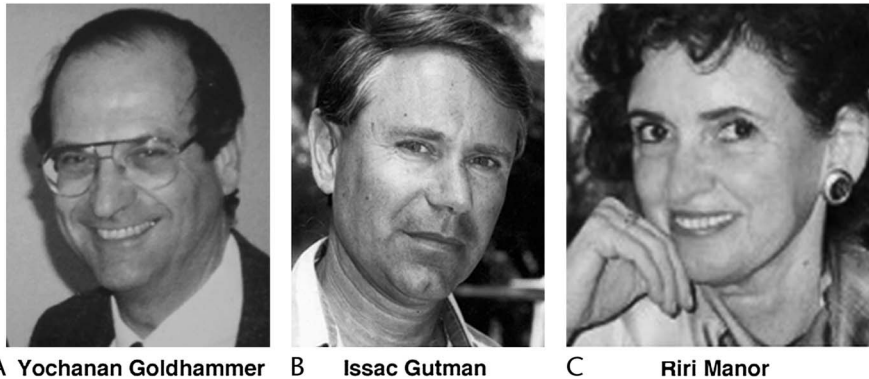


Neuro-Ophthalmology in Israel

Ruth Huna-Baron, MD, Eitan Zvi Rath, MD



A Yochanan Goldhammer B Issac Gutman C Riri Manor

FIG. 1. Pioneers of neuro-ophthalmology in Israel.

Neuro-ophthalmology was introduced in Israel during the late 1970s by Riri Manor, Yochanan Goldhammer, and Isaac Gutman (Fig. 1). They trained with from William Hoyt, Lawton Smith, and Myles Behrens, respectively. These pioneers trained many local ophthalmologists, neurologists, and neuro-ophthalmologists in Israel, and their efforts resulted in 21 neuro-ophthalmologists currently serving a population of 8 million. Many Israeli neuro-ophthalmologists did fellowships in the United States with a variety of other mentors, including Ronald Burde, Joel Glaser and Norman Schatz, Mark Kupersmith, Byron Lam, Neil Miller, Barry Scarf, and Jonathan Trobe.

In Israel, each citizen is entitled to health care services under the National Health Insurance Law. To meet the

challenge of the rapid development of new and expensive diagnostic and therapeutic modalities, a committee of the Ministry of Health each year announces new technologies and therapies to be included in basic health coverage. There are 18 magnetic resonance imaging devices in Israel and 5 interventional neurovascular units, and most medical centers in the country have a neuro-ophthalmology service (Table 1). Much like in the United States, referrals come from neurologists, ophthalmologists, neurosurgeons interventional neuroradiologists, and endocrinologists.

In 1997, the Israeli Neuro-Ophthalmology Society was founded by Riri Manor as a subspecialty section of the Israeli Ophthalmology Society. Two annual meetings are organized by the society, of which one hosts a leading

TABLE 1. Neuro-ophthalmic community of Israel

Medical Center	Location	Section Chief
Assaf Harofeh Medical Center	Zerifin	Zina Almer
Barzilai	Ashkelon	Eyal Aloni
Carmel Medical Center	Haifa	Josepha Horowitz
Edith Wolfson Medical Center	Holon	Michael Paul
Hadassah University Hospital	Jerusalem	Shlomo Dotan
Haemek Medical Center	Afula	Haneen Jabaly-Habib
Kaplan Medical Center	Rehovot	Hana Leiba
Meir Hospital	Kfar Saba	Yehoshua Almog
Nahariya Medical Center	Nahariya	Eitan Rath
Rabin Medical Center	Petach Tikva	Hadas Kalish
Rambam Medical Center	Haifa	Irena Krasnitz
Schneider Children's Medical Center	Petach Tikva	Goldenberg Cohen, Nitza
Sheba Medical center	Ramat Gan	Ruth Huna-Baron
Soroka Medical Center	Beersheba	Mira Marcus
Tel Aviv Sourasky Medical Center	Tel Aviv	Anat Kesler

TABLE 2. Neuro-ophthalmic research in Israel

- 1 Idiopathic intracranial hypertension: pediatric, thrombophilic factors
- 2 NAION: C-reactive protein, experimental model
- 3 Thyroid eye disease: dysthyroid optic neuropathy
- 4 OCT in: Parkinson disease, minor cognitive impairment, Alzheimer disease, NAION
- 5 Stem cells: glial and neuronal markers
- 6 Meningioma—surgical and radiation outcomes
- 7 Functional MRI: optic neuritis
- 8 Multiple sclerosis: gene expression

MRI, magnetic resonance imaging; NAION, nonarteritic anterior ischemic optic neuropathy; OCT, optical coherence tomography.

international neuro-ophthalmologist. Invitees have included William Hoyt, Joel Glaser, Mark Kupersmith, Robert Yee, Jonathan Trobe, Klara Landau, Nancy Newman, Valerie Biousse, Steven Newman, John Leigh, Neil Miller, Mark Borchert, Lanning Kline and Andy Lee.

Every other year, the Israeli Ophthalmological Society meeting features neuro-ophthalmology. Also, among the 4 sessions of the Israeli Ophthalmology Board examinations, 1 is dedicated to neuro-ophthalmology and oculoplastics surgery.

Israeli neuro-ophthalmologists are involved in basic and clinical research (Table 2). There also are multicenter studies under way, such as the phase 1 trial of intravitreal injection of QPI-1007 in NAION. Nitza Cohen-Goldenberg received a North American Neuro-Ophthalmology Society (NANOS) Pilot Research Grant in 2008.

Members of the Israeli neuro-ophthalmology community are active in international societies, including NANOS and European Neuro-Ophthalmological Society (EUNOS). In 1999, the EUNOS meeting was held in Jerusalem. Neuro-ophthalmic publications from Israel appear in leading ophthalmology and neurology journals. Two fellows from Israel currently are training in neuro-ophthalmology, and the future here appears bright for our subspecialty.

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ADDENDUM

The February, 2013 issue of Harefuah – The Journal of the Israel Medical Association - was devoted to neuro-ophthalmology. Anat Kesler served as guest editor & a wide range of topics were covered including neuromyelitis optica, ischemic optic neuropathies and an update on idiopathic intracranial hypertension. This particular issue of the journal was entitled: “Neuro-Ophthalmology: the eye as a window to the brain.”

