LETTERS TO THE EDITOR

Blindness in the developing world

Editor,—I was most interested in the leading article by Allen Foster and Gordon Johnson which appeared in the journal.1 Some years ago I was lucky enough to attend one of their excellent courses on 'Ophthalmology in the Third World'. At that time I was an NHS consultant in my mid fifties and was anxious to take early retirement and work in the developing world. In my case there were considerable problems in finding such a post as all the non-governmental organisations working in these areas appeared to be Christian organisations that required their doctors to be committed Christians and actively to evangelise on behalf of the church. This I was neither able nor prepared to do.

In the event I was fortunate to be offered a post by the Order of St John in its prestigious Hospital of St John in Jerusalem. However, this sophisticated and well equipped hospital with its educated, if poverty stricken, population of patients from the occupied territories is hardly the Third World and was not quite the type of help to the medically primitive developing world that I was visualising at the time. It is apparent that there are very many doctors of my generation who would be highly delighted to give a year or two's service to the developing world, with money being of secondary importance.

The problem is that it appears that there is no easily available central mechanism to recruit, coordinate, and organise much of this goodwill.

I would strongly echo the views of Foster and Johnson who, pointing out the number of organisations involved in ophthalmic care, state that there needs to be a central co-ordination and targeting of the expertise that could be mobilised.

MICHAEL WARD
Order of St John
Jerusalem, Israel

Identification and rapid screening of a Draf RFLP by PCR in the retinoblastoma gene

Editor,—The use of DNA polymorphisms for clinical diagnosis of retinoblastoma is limited by the lack of heterozygosity among parents for the polymorphism being evaluated. Hence, it is important to maximise the density of informative markers with rapid screening in order to be able to use the information.

Our analysis of the T to A polymorphism located 10 base pairs (bp) from the 5' end of exon 26 of the retinoblastoma susceptibility (RB1) gene, using the polymerase chain reaction (PCR) followed by restriction digestion, revealed the creation of a new cleavage site for Dral (T TT AAA) restriction endonuclease. This DNA polymorphism was previously detected by direct sequencing but no restriction site alteration was reported.1 The PCR primers used were 5'-CAGTCAAGAGTTCTCTTGGT-3' (forward primer) and 5'-CAGTCAAGAGTCTCTTGG-3' (reverse primer). The PCR amplification was carried out in a 10 pmol reaction volume with Taq polymerase and 20 pmol of each primer, amplified for 35 cycles with denaturation, 94°C, 1 minute; annealing, 50°C, 1 minute; extension, 72°C, 1 minute 20 seconds, followed by a 4 minute incubation at 72°C. The PCR product was precipitated with 1-4 volumes of 20% polyethylene glycol (PEG) in 2.5 M NaCl. The final pellet was resuspended in 10 μl of distilled water. DNA was digested by Draf enzyme (10 units of enzyme in a 10 μl reaction volume containing 2 μl of the PEG precipitated DNA) at 37°C for 2 hours.

The Draf digest of the amplified fragment identifies two within the following fragment pattern: A1 (T/T) = 215 bp and A2 (T/A) = 124 bp + 89 bp. In one pedigree (Fig 1) with familial retinoblastoma, the affected father (I-1; age 42 years) is heterozygous for this polymorphism and his affected daughter (II-2; age 21 years) inherited the T allele, whereas the unaffected son (II-3; age 19 years) inherited the A allele. His affected grandson (III-1; age 18 months) also inherited the T allele (results were verified by direct sequencing). In this family the T allele from the affected parent is in phase with the disease predisposition mutation, and segregation of the marker is shown in II-2 and II-3. The allele frequency based on analysis of 26 unrelated individuals (52 chromosomes) is T allele: 0-79 and A allele: 0-21. Eleven of the 26 individuals (42%) were heterozygous for the T—A DNA polymorphism.

Data on the cleavage site and primer sequences reported here, are the only requirements for rapid inexpensive analysis for this polymorphic marker on a large scale, with the potential for DNA diagnostics for families minimally informative for other known markers within the retinoblastoma gene.

NILOFER NINA AHMAD
PAUL DIXON
JERRY A SHIELDS
HARMINDER S DUA
LARRY A DONOSO
Wills Eye Hospital, 900 Walnut Street
Philadelphia, PA 19107, USA

NOTICES

Optics '94

Optics '94, an international exhibition on eye wear, technology, and equipment for optometry and ophthalmology will be held on 18–20 February 1994 at the World Trade Center, Singapore. A conference on better eye care will be held in conjunction with the exhibition.

Further details: Lines Exposition & Management Services Pte Ltd, 318-B King George's Avenue, Singapore 0820. (Tel: (65) 2998611; Fax: (65) 2998663.)

International Society of Ocular Trauma

The 3rd International Symposium on Ocular Trauma will be held in Cancun, Mexico in March 1994. Further details: Secretariat, PO Box 50006, Tel Aviv, 61500, Israel. (Tel: (972 3) 5174571; Fax: (972 3) 5175674.)

Third Annual Scientific Meeting of the Australian Squint Club

The Third Annual Scientific Meeting of the Australian Squint Club will be held in Melbourne, Australia on 4–6 March 1994. Further details: Dr W E Gillies, 82 Collins Street, Melbourne 3000, Australia (tel: 61 3 654 3860; fax: 61 3 650 4406).

---


Reply

Editor,—In response to the letter from Michael Ward, warden of the Order of St John in Jerusalem, I agree with the contents of his letter except for one point. He states 'in my case there were considerable problems in finding such a post as all the non-governmental organisations working in these areas appeared to be Christian organisations that required their doctors to be committed Christians and actively to evangelise on behalf of the church...' In actual practice there are more than 15 international non-governmental organisations involved in prevention of blindness activities in developing countries of which to my knowledge only one is a Christian organisation. This is Christoffel-Blindenmission (Christian Blind Mission International). As a Christian organisation it recruits ophthalmologists who confine themselves to having a Christian faith, but it does not ask ophthalmologists to evangelise actively, rather to use their skills as eye specialists to help people in countries where eye services and manpower are very limited.


Identification and rapid screening of a Draf RFLP by PCR in the retinoblastoma gene

Editor,—The use of DNA polymorphisms for clinical diagnosis of retinoblastoma is limited by the lack of heterozygosity among parents for the polymorphism being evaluated. Hence, it is important to maximise the density of informative markers with rapid screening in order to be able to use the information.

Our analysis of the T to A polymorphism located 10 base pairs (bp) from the 5' end of exon 26 of the retinoblastoma susceptibility (RB1) gene, using the polymerase chain reaction (PCR) followed by restriction digestion, revealed the creation of a new cleavage site for Draf (T TT AAA) restriction endonuclease. This DNA polymorphism was previously detected by direct sequencing but no restriction site alteration was reported.1 The PCR primers used were 5'-CAGTCAAGAGTTCTCTTGGT-3' (forward primer) and 5'-CAGTCAAGAGTCTCTTGG-3' (reverse primer). The PCR amplification was carried out in a 10 pmol reaction volume with Taq polymerase and 20 pmol of each primer, amplified for 35 cycles with denaturation, 94°C, 1 minute; annealing, 50°C, 1 minute; extension, 72°C, 1 minute 20 seconds, followed by a 4 minute incubation at 72°C. The PCR product was precipitated with 1-4 volumes of 20% polyethylene glycol (PEG) in 2.5 M NaCl. The final pellet was resuspended in 10 μl of distilled water. DNA was digested by Draf enzyme (10 units of enzyme in a 10 μl reaction volume containing 2 μl of the PEG precipitated DNA) at 37°C for 2 hours.

The Draf digest of the amplified fragment identifies two within the following fragment pattern: A1 (T/T) = 215 bp and A2 (T/A) = 124 bp + 89 bp. In one pedigree (Fig 1) with familial retinoblastoma, the affected father (I-1; age 42 years) is heterozygous for this polymorphism and his affected daughter (II-2; age 21 years) inherited the T allele, whereas the unaffected son (II-3; age 19 years) inherited the A allele. His affected grandson (III-1; age 18 months) also inherited the T allele (results were verified by direct sequencing). In this family the T allele from the affected parent is in phase with the disease predisposition mutation, and segregation of the marker is shown in II-2 and II-3. The allele frequency based on analysis of 26 unrelated individuals (52 chromosomes) is T allele: 0-79 and A allele: 0-21. Eleven of the 26 individuals (42%) were heterozygous for the T—A DNA polymorphism.

Data on the cleavage site and primer sequences reported here, are the only requirements for rapid inexpensive analysis for this polymorphic marker on a large scale, with the potential for DNA diagnostics for families minimally informative for other known markers within the retinoblastoma gene.

NILOFER NINA AHMAD
PAUL DIXON
JERRY A SHIELDS
HARMINDER S DUA
LARRY A DONOSO
Wills Eye Hospital, 900 Walnut Street
Philadelphia, PA 19107, USA

NOTICES

Optics '94

Optics '94, an international exhibition on eye wear, technology, and equipment for optometry and ophthalmology will be held on 18–20 February 1994 at the World Trade Center, Singapore. A conference on better eye care will be held in conjunction with the exhibition.

Further details: Lines Exposition & Management Services Pte Ltd, 318-B King George's Avenue, Singapore 0820. (Tel: (65) 2998611; Fax: (65) 2998663.)

International Society of Ocular Trauma

The 3rd International Symposium on Ocular Trauma will be held in Cancun, Mexico in March 1994. Further details: Secretariat, PO Box 50006, Tel Aviv, 61500, Israel. (Tel: (972 3) 5174571; Fax: (972 3) 5175674.)

Third Annual Scientific Meeting of the Australian Squint Club

The Third Annual Scientific Meeting of the Australian Squint Club will be held in Melbourne, Australia on 4–6 March 1994. Further details: Dr W E Gillies, 82 Collins Street, Melbourne 3000, Australia (tel: 61 3 654 3860; fax: 61 3 650 4406).
Identification and rapid screening of a DraI RFLP by PCR in the retinoblastoma gene

Nilofer Nina Ahmad, Paul Dixon, Jerry A Shields, Harminder S Dua and Larry A Donoso

Br J Ophthalmol 1994 78: 159
doi: 10.1136/bjo.78.2.159-a

Updated information and services can be found at:
http://bjo.bmj.com/content/78/2/159.2.citation

These include:

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/