées dans la voie des régimes de tiers dans leur province respective, soit la Colombie-Britannique et le Québec.

Un message très clair de, ces dirigeants fût adressé à l'ACO à la fin de la plénière qui a suivi les ateliers :

1. **Coordonner l'élaboration de codes nationaux uniformes de facturation et une formule de facturation pour les programmes de tiers.**
2. **Élaborer un guide national des soins de la vue en régimes de tiers.**
3. **Élaborer une stratégie et un plan pour la communication avec les tiers payeurs et l'industrie au sujet des services qu'offre l'optométrie.**
4. **Élaborer un réseau national de communication au sein de l'optométrie.**

Des millions \$ en jeu

On ne saurait exagérer l'importance d'un programme de soins de la vue en régimes de tiers, coordonné à l'échelle nationale et administré par chaque association provinciale.

Depuis quelques années, nous avons vu nos concurrents réaliser un chiffre d'affaires de plus en plus important en soins opculo-visuels : des centaines de *millions* de dollars. L'optométrie indépendante est en train de perdre beaucoup plus que des dollars et des cents. Nous perdons le contrôle.

L'ACO est déjà passé à l'action

Au moment où vous lirez ces lignes, dès la fin de l'été, l'ACO aura déjà amorcé le processus de concrétisation des orientations établies lors d'Interaction 1991. En créant un comité présidentiel de régime des tiers en soins visuels. À la réunion du prochain conseil, à la fin d'octobre, nous aurons lancé plusieurs mesures, dont l'autorisation d'un budget de travail pour ce Comité qui travaillera en étroite collaboration avec le Comité consultatif national sur les régimes de soins de la vue.

TIERS : bien plus que la lunette de sécurité

Entre-temps, j'encouragerais—j'inciterais, même—les associations provinciales qui n'ont pas encore de programme

are limited solely to the provision of industrial safety eyewear, I urge you to have your Committees look beyond this aspect of third-party care, and consider how best to expand your mandate.

It is clearly apparent that Third-Party Vision Care has to become much, much more than simply industrial eyewear programs in the eyes of our members. I would go so far as to say the difference between what they *are* and what they *should* be is, to put it in visual terms, the difference between wide-screen panavision and 16-mm film!

Third-Party Vision Care covers the enormous range of potential participants from the private to the public sector. As an example of one end of this range, consider a single urban contract drawn up for impact-resistant spectacles for the lathe operators of Local XYZ of the Edmonton Widget Manufacturers' Corporation. At the other end of the spectrum, a third-party program could well be a centrally co-ordinated agreement whose terms provide for the full scope of optometric services being made available to a large, national Canadian employer offering vision and eye care benefits, like Air Canada, the Government of Canada, Alcan and so forth.

Charting the course: Finding a strategy for CAO

To start, an action plan, our "Blueprint for Success", will be presented by the Executive Committee to CAO Council at its Fall meeting. The results of those deliberations will follow very soon thereafter under the combined mandate of a newly struck President's Committee on Third-Party Vision Care and the National Advisory Committee on Vision Care Plans (NACVCP).

I will continue to report directly to our members through this column, and through the CAO President's *Communiqué*. And, as always, if what you read or hear strikes a chord—harmonious *or* discordant—please be sure your message reaches me, or your CAO Councillor.

Dr Jean-M Rodrigue
President

de tiers à faire le premier pas et à désigner un co-ordonnateur ou un président par l'entremise de qui pourra circuler l'information que l'ACO destine à vos membres. En même temps, pour les associations dont les programmes se limitent à la prestation de lunettes de sécurité industrielle, je vous inciterais à amener vos comités à regarder au-delà de cet aspect et étendre leur mandat vers les tiers payeurs.

Il est déjà clair que les régimes de tiers doivent être beaucoup plus que de simples programmes de lunettes industrielles. J'irais jusqu'à dire que la différence entre ce qu'ils *sont* et ce qu'ils *devraient* être, c'est, pour reprendre un terme visuel, la différence entre la panavision grand écran et le film de 16 mm!

Les soins de la vue payés par les tiers couvrent l'immense gamme des participants (employés) éventuels du secteur privé et du secteur public; par exemple, un contrat unique couvrant les lunettes résistant à l'impact pour les opérateurs d'équipements manufacturé d'une industrie jusqu'à, par exemple, une convention coordonnée à l'échelle nationale couvrant toute la gamme des services optométriques mis à la disposition d'un grand employeur canadien d'envergure nationale offrant des prestations oculo-visuelles à ses employés, comme Air Canada, le gouvernement du Canada, Alcan, etc.

Définition d'une stratégie pour l'ACO

Le Comité exécutif présentera un plan d'action, notre «**Plan pour le succès**», au Conseil de l'ACO à sa réunion d'automne, et les résultats de ces délibérations suivront peu après, dans le cadre du mandat combiné d'un nouveau Comité présidentiel des régimes de tiers et du Comité consultatif national sur les régimes de soins de la vue (CCNRSV).

Je continuerai d'informer nos membres directement par cette chronique, et par le *Communiqué* du président de l'ACO. Et, comme toujours, si vous êtes d'accord ou en désaccord sur mes propos, ne manquez pas de me le faire savoir, ou de le dire à votre conseiller de l'ACO.

Le président
Dr Jean-M Rodrigue



*The CJO*RCO welcomes letters to the Editor. Letters must be signed and accompanied by clear identification of the author's name, address and telephone number. Unsigned correspondence will not appear in the CJO*RCO, although a writer may request anonymity should the CJO*RCO accept the letter for publication. The Editors reserve the right to edit all letters submitted for publication for purposes of grammar, spelling, punctuation and clarity. Submission of a letter does not guarantee publication.*

Vision care donations needed

With reference to "Feeling charitable?" in "Vision Care News" Vol 53, No 2 (Summer 1991), I would like to inform your readers of another charitable organization involving vision care.

Canadian Vision Care (CVC) is a registered, non-profit Canadian charity formed in 1981 to provide essential free vision care to the needy. CVC projects focus particularly on the visual needs of children to provide the greatest potential help in less developed countries. By correcting vision problems, CVC provides these children much-needed tools to assist them in achieving an education, ultimately helping both themselves and their countries.

To ensure the success of these projects, community Lions and other service clubs and organizations act as local "partners" in identifying the most immediate needs and assisting with programs that provide preventive vision and eye care.

Based in Alberta, Canadian Vision Care works in co-operation with optometrists, ophthalmologists and dispensing opticians across Canada and the United States. Projects have included an annual trip to the Caribbean islands of Jamaica and St. Lucia. CVC has raised funds to purchase portable refracting and diagnostic equipment, as well as a portable operating microscope and other surgical instruments for use in rural Jamaica.

CVC was also instrumental in providing for the equipment and training of a dispensing optician at St. Jude Hospital in St. Lucia. During the past few years, the organization has sponsored several children who required corneal transplants to come to Canada for this treatment. Requests from many other places come in as well, but fund-raising does not always reach even the demands of providing basic vision and eye care to the underprivileged.

Donations (funds, used spectacle frames [especially children's], gifts) can be made to the following address. (A charitable donation tax receipt will be issued to the donor.) Canadian Vision Care, 102 — 5920 Gaetz Avenue, Red Deer, Alberta, T4N 4C3. Telephone (403) 346-1275.

Peter J McGuigan, OD
Red Deer, Alberta

Missionary program seeks support

Following is a copy of a letter from a former neighbour and friend who heads a missionary program in Ethiopia. As you can read, apparently their optical department was recently vandalized and they are sorely in need of equipment.

You have probably heard that we were out of Ethiopia for some weeks and returned the middle of June. Since then, we have been up to our ears in emergency relief efforts, along with many other organizations.

At a meeting in early July, we were informed of the huge losses sustained this spring through vandalism at SIGNUM VITAE, a rehabilitation workshop that offers 60 working places for disabled young Ethiopians, including an eye clinic offering refractions, prescriptions and other treatments, spectacle lens manufacturing, lens grinding, an optical workshop and eyeglass sales shop. Since you were on the Canadian optometric board (I'm not sure of the correct name), I thought I would write you and ask whether the Association would want to contribute toward replacement of the equipment.

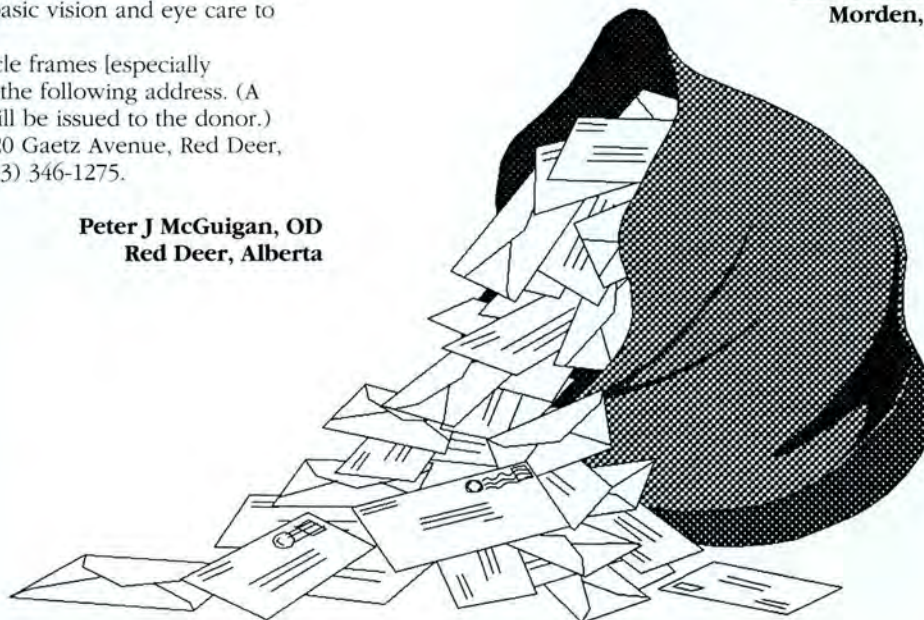
You should probably correspond directly with the organization regarding specific losses, since my familiarity with optics is extremely limited. You need to know that equipment here is 220 volt and it would not make sense to send 110-volt equipment because, inevitably, someone would be sure to try and use it without a transformer.

SIGNUM VITAE / SIGN OF LIFE is at PO Box 5621, Addis Ababa, Ethiopia. The Ethiopia and Addis area code is 251, followed by the phone number: 18 09 79. Alternatively, 51 99 57 is a residence number that can be reached during non-working hours.

If there is any interest in providing some kind of assistance, and we can provide you with further information, please let us know: JA Reimer, Field Director, Mennonite Mission in Ethiopia, PO Box 70367, Addis Ababa, Ethiopia.

Thank you for your kind attention in this matter.

Earl A Lautenschlager
Morden, Manitoba



Puissance prismatique effective : Analyse paramétrique

André Lachance

mot clés : mouvements oculaires; effet prismatique; puissance prismatique effective

key words: eye movements; effective prismatic power; prismatic effect

L'évaluation d'une déviation oculaire nécessite l'utilisation de lentilles prismatiques. Ces lentilles, placées entre l'oeil et l'objet, induiront un mouvement de duction de l'oeil de façon à ce que ce dernier suive le déplacement de l'image. L'étude du mouvement oculaire de duction sera fonction de l'interaction entre les paramètres intrinsèques à la manipulation. Ces paramètres, tels que la distance entre l'oeil et la lentille prismatique et, la distance entre l'objet et la lentille prismatique, modifient la puissance prismatique effective de l'élément optique sur le système visuel. Mise à part la position primaire de fixation, l'effet prismatique de l'élément optique sur la rotation oculaire, exprimée en dioptrie prismatique, sera toujours de valeur inférieure à la puissance prismatique de l'élément optique. L'erreur commise, en considérant une égalité entre la valeur prismatique de la rotation oculaire et la valeur prismatique de l'élément optique, augmente au fur et à mesure que la distance entre l'objet et la lentille prismatique diminue, ou que la distance entre l'oeil et la lentille prismatique augmente.

A prismatic lens is required for an evaluation of ocular deviation. These lenses will induce a duction movement of the eye in order to follow the image. The study of this ocular movement will be a function of the interaction between parameters, such as the distance between the eye and the prismatic lens, and the distance between the object and the prismatic lens, related to the clinical manipulation of this prismatic lens. The effective prismatic power of a prismatic lens can be modified by these parameters. The prismatic effect of a prismatic lens on the ocular rotation will always be lower than the prismatic power of the lens, except for an object located at optical infinity. If an equality is considered between the prismatic value of the ocular rotation and the prismatic value of the lens, the error on the effective prismatic power will increase if the distance between object and lens decreases, or if the vertex distance increases.

André Lachance, BSc, MSc, LScO — École d'optométrie, Université de Montréal

Introduction

Lors d'un examen oculo-visuel ou d'une évaluation spécifique de la vision binoculaire, il est très fréquent de faire appel à des tests nécessitant l'utilisation de prismes.¹⁻⁴ Le clinicien doit sélectionner les tests les plus significatifs, dans le but de quantifier un diagnostic.²⁻⁴ Entre autres, ces tests sont fréquemment exécutés lors de l'évaluation d'une déviation oculaire.²⁻⁴ Parmi les tests de diagnostic quantitatif on retrouve, par exemple, le test écran avec prismes et le test de Krimsky pour la quantification objective des hétérotropies,⁴ le test de la tige de Maddox et le test de dissociation par prismes pour la quantification des hétérophories.⁴ Le trait commun de ces tests est l'analyse des mouvements de ductions de l'oeil dévié, par rapport à l'oeil fixe, ou l'analyse du mouvement de l'image.

Considérons un objet positionné sur l'axe visuel de l'oeil, droit devant, à une certaine distance de ce dernier. Une lentille prismatique est placée entre l'oeil et l'objet. À ce moment, l'oeil effectuera un mouvement de duction de façon à suivre le déplacement de l'image causé par la lentille prismatique. Ce mouvement oculaire de duction, exprimé en dioptrie prismatique, correspond-il à une valeur identique à la puissance prismatique de l'élément optique? En d'autres termes, si un prisme de 5Δ est positionné devant l'oeil, ce dernier effectuera-t-il un mouvement de duction équivalent à 5Δ ? Si la réponse est négative, existe-t-il des paramètres intrinsèques ou extrinsèques à la manipulation clinique, pouvant modifier l'inégalité?

La notion de puissance prismatique effective a été discutée antérieurement par Bennett⁵ et Obstfeld.⁶ Cependant, ces auteurs ont utilisé l'approximation du "petit angle"; c'est-à-dire que l'angle de déviation des rayons lumineux provoqué par la lentille prismatique est suffisamment petit de sorte que l'on peut considérer une égalité entre la tangente de l'angle et l'angle lui-même, en radian. Cette approximation a permis la dérivation de formules mathématiques approchées pour le calcul de la puissance prismatique effective et, pour la rotation oculaire. Or, cette approximation est-elle suffisante et nécessaire pour trouver des expressions mathématiques approchées?

L'objectif de cet article est de trouver des expressions mathématiques exactes et approchées, conjointement à des graphiques, mettant en relief la puissance prismatique de l'élément optique et la puissance prismatique associée à la rotation oculaire. Ces graphiques permettront au clinicien de déterminer rapidement la puissance prismatique effective à l'oeil, en fonction des principaux paramètres reliés à la manipulation clinique. Également, une évaluation de la différence entre l'expression exacte et l'expression mathématique plus simple, telle que formulée par Bennett,⁵ de la rotation oculaire sera discutée.

Calcul exact de la rotation oculaire et de la puissance prismatique effective

Rotation oculaire

Soit un objet positionné sur l'axe visuel d'un oeil, fixant droit devant. Une lentille prismatique de puissance $P\Delta$ est placée à une distance de V mètre devant l'oeil; l'apex cornéen antérieur sert de point de référence à la mesure. L'objet est situé à une distance de ℓ mètre devant le prisme; la ligne base-apex du prisme sert de ligne de référence à la mesure. Selon le système de coordonnées cartésien, la distance ℓ est une quantité négative;⁷ en conséquence, la valeur absolue de ℓ , soit $|\ell|$, sera considérée dans les calculs. Par définition, il est possible de relier la puissance prismatique $P\Delta$ de la lentille à la tangente de la déviation angulaire d du rayon lumineux, selon la relation:⁷

$$P\Delta = 100 \cdot \tan(d) \quad (1)$$

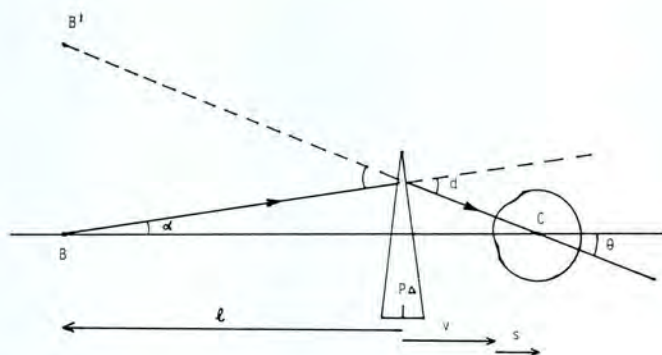


Figure 1. Description paramétrique de la rotation angulaire de l'oeil et de la déviation angulaire du faisceau lumineux. En vision de près, l'angle $\alpha = d - \theta$.

Cette lentille prismatique positionnée devant l'oeil induira une rotation oculaire d'angle θ définie à partir de centre de rotation de l'oeil;⁸ les angles d et θ suivent la convention de signes du système de coordonnées cartésien.⁷ La distance entre le centre de rotation de l'oeil et l'apex cornéen antérieur est de S mètre; cette distance est généralement considérée comme égale à 13.5 mm .^{3,8}

Selon cette description paramétrique, on peut établir la relation suivante, entre la rotation angulaire de l'oeil et la déviation angulaire du faisceau lumineux:

$$d = \theta + \text{tg}^{-1} \left[\frac{(S+V)}{|l|} \cdot \text{tg}(\theta) \right] \quad (2)$$

Où, tg^{-1} est la fonction inverse de la fonction tangente. En réorganisant l'équation précédente, on retrouve une forme quadratique (voir l'annexe pour les détails du calcul) pour la tangente de la rotation oculaire:

$$0 = \left[\frac{(S+V)}{|l|} \cdot \text{tg}(d) \right] \cdot \text{tg}^2(\theta) + \left[\frac{(S+V)}{|l|} + 1 \right] \cdot \text{tg}(\theta) - \text{tg}(d) \quad (3)$$

La présence de la distance de l'objet à la ligne base-apex du prisme au dénominateur de l'équation, oblige à trouver les solutions en fonction de cette distance (voir l'annexe pour les détails du calcul). Les trois solutions de l'équation 3 sont:

$$\text{Si } 0 < |l| < \infty \text{ alors:} \quad (4)$$

$$\text{tg}(\theta) = \frac{-B + \sqrt{B^2 - 4 \cdot A \cdot C}}{2 \cdot A}$$

$$\text{où } A = \frac{(S+V)}{|l|} \cdot \text{tg}(d)$$

$$B = \frac{(S+V)}{|l|} + 1$$

$$C = -\text{tg}(d)$$

$$\text{Si } |l| \rightarrow \infty \text{ alors:} \quad (5)$$

$$\text{tg}(\theta) = \text{tg}(d)$$

$$\text{Si } |l| \rightarrow 0 \text{ alors:} \quad (6)$$

$$\text{tg}(\theta) = 0$$

La seconde solution, l'équation 5, signifie que la valeur numérique de la rotation oculaire est identique à la valeur numérique de la déviation angulaire des rayons lumineux

occasionnée par le prisme; et ce, lorsque l'objet de fixation se situe à l'infini optique, indépendamment de la distance vertex.

Par contre, la première solution, l'équation 4, démontre bien la dépendance paramétrique de la rotation angulaire de l'oeil sur la distance vertex, de la position spatiale de l'objet et de la déviation angulaire des rayons lumineux.

Puissance prismatique effective

Il est possible de convertir les valeurs angulaires trouvées précédemment, en valeurs prismatiques. En effet, la relation 1 nous permet de réaliser cette transformation pour la lentille prismatique. Par analogie mathématique, la forme fonctionnelle de l'expression entre la rotation angulaire de l'oeil, θ , et la puissance prismatique effective, $P_{\Delta oc}$, au centre de rotation de l'oeil sera:

$$P_{\Delta oc} = 100 \cdot \text{tg}(\theta) \quad (7)$$

En substituant les relations 1 et 7 dans l'équation générale 3, on obtient la forme quadratique suivante pour la puissance prismatique effective:

$$0 = \left[10^{-4} \cdot \frac{(S+V)}{|l|} \cdot P_{\Delta} \right] \cdot P_{\Delta oc}^2 + \left[\frac{(S+V)}{|l|} + 1 \right] \cdot P_{\Delta oc} - P_{\Delta} \quad (8)$$

En suivant le même procédé mathématique utilisé pour les valeurs angulaires, les solutions de l'équation quadratique 8 sont:

$$\text{Si } 0 < |l| < \infty \text{ alors:} \quad (9)$$

$$P_{\Delta oc} = \frac{-B + \sqrt{B^2 - 4 \cdot D \cdot E}}{2 \cdot D}$$

$$\text{où } D = 10^{-4} \cdot \frac{(S+V)}{|l|} \cdot P_{\Delta}$$

$$E = -P_{\Delta}$$

$$\text{Si } |l| \rightarrow \infty \text{ alors:} \quad (10)$$

$$P_{\Delta oc} = P_{\Delta}$$

$$\text{Si } |l| \rightarrow 0 \text{ alors:} \quad (11)$$

$$P_{\Delta oc} = 0 \Delta$$

La seconde solution, l'équation 10, démontre que la puissance prismatique effective sur l'oeil est identique à la puissance prismatique de l'élément optique, lorsque l'objet est situé à l'infini optique; et ce, indépendamment de la distance vertex.

Calcul approche de la rotation oculaire et de la puissance prismatique effective

Les solutions, telles que trouvées pour la rotation oculaire et la puissance prismatique effective, présentent un certain degré de complexité quant à leurs utilisations. Ainsi, serait-il possible de simplifier les expressions de sorte à ce qu'elles soient plus opérationnelles en clinique?

La solution 4 à l'équation générale concernant la rotation oculaire, peut s'écrire de la façon suivante:

$$\text{tg}(\theta) = \frac{-B + \sqrt{B^2 - \frac{4 \cdot A \cdot C}{B^2}}}{2 \cdot A}$$

$$\text{Si } 0 < |l| < \infty \text{ et } B \neq 0$$

En substituant les expressions pour les paramètres A, B et C, le terme suivant devient:

$$\frac{-4 \cdot A \cdot C}{B^2} = \frac{4 \cdot |l| \cdot (S + V)}{(S + V + |l|)^2} \cdot \text{tg}^2(d)$$

Or, pour des fins cliniques, cette dernière expression sera plus petite que l'unité.

En effet, le tableau 1 démontre que les valeurs de l'expression précédente sont inférieures à l'unité pour une valeur prismatique, une position spatiale de l'objet et une distance vertex habituellement rencontrées en clinique.

Tableau 1. Valeurs numériques^a

l	PΔ0	PΔ10	PΔ20	PΔ30	PΔ40
0.0	0	0	0	0	0
0.1	0	0.007	0.027	0.060	0.107
0.3	0	0.003	0.012	0.027	0.048
0.5	0	0.002	0.008	0.018	0.031
0.7	0	0.001	0.006	0.013	0.023
1.0	0	0.001	0.004	0.009	0.016
∞	0	0	0	0	0

a. Valeurs numériques de l'expression

$$\frac{4 \cdot |l| \cdot (S + V) \cdot \text{tg}^2(d)}{(S + V + |l|)^2}$$

en fonction de la puissance prismatique PΔ de l'élément optique, de la position spatiale de l'objet. La distance vertex est de 13.5 mm. La distance l est en mètre.

En conséquence, on peut utiliser le développement binomial⁹ qui s'écrit comme suit:

$$\sqrt{1 + X} = 1 + \frac{1}{2}X - \frac{1}{8}X^2 + \dots \quad \begin{array}{l} \text{si } X < 1 \\ \text{où } X = -\frac{4 \cdot A \cdot C}{B^2} \end{array}$$

En négligeant les termes du second ordre et suivant, on obtient:

$$\text{tg}(\theta) \approx \frac{-C}{B} = \frac{|l|}{(S + V + |l|)} \cdot \text{tg}(d)$$

Ainsi, les solutions approchées pour la rotation oculaire seront:

Si $0 < |l| < \infty$ alors: (12)

$$\text{tg}(\theta) = \frac{|l|}{(S + V + |l|)} \cdot \text{tg}(d)$$

Si $|l| \rightarrow \infty$ alors: (13)

$$\text{tg}(\theta) = \text{tg}(d)$$

Si $|l| \rightarrow 0$ alors: (14)

$$\text{tg}(\theta) = 0$$

Ces dernières relations démontrent que la déviation angulaire occasionnée par le prisme est supérieure à la rotation angulaire θ de l'oeil, lorsque l'objet est situé à une distance finie de l'oeil.

En ce qui concerne la puissance prismatique effective sur l'oeil, on obtient les solutions approchées suivantes, en utilisant le même procédé mathématique que pour la rotation oculaire:

Si $0 < |l| < \infty$ alors: (15)

$$P\Delta_{oc} = \frac{|l|}{|l| + V + S} \cdot P\Delta$$

Si $|l| \rightarrow \infty$ alors: (16)

$$P\Delta_{oc} = P\Delta$$

Si $|l| \rightarrow 0$ alors: (17)

$$P\Delta_{oc} = 0\Delta$$

Ces solutions démontrent que la puissance prismatique de l'élément optique a une valeur supérieure à la puissance prismatique effective sur l'oeil, lorsque l'objet est situé à une distance finie de l'oeil.

Discussion

Analyse paramétrique

Les solutions approchées 15, 16 et 17 pour la puissance prismatique effective, sont identiques à celles trouvées par plusieurs auteurs;⁵⁻⁷ cependant, la méthode utilisée pour obtenir ces solutions diffère de celle proposée.

La méthode proposée dans cet article démontre que l'approximation du "petit angle" n'est pas nécessaire, puisque les solutions 12, 13 et 14 pour la rotation angulaire de l'oeil sont indépendantes de l'approximation et, en conséquence, elles peuvent être utilisées pour de grands angles en autant que soit respectée la condition suivante:

$$\frac{4 \cdot |l| \cdot (S + V)}{(S + V + |l|)^2} \cdot \text{tg}^2(d) < 1$$

D'autre part, si l'angle d relatif à la déviation des rayons lumineux par la lentille prismatique est petit, de sorte que l'approximation du "petit angle" soit applicable, la rotation oculaire s'écrit comme suit:

Si $0 < |l| < \infty$ alors:

$$\theta = \frac{|l|}{(S + V + |l|)} \cdot d$$

Si $|l| \rightarrow \infty$ alors:

$$\theta = d$$

Si $|l| \rightarrow 0$ alors:

$$\theta = 0$$

Ces solutions sont identiques à celles proposées par les auteurs en ce qui concerne la valeur angulaire de la rotation oculaire. Cependant, si l'approximation du "petit angle" ne s'applique pas, rien nous permet d'appliquer simplement la tangente aux angles, étant donné la présence de la fonction d'effectivité

$$\frac{|l|}{S + V + |l|}$$

Puissance prismatique effective et erreur relative

Malgré la simplicité des solutions approchées, déterminées selon l'approximation linéaire du développement binomial, une visualisation graphique des solutions permettra au clinicien de réaliser l'importance de la différence, entre la puissance prismatique de l'élément optique et la puissance prismatique effective de l'élément optique à l'oeil. Les graphiques aideront le

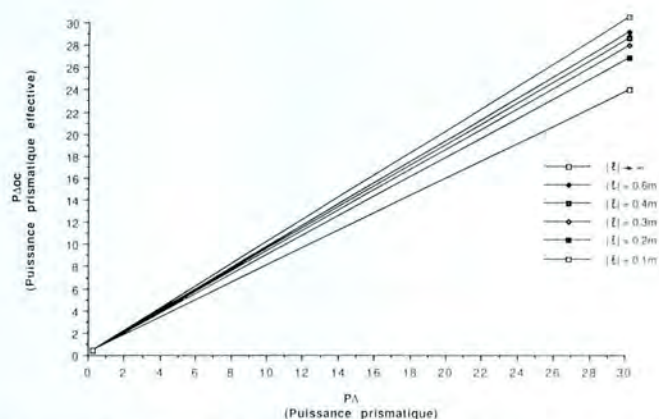


Figure 2. Graphique de la puissance prismatique $P\Delta$ en fonction de la puissance prismatique effective $P\Delta_{oc}$; les distances S et V sont fixées respectivement à 13.5 mm et 14 mm.

clinicien à déterminer rapidement la puissance prismatique effective à l'oeil, en fonction des principaux paramètres: La distance de l'objet à l'élément optique et la distance vertex.

La figure 2 représente un graphique de la puissance prismatique en fonction de la puissance prismatique effective, pour une distance vertex de 14 mm; il présente une série de droites correspondant à des distances différentes de l'objet à la lentille prismatique. Ce graphique démontre, sans l'ombre d'un doute, que la puissance prismatique de l'élément optique est supérieure à la puissance prismatique effective à l'oeil sauf, pour un objet localisé à une très grande distance.

Si la distance vertex diffère de 14 mm mais que la distance entre l'objet et l'élément optique est de 40 cm, la figure 3 nous permet de trouver la puissance prismatique effective pour différentes distances vertex.

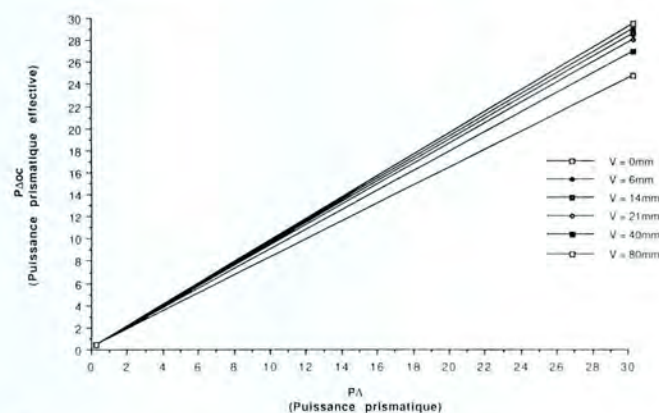


Figure 3. Graphique de la puissance prismatique $P\Delta$ en fonction de la puissance prismatique effective $P\Delta_{oc}$; les distances S et $l|l$ sont fixées respectivement à 13.5 mm et 40 cm.

Si, pour des raisons particulières à l'examen, la distance vertex est différente de 14mm et que la distance entre l'objet et l'élément optique est différente de 40 cm, la figure 4 permet le calcul de la puissance prismatique effective à l'oeil. En effet, le graphique de la figure 4 représente la distance entre l'objet et l'élément optique en fonction de l'expression

$$\frac{P\Delta - P\Delta_{oc}}{P\Delta_{oc}} = \frac{V + S}{l|l|}$$

selon la relation 15.

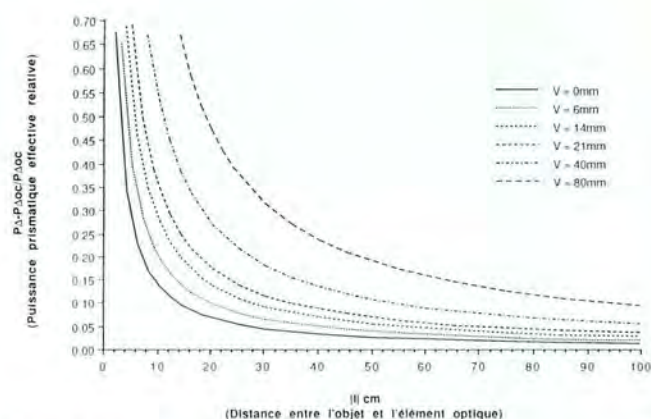


Figure 4. Graphique de la distance entre l'objet et l'élément optique en fonction de la puissance prismatique effective relative; la distance S est fixée à 13.5 mm.

Ce graphique présente une série de courbes correspondant à des distances vertex différentes. Ainsi, en connaissant la distance $l|l|$, la distance vertex V et la puissance prismatique $P\Delta$ de l'élément optique, il nous est possible de calculer la puissance prismatique effective à l'oeil $P\Delta_{oc}$. Par exemple, pour une distance entre l'objet et la lentille prismatique $l|l| = 35$ cm, et une distance vertex $V = 21$ mm, la figure 4 nous donne une valeur de 0.0986. Si le clinicien utilise un prisme de 20Δ pour neutraliser une déviation oculaire, alors la valeur prismatique de la déviation oculaire $P\Delta_{oc}$ sera déterminée comme suit:

$$\frac{P\Delta - P\Delta_{oc}}{P\Delta_{oc}} = 0.0986 \text{ (valeur trouvée par la figure 4)}$$

et $P\Delta = 20\Delta$ (résultat de l'examen)

Alors, on trouve $P\Delta_{oc} = 18.2\Delta$.

Egalement, le graphique de la figure 4 nous permet de trouver directement l'erreur commise, en considérant une égalité entre les puissances $P\Delta$ et $P\Delta_{oc}$, selon différentes distances vertex et pour toute distance entre l'objet et l'élément optique. En effet, en considérant l'exemple précédent, l'erreur serait de 9.86%; ce qui n'est pas négligeable.

Conclusion

La quantification d'un diagnostic par des lentilles prismatiques, exige une connaissance des paramètres intrinsèques à la manipulation. En effet, la grandeur de la puissance prismatique de l'élément optique, la distance vertex ainsi que la position de l'objet dans l'espace influenceront la puissance prismatique effective à l'oeil; par exemple, si le patient est un enfant dont la distance vertex est de 14 mm et que la position de l'objet est à 25 cm en avant de la lentille, l'erreur commise sur la puissance prismatique oculaire sera de 11%!

La procédure mathématique développée dans cet article nous permet d'utiliser des formules approchées, sans égard à l'approximation du "petit angle", mettant en relief les paramètres intrinsèques à la manipulation.

Références

1. Borish IM. Clinical refraction. 3e éd. Chicago: The Professional Press, 1970.
2. Griffin JR. Binocular anomalies procedures for vision therapy. Chicago: The Professional Press, 1976.
3. Hugonnier R, Hugonnier S. Strabismes, hétérophories, paralysies oculo-motrices. 3e éd. 2e tirage. Paris: Masson, 1976.

4. Von Noorden GK. Atlas of strabismus. 3e éd. Saint-Louis: C.V. Mosby, 1977.
5. Bennett AG. Emsley and Swaine's ophthalmic lenses. Vol 1. London: Hatton Press, 1968.
6. Obstfeld H. The effect of prismatic spectacle and contact lens corrections on ocular rotation. *Ophthal Physiol Opt* 1986;6(2).
7. Jalie M. The principles of ophthalmic lenses. 3e éd. London: ADO, 1977.
8. Keating MP. Geometric, physical and visual optics. Stoneham: Butterworth, 1988.
9. Spiegel MR. Mathematical handbook. Schaum's outline series. New York: McGraw-Hill, 1968.
10. Thomas GB, Warusfel A. Calcul différentiel et intégral et géométrie analytique. Montréal-Paris: Edition du renouveau pédagogique, 1969.

Annexe

Rotation angulaire de l'oeil

Une lentille prismatique provoquera une déviation angulaire d des rayons lumineux; la ligne base-apex du prisme sert de ligne de référence. Cette lentille positionnée devant l'oeil induira une rotation angulaire θ définie à partir du centre de rotation. Si un objet est situé à $|l|$ mètre devant le prisme, alors on établit la relation suivante entre les deux angles:

$$\frac{S+V}{|l|} \cdot \text{tg}(\theta) = \text{tg}(d - \theta) \quad (18)$$

Cette dernière équation est générale c'est-à-dire quelle n'implique aucune approximation, ni aucune hypothèse de dérivation.

Or, la tangente d'une différence s'écrit comme:⁹

$$\text{tg}(d - \theta) = \frac{\text{tg}(d) - \text{tg}(\theta)}{1 + \text{tg}(d) \cdot \text{tg}(\theta)} \quad (19)$$

Ainsi, la relation 18 devient:

$$\frac{\text{tg}(d) - \text{tg}(\theta)}{1 + \text{tg}(d) \cdot \text{tg}(\theta)} = \frac{(S+V)}{|l|} \cdot \text{tg}(\theta) \quad (20)$$

En réorganisant cette équation, on retrouve une forme quadratique:

$$0 = \left[\frac{(S+V)}{|l|} \cdot \text{tg}(d) \right] \cdot \text{tg}^2(\theta) + \left[\frac{(S+V)}{|l|} + 1 \right] \cdot \text{tg}(\theta) - \text{tg}(d) \quad (21)$$

Si la distance de l'objet à la ligne base-apex du prisme est une distance finie ($|l| \neq 0$ et $|l| \neq \infty$), alors l'équation quadratique aura comme solutions:

$$\text{tg}(\theta) = \frac{-B \pm \sqrt{B^2 - 4 \cdot A \cdot C}}{2 \cdot A} \quad (22)$$

$$\text{où } A = \frac{(S+V)}{|l|} \cdot \text{tg}(d) \quad (23)$$

$$B = \frac{(S+V)}{|l|} + 1 \quad (24)$$

$$C = -\text{tg}(d) \quad (25)$$

De ces deux solutions, équation 22, seule la solution positive doit être considérée. En effet, si la déviation angulaire d tend vers zéro alors la rotation oculaire doit également tendre vers zéro; en utilisant le calcul des limites du calcul différentiel et intégral,¹⁰ on trouve:

$$\begin{aligned} \lim_{(d \rightarrow 0)} (\text{tg} \theta) &= \lim_{(d \rightarrow 0)} \frac{-B \pm \sqrt{B^2 - 4 \cdot A \cdot C}}{2 \cdot A} \\ &= \lim_{(d \rightarrow 0)} (-B) \pm \lim_{(d \rightarrow 0)} \frac{\sqrt{B^2 - 4 \cdot A \cdot C}}{2 \cdot A} \\ &= \lim_{(d \rightarrow 0)} \frac{(-B) \pm \lim_{(d \rightarrow 0)} \sqrt{B^2 - 4 \cdot A \cdot C}}{\lim_{(d \rightarrow 0)} (2 \cdot A)} \\ \lim_{(d \rightarrow 0)} (\text{tg} \theta) &= \frac{-B \pm B}{\lim_{(d \rightarrow 0)} (2 \cdot A)} \quad (26) \end{aligned}$$

en considérant les relations 23, 24 et 25. Ainsi, en l'absence de prisme ($d = 0$), la rotation oculaire sera évidemment nulle; donc, seul le signe positif de l'équation 26 doit être considéré.

Maintenant, si l'objet se situe à l'infini optique, l'équation 21 devient, en utilisant le calcul des limites:

$$\begin{aligned} 0 &= \lim_{(|l| \rightarrow \infty)} \left[\frac{(S+V)}{|l|} \cdot \text{tg}(d) \right] \cdot \text{tg}^2(\theta) + \lim_{(|l| \rightarrow \infty)} \left[\frac{(S+V)}{|l|} + 1 \right] \cdot \text{tg}(\theta) \\ &\quad - \lim_{(|l| \rightarrow \infty)} [\text{tg}(d)] \\ &= 0 + \text{tg}(\theta) - \text{tg}(d) \end{aligned} \quad (27)$$

d'où $\text{tg}(\theta) = \text{tg}(d)$

Cette égalité signifie que la valeur numérique de la rotation angulaire de l'oeil est identique à la valeur numérique de la déviation angulaire des rayons lumineux occasionnée par le prisme.

Maintenant, si la distance entre le prisme et l'objet tend vers zéro, l'équation 21 peut être écrite de la façon suivante; en multipliant l'équation par $|l|$:

$$\begin{aligned} 0 &= [(S+V) \cdot \text{tg}(d)] \cdot \text{tg}^2(\theta) + [S+V+|l|] \cdot \text{tg}(\theta) - |l| \cdot \text{tg}(d) \\ \text{et, en appliquant le calcul des limites:} \\ 0 &= \lim_{(|l| \rightarrow 0)} [(S+V) \cdot \text{tg}(d)] \cdot \text{tg}^2(\theta) + \lim_{(|l| \rightarrow 0)} [S+V+|l|] \cdot \text{tg}(\theta) \\ &\quad - \lim_{(|l| \rightarrow 0)} [|l| \cdot \text{tg}(d)] \\ &= [(S+V) \cdot \text{tg}(d)] \cdot \text{tg}^2(\theta) + [S+V] \cdot \text{tg}(\theta) - 0 \end{aligned}$$

$$0 = \text{tg}(\theta) \cdot [(S+V) \cdot \text{tg}(d) \cdot \text{tg}(\theta) + (S+V)] \quad (28)$$

Cette équation a deux solutions:

$$\operatorname{tg}(\theta) = 0 \text{ et}$$

$$\operatorname{tg}(\theta) = \frac{-1}{\operatorname{tg}(d)} \text{ qui doit être rejetée car la relation 26 stipule}$$

que si $\operatorname{tg}(d) = 0$ alors

$$\operatorname{tg}(\theta) = 0.$$

Donc, les solutions à l'équation générale 21 sont les suivantes:

Si $0 < |\ell| < \infty$ alors:

(29)

$$\operatorname{tg}(\theta) = \frac{-B + \sqrt{B^2 - 4 \cdot A \cdot C}}{2 \cdot A}$$

$$\text{où } A = \frac{(s+v)}{|\ell|} \cdot \operatorname{tg}(d)$$

$$B = \frac{(s+v)}{|\ell|} + 1$$

$$C = -\operatorname{tg}(d)$$

Si $|\ell| \rightarrow 0$ alors:

(30)

$$\operatorname{tg}(\theta) = \operatorname{tg}(d)$$

Si $|\ell| \rightarrow \infty$ alors:

(31)

$$\operatorname{tg}(\theta) = 0$$



Defensive contact lens practice

J Sévigny

Recent media coverage following the publication of the study on the risk of ulcerative keratitis among users of daily-wear and extended-wear soft contact lenses has focused public attention on the dangers of contact lens wear.¹

Bad news travels fast. One should, therefore, ask how to redefine one's contact lens practice in consideration of potentially increased risk associated with contact lens fitting. The following is an attempt to look at the issue of trouble-free contact lens fitting.

Contact lens wearing is now considered the major cause of ulcerative keratitis, with the incidence of ulcerative keratitis at least five times greater in extended wear than in daily wear.^{1,2} Hope that disposable contact lenses would solve the problem has vanished. Many published case reports have established that the risk remains present with disposable contact lens wear.³⁻⁶

Harris and Classe have outlined the three minimal requirements they believe prudent with the use of disposable, extended-wear lenses: supply an informed consent agreement; be aware that the FDA approves disposable contact lenses for one-time wear only; warn the patient to discard any lenses causing even minor irritation.⁷

At a recent panel discussion I asked if the informed consent was necessary in the field of extended-wear lenses. The panel agreed that even when a patient signs such a document, it does not necessarily dispose of our liability. I, too, believe that no documents can replace the optimal care that you can render to your patient in your practice. However, I am among many practitioners who also believe that an informed consent agreement is necessary. In my practice, I undertake no new cases without a signed consent from the patient (sample shown).

Protocols exist for contact lens evaluations used for clinical studies. Such protocols may be too cumbersome for practical use in daily contact lens fitting, but they can and should be individually tailored to fit any practice. The protocols were developed with sound and protective rationale.

In terms of records, notations such as "within normal limits" or "negative ou." should be avoided in slit-lamp findings, as these are grounds for dispute in court.⁸ The record should show and quantify procedures such as evert the lids, using fluoresceine or counting microcysts.

Defensive contact lens practice centres around a thorough examination and good record-keeping. A signed consent form, an established protocol for examinations and detailed documentation of procedures and their results—these are the basis of a safe and profitable practice.

References

1. Poggio EC, et al. The incidence of ulcerative keratitis among users of daily-wear and extended-wear soft contact lenses. *N Engl J Med* 1989;323(12):779.

J Sévigny, OD, FFAO — St-Romuald, Quebec

2. Weissman BA. Corneal infection and contact lens wear. *Contact Lens Update* 1989;8(3):33.
3. Kershner RM. Infectious corneal ulcer with over-extended wearing of disposable contact lenses. *J Am Med Assn* 1989;261:3549.
4. McLaughlin R, et al. Corneal ulceration associated with disposable E W lenses. *Contact Lens Spectrum* 1989;4(3):57.
5. Parker WT, Wong SK. Keratitis associated with disposable contact lenses. *Am J Ophthalmol* 1989;107:322.
6. Serdahl CT, et al. Infiltrative keratitis associated with disposable soft contact lenses. *Arch Ophthalmol* 1989;107:322.
7. Harris MG, Classe JG. Disposable lenses: Don't dispose of your legal responsibilities. *Optom Manag* 1989;25(5):78.
8. Harris MG. Is your practice vulnerable to legal action? *Contact Lens Spectrum* 1990;5(1):56.

Informed Consent Agreement

I am taking note of the Contact Lens Institute of Extended Wear recommendations on the use of soft contact lenses:

- Extended wearers of soft contact lenses are at risk of encountering complications.
- The major risk is the incidence of ulcerative keratitis, which can lead to grave and permanent loss of eyesight.
- Reports indicate that the incidence of such complications is rather low: only 0.02% of patients can encounter such problems.
- Consequently, a wearing schedule of six days with a one-day absence of contact lens use is strongly suggested.
- Reports indicate that any subsequent days of extended wear increase the risk factors considerably.
- I must communicate with my optometrist with occurrence of any symptoms, such as
 - blurred vision
 - persistent discomfort
 - eye redness
- A minimum follow-up of two times a year is required.

I the undersigned have read and taken note of the previous informed consent.

Patient signature

Optometrist signature

Date: _____



Glasses—who needs 'em? by Lane Smith. 1991, Viking Penguin, a division of Penguin Books Canada Limited, Suite 300, 10 Alcorn Avenue, Toronto, ON, M4V 3B2. 30 pp, illustrated. \$18.99

You just *know* that any book that opens with the line, "My doctor said I needed glasses. ... I'm worried about looking like a dork", is not going to be a run-of-the-mill read. And *Glasses—who needs 'em?* isn't. Just to clarify things right from the start, this is a children's book and a must for any practitioner with young patients (say, 8 years and older) sitting around your waiting room.

A delightfully whimsical combination of straightforward text and arresting illustration, *Glasses* captivates immediately. For one thing, it's written in language understood—and spoken—by kids today.

The story hinges on a particularly determined youngster who, when told he has to have glasses, proceeds to argue—strenuously argue—the diagnosis with his eye doctor. When, for example, he is told that his mother, his father and his sister all wear glasses, he retorts, "My sister wears green rubber bands in her hair and T-shirts with unicorns on 'em." It is not a compliment to her taste.

The doctor, however, is just as determined to make his case. As readers are taken through the many stages of the debate, we are treated to pictures of everything from "short fuzzy bunnies" to "Hong Kong flu bugs", all wearing glasses.

And the pictures are a manic contribution to the text. Created by the author, each illustration—many are full-page and all are in colour—looks like it was generated with lavish splatters of paint rather hastily pushed together until, lo and behold, something resembling the subject emerges on each page. It is, in fact, the book's only flaw that the colour in an illustration interferes on a couple occasions with the colour of the ink used for the text, making those pages somewhat difficult to read. (Interestingly, one of those pages refers to a chameleon; the difficulty in reading may, in fact, have been exactly the intent of the author-illustrator.)

Glasses—who needs 'em? ultimately does resolve that the wearing of glasses can be a benefit. How it does this is a delight both to read and to see. I recommend that any optometrist with a pediatric patient population add at least one copy to your waiting room and, after hours, sneak out and read it yourself!

Michael J DiCola
Director of Communications, CAO



BY LANE SMITH

Eighth Annual Palm Beach Winter Seminar P.G.A. NATIONAL RESORT AND SPA Palm Beach Gardens, Florida February 21, 22, & 23, 1992

FEATURING: Louis T. Catania, O.D.
Pennsylvania College of Optometry
Linda Casser, O.D.
Indiana University, School of Optometry

TOPICS: 1) Cornea Under Stress - 4 hours T.Q. credit
2) Stump the Stars - 4 hours C.E. credit
3) What's New for '92: Ocular Disease Update - 4 hours T.Q. credit



REGISTRATION INCLUDES

- Eight hours transcript quality education credit (I.A.B. classified), plus four hours regular credit.
- Continental Breakfast all three mornings.
- Poolside buffet luncheon on Saturday.

REGISTRATION:

- Before January 22, 1991 - \$225
- After January 22, 1991 - \$250

For discounted travel rates
call Delta Airlines "special meeting network"
1-800-221-1212, #M 21067
(Ask for lowest rates)

For information Contact:
Pre-registration Chairman
Salvatore M. DeCanio, Jr., O.D., F.A.A.O.
211 E. Boynton Beach Blvd.
Boynton Beach, Florida 33435
(407) 732-8088

Sponsored By:
Palm Beach County
Optometric Society

Magique Manitoba Magic

1991 Biennial Congress photo contest: Magic, indeed

Once again this year, the members of our Association and their families proved that optometrists are just as adept at looking *out* of eyes as they are at looking *into* them. The 1991 Biennial Congress photo contest, sponsored in its entirety by Canon Canada Inc, was a huge success, attracting a superb crop of entries.

Dr Susan Lu of Winnipeg co-ordinated the program and judging this year. Taking its category titles from the overall Congress theme, Magique Manitoba

Magic, the contest offered photographers the opportunity to capture the Magic of the Moment, the Magic of the Environment or the Magic of Black and White. On these pages, we present all nine winners.

CAO would like to express its sincere gratitude to **Canon Canada Inc** for its generous support. Not only did Canon donate all nine cash prizes, they provided display material to help showcase the complete roster of contest entries outside the registration and

information centre for the duration of the Congress. Thanks, too, to Dr Susan Lu for grappling so successfully with the extremely difficult task of arranging for only nine winners from so many excellent entries.

For those entrants who missed the prize list this year, keep those photographic eyes open. 1993's "Island Paradise" Congress in Charlottetown will be looking for your submissions.

*Right: Magic of Black and White, first prize,
Dr Dale Mulball*

*Below: Magic of Black and White, second prize,
Lauren Mulball*

*Below right: Magic of Black and White, third prize,
Angelika Koetb-Strohan*





Above: Magic of the Environment, first prize, Angelika Koeth-Strohan
Below: Magic of the Moment, second prize, Lauren Mulball

Above: Magic of the Environment, third prize, Dr Michelle Georgi



Above: Magic of the Moment, third prize, Jill Smit

Right: Magic of the Environment, second prize, Angelika Koeth-Strohan

Below: Magic of the Moment, first prize, Lauren Mulball



Drs Marvin Langer, Harry Basman and Emmanuel Finkleman receive accolades at CAO's 1991 Biennial Congress

Three outstanding practitioners have been added to the Canadian Association of Optometrists' honour roll as the result of special presentations made at this past summer's Congress.

Dr Marvin Langer, a Past President of the Ontario Association of Optometrists and on many different occasions a virtual one-man legislative task force for the national Association, received the 1991 CAO President's Award at the Congress's closing event, the President's Banquet.

Dr Harry Basman, retiring as Executive Director of the Manitoba Optometric Society, received an Honorary Membership in the national association at the same event.

And, at a luncheon held earlier in the Congress, Dr Emmanuel Finkleman, a Past President of CAO (1961-63), was honoured for 60 years as a practitioner in Winnipeg. He is still active.

1991 CAO President's Award

In paying tribute to Dr Marvin Langer, CAO's Awards Committee Chairman and Past President Dr Tom Adamack reviewed an extensive list of projects,



Dr Marvin Langer suggested that the 1991 President's Award was presented "to the wrong person". His argument was overridden, however, by two standing ovations given during the presentation of CAO's highest honour.

briefs and submissions for which the research and writing had been carried out either under the direction or with the close co-operation of Dr Marvin Langer.

Reading from the award's inscription, Dr Adamack noted that the Association's highest honour was being presented to Dr Langer "in recognition of his dedicated service to Optometry in Canada as a practitioner, a lecturer at the College of Optometry, an active contributor to many of the profession's most important statements of record to the Governments of Canada and of Ontario, and a leader and pioneer in the development of codified Standards of Practice still observed by many of this country's optometrists."



Dr Harry Basman (right) and CAO President Dr Jean-Marie Rodrigue are seen here holding the plaque commemorating the CAO Honorary membership presented earlier in the evening to Dr Basman.

Dr Harry Basman retires

The presentation to Dr Basman of an Honorary Membership in the national association was made at the nomination of the Manitoba Optometric Society (MOS). Immediately following the Congress, Dr Basman stepped down from his position as Executive Director of the MOS, a position he had held for 10 years. In their nomination, the Society's Executive paid glowing tribute to the tireless energies of Dr Basman, calling him "a valued counsellor and friend to many of Canada's optometrists".

Dr Adamack, reviewing the many reasons for this night's tribute to Dr Basman, cited in particular his early years of service on behalf of the provincial Society when, although he was paid on a part-time basis for just three days per week, often four, five or even six days were logged by this most dedicated of administrators.

Honouring six decades of practice

Recognizing an almost unparalleled active contribution as a practising optometrist, the Congress also paid tribute to Dr Emmanuel Finkleman, the holder of Manitoba's first licence to practise Optometry which, when issued, began an unbroken line of 60 years in active practice.

Dr Finkleman's remembrances, when he accepted the recognition, offered a fascinating look back to times when Optometry struggled not merely for recognition but, indeed, for its very survival as an independent health care profession.

And finally, in a related tribute to the partners behind the honourees at this Congress, Dr Adamack—also during the President's Banquet—singled out for special recognition the equally active support offered by Malca Langer, Joyce Basman and (especially over the past two gruelling years) Dr Michelle Georgi, Chairwoman of the Congress Registration Committee.



Dr Steve Mintz (right), President of the MOS, presents a commemoration of six decades as an active practitioner to Dr Emmanuel Finkleman.

THE OPTIMA PROMISE



P E R F O R M A N C E

With OPTIMA you get the best. Not satisfied with performance that's "as good as", Optima lenses give you more. Here's how:

FOR DAILY WEAR – OPTIMA 38

An excellent first choice lens with outstanding visual acuity, movement and centration – a cut above the rest.

FOR FLEXIBLE WEAR – OPTIMA FW

Provides superior ease of handling and durability when compared to previous standard thickness or thin lenses. Optima FW also provides unmatched patient comfort and corneal health.

FOR ASTIGMATS – OPTIMA TORIC

The Optima that outshines other torics, particularly at low powers. Superb lens design gives your patients unmatched comfort and stability.

Optimize the performance of the lenses you prescribe. Ask your Bausch & Lomb representative about the OPTIMA family. Or phone 1-800-668-7510.



Bausch & Lomb Canada Inc.
Vision Care Group
Richmond Hill, Ontario L4B 3B3

OP1DM8/90E

**BAUSCH
& LOMB**
Healthcare and Optics
Worldwide

Tea with the Wizard attracts hundreds for COETF lunch

The Canadian Optometric Education Trust Fund (COETF) drew a huge crowd to its biennial luncheon and draw this year in Winnipeg.

As part of Magique Manitoba Magic, the 22nd Biennial Congress of CAO in Winnipeg, the COETF sponsored Tea with the Wizard, a draw for which the grand prize was a three-week trip for two to the United Kingdom. (Actually, "administered" is a more accurate verb than "sponsored". Sponsorship of the event was underwritten by a generous supporting grant from Allergan Inc.)

Throughout the Congress, the Fund's trustees, provincial fund-raising chairs and volunteers sold tickets for the draw so successfully that, by noon on the Congress's last day, a total of some 250 had been sold (reflecting the almost unanimous support—in some cases with more than one of the \$100 tickets—of the Congress's 200 registered optometrists).

The draw also featured several ancillary prizes, all with a distinctly British flavour to console those who didn't win the invitation to tea with CAO's Wizard of Eyes character.

The winner of the grand prize, a two-week tour of the UK plus a week for two

in London, along with a celebratory bottle of Mumm's champagne, was Dr Don Williamson of Brandon, Manitoba (and Chairman of the Congress's Entertainment Committee—talk about a reward for hard work!).

Runner-up and consolation prizes were won as follows: 2nd prize (\$500 in Marks and Spencer gift certificates and a 40-oz bottle of Tanqueray gin), Dr Marlene Reiss; 3rd prize (\$250 in Marks and Spencer gift certificates and a 40-oz bottle of Tanqueray gin), Drs Martin Reinhorn and Doug Puttaert (on a shared ticket); 4th prize (a weekend for two at any Holiday Inn in Canada, courtesy of the Holiday Inn Crowne Plaza in Winnipeg, and a 40-oz bottle of Tanqueray gin), Dr George Elliott; 5th to 10th prize (a 40-oz bottle of Tanqueray gin, each), Drs Doug Côté, Marv Langer, Hugh MacKenzie, Blain Stokowski, Al Tataryn, Doug Turnbull; two consolation prizes (a do-it-yourself UK tea party including tea, biscuits, cups, English beer and steins), Drs Denis Champagne and Harry Wismer.

The trustees of the COETF extend their hearty congratulations to all winners in this year's draw and their profound gratitude to all who supported

the Fund by buying a ticket. They are also grateful to Allergan Inc for underwriting the cost of the buffet luncheon at which the draw took place.

Dr Ivan McNabb singled out

Dr Ivan McNabb is the first CAO member in the history of the COETF to have achieved a *personal* donation level of over \$10,000. At the luncheon and draw, one of the COETF's founding trustees, Dr Jack Huber, presented Dr McNabb with a unique gift recognizing not only this measure of support, but also his service as CAO President from 1973–75. It was under Dr McNabb's presidency that much of the formative groundwork for the Fund was laid. Dr McNabb now wears a specially struck CAO presidential ring, given to him in deep appreciation by the present COETF Board of Trustees.

In accepting the presentation, Dr McNabb encouraged all those in attendance to consider directing their charitable dollars to a Fund dedicated to advancing the profession. "Giving something back to the profession," he said, "is the best way I know to thank Optometry for what it has given to me."

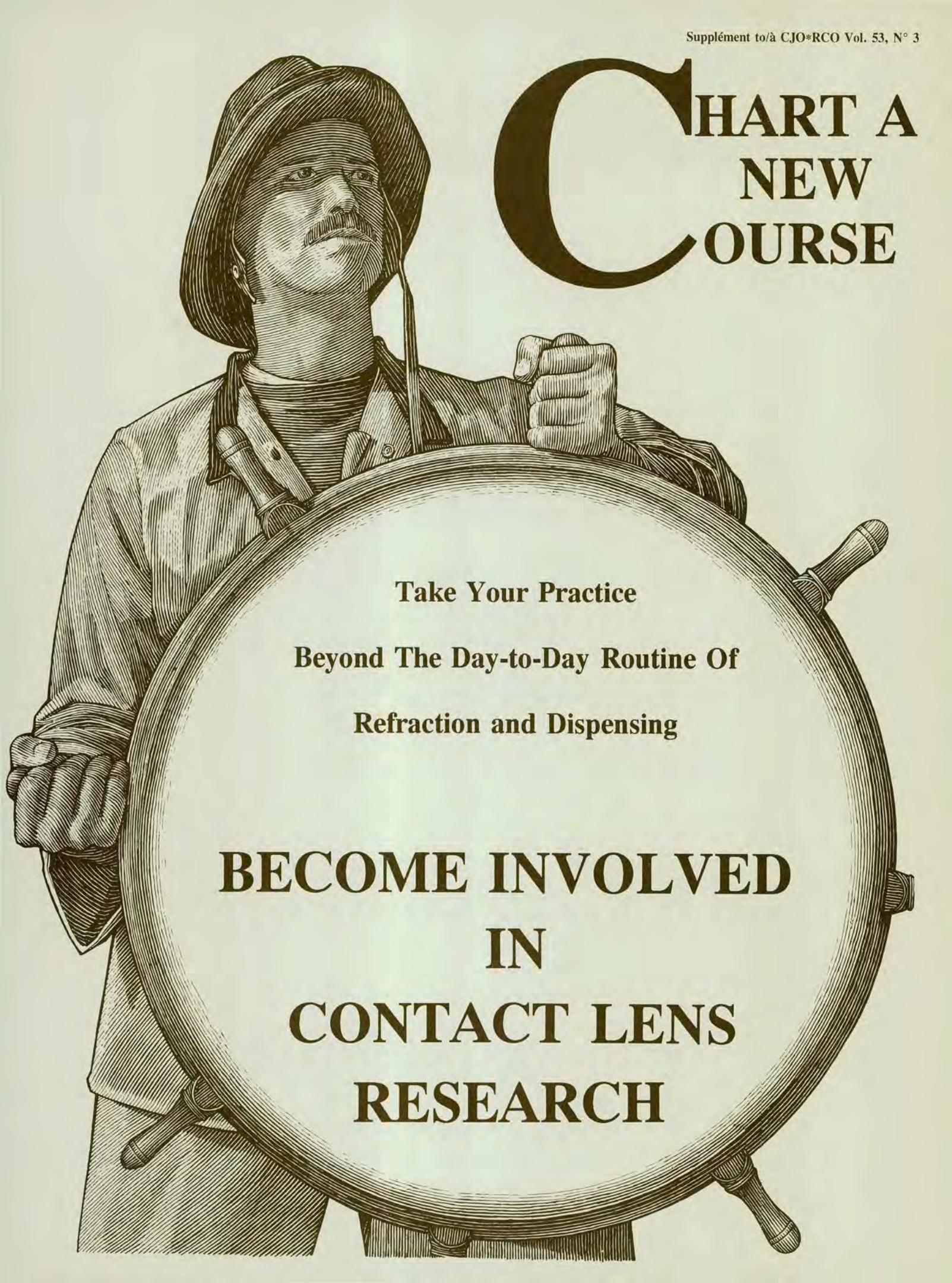
Right: Flanking COETF Chairman Dr Margaret Hansen des Groseilliers are Peter Slight (left), Director of Optical Sales, and Dr J Martin McDowell (right), Professional Services Manager, who together represented Allergan Inc (parent company to Allergan Humphrey, Allergan Medical Optics, Allergan Optical and Allergan Pharmaceuticals), sponsor of the luncheon.

Below, left: Dr Ivan McNabb (left), still sporting the "magic" top hat from which he drew the prizewinning ticket, seems loath to release the bottle of Mumm's champagne while congratulating the grand prize winner, Dr Don Williamson of Brandon, Manitoba.

Below, right: Dr Jack Huber (left), a founding trustee of the COETF and a Past President of CAO, presents \$10,000-plus donor Dr Ivan McNabb with a CAO president's ring, specially struck by the Fund to recognize Dr McNabb's unique, generous and ongoing support of Optometry's own charity. (All photos by Stew McCulloch, Winnipeg.)



CHART A NEW COURSE



Take Your Practice

Beyond The Day-to-Day Routine Of

Refraction and Dispensing

**BECOME INVOLVED
IN
CONTACT LENS
RESEARCH**

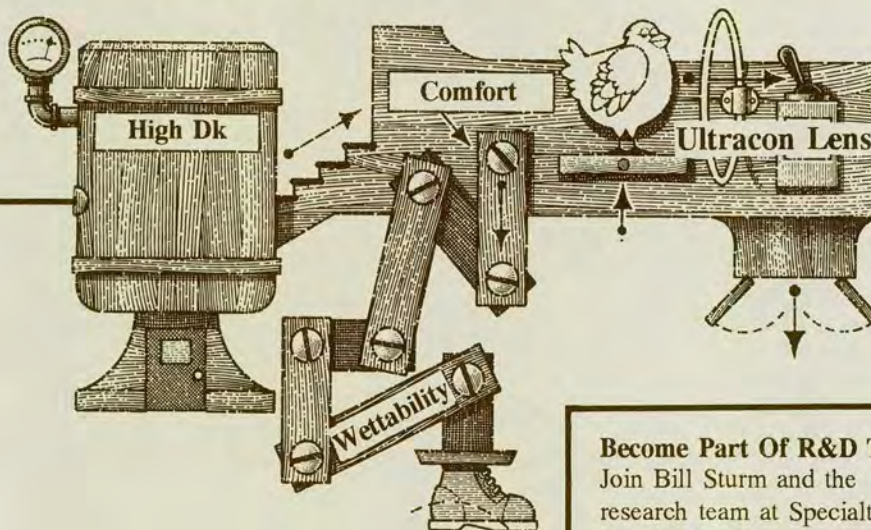
Wanted: Contact Lens Practitioners To Participate In Contact Lens Clinical Trials

A Call To Action Is Being Issued
By Optical Researcher Bill Sturm
President, Specialty Contact Lens, Calgary, Alberta
To Join His Efforts
In Making Canada The World Leader
In Contact Lens And Allied Optical Research

To achieve this goal, your fitting expertise, documentation skills and complete patient monitoring will guide research in designing the optimum in contact lens performance.

Blaze New Trails

Specialty Contact Lens invites enthusiastic practitioners with experience in the contact lens field and a thirst for knowledge to become involved in blazing new trails in contact lens research.

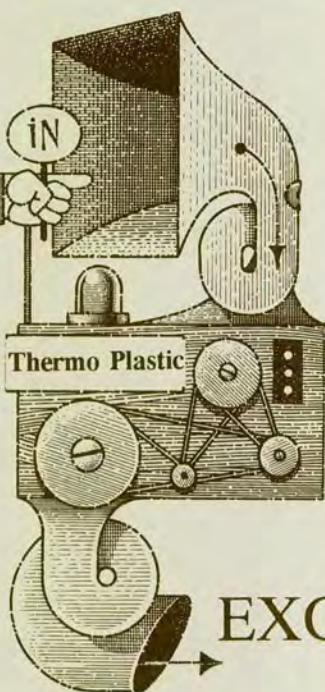


Become Part Of R&D Team

Join Bill Sturm and the research team at Specialty Contact Lens in their quest to recruit a team of Canadian researchers who will work to advance contact lens standards enabling the worldwide ophthalmic community to provide unsurpassed vision correction.

Veteran Knowhow

A veteran contact lens researcher, Bill Sturm is well versed in clinical protocol. A phone call to him will get you on your way in R&D.



EXCITING NEW CAREER DIMENSION

With No Financial Obligation

For further information, call 1-800-661-1044

Research Efforts Add Zest To Your Practice

Here's Why Canadian Eye Care Practitioners Have First Access To The Latest Contact Lens Technology

Canada has a Medical Devices Act that is of significant benefit to the contact lens industry. Grant money is available for clinical studies that YOU, the practitioner, can conduct.

Unlike the United States and other countries, our government does not encumber researchers with unnecessary bureaucratic red tape that bogs down research and development. Because of the freedom to explore new technology, Canadians take science to its next evolutionary stage within a reasonable time frame, making us the envy of other nations.

We develop hypotheses. We formulate and test theories. We invent new products, conduct tightly controlled clinical studies, and improve and re-test our inventions. Those products that perform well during clinical studies eventually reach the marketplace. Those with less than ideal performance are set aside, perhaps only temporarily sidetracked until refinements are made. Some products never make it to the marketplace, though they contribute immensely to our knowledge base.

Our industry is constantly in search of knowledgeable persons to conduct research that could uncover new and useful information. **Unfortunately, the opportunity to become a respected researcher is being overlooked by many excellent candidates. Here's YOUR chance to receive the proper coaching for initiating contact lens research.**

The dissemination of new information from the lecture platform is becoming rare. Top lecturers are forced to repackage old data. You can change that by working to produce new and important facts!!!

Future Projects

Ongoing research is the hallmark of Specialty Contact Lens Co. Future projects will include:

- . Photo Transfer Lens in a 10mm design and scleral lens design, with or without optics
- . Moulded telescopic LVA lenses
- . Hybrid hard center/soft edge lens
- . Optix System for RGP lenses
- . Poultry lenses

Various Lens Designs and Sizes:

- . 9.5mm to 10.5mm RGP design
- . 13mm to 16mm soft lens design
- . 16mm to 24mm scleral lens design

Career Advancement

Once you have gotten your feet wet in research, you can augment your income by lecturing on your research findings. And, you can gain additional exposure by writing scientific papers for leading trade journals.

Other practitioners have benefitted. You can, too!

Take Advantage of Government Grant Money And Boost Our Country's Reputation For Research And Development

Scleral Lenses

An Old Dog with a New Trick

In the past, Scleral lenses have been overlooked for many reasons. To quote Dr. Don Ezekeil of Gelflex Laboratories in Perth, Australia, "The development of new RGP materials has, unfortunately led to the neglect of the scleral lens: yet this lens is the lens of choice in many cases. Without the Scleral lens, some patients are deprived of the only optical aid that would provide them with useful vision." Specialty Contact Lens in Calgary, Canada, inspired by Dr. Ezekeil, has devoted their last 3 years of research to correct this problem.

Rasor Associates, a research group that develops medical devices, produced a membrane to oxygenate blood during heart/lung surgery. Several essential characteristics were necessary in such a membrane, many of which could serve well in a contact lens. Rasor shareholder, Dr. Irv Fatt, PHD who is well known in the contact lens industry, decided to explore the potential to use this material for Contact Lenses.

Dr. Fatt had lectured at an International Contact Lens Symposium in Calgary where he met Bill Sturm of Specialty Contact Lens. Since he knew of Bill's involvements in research, Dr. Fatt contacted Bill to discuss the possible uses of this material for contact lenses. As a result a joint venture between Specialty Contact and Rasor Associates began. This joint venture has the potential to redefine the manufacturing and fit of Scleral lenses.

At this time Specialty Contact is concentrating its efforts on producing a Scleral lens from this new material. The material has tremendous potential as a Scleral lens because of its design comfort, high oxygen permeability, ease of fitting and reproducibility.

We need to remember the difficulties the entire contact lens industry has with Scleral or Haptic lenses in the past. The available materials were not permeable, and manufacturing and fitting techniques were cumbersome and time-consuming (Bier and Lowther, 1977) more like an art than a science. Consequently Scleral lenses had limited wearing time, were difficult to make and fairly expensive for the practitioner.

Previously Scleral lenses were manufactured from laborious fitting methods. For example the Impression Method. This fitting technique consisted of making an impression or mould of the eye. The mould is then ground to attain a proper fit. If at any stage of the grinding an error occurs the lens must then be discarded and another made.

Old Scleral lenses were produced from hard materials such as PMMA. When the eye is turned nasally the unforgiving Scleral, riding on the movement of the medial rectus muscle, is displaced causing the patient discomfort because of stiffness of the edges that rested on the medial and lateral rectus muscles. The displacement of the lens during movement will also let air underneath the lens, losing the fluid causing a loss of visual acuity. As well the PMMA material is not permeable therefore risking the health of the eye.

As the following description shows, the new material has properties that make it ideal for use in comfortable, easily and quickly manufactured and relatively inexpensive scleral or haptic lenses – a real breakthrough for the industry and potentially a great benefit for many patients.

Ultracon material has many characteristics that set it apart from any lens available today. It has the comfort of a soft (hydrophilic) lens with the positive characteristics of Rigid Gas Permeable lenses. The material characteristics are as follows:

- no water content; therefore no dehydration; sharper vision; low probability of infection.
- extended range of stiffness ranging from soft to rigid.
- high index of refraction (-1.55).
- very high Dk (80-160)
- the material doesn't tear or split.

Ultracon

In Scleral Lens Production

Producing a Scleral lens in the Ultracon material could eliminate the majority of the problems previous Sclerals have presented. The flexibility of the material will allow the lens to move with the eye without any discomfort or lens displacement.

The Ultracon material lends itself to thermo-pressure moulding. This manufacturing process eliminates the tedious, time-consuming fitting and manufacturing process. As described later, the fitting procedure is extremely simple reducing practitioners costs and patient inconvenience. The manufacturing process allows for reduced manufacturing costs.

The manufacturing process consists of pressure moulding a blank of Ultracon material between two nickel moulds at high temperatures. A male and female mould, with an Ultracon blank in between, are placed in a holder, then put into a press. The moulds are subject to pressure and relatively high temperatures. After cooling, the lens is removed from the mould, and edged slightly.

When fitting a Scleral lens, the most important things to consider are the central apical clearance and good alignment in the haptic or scleral area with very little or no edge stand-off. It is necessary to first fit a trial lens to evaluate the physical fitting characteristics of the lens by analyzing the fluorescein patterns. The lenses are fenestrated to release the vacuum that is created between the contact lens and the eye by the lid action. Trial lens kits are available.

A Photo transfer Scleral lens is also possible using the Ultracon material. A photograph of an eye is transferred into the lens. The lens is opaque, therefore camouflaging the unsightly eye. This lens is most effective on patients with corneal scarring and can be produced with or without optics.

Specialty Contact Lens has begun clinicals on the Scleral lens. Several patients have been fitted with the Scleral lens. The results to date have been inspiring. Clinical evaluations will be ongoing.

The Ultracon material has potential for other lens designs as well as the Scleral. Corneal lenses (10mm), Soft lens design (14mm) and a hard center/soft edge in any diameter. Specialty Contact is working on realizing the full potential of the Ultracon material.

The Ultracon Scleral lens can overcome the stigma of previous Sclerals, providing an uncomplicated and economical solution to select eye problems.

Introducing Ultracon

A New Unique Ultra-Permeable Material

MAJOR ADVANTAGES:

- * Comfort of a soft (hydrophilic) lens with the positive characteristics of RGP lenses.
- * Reduced manufacturing cost/potential for inexpensive disposable lenses.

MATERIAL CHARACTERISTICS:

- * No water content; therefore, no dehydration; clearer, sharper vision; low probability of infection.
- * Extended range of stiffness ranging from soft to semi-rigid to hard.
- * High index of refraction (-1.55)
- * Very high Dk (80-160)
- * Doesn't tear or split.

MANUFACTURING CHARACTERISTICS:

- * Thermo-pressure molding
- * Reduced manufacturing costs
- * Accurate reproducibility

CLINICAL USE CHARACTERISTICS

- * Comfort equal to hydrophilic soft lenses
- * Fewer deposits and eye infections
- * Rapid patient adaptation
- * Special solution opportunities

THE ULTRACON CORNEAL CONTACT LENS CHARACTERISTICS

O B J E C T I V E S

S T A T U S

1. HIGH COMFORT

- A. Material properties optimized
- B. Optimized edge geometry
- C. Good lens wettability
- D. Poor adhesion of protein, debris

Demonstrated
Fair and improving
Fair and improving
Fair and improving

2. REDUCED RISKS OF INFECTION OR CORNEAL DAMAGE

- A. No material water content
- B. No microbe penetration
- C. High oxygen permeability

Demonstrated
Demonstrated
Dk 80 to 160

3. EXCELLENT OPTICS

- A. No dehydration or change in shape with time
- B. High optical clarity
- C. Precise and reproducible optical surfaces and geometries
- D. High index of refraction
- E. Correction for astigmatism

Demonstrated
Demonstrated

Demonstrated
About 1.55
Probable

4. GOOD HANDLING PROPERTIES

- A. High strength; won't easily tear or split
- B. Low compression set

Demonstrated
Demonstrated

5. GOOD MANUFACTURING CHARACTERISTICS

- A. Consistent and reproducible lenses
- B. Little or no waste material
- C. Thermal compression molding process allows high volumes and low cost.
- D. Mold sets should be low in cost and have long life

Demonstrated
Demonstrated

To Be Determined

To Be Determined

Launch Into R & D

Through Clinical Evaluations Sponsored By
Specialty Contact Lens

ULTRACON MATERIAL CHARACTERISTICS

PARAMETER	LENS MATERIAL	REMARKS
Oxygen Permeability Dk	80 - 140	"Superpermeable" category; suitable for extended wear.
Fabrication Method	Thermoplastic	Can be molded using simple standard production techniques. Thermal lamination also possible.
Material Cost	Low	Minimal polymer waste.
Equipment Cost	Low	Simple press/mold configuration. Easy mold interchangeability.
Dimensional Stability	Highly stable	Fabrication technique avoids residual stress.
Stiffness	Variable, as required	Ranges from soft to semi-rigid to rigid.
Refractive Index	1.55	High value permits thinner lens.
Specific Gravity	Approx. 1.01	Enhances capillary attraction; improves centering.
Toxicity	Non-toxic	Tissue culture testing demonstrates.
Biocompatibility	Compatible	In vivo evaluation - rabbit.



Watts Line: 1-800-661-1044

Lower Level, 213-19th Street N.W., Calgary, Alberta, Canada T2N 2H9 / 403-283-9506 Telex:03-821172Cgy. Fax:403-283-1014

Overview of Top Canadian Contact Lens Research Efforts During The Past Quarter Century

- * **1974** Corneal Contact of Calgary is one of only two producers of CAB lenses in the world.
- * **1975** Joint effort by Calgary's Bill Sturm and Don Ratkowski, of Paragon, Mesa, Arizona, to perfect the lens known as Paracab.
- * **1976** Bill Sturm and M.K. Lee, of Seoul, Korea, develop the only CAB/PMMA silicone material known as the Calgary lens. In its heyday, more than 2,000,000 of these lenses were produced. Today, more than 10,000 are produced in Europe annually, and are known as XL20.
- * **1978** The Boston Lens is introduced to Canada by Plastic Contact Lens, of the United States, with several Canadian practitioners lecturing on the positive effects of this material.
- * **1978** The Alberta lens, developed by the late George Tsuetaki and Nick Novicky, of Chicago, Ill., with input from Bill Sturm during clinical evaluations, is introduced worldwide by Bill Sturm's Corneal Contact laboratory.
- * **1978** The late George Nissel, of England, and Bill Sturm begin to develop a lathe that would produce a spherical optic zone with a variable aspheric peripheral curve, and one-half of the edge radius on the concave surface, without the diamond-cutting tool losing contact with the lens surface. This design had a great deal of versatility built in so that variable A.E.L. could be produced according to the corneal profile. Lenses produced in this manner are now known as the Canadian Hybrid lens. Similar lens designs originated from this concept. Mr. Sturm acknowledges the input of his good friends, the late Gene Hirst, of New Zealand, and the late David Volk, of the U.S.A.
- * **1980** Another R.G.P. material makes its appearance. The S.M. 38, introduced in Calgary by Corneal Contact Lens Co., makes a strong impact in Europe and the U.S.A. Later becomes known as Optacryl 60. Developed by Bill Hoffman, Denver, Colorado, with minor chemistry input from Bill Sturm. Between 1981-1984, several improvements occur, including higher Dk, greatly improved wettability, and a tear breakup time of 22 seconds, almost double that of Polymer Technology's Boston IV and Paragon's Paraperm O₂ and Paraperm O₂+, two of the most aggressively marketed RGP lenses in the world.
- * **1981** Bill Sturm establishes Specialty Contact Lens Co. in Calgary, dedicating his efforts to improving contact lens manufacturing and evaluating new rigid materials introduced by a variety of material producers.
- * **1981** Specialty Contact Lens Co. introduces the first ruby R.G.P. lens in the Alberta material.
- * **1984** The first fluorinated acrylate, the Alberta N with a Dk 46×10^{-11} , is developed by Nick Novicky and Bill Sturm. Within two years, most material manufacturers begin to copy the Alberta N concept, beginning in 1986 with Polymer Technology's Equalens; then Paragon's Fluoroperm in 1987; and in 1989, Polymer Technology's RXD, which is almost identical to the Alberta N in overall characteristics, including hardness and stability.
- * **1988** Specialty Contact Lens Co., of Calgary, enters joint venture with Rasor & Associates to produce a lens from Ultracon material. Clinical trials begin in June, 1991.
- * **1988** The Alberta S is developed by Nick Novicky, of Progressive Optical Research Ltd., Calgary.
to **It receives approval of the U.S. Food and Drug Administration, and is introduced to the U.S. market**
1991 **the second half of 1991.**



THE OPTIMA PROMISE



P R E D I C T A B I L I T Y

Optima lenses are the most reproducible lenses made. Optima lenses are the most predictable lenses you can select.

O P T I M A 3 8

For your first fit, daily wear patients choose Optima 38.

O P T I M A F W

Where a thin lens is desired Optima FW for either daily or flexible wear.

O P T I M A T O R I C

For your astigmatists choose the proven Optima Toric.

For maximum predictability in the lenses you prescribe. Ask your Bausch & Lomb representative about the OPTIMA family. Or phone 1-800-668-7510.



Bausch & Lomb Canada Inc.
Vision Care Group
Richmond Hill, Ontario L4B 3B3

OP2DM10/90E

**BAUSCH
& LOMB**

Healthcare and Optics
Worldwide

A 1991 Biennial Congress photoplay

If one accepts the old adage about a picture's being worth a thousand words, then the following photo album is a story rivalling *War and Peace*, but without the same bookshelf space requirement.

After a CAO Congress, it is customary to ask the Local Arrangements Chair for a few written recollections. Just before this issue was committed to press, a fax arrived at CAO from Dr Scott Mundle. It opened with the line, "Sorry, but my mind is still mush re the Congress happenings."

He did add a few notes, however, on highlights he felt worth mentioning. Beginning as a proud father, "My kid (Cameron)," he notes, "drew Gérard's winning ticket." (The ticket in question was a prize offered by Air Canada, the official air carrier of this convention, to be drawn from among the names of everyone—delegates, staff, exhibitors—who flew to the Congress on an Air Canada flight. The lucky winner received tickets for two to any Air Canada destination in North America. Our Local Arrangements Chairman's *first* official Congress recollection, then, is that his son drew the name of CAO's Executive Director, Gérard Lambert, as the winner of this particular prize!)

Other notes from Dr Mundle's diary:

"I don't really have an unbiased view; the last bus home from the Hitch 'n' Post had to make an unscheduled pit stop." (Our Chairman is noted for politeness. The buses used for this particular event were classic British double-deckers, made for negotiating the streets of London, not the highways of Manitoba. At a top speed of some 45 km/h, it seems the distance between the washrooms at the Hitch 'n' Post and the washrooms at the hotel was

more than the evening's last revellers could comfortably manage; hence, the pit stop!)

"James Cielen's red dove laid a 'magic egg' after the Monday show; Lauren Williamson is the proud owner!" (James Cielen is an outstanding young illusionist who entertained several times over the course of the Congress. In one of his acts he uses live birds, including a white dove that mysteriously becomes a red dove and that, yes, clearly identified herself as a "she" after Monday's performance by laying an egg!)

"Who is it that was AWOL for the better part of Saturday?" (AWOL, for those lacking a military background, is the abbreviation for absent without leave, and the "who" in question is none other than Mike DiCola, CAO's Director of Communications, who was effectively lost for most of the day while his air carrier of choice (a) treated him to delays, deferrals and cancellations and (b) treated those at the other end, in Winnipeg, to the incorrect explanation that he had "failed to board his Ottawa flight". It wasn't until he finally arrived at the hotel some four hours later than planned that the foregoing was discovered; it took some quick calls to several of the hotel's meeting rooms, and back home to Ottawa, to assure colleagues and family that, no, one of CAO's employees had not abandoned the Congress and, no, Dad hadn't abandoned home and hearth.)

"It was the most people I've ever seen dance *during* supper on Friday." (This is true. Supper on Friday was the CAO President's Banquet. An exceptional group of lively musicians began playing well before the salad was served and the

poor banquet catering staff must have thought our traditional closing event had been victimized by an inordinately high number of "no-shows", until they cast their eyes toward the packed dance floor.)

"I am accepting no bribes to tell how I did my magic escape—we magicians don't tell our secrets!" (Actually, we haven't yet heard of any bribes being *offered* to Dr Mundle for this little tidbit. Not to say we aren't curious. The "escape" in question took place during the Congress Opening Ceremonies when world-renowned Winnipeg escape artist Dean Gunnarson produced a huge trunk on stage. After twisting it, tilting it, turning it around and opening it to show that it was indeed empty, he closed and reopened it to magically and mysteriously produce our Congress Local Arrangements Chairman, who then welcomed everyone to the event! But what Dr Mundle escaped to were five of the most hectic days of his life, so we suspect the preceding mention of bribes is wishful thinking!)

"I never got the chance to apologize for our weather—25+°C and sunny, except for Tuesday. We had no rain for the rest of the month, either!" (Apology accepted. Now, about those harpie eagle/vampire bat cross-breeds that Manitobans laughingly call "mosquitoes" ...)

So, on to the visual evidence of the wonderful success that was Magique Manitoba Magic 1991. (All photographs by Stew McCulloch, 922 Jessie Avenue, Winnipeg, Manitoba, R3M 1A8. Tel. [204] 488-8942.)

CAO President Dr Jean-Marie Rodrigue declares the Congress officially open.



THE OPTIMA PROMISE



SATISFACTION GUARANTEED

BAUSCH & LOMB is so confident in the performance of the OPTIMA family of contact lenses, it backs them with an **UNCONDITIONAL** guarantee of satisfaction.

THE OPTIMA FAMILY SATISFACTION GUARANTEE

All Optima 38/Naturalint, Optima FW/Naturalint, and Optima Toric contact lenses are covered under a comprehensive lens product warranty. They may be returned for credit or exchange within 60 days of dispensing if either the dispenser or the wearer find their fit or performance to be unsatisfactory for any reason.

Performance, predictability, satisfaction guaranteed. That's the OPTIMA promise. If you'd like to take advantage of these benefits, ask your Bausch & Lomb representative for details. Or phone 1-800-668-7510.



NUMBER THREE IN A SERIES



Bausch & Lomb Canada Inc.
Vision Care Group
Richmond Hill, Ontario L4B 3B3

OP3DM12/90E

**BAUSCH
& LOMB**

Healthcare and Optics
Worldwide

Opening night



Left: Renowned escape artist Dean Gunnarson (right) challenges Local Arrangements Chairman Dr Scott Mundle to break out of his straitjacket within 15 minutes. Dr Mundle, thank goodness, proved his Congress planning abilities are infinitely superior to his escape techniques.

Right: Later in the show, Dean Gunnarson (left) is being chained—over a straitjacket—by an assistant at the opening ceremonies. In spite of the snugly coiled steel bonds, Dean's artistry enabled his own escape in about three minutes flat.



Left: Birds, steel hoops and even something as mundane as a sheet of newspaper are magician James Cullen's tools as he dazzles the opening ceremonies crowd at the Magic Mixer.

Right: Dr Kerby Kelly's daughter charmed the audience at the opening ceremonies with her dance steps.



Below left: CAO President Dr Jean-Marie Rodrigue and LAC Entertainment Committee Chairman Dr Don Williamson (right) at the official ribbon-cutting to mark the opening of the exhibit ball.

Below right: Believe it or not, this is a promotion for 1993's "Island Paradise" Congress in Charlottetown. Looks more like the Green Gables Gang in a police line-up!



Faces at the Congress



Left: Anne of Green Gables—a long way from home, but not homesick at all—extended a cheery invitation to all and sundry to come to PEI in '93 for CAO's "Island Paradise" Congress.

Right: Arden Trinaistich picks a winner at the exhibit ball door prize draw.



Left: Dr Tony Cullen (left), Director of the School of Optometry, University of Waterloo, collects a prize in the exhibit ball door prize draw, this one courtesy of Imperial Optical.



Right: The Green Gables Gang, prepared for a squall (or protecting their fiery red pigtails), presents a few Charlottetown highlights to promote 1993's "Island Paradise" Congress in PEI.



Left: A bit of cherished magic—James Cielen's autograph—adorns one of these Juniors' souvenir balloons.

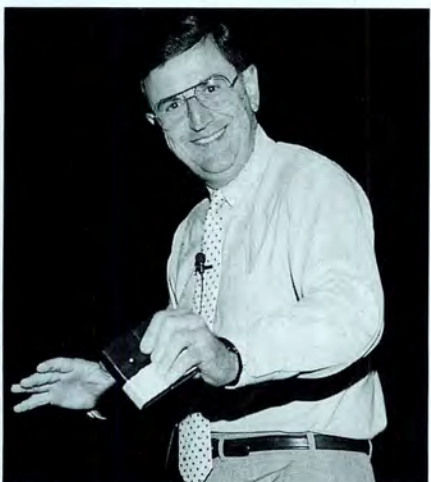
Right: Buried in a sea of silk, one of our Junior Delegates virtually "disappears" during a magic workshop.



Bottom left: From the looks of Dr Jimmy Bartlett, it's hard to imagine he's lecturing on Anterior Segment Therapeutics.

Bottom centre: Dr Howard Gimbel reviewed current aspects of IOL implantation and keratometric surgery.

Bottom right: For the first time in our Congress history, a provincial premier (in this case, Gary Filmon of the host province of Manitoba) addresses delegates at the government-sponsored luncheon.





Left: En route to the Hitch 'n' Post, a no-nonsense group of riders waylays each bus, searching for the unsuspecting white-batted "desperado" (a hapless CAO victim who had earlier been given the bat as a "draw gift").

Below left: Four of the jailed desperados await release on bail. (L-R) Dr Pasq Marcantonio, CJO*RCO Senior Editor Dr Mitch Samek, Dr Stan Eng and, in the foreground, David Mintz (regrettably, too young to enjoy the beer quaffed by his cellmates).



Below: CAO President-elect Dr Margaret Hansen des Groseilliers (left) and NBO Councillor to CAO Dr Pasq Marcantonio at the general business meeting.

Bottom: Past Presidents' luncheon. (Seated, L-R) Dr Woody Spearman (1969-71), Dr Hervé Landry (1980-81), Dr Marv Langer (President's Award recipient), Dr Ivan McNabb (1973-75), Dr Jack Huber (1979-80). (Standing, L-R) Dr Roy Brown (1977-79), Dr Tom Adamack (1988-90), Dr Earle Hunter (AOA Executive Director), Dr Jean-Marie Rodrigue (President), Dr Bruce Rosner (1985-86), Dr Roland des Groseilliers (1982-84), M Gérard Lambert (Executive Director).



Above and left: CAO Past President Dr Tom Adamack lines a sure ringer on the horseshoe pitch. . . while AOA Executive Director Dr Earle Hunter demonstrates the "USA" (upward spiral arc) shot . . . and CAO President Dr Jean-Marie Rodrigue combines the "French fling" with body English!



Below: Meanwhile, back to business. Dr John Lovasik, Director, personally delivered the General Business Meeting report for l'École d'optométrie, Université de Montréal.

Below right: International Optometric and Optical League (IOOL) President Dr Burt Holmes addressed this year's GBM on behalf of the League's member countries worldwide.





Above: CAO President and First Lady: Dr Jean-Marie Rodrigue and H  l  ne Rodrigue.

Right: LAC Chairman Dr Scott Mundle and Registration Committee Chairwoman Dr Michelle Georgi (husband and wife) look more relaxed now that the Congress's final event is under way.



Right: Host MOS President Dr Steven Mintz and his wife, Debbie, at the President's Banquet.

Below: CAO President's Award winner Dr Marvin Langer delivered a reflective acceptance speech.

Below right: Dr Harry Basman, retiring as Executive Director of the Manitoba Optometric Society, accepts Honorary Membership in CAO at the President's Banquet.



Right: The 1990-91 edition of the CAO Council gathers in Dr Rodrigue's suite just before the President's Banquet. (Seated L-R) Secretary-Treasurer (and NSAO Councillor to CAO) Dr Mike Duffey, President-elect (and OAO Councillor to CAO) Dr Margaret Hansen des Groseilliers, President Dr Jean-Marie Rodrigue, Past President Dr Tom Adamack. (Standing L-R) Executive Director G  rard Lambert, Dr Doug C  t   (NAO), Dr Ross Palmer (PEIAO), Dr Rix Graham (BCAO), Dr Steve Mintz (MOS), Dr Jim Kerr (SAO), Dr Jean-Claude   mard (AOQ), Dr Graham Dawdy (AAO) and Dr Pasq Marcantonio (NBAO).



Below: Past President Dr Tom Adamack chaired the awards portion of the banquet.

Bottom: President Dr Jean-Marie Rodrigue officially closes the Congress.





The COETF Annual Awards Program for 1992



The Canadian Optometric Education Trust Fund (COETF) was created by the members of the Canadian Association of Optometrists to assist programs in research, education and manpower development in the vision and eye care field in Canada.

Through its annual program of Awards, the COETF has supported (i) faculty development, (ii) research and/or specialized education programs carried out by graduate students, and (iii) investigative projects conducted by undergraduate students enrolled or on staff at Canada's Schools of Optometry.

The COETF has also extended grants to these institutions for the acquisition of new equipment, or the augmenting of existing teaching, library and archival facilities.

The COETF supports work carried out by optometrists in practice through grants to a number of professional development programs offered through a variety of institutions. The Fund has also supported optometrists involved in the coordination and implementation of projects established and carried out in clinical environments to assist the visually handicapped.

In the belief that Continuing Education for optometrists must continue to be offered at the leading edge of vision and eye care

research in Canada, the COETF has supported a number of projects and programs designed to enable the professional optometrist, or the optometric student, to benefit from the latest tools and techniques available for the delivery of these services to the Canadian public.

We call it **A Vision of the Future** and the COETF is willing to offer financial assistance to those who seek to keep this vision bright and clear. If you are an optometric practitioner, a faculty member or student at a Canadian School of Optometry, an educational institution seeking assistance with a specific vision and eye care program involving optometrists in your community, a service organization, or even a member of the general public with a great idea to help meet the goals outlined above, then the COETF's assistance might be available to help you realize your goal.

Please fill out and return the attached application, before the deadline indicated at the top of the form. The members of the COETF Awards Committee promise that all applications received on time for projects meeting the purposes of the Fund will be given serious consideration as a part of this year's Awards Program.



Édition 1992 du programme annuel de prix du FFOCE



Le Fonds du fiducie des optométristes canadiens pour l'éducation (FFOCE) a été créé par les membres de l'Association canadienne des optométristes pour appuyer les programmes de recherche, d'éducation et de perfectionnement de la main-d'oeuvre dans le domaine des soins opculo-visuels au Canada.

Par son programme annuel de prix, le Fonds a favorisé (i) le perfectionnement du personnel enseignant, (ii) la recherche ou les programmes de formation spécialisée chez des étudiants de deuxième et troisième cycle et (iii) les projets de recherche d'étudiants de premier cycle inscrits ou travaillant dans les écoles canadiennes d'optométrie.

Le FFOCE a également accordé des subventions à ces organismes pour l'acquisition de nouveaux matériels ou l'agrandissement des installations d'enseignement, de la bibliothèque et des archives.

Le FFOCE appuie le travail des optométristes praticiens par des subventions à divers programmes de perfectionnement professionnel offerts par l'intermédiaire de toutes sortes d'organismes. Le FFOCE a également aidé financièrement les optométristes participant à la coordination et à la mise en application de projets créés et exécutés en milieux cliniques pour aider les personnes handicapées visuelles.

Croyant que l'éducation permanente des optométristes doit continuer d'être offerte et demeurer à la fine pointe des

recherches sur la vision et soins opculo-visuels au Canada, le FFOCE a subventionné un certain nombre de projets et de programmes conçus pour permettre à des optométristes professionnels ou à des étudiants en optométrie de tirer parti des outils et des techniques les plus modernes pour offrir leur services à la population canadienne.

Nous appelons cela **Vision de l'avenir** et le Fonds est prêt à offrir une aide financière à ceux qui souhaitent que cette vision demeure claire et bonne. Si vous êtes optométriste praticien, membre du corps enseignant ou étudiant à l'une des écoles d'optométrie du Canada, ou encore un établissement d'enseignement cherchant de l'aide pour un programme particulier de soins pour la vision et pour les yeux faisant appel aux optométristes de votre collectivité, ou même un organisme de service ou encore un simple citoyen qui a une idée exceptionnelle pour permettre d'atteindre les objectifs susmentionnés, peut être pourrez-vous recevoir l'aide du FFOCE et atteindre votre but.

Veuillez remplir et nous retourner la formule de demande jointe avant la date limite qui y figure en haut à droite. Les membres du Comité des bourses du FFOCE s'engagent à étudier attentivement, dans le cadre du programme de bourses de cette année, toutes les demandes reçues à temps à l'égard de projets correspondant aux objectifs du Fonds.

Canadian Optometric Education Trust Fund
1992 Awards Program — Application for Funding

1992 Awards Program Application Deadline: 7 February 1992*

*date by which application must be RECEIVED at the address immediately below

Complete and forward this original plus seven (7) copies to:
COETF Awards Program
c/o The Canadian Association of Optometrists
Suite 301 — 1785 Alta Vista Drive
Ottawa, ON
K1G 3Y6

APPLICANT'S FULL NAME _____

MAILING ADDRESS _____

_____ TELEPHONE NO. _____

(1) TITLE or BRIEF DESCRIPTION OF PROJECT _____

(2) PROJECT SUPERVISOR* _____

*If applicant is a graduate or undergraduate student

(3) EXPECTED DATE OF COMPLETION _____

(4) ESTIMATED BUDGET (Please provide details on a separate attachment)

Personal Services	Salaries	Equipment	Supply Mtl.	Travel	Tuition	Other (specify)
				Total Grant Requested \$		

Note: The COETF customarily does NOT provide funding support for travel to and from sites where the results of a project are intended to be presented, for example, a symposium or continuing education seminar.

Until otherwise advised, the following policy has been approved by the COETF's Board of Trustees with respect to written reports on projects funded by the Annual Awards Program: The applicant agrees to submit a written report* to the COETF Trustees within sixty (60) days of the completion of this project, whether wholly or partially funded by the COETF. The report will be submitted to the Editors of the *CJO*RCO* and considered by them for publication. *NOTE: The "report" may take the form of a clinical, scientific paper, or a complete summary if the grant recipient is required to submit the full paper elsewhere.

(1) SIGNED (Director, School of Optometry/If applicant is a faculty member, graduate or undergraduate student at the School of Optometry, University of Waterloo or l'École d'Optométrie, Université de Montréal)

(2) SIGNED (Applicant)

DATE

(5) How will this program or project benefit or improve the delivery of vision and eye care services in Canada?

In this Section, the applicant is asked to outline briefly the public, professional and/or personal benefits to be derived from this project.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

(6) To the best of the applicant's knowledge, is this project eligible for, has the applicant applied for, has this project received, or will it be receiving funding support from any source other than the COETF?

In this Section, the applicant is asked to outline briefly whether the COETF is viewed as the sole source of funds for this project, or whether COETF support is being sought in addition to alternate funding support already (or yet to be) solicited and/or received from any other funding source(s).

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Fonds de fiducie des optométristes canadiens pour l'éducation
Programme de bourses 1992 — Demande de fonds

Date limite de demande pour le programme de bourses 1992 : le 7 février 1992*

*date à laquelle les demandes doivent PARVENIR à l'adresse qui figure ci-dessous :

Remplir et transmettre l'original et sept (7) copies à l'adresse suivante :

**Programme de bourses du FFOCE
au soin de l'Association canadienne des optométristes
Pièce 301, 1785, promenade Alta Vista
Ottawa (Ontario)
K1G 3Y6**

NOM COMPLET DU CANDIDAT _____

ADRESSE POSTALE _____

_____ NUMÉRO DE TÉLÉPHONE _____

(1) TITRE ou BRÈVE DESCRIPTION DU PROJET _____

(2) DIRECTEUR DU PROJET* _____

*Si le candidat est un étudiant aux études supérieures ou un étudiant de premier cycle

(3) DATE PRÉVUE POUR LA FIN DU PROJET _____

(4) BUDGET ESTIMATIF (prière de fournir des détails sur une feuille distincte)

Services personnels	Salaires	Matériel	Fournitures	Voyages	Frais de scolarité	Autre (préciser)
				Bourse totale demandée : \$		

Remarque : Habituellement, le FFOCE n'accorde PAS d'aide financière à l'égard des déplacements pour se rendre sur place et en revenir, si les résultats d'un projet doivent être présentés, par exemple, à un colloque ou à un séminaire d'éducation permanente.

Sauf mention du contraire, voici la ligne de conduite approuvée par le Conseil des fiduciaires du FFOCE à l'égard des rapports écrits sur les projets subventionnés dans le cadre du Programme annuel de bourses : le candidat s'engage à remettre un rapport écrit* aux fiduciaires du FFOCE dans les soixante (60) jours suivant l'achèvement du projet, qu'il soit subventionné entièrement ou partiellement par le FFOCE. Le rapport sera remis aux rédacteurs de la RCO, qui jugeront s'il y a lieu de le publier. *REMARQUE : Le rapport peut être présenté sous forme d'exposé clinique ou scientifique ou de résumé complet, si le boursier est tenu de présenter ailleurs le document intégral.

(1) SIGNATURE (Directeur de l'école d'optométrie/si le candidat est membre du corps enseignant, étudiant aux études supérieures ou de premier cycle à l'école d'optométrie de l'Université de Montréal ou de l'Université de Waterloo)

(2) SIGNATURE (candidat)

DATE

Le candidat doit ainsi préciser brièvement les avantages publics, professionnels ou personnels à retirer du projet.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines, typical of notebook paper. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

Le candidat doit ici préciser brièvement si le FFOCE est considéré comme l'unique source de fonds pour le projet ou si l'aide financière du FFOCE est demandée en plus de celle déjà demandée (ou à demander) ou reçue de toute autre source.

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



(Unless otherwise noted, all items appearing in Vision Care News are written by Michael DiCola, CAO Director of Communications. Where external information sources were used in compiling an item, these are also identified and an address for readers wishing further information, if provided with the source material, is included.)

Interaction 1991 tackles third-party vision care

Interaction 1991, CAO's annual meeting of national and provincial optometric leaders, was an introduction in depth to the subject of third-party health care plans.

The meeting, which was held in conjunction with Magique Manitoba Magic, the Association's 1991 Biennial Congress in Winnipeg, featured presentations from all sides of the third-party spectrum: an insurer (Blue Cross); a national provider (Canadian Dental Association); and a beneficiary (Petro-Canada). In addition, two optometric groups that are managing very successful third-party vision care plans in their respective jurisdictions—l'Association des optométristes du Québec and the British Columbia Association of Optometrists—outlined the features of their programs.

The day-long session was chaired by CAO President-elect Dr Margaret Hansen des Groseilliers and included a breakout-workshop portion. A cross section of Optometry in Canada was represented, and each group addressed the specific implications of co-ordinating and augmenting existing provincial programs under some form of national umbrella.

While still a considerable distance from formalizing a national program, Canada's optometric leaders came away from this meeting with a solid understanding of the challenges involved.

CAO President Dr Jean-Marie Rodrigue, in his summarizing statement at the end of the day, noted that CAO will take the initiative, as directed by these leaders.

Names and faces at CAO

In this issue, we begin a series of brief profiles of CAO staff personnel. The

names will already be familiar to readers of the *CJO*RCO* and the CAO Annual Report, but beyond having been identified by name and title, CAO's personnel, to most of our members, are simply "the national office staff". These brief profiles are intended to put faces and personalities to the names you read, or voices you hear when you call the national office.

Executive Director **Gérard Lambert** is CAO's CAO (Chief Administrative Officer). He has held the position for the past eight years, after having served in the same post for l'Association des optométristes du Québec.



Born in Winnipeg, Manitoba, Gérard is a graduate of the University of Manitoba (BA) and l'Université de Montréal (BPh). He received his Master's degree in hospital administration (MAH) from l'Université de Laval and, in business administration (MBA), from l'Université de Montréal.

Before joining Canadian Optometry, Gérard was an association executive for 15 years with western and central Canadian health- and business-related professional groups. His positions included hospital administration and Executive Director to provincial medical and nursing organizations.

He is also a member of both the Canadian and American Societies of Association Executives (CSAE and ASAE) and was recently elected as first President of the Canadian Association of Optometric Executives (CAOE).

Gérard and his wife, Monique, have two sons, Denis, 14, and Marc, 13.

Professor WD Wright receives honorary Waterloo Science degree

At the University of Waterloo's 1991 convocation, held in late May, Dr W David Wright, a Professor Emeritus and instructor with a long affiliation with the School of Optometry, was awarded an honorary degree in Science. Dr Wright was nominated for the honour by the faculty of the School of Optometry.

Formerly Chair of Applied Optics at Imperial College, Professor Wright has long been a leading authority in the field of colour science. In 1931, his research on the standardization of human colour-mixture data led to the formulation of the CIE Standard Observer, still used as the basis for most colorimetric work, both scientific and industrial, throughout the world.

Retirement did nothing to lessen his work load. He went on to develop a spectrophotometer designed to measure the colour characteristics of artworks without damaging them either through mechanical contact or excessive irradiation.

In 1973, Dr Wright began his association with the School of Optometry when he was invited to give the annual Squarebriggs Memorial Lecture. Since then, he has taught regularly at the school and has had a significant influence on the development of its research program.

It's not all hard work

As anyone who knows how CAO President Dr Jean-Marie Rodrigue spends his leisure time can attest, he



plays a very competitive round of golf. On the golf course, as in chairing a meeting, his goal is the same—to achieve the maximum effectiveness in the minimum time.

You just don't get more effective on the golf course than to take one swing to transfer your ball from a tee to the bottom of the cup. Dr Rodrigue's hole-in-one occurred this past spring at le Cardinal course in Laval, Quebec, on a 165-yard par 3, using a 6 iron.

IOOL names 1991 International Optometrist of the Year

To Dutch optometrist Bert Koopman of Purmerend in the Netherlands, receiving the International Optometric and Optical League (IOOL)'s 1991 International Optometrist of the Year Award was a "complete surprise".

"Three times," he said during his acceptance speech at the League's 1991 General Meeting in Cardiff, Wales, "the title has already been given, but you never expect to be the one to receive such honours."

For two decades, Dr Koopman has represented the Netherlands in the IOOL. As Chairman of the organization's Legal and Legislative Committee, he has become an authority on the myriad of national optometric laws. He is an Honorary Member of three separate Dutch ophthalmic organizations—the Optometristen Vereniging Nederland (OVN), the Algemene Nederlandse Vereniging voor Contactlensspecialisten (ANVC) and the Nederlandse Unie van Opticiens (NUVO), in which he also served as President for 17 years. He is also a member of the German organization of contact lens specialists and the Belgian Professional Opticians' organization.

Optometry is a family affair for Dr Koopman (see photo). His Purmerend practice (near Amsterdam), was actually started by his grandfather.



The IOOL's International Optometrist of the Year Award is given in recognition of contributions to Optometry worldwide.

In the second photo, two of Canada's delegates to the League's 1991 General Delegates' Meeting in Cardiff listen attentively during the discussion. At left is Dr Tony Cullen, Director of the School of Optometry, University of Waterloo, and at right is Dr Roland des Groseilliers, CAO's official delegate to the IOOL.



Current Opinion in Ophthalmology

... is the name of a regularly published, comprehensive summary of ophthalmic papers published in "hundreds" of relevant journals throughout the world. All developments are reviewed, key papers are identified and annotated, and all relevant papers are listed.

In a news release issued in August, subscribers were advised they would receive "the most effective updating information service available in your specialty". Each issue includes reviews by leading authorities of recent published papers in the field, including selection and evaluation of "key" papers.

By way of example, the current year's six issues focus on the following topics: February—cataract surgery, lens implantation, optics, refraction and visual function; April—glaucoma; ocular manifestations of systemic disease; June—oncology, retina and vitreous disorders; August—corneal and conjunctival disorders, uveitis and infectious diseases; October—oculoplastic and orbital surgery, neuro-ophthalmology; December—pediatric ophthalmology and strabismus, world blindness and rehabilitation.

Access to this information is by subscription (£120 personal; £200 institutional) and includes access to offers to obtain other related specialty publications: for example, *Current Opinion in Pediatrics*; a *Slide Atlas of Current Ophthalmology*; and the *Current Opinion in Ophthalmology Database*.

Information and subscription: Mr Paul Nash, Marketing Manager, Current

Science Limited, 34-42 Cleveland Street, London, W1P 5FB, England. Telephone 01-323-0323; fax. 01-580-1938.

IAB seeks who, what, when, where, why and how

The International Association of Boards of Examiners in Optometry (IAB) was recently awarded a contract for \$24,900 from the United States Public Health Service's Bureau of Health Professions (BHP) to write a final report on the development of a plan for an Optometry-based information system.

The information system, according to the BHP and IAB, "is needed to provide an accurate picture of where optometrists are located, [and] demographic characteristics such as age, gender, ethnicity, educational background and practice characteristics."

The contract, scheduled to run nine months, includes initiating and running a forum to bring together organizational representatives for input on the design of such a system. The end result will see a series of recommendations on what should be acquired, in what priority the system should be developed, how to ensure compatibility of the diverse data elements and, finally, what groups should be involved in the program.

Information: Ronald W Jones, International Association of Boards of Examiners in Optometry, Suite 1117, 4330 East-West Highway, Bethesda, Maryland, 20814-4408, USA. Telephone (301) 718-6506; fax. 656-0989.

AOA panel advises VICA on PR material

The American Optometric Association (AOA), in what the Vision Council of America (VICA)—a not-for-profit trade association for the ophthalmic community—calls an "historic gesture", has made available a list of members who are prepared to review draft proposals for new public relations material developed by the Council.

In addition, for the first time in VICA's history, both the AOA and the Opticians' Association of America (OAA) have authorized the use of their respective logos in the Council's "ABC's of Eyecare" resource guide and "Envision Yourself" manual.

As reported in the August 1991 issue of *Focal Point*, the official VICA newsletter, the joint ad hoc materials review panel is seen to be a "strong example of the growing level of communication and co-operation between the industry and the professions within the ophthalmic community."

VISIONS OF VANCOUVER

at BCAA's Continuing Education Seminar
Feb. 16 - 18, 1992 at the Westin Bayshore Inn

18 hours on:

- . Keratoconus & Corneal Transplants,
Dr. D. Lin, Eye Care Centre, UBC
- . Hypertensive Retinopathy
Dr. D. Neima, ophthalmologist, B.C.
- . Prescribing for VDT's
Dr. J. Sheedy, San Francisco
- . Visual Processing
Dr. R. Yolton, O.D., PhD.Psych., PU
- . Grand Rounds/Ant. Segment
Dr. J. Thimons, O.D., New York
- . Optometry in an ophth. surgical centre
Dr. J. Jantzi, O.D., B.C.
- . Ant. & Post. Segment Gonioscopy
Dr. N. Lingel, O.D., PU
- . Ocular manifestations of AIDS
Dr. N. Lingel, O.D., PU
- . AIDS, Dr. S. Kohl, M.D., Chief of
Pediatric Infectious Diseases, USA



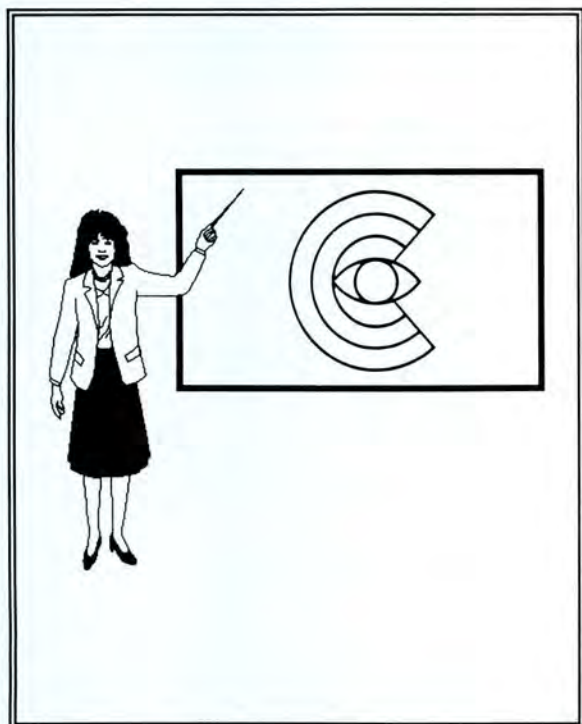
- . Pediatric Herpetic Infections
Dr. S. Kohl, M.D., Chief of
Pediatric Infectious Diseases, USA
- . Healthy Lifestyles
Dr. A. Hister, speaker & author
- . Glaucoma — Facts and Myths
Dr. S. Drance, O.C., M.D., UBC
- . Auto Perimetry
Dr. G. Douglas, M.D., Eye
Care Centre, UBC
- . Gerontology, Dr. Gutman, Ph.D.,
gerontologist, SFU
- . Understanding OEP/Skeffington Analysis
O.D., FCORD, Tennessee
- . Physical Properties of RGP's
B. Sturm, c.i. manufacturer, Canada
- . Sports Vision, Dr. Berman,
Institute of Sports Vision, Conn.

PLUS: 2 workshops (gonioscopy; sports vision)

PLUS the West's largest OPTOFAIR

Registration Fee: \$ 350.00 for OD's; \$125.00 for assistants
Registration Deadline: January 31/92 (late registrants, add \$25.00)

For information contact BCAA, 125-10451 Shcillbridge Way, Richmond, V6X 2W8, (604) 270-9909



Now class...

In 1991, the Canadian Optometric
Education Trust Fund
donated \$7,000.00 to the Nova Scotia
Association of Optometrists to support
an eyesight teaching exhibit at the
province's tremendously popular
Discovery Centre.

The COETF annually supports worthy
vision and eye care research projects in
Canada.

Now that's class!

Support the COETF, Optometry's
charity.

As at July 1, some 9,000 "ABC" kits and nearly 6,000 "Envision Yourself" manuals had been ordered by vision and eye care professionals across the US. For further information: Vision Council of America, Suite 904, 1800 North Kent Street, Rosslyn, Virginia, 22209, USA. Tel (703) 243-1508.

Standards of ethical conduct

The Canadian College of Health Service Executives (CCHSE) recently adopted a set of standards for professional and ethical behaviour for its more than 3,000 members, CEOs and managers from different health care sectors.

In a news release issued 30 August, the CCHSE notes the Standards of Ethical Conduct are intended to ensure that its members "understand their responsibilities", "The College," says Chairwoman Sister Roberta Freeman, "will enforce these standards if necessary."

The standards cover what the College sees as five key areas of a health executive's scope of responsibility: the individual; the organization; the community and society in general; the profession; and conflict of interest.

The CCHSE's members are in the delivery, government, teaching, corporate and consulting areas of health care in Canada. CCHSE's national certification program, leading to the CHE (Canadian Health Executive) designation, is currently the only Canadian credential available in this area.

For further information: Karen McCarthy, Communications Co-ordinator, Canadian College of Health Service Executives, Suite 201, 17 York Street, Ottawa, Ontario, K1N 5S7. Telephone (613) 235-7218; fax: (613) 235-5451.

Wesley-Jessen launches new programs, expands Canadian facility

Effectively doubling its facility in Canada, Wesley-Jessen recently announced a move to a new Mississauga location. In addition to relocating, the company will now be able to ship most orders the same day they are received, owing to a vastly expanded inventory.

According to company President Charles Stroupe, for lens orders placed from outside Toronto before 3:00 p.m. EST, lenses will be shipped the same day and delivered the next business day. After 3:00 p.m., orders will be processed the next business day and delivered on the day following. For Toronto practitioners, the same-day service also

applies, but with an order-time cut-off of 11:00 a.m. to assure same-day delivery.

For Canadian customers, a new toll-free order and customer service number has also been instituted: 1-800-263-2630.

W-J launches OptiFit toric colours

Wesley-Jessen's OptiFit line of toric lenses is now available in opaque colours.

In a news release issued August 19, the company advised that the lenses, DuraSoft 3 OptiFit Colors, "combine two of the company's most successful technologies—the advanced OptiFit toric design with W-J's patented opaque color process."

According to company President Charles M Stroup, "There are a lot of astigmats who have expressed a desire to change their eye color. Now, they can."

The lens is made from the same 55%-water material (phemfilcon A) as the company's DuraSoft 3 lenses. Locating the lens orientation mark differs from the clear lens process in that the W-J logo is imprinted in a contrasting colour directly above the Opti-Mark, which is itself incorporated into the colour's dot-matrix pattern.

Further information: Wesley-Jessen Corporation, 400 West Superior Street, Chicago, Illinois, 60610, USA. Telephone: Ann Foppe (312) 751-6265.

Profits from W-J prosthetic lens program to support vision education

A new Wesley-Jessen program has been established to channel profits from the sale of its highly specialized prosthetic lenses into the Canadian Optometric Education Trust Fund, the Canadian Ophthalmological Society, or the Opticians' Association of America.

The practitioners who order the lenses for their patients with injured, diseased or otherwise disfigured eyes will be asked to designate the recipient; W-J will then donate all profits from the sale of the lenses.

The lenses, from the DuraSoft Colors line (both phemfilcon A, 55% water; and phemfilcon A, 38% water), are available for sighted and non-sighted eyes, with or without lens power. In sighted eyes, indications for use include corneal scars; iris, lens and vitreoretinal abnormalities; extraocular muscle disorders; and amblyopia. In non-sighted eyes, indications for use include abnormalities of the globe, cornea or lens; and non-functional eye. Powers will range from

-20.00D to +20.00D; base curves will include 8.3 mm, 8.6 mm, 9.0 mm and others by special request. Lens diameter will be 14.5 mm, with the opaque black pupil diameter either 3.7 mm or 5.0 mm. Lens iris colour diameter will be 12.5 mm.

For the 55%-water lenses, available colours are baby blue, emerald green, aqua, hazel, sapphire blue, jade green, violet, misty gray, chestnut brown and black. In the 38%-water lenses, the colours are sky blue, jade green, aquamarine and violet blue. All lens orders will be customized, requiring 6 to 10 weeks for delivery, and priced at \$175 per lens.

For further information: Wesley-Jessen Corporation, 400 West Superior Street, Chicago, Illinois, 60610, USA. Telephone, Ann Foppe (312) 751-6265.

Titmus offers work-related eye safety video

Titmus Optical Inc, an arm of the Carl Zeiss group, has produced a new eye protection video for training employees on the selection, inspection, cleaning and use of proper protective eyewear.



"A Vision of Safety" runs 8 minutes, 45 seconds, and is delivered with a package of 100 patient pocket brochures that remind the employee of the importance of protective eyewear.

Further information, including ordering: Titmus Optical Inc, Petersburg, Virginia, 23804, USA. Telephone, Karen Lutto (804) 732-6121, ext 358.

Exclusive Canadian carrier for Keeler announced

Keeler Instruments recently announced that INNOVA Medical Ophthalmics, a Toronto company, will be the exclusive Canadian distributor for its line of instruments.

INNOVA will carry the complete Keeler line, including the Pulsair 2000 non-contact tonometer, the Vista 20 ophthalmoscope, the Henson CFA 3000 field screener and the Microlase diode

COMPLETE DAILY LENS CARE IN A SINGLE BOTTLE



NEW Sensitive Eyes® Multi-Purpose Solution*

A name that says it all, and, an appealing new look

*(Formerly, Sensitive Eyes Soaking Solution)

For healthy eyes and successful lens wear, only Sensitive Eyes Multi-Purpose Solution combines:

- ▶ unsurpassed cleaning strength and easy rinsing
- ▶ sustained antimicrobial power
- ▶ proven gentleness

IN ONE COMPLIANCE-ENHANCING PACKAGE

Your recommendation simplifies daily cleaning, rinsing, disinfecting and lens storage, like never before

- ▶ For more information, or care kits, please telephone 1-800-668-7510

SENSITIVE EYES MULTI-PURPOSE SOLUTION / SENSITIVE EYES SOAKING SOLUTION IS DISTRIBUTED AS ReNu® MULTI-PURPOSE SOLUTION IN THE UNITED STATES.

BAUSCH & LOMB, SENSITIVE EYES and ReNu are trademarks of Bausch & Lomb Incorporated.

® Official Mark of the Canadian Olympic Association

Bausch & Lomb Canada Inc.
Vision Care
Richmond Hill, Ontario
L4B 3B3



**BAUSCH
& LOMB**
Healthcare and Optics
Worldwide

laser. INNOVA will also provide sales and service support for both new and long-time Keeler products, including their indirect ophthalmoscopes, loupes, cryo surgical systems, low vision aids and other sight testing and training products.

Further information: INNOVA Medical Ophthalmics, 265 Rimrock Road, Downsview, Ontario, M3J 3C6. Telephone (Toronto area) (416) 398-3306 or toll-free in Canada 1-800-461-1200. Fax: (416) 631-8272.

Something new to bug you

What do the following terms have in common: back door; bacteria; cookie monster; logic bomb; time bomb; trojan horse; worm?

Don't fret if you find yourself groping for something to tie such apparently diverse subjects together. It's not exactly Optometry—or at least it *wasn't*, until the business computer became a routine office accessory. According to the Summer 1991 issue of *Focus*, the newsletter of the Canadian Standards Association (CSA), each of the foregoing terms is found in the current lexicon of modern computer ailments. And you thought "bug" or "virus" said it all.

"Back door" refers to a program-access mechanism generally known only to the designer of the program or system. Often, back door access allows entry into a system you might otherwise thought to have been completely secured by passwords.

"Bacteria" are, yes, program "infections", usually hidden in incoming electronic mail. Once infected, your system can lock up with surprising suddenness. In one of the more infamous epidemics, a bacterial infection effectively shut down IBM for several days as the result of the spread of a "Christmas Exec" message. More recently, bacteria have also been referred to as "chain letters".

"Cookie monster", as its name suggests, is a less malicious but still irritating program that migrates with copy commands when disks are backed up and later recopied into other systems. It can then reappear over a period of several months. It got its name from its debut demand for a cookie every time it appeared. Cookie monster can disrupt, but it doesn't usually destroy data.

"Logic bombs" and "time bombs" are more destructive infestations. The logic bomb "detonates" only on a very specific (and, to the user, unknown) logic command, like logging in with a new date, or time, or specific operating command. A "time bomb", as its name suggests, can simply lie dormant,

sometimes for months, before a day-date signal activates it. ("Friday the 13th" is one example of a popular day-date combination for time bombs.) Both "bombs", depending on their buried instructions, can be extremely destructive and erase huge banks of data and programs just by coming on line.

The "trojan horse" also lives up to its name. You could welcome an apparently useful program or utility disk into your system only to find (or perhaps *never* know) you have opened the door to a virus. Like a back door, the trojan horse is often simply a vehicle to carry a secret key through which access can be gained to a databank, often to the complete ignorance of the user who installs the program or utility.

Finally, a "worm" is a self-contained, self-multiplying infection that "crawls" from system to system along network paths. As it multiplies, it eats more and more of a system's memory until the entire system can be locked up and fail to function.

According to David Bonyun, Director of Computer Security at the Ottawa-based AIT Corporation, prescribing a "cure" or "vaccination" for these many viruses is not an easy task. "These infections, just like the human kind, spread through everyday office working conditions. A systematic approach to identifying the causes and prescribing a few preventative measures may slow down their spread or even offer a cure, [and] standards and guidelines may be part of the prescription for the cure."

The Rocky part of the NBO's TPA course

... this past June took place during a gruelling 24 hours of practical clinic work over four days at The Eye Institute of the Pennsylvania College of Optometry (PCO).

The course, Concentrated Ocular Therapeutics, was organized by Drs Pasq Marcantonio, Leonide Desjardins and George Caissie of the New Brunswick Association of Optometrists (NBO). The full course lasted 100 hours. Under the joint sponsorship of the NBO and the School of Optometry, University of Waterloo, the session's venues were Philadelphia for the practical portion, and Moncton for the lectures.

The faculty for the course consisted of a high-profile battery of lecturers, including Drs Tony Cullen, Michael Doughty and John Flanagan of the Waterloo School of Optometry; Dr Mitch Samek of the Vision Institute; Dr Louis Catania of PCO; and Dr Howard Gimbel of Calgary's Gimbel Eye Surgical Centre.

Dr Marcantonio, in a recent interview, spoke highly of the overall success of the program and noted that at least two other provinces are looking into modelling similar programs after it. He also mentioned that a repeat Atlantic presentation might be possible, but this has not yet been decided.

Oh, why the "Rocky" part of the course in Philly? The course members—some 40 in all—are shown here on the steps of the Philadelphia Museum of Art, in the spot where Sylvester Stallone's film character made his famous sunrise salute in the first "Rocky" movie.



Well, it was rumoured to relieve glaucoma symptoms

According to a report from the Reuters News Agency, published in *The Globe and Mail* June 27, marijuana may actually help people to see in the dark.

Quoting from a letter that appeared in the scientific journal *Nature*, the article cites the experience of Jamaican fishermen who, it seems, "have an uncanny ability to see in the dark, and cannabis is the magic ingredient". The letter's author, ME West, of the University of the West Indies, says he began conducting his own research after joining a crew on a nighttime fishing expedition. He was amazed by their ability to navigate without lights in treacherous waters, where he could see nothing. He noted that most Jamaican fishermen not only smoke marijuana leaves, but also drink an alcoholic beverage made from the plant's stems and leaves.

So far, concludes the *Globe* article, "The way marijuana works to improve night vision remains a mystery."

And this just in (1)

According to another report from Reuters, far and away the single greatest factor leading to potentially blinding eye disease is "contact lenses, especially the soft and extended-wear types". The

report, which appeared in *The Globe and Mail* on 13 September, notes that a study released by London's Moorfields Eye Hospital found that people who wear contact lenses rather than glasses "are six times more likely to develop microbial keratitis" than are people who suffer an eye injury, which is the next most common cause. (*Editor's note:* See

also the paper by Jacques Sévigny, OD, FAAO, in this issue.)

And this just in (2)

"Recent additions to the list of things to be concerned about: *Popcorn*. There have been increased reports of people scorching their corneas by peering too

quickly into bags of microwaved popcorn and getting a faceful of steam, Research to Prevent Blindness says. The association believes popcorn should be added to sticks, BB guns and fireworks as common causes of eye injuries." (*The Globe and Mail*, 10 September 1991)

Calendar



Calendrier

For further information about events sponsored by the Canadian Association of Optometrists, unless otherwise indicated, contact the CAO office in Ottawa. For events sponsored by a provincial association or society of optometrists, or for international events, contact the hosting organization identified in the item.

1991

November 18-21: Bausch & Lomb's European Symposium on Contact Lenses, Geneva, Switzerland.

Information:

Mary Dorton, Associate Manager
Professional Services
Bausch & Lomb Canada Inc
85 Leek Crescent
Richmond Hill, ON, L4B 3B3
Tel (416) 886-6860
or 1-800-668-7510

December 12-16: American Academy of Optometry 1991 Annual Meeting, Disneyland Hotel, Anaheim, CA.

Information:

The American Academy of
Optometry
4330 East-West Highway, Suite 1117
Bethesda, MD, 20814, USA
Tel (301) 718-6500
Fax (301) 656-0989

1992

January 26-31: International Winter Ophthalmic Conference (20 hours of CE in Ocular Pathology and Contact Lenses), Lake Louise, Alberta.

Information:

IWOC
Robert H Honnors, OD, FAAO
419 East Romie Lane
Salinas, CA, 93901, USA
Tel (408) 758-3331 (office)
(408) 484-9356 (home)

April 24-25: International Contact Lens and Anterior Segment Conference and 10th Anniversary Meeting, Westin Harbour Castle Hotel, Toronto.

Information:

Harold A Stein, MD
c/o Bochner Eye Institute
40 Prince Arthur Avenue
Toronto, ON, M5R 1A9
Tel (416) 966-3336
Fax (416) 966-8917

June 14-19: 6th International Congress of the South African Optometric Association, Sun City, Bophuthatswana.

Information:

Congress Secretary, SA Optometric
Association
PO Box 3966
Pretoria, 0001, South Africa
Tel (012)-322-1310
Fax (012)-322-1313

"Equality is more than appearance"
Canadian Human Rights Commission

«L'égalité va au-delà des apparences»
Commission canadienne des droits de la personne

À vous de jouer.

Un 5 à 7 à la volée.
Un 8 à 9, c'est pas volé !
En simple ou en double,
le badminton, c'est tout simple !

PARTICIPATION

Make your move.

Badminton's easy and exciting!
After work or on the weekend,
make it part of your game plan!

PARTICIPATION

Optometrist Required

immediately, to work with ophthalmologist in town near Toronto.

Reply to

CJO*RCO, Box 391-A
Suite 301 — 1785 Alta Vista Drive
Ottawa, Ontario, K1G 3Y6

Calgary, Alberta Optometrist

wishes to semi-retire.

Practice will be given away in exchange for equipment value and two days per week usage by principal.

Dr AL Savell
215 Medical Centre, 906 — 8th Avenue SW
Calgary, Alberta, T2P 1H9
Tel (403) 265-8664

WILLIAM NEWELL SIEBERT Attorney at Law

307 North Michigan Avenue
Suite 915
Chicago, Illinois
60601, USA
Tel (312) 329-0646

Practice limited to US Immigration law
since 1969

WANTED Humphrey Field Analyzer Model 610 or 620

(preferably with Stat Pac)

Dr Greg E Evans
PO Box 597
Burns Lake, BC
V0J 1E0
Canada
Tel (604) 692-7713

Centre for Contact Lens Research School of Optometry, University of Waterloo

Applications are being accepted for a full-time research optometrist at the Centre for Contact Lens Research, School of Optometry, University of Waterloo. Specific duties will include conducting clinical trials (patient examination), writing research protocols and reports, data analysis, clinical photography, poster and presentation preparation, and participation in other applied research projects.

Applicants should have an OD degree or equivalent optometric qualification and/or a graduate degree. Preference will be given to applicants who have experience in contact lens research. Starting salary is from \$35,000, negotiable according to experience.

General enquiries or letters of application, with a current résumé, should be submitted to
Dr Desmond Fonn, Director
Centre for Contact Lens Research
School of Optometry, University of Waterloo
Waterloo, ON
N2L 3G1, Canada

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. The University of Waterloo encourages applications from qualified women and men, members of visible minorities, native peoples and persons with disabilities.

Support Christmas Seals...

Les timbres de Noël...
une idée à retenir!



For cleaner air and healthier people.
It's getting better all the time.

Pour un air plus pur et pour une meilleure santé.
Ensemble, nous y parviendrons.

THE  LUNG ASSOCIATION
L'ASSOCIATION PULMONAIRE

For Better or For Worse by Lynn Johnston © 1987 Universal Press Syndicate All rights reserved
For Better or For Worse par Lynn Johnston © 1987 Universal Press Syndicate Tous droits de reproduction réservés

ALSO AVAILABLE
IN **SOFTCOLORS®**

SPECTRUM™ MRx

MONTHLY REPLACEMENT LENS SYSTEM

PREVENTIVE HEALTH IS A WAY OF LIFE.

By replacing lenses on a regular monthly schedule, lenses and deposits are discarded before complications can arise. The results are more comfortable, trouble-free lens wear and healthier, more satisfied patients.



PERSONALIZED PACKAGING

Personalized 4-lens strip packaging provides automatic imprinting by CIBA Vision of the practitioner's name, phone number and patient's name.



Exclusive two-way reminder system simplifies patient recall:

1. A "time-to-reorder" message is included on the third label on each 4-lens strip.
2. On a regular basis, CIBA Vision will mail you a special CIBAGram indicating those patients who are due for a recall.

Unique Slim Packaging Design
for convenience and portability
Information on proper lens insertion and removal
is included inside each Spectrum MRx package.

CIBA Vision™

Talk to your CIBA Vision representative today.



marcolin®

MARCOLIN CANADA INC.

4995 - Timberlea Blvd. Unit 8 - Mississauga, Ontario L4w 2S2

Telephone (416) 629-2056 - Toll Free 1-800-268-0487

Ontario 1-800-387-3335 - Fax (416) 629-3408

Suite 212, 5250 Decarie Blvd. - Montreal, P.Q. H3X 2H9

Telephone (514) 485-2020 - Toll Free 1-800-361-2962 - Fax (514) 485-5900

Mod. 7038