The Department of Ophthalmology is an academic and clinical department, whose mission is to provide teaching, research and patient care at the highest and most competitive international level. The Department’s policy is to provide access to excellent quality of patient care through helping acquire and enhance the competency of professionals and support staff, and procuring the latest technology, equipment and facilities. In contrast to non-academic facilities, we understand our role as a referral center for the most complicated problems of Oman and the region, which can be managed only here. The Department is involved in training and educating medical students, who undergo block-wise individual bed-side teaching by the medical staff and each semester take part in an interdisciplinary case presentation. Continuing medical education programmes (internal and external), with invited academic authorities from all over the world, are carried out regularly for ophthalmologists, optometrists, nurses and ophthalmic technicians in Oman. Academic and clinical research is encouraged and actively pursued by all staff in the Department. Keeping in mind national and international issues of preventable and curable blindness, glaucoma and diabetes clinical research programmes have been established together with the Department of Family Medicine and Community Health and the Ministry of Health.

Staff

Head of Department
Nadya Al-Kharusi, Consultant

Faculty
Sana Al-Zuhaibi, Consultant
Abdullah Al-Mujaini, Consultant
Anuradha Ganesh, Consultant
Carolina Montana, Senior Registrar
Upender Wali, Registrar
Nawal Al-Fadhil, Registrar
Archana Thakral, Registrar
Buthaina Al-Sabt, Registrar
Aisha Al-Busaidi, Senior House Officer
Rana Senawi, Senior House Officer
Support Staff
Habiba Al-Belushi, *Chief Technician*
Salim Al-Abri, *Senior Technician*
Raya Al-Mughery, *Senior Technician*
Sadika Al-Ajmi, *Senior Technician*
Harith Al-Hasani, *Technician*
Hanan Al-Harthy, *Technician*
Eman Al-Harthy, *Technician*
Iman Al-Hashmi, *Technician*

Coordinators
Saif Al-Hasani
Fatma Al-Hosni
Cesaria Olivares
Melinda Manegdeg

Highlights of the Years 2005-2007
In the year 2007, the Ophthalmology Department underwent major changes in the form of establishing an internationally competitive department with excellent subspecialised services to provide quality patient care as a tertiary centre.

For any successful residency programme the availability of such subspecialty service is mandatory in order to provide the residents with a wide scope of knowledge in different disciplines of ophthalmology. The following were offered:

- Cornea and external diseases and uveitis, medical retina and general ophthalmology
- Ocuplastics and general ophthalmology
- Pediatric ophthalmology, ophthalgenetics
- Medical Retina

The hospital administration with the purchase department and biomedical engineering provided the Department with the latest equipments and instruments needed to establish these subspecialty services. The support also included providing new staff to help establish the Vitreoretinal Unit, expected to be operational in March 2008.
The 3rd International Conference with Workshop for Ophthalmic Nurses and Technicians was held at the SQU Main Conference Hall on 14 to 15 February 2006. Following the above conference was the 17th CME Program of the paediatric Ophthalmology Update which was held on 16th February 2006. The two significant occasions had 20 international distinguished invited speakers and 22 local speakers.

On demand from the Oman Medical Specialty Board, the Department submitted the first residency programme manual in October 2007 for the revision and approval by the OMSB.

The Department conducted the International Council of Ophthalmology (ICO) Basic Sciences, Optics and Refractions, and Clinical Sciences assessments.

Dr. B.S. Chidamber, Head of Clinics from Welcare Hospital, Dubai visited the Department from 16-18 August 2007 and also operated on vitreoretinal patients.

Mr. Wael Alaa El Din Kamel Ali, Saudi Arabia Services and HealthCare Co. Ltd, visited the Department in December 2007 to demonstrate the use of new laser equipment “Pascal”.

**Teaching Programme**

**UNDERGRADUATES**

4th year
The Department participates in the Clinical Methods Course (skills laboratory) for preclinical students for 3 days. This involves all the Department doctors and covers extra-ocular muscle evaluation and ophthalmoscopy.

5th year
The Department is involved in the Integrated Lecture Series (ILS) conducting a one hour lecture on the Diabetic Eye.

6th Year (Approx. 130 students (12-15 students per group))
The Department conducted a 4 week course in Ophthalmology for the 6th year medical students wherein they spent 2 weeks in the University Hospital and 2 weeks at the Ministry of Health’s Al-Nadha and/or Bausher hospitals. During the 2 weeks period in SQUH, they were provided with a broad exposure to various procedures, instruments and to common ophthalmic diseases. They attended a two hour lectures on basic ophthalmology every morning for the first 2 weeks. The students are exposed to the following 9 lectures to cover the important topics in Ophthalmology:
- Introductory lecture - Anatomy and Physiology
- Red Eye
- Acute Visual Loss, Primary Narrow Angle Glaucoma (PNAG)
- Chronic Visual Loss, Primary Open Angle Glaucoma (POAG)
- Ocular Trauma
- Uveitis and Neuroophthalmology
- Systemic Diseases of the Eye
- Amblyopia and Strabismus
- Optics & Refraction and Pediatric Ophthalmology

A logbook of the patients seen is also maintained and they were provided with a model case write-up to enable them to submit an appropriate case report for evaluation. After their 2 weeks rotation in MoH hospitals, they took an end of posting examination.

**POSTGRADUATES (RESIDENTS)**

In October 2007, the department submitted the first residency programme manual for review and approval by the Oman Medical Specialty Board.

FAMCO and Accident and Emergency Residents: Residents from these departments were given periodic rotations with duration of 2 months. They had a short term training courses to deal with basic eye diseases, emergencies, and their management. They, too, attended the morning lectures on Basic Ophthalmology.

**ELECTIVE**

The Department accommodated 1 elective student from Ain Shams University for the period 18 August - 5 September 2007.

**TRAINING & CONTINUING MEDICAL EDUCATION ACTIVITIES**

National CMEs conducted by the Department were as follows:

**2nd Middle East Metabolic meeting, Muscat, 15 December 2005**

*Invited speakers*

1. Prof. Hansjosef Bohles, *Chairman, Paediatrics, Johann Wolfgang Goethe Universität, Frankfurt, Germany.*
2. Dr. Tony Zherdy, *Consultant, Orphan Europe.*
3. Prof. Howard Parsons, Professor Emeritus, Department of Paediatrics, University of Calgary, Canada.

Delegates came from the Kingdom of Saudi Arabia, United Arab Emirates, Bahrain, Qatar, Lebanon, Egypt, Syria, France and Iran.

**New Surgical Options for Keratoconus and Corneal Ecstasia, 5th April 2007**

*Keynote Speaker*
Professor Joseph Collins, Bordeaux, France

**European Endophthalmitis Study and Guidelines, 7th December 2006**

*Keynote Speaker*
Professor David Seal, London, U.K.

**Educational and Training Programs at the Royal Eye and Ear Infirmary of the University of Melbourne, 15th April 2006**

*Keynote Speaker*
Professor Hugh Taylor, Melbourne Australia

**Bechet’s Disease, Uveitis, 8th December 2005**

*Keynote Speaker*
Dr. Joachim Kalden, Erlangen, Germany; Dr. Anselm Kampik, Munich, Germany
Dr. Manfred Zeirhut, Tubingen, Germany
Dr. Franz Grehn, Wurzburg, Germany
Dr. Nooyi Chandrashekar, Al-Nahda Hospital, Oman

**Intraocular Refractive Surgery, 24th February 2005**

*Keynote Speaker*
Dr. Michael Wagoner, Riyadh, KSA
Clinical & Diagnostic Services

OUTPATIENT DEPARTMENT (OPD)

January to December 2007

<table>
<thead>
<tr>
<th>Out-patient</th>
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<tbody>
<tr>
<td>No. of patients booked</td>
<td>9,940</td>
</tr>
<tr>
<td>No. of patients seen</td>
<td>9,945</td>
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<tr>
<td>No. of patients admitted</td>
<td>530</td>
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</table>

<table>
<thead>
<tr>
<th>Inpatient</th>
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<tbody>
<tr>
<td>Paediatric</td>
<td>49</td>
</tr>
<tr>
<td>Adults</td>
<td>481</td>
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<tr>
<td>Total</td>
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<table>
<thead>
<tr>
<th>Laser Procedures</th>
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<tbody>
<tr>
<td>Argon</td>
<td>50</td>
</tr>
<tr>
<td>Yag</td>
<td>100</td>
</tr>
<tr>
<td>PDT</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
</tr>
</tbody>
</table>

Technical Procedures 2007

- Refraction: 465
- Ultrasound: 200
- Pachymetry: 315
- Visual Field: 468
- OCT: 183
- Coiission: 40
- Orbscan: 50
- Photo FA: 402
**MAIN THEATER**

*Number of surgeries in 2007*

<table>
<thead>
<tr>
<th>Laser Procedures</th>
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<tbody>
<tr>
<td>Lens</td>
<td>151</td>
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<tr>
<td>EUA</td>
<td>110</td>
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<tr>
<td>Retina</td>
<td>43</td>
</tr>
<tr>
<td>Lacrimal Systems</td>
<td>10</td>
</tr>
<tr>
<td>Strab</td>
<td>19</td>
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<tr>
<td>Lid</td>
<td>11</td>
</tr>
<tr>
<td>Conjunctiva</td>
<td>15</td>
</tr>
<tr>
<td>Cornea</td>
<td>28</td>
</tr>
<tr>
<td>Globe</td>
<td>9</td>
</tr>
<tr>
<td>Glaucoma</td>
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</tbody>
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**Research Overview**

In 2006/2007, the Department had one internally funded and 2 other research projects. They had a total value of 6,000 OR. It also participated in 2 other research projects led by other departments. The Department also published 21 journal articles and one book chapter. It made 7 international and 10 local conference presentations and presented 7 international and 12 local conference posters.

**Research Projects**

**INTERNALLY FUNDED RESEARCH PROJECTS**

*Pseudoexfoliation (PEX) Glaucoma Blindness in Oman*

- **Project Code:** IG/MED/OPTH/07/01
- **Dates:** 2007 – to date
- **Value:** OR 5,000
- **Investigators:** *Dr. Alexander Bialasiewicz, Department of Ophthalmology, SQU; Dr. Upender Wali, Department of Ophthalmology, SQU; Dr. Riad Bayoumi, Department of Biochemistry,*
Summary: The main objective of this project is to identify, assess and validate genes that contribute to PEX/PEX glaucoma in the Omani population.

OTHER RESEARCH PROJECTS

 Orbital involvement in Sickle Cell Disease: A clinicogenetic study

<table>
<thead>
<tr>
<th>Project Code:</th>
<th>MREC/242</th>
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<tbody>
<tr>
<td>Dates:</td>
<td>2006 – to date</td>
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<tr>
<td>Value:</td>
<td>RO 1,000</td>
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<tr>
<td>Investigators:</td>
<td>Dr. Anuradha Ganesh, Department of Ophthalmology, SQU; Dr. Sana Al-Zuhaibi, Department of Ophthalmology, SQU; Dr. Abdullah Al-Mujaini, Department of Ophthalmology, SQU; Dr. Yasser Wali, Department of Child Health, SQU; Dr. Salam Al-Kindi, Department of Haematology, SQU</td>
</tr>
</tbody>
</table>

Summary: The aim of the project is to study Omani patients with sickle cell disease (SCD) with orbital involvement and to determine if any particular ethnic distribution, genetic or common clinical general and ocular and haematological features set them apart as an identifiable group.

 Central corneal thickness – Glaucoma Study

<table>
<thead>
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<tbody>
<tr>
<td>Dates:</td>
<td>2007 to date</td>
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<tr>
<td>Value:</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Investigators:</td>
<td>Dr. Sana Al-Zuhaibi, Department of Ophthalmology, SQU</td>
</tr>
</tbody>
</table>

Summary: To study the possible impact of central corneal thickness on intraocular pressure (IOP) in children who have undergone surgery for congenital cataracts.

PARTICIPATION IN PROJECTS LED BY OTHER DEPARTMENTS (SEE LEAD DEPARTMENT FOR FULL DETAILS)

 Delaying the Onset of Type 2 Diabetes mellitus in Oman – The AMAL study (Family Medicine & Public Health)
Co-investigator:  Dr. Radha Shenoy

*Family and Genetic Understanding of Autosomal Recessive Disorders: A Clinical Genetic, Cytogenetic, Molecular and Linkage Study in Oman (Genetics)*

Co-investigator:  Dr. Anuradha Ganesh

**Research Publications and Books**

**JOURNAL PUBLICATIONS**


**BOOKS & BOOK CHAPTERS**


**Conference and Seminar Presentations**

**CONFERENCE PRESENTATIONS**

**International**


4. Al-Kharusi N. Ocular Trauma Evaluation. Annual Meeting of Canadian Ophthalmological Society, Montreal,

**Local**
1. **Ganesh A.** ROP screening in Oman. 3rd International Conference on Ophthalmic Nurses & Technicians, Sultan Qaboos University, Muscat, Oman, 14-15 February, 2006.
2. **Al-Kharusi N.** Functional vision loss – techniques & examination methods. 3rd International Conference on Ophthalmic Nurses & Technicians, Sultan Qaboos University, Muscat, Oman, 14-15 February, 2006.
3. **Al-Zuhaibi S.** Evaluation of ocular motility and alignment. 3rd International Conference in Ophthalmic Nurses & Technicians, Sultan Qaboos University, Muscat, Oman, 14-15 February, 2006.
8. **Al-Zuhaibi S.** Leukocyte adhesion deficiency type1 associated with neonatal necrotizing P. aeruginosa infection of the adnexae. National CME on European Endophthalmitis Study and Guidelines, Sultan Qaboos University, Muscat, Oman, 7 December 2006.

**CONFERENCE POSTERS**

**International**
2. **Al-Zuhaibi S, Ganesh A, Koul RI, Sankhla DK, Al-Waili A.** PHACES syndrome in an Omani child. Annual Meet-


**Local**


9. **Ganesh A, Al-Zuhaibi S, Buthaina I, Sabt S, Bialasiewicz AA.** Visual rehabilitation by scleral-fixated poste-
terior chamber intraocular lenses in Omani children. University Day, Sultan Qaboos University, Muscat, Oman, 2 May 2006.

