

*May, 2005*

## CURRICULUM VITAE

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**Place of Birth:** Jakarta, Indonesia

**Citizenship:** USA

**Education:** 1974-1977 Faculty of Medicine,  
Medical Academy, Sofia, Bulgaria  
1977-1980 M.D. Faculty of Medicine,  
University of Toronto, Canada

### *Postdoctoral training:*

#### **Internship and Residency:**

1980-1981 Rotating Internship, St. Joseph's Health Centre, Toronto, Canada  
1981-1986 Resident, Neurosurgery, University of Ottawa, Ottawa, Canada  
1985-1986 Chief Resident, Neurosurgery, Ottawa Civic Hospital, Ottawa, Canada

#### **Clinical Fellowship:**

1987-1988 Fellow, Pediatric Neurosurgery, The Hospital for Sick Children,  
University of Toronto, Toronto, Canada

#### **Research Fellowship:**

1988-1990 Dana Fellow, Neuroscience, David Mahoney Institute of Neuroscience,  
University of Pennsylvania, Philadelphia, PA

***Licensure and Certification:***

1980	Licensing Exam of the Medical Council of Canada (Licentiate)
1981	June 26, 1981, License No: 51204
1986	General Practice License, Ontario, Canada
1986	Royal College of Physicians and Surgeons of Canada (Neurosurgery)
1990	Massachusetts License Registration #72399
1992	American Board of Neurological Surgery (Diplomate)
1997	American Board of Pediatric Neurological Surgery (Diplomate)

***Academic appointments:***

1987-1988	Clinical Fellow in Pediatric Neurosurgery, University of Toronto, Toronto, Canada
1988-1990	Dana Fellow in Neuroscience, University of Pennsylvania, Philadelphia, PA
1990-1995	Instructor in Surgery, Harvard Medical School, Boston, MA
1995-	Assistant Professor of Surgery, Harvard Medical School, Boston, MA

***Hospital appointments:***

1986-1987	Associate staff surgeon, Ottawa Civic Hospital, Ottawa, Canada
1987-1988	Associate staff neurosurgeon, The Hospital for Sick Children, Toronto, Canada
1990-	Associate in neurosurgery, Children's Hospital, Boston, MA
1990-	Associate in neurosurgery, Brigham and Women's Hospital, Boston, MA
1990-	Consulting neurosurgeon, Dana Farber Cancer Institute, Boston, MA
1999-	Director, Clinical Pediatric Neurosurgical Oncology, Children's Hospital & Dana Farber Cancer Institute, Boston, MA

***Hospital and Health Care Organization Service Responsibilities:***

1990-	Responsible for the neurosurgical care of patients at Children's Hospital
1990-	Responsible for the neurosurgical care of patients at BWH
1990	Attending neurosurgeon, Multidisciplinary Spina Bifida Clinic, Children's Hospital
1990	Consulting neurosurgeon, Dana Farber Cancer Institute
1993-	Attending neurosurgeon, Stop and Shop Pediatric Brain Tumor Clinic, Children's Hospital and Dana Farber Cancer Institute
2002-	Attending neurosurgeon, Antenatal Fetal Care Center, Children's Hospital

***Major Administrative Responsibilities:***

1992-	Director, Quality Improvement, Department of Neurosurgery, Children's Hospital and Brigham and Women's Hospital
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1999- Director, Clinical Pediatric Neurosurgical Oncology, Children's Hospital & Dana Farber Cancer Institute, Boston, MA.

***Major Committee Assignments:***

**National:**

1996 Adjudication committee, Shunt Design Trial, Pediatric Hydrocephalus Treatment Evaluation Group (Multicenter International Trial)  
1999-present Biology Committee, Pediatric Brain Tumor Consortium (NIH/NCI)  
1999-present Drug Delivery Committee, Pediatric Brain Tumor Consortium (NIH/NCI)

**Harvard Medical School:**

1993 Affirmative Action Representative, Department of Surgery, HMS Promotions, Reappointments and Appointments Committee

**Hospital:**

1991-1995 Multidisciplinary Intensive Care Unit Committee, Children's Hospital  
1991-1996 Managed Care Committee, Children's Hospital  
1994-1996 Secretary, Medical Staff Association, Children's Hospital  
1996-1998 President, Medical Staff Association, Children's Hospital  
2004- Tissue Committee, Children's Hospital

***Professional Memberships:***

1986 College of Physicians and Surgeons of Ontario, Canada  
1987 Canadian Neurosurgical Society  
1987 Royal College of Physicians and Surgeons of Canada  
1990 Massachusetts Medical Society  
1990 Boston Society of Neurology and Psychiatry  
1991 Congress of Neurological Surgeons (CNS)  
2000 **Chairman**, Special Courses, Scientific Program, Annual Meeting of the Congress of Neurological Surgeons (one of two major national organizations)  
  
1991 Joint Section for Tumors, CNS/AANS  
1991-1995 Society for Neuroscience  
1991 New England Neurosurgical Society  
1991 American Association of Neurological Surgeons (AANS)  
1992 Mini Task Force on Changing Technology, American Association of Neurological Surgeons  
1993 CME Liaison, Section of Pediatric Neurological Surgery

1992	American Board of Neurological Surgeons (ABNS)
1992	Pediatric Neurological Surgery Section, AANS
1992	American Association for the Advancement of Science
1994	American College of Surgeons
1995-2000	New York Academy of Sciences
1995	International Stereotactic Radiosurgery Society
1995-2000	Pediatric Oncology Group
1997	American Society for Pediatric Neurosurgery (ASPN)
	1998 - present Bylaws Committee
	2000-2002 Nominating Committee
1997	Society for Neuro-Oncology
2000	Children's Oncology Group
2003	Society of University Neurosurgeons

***Editorial Boards:***

1996-	Ad hoc reviewer, Neurosurgery
1996-	Ad hoc reviewer, Cancer
1997-	Ad hoc reviewer, Pediatric Neurosurgery
1998-	Ad hoc reviewer, Surgical Neurology
2001-	Ad hoc reviewer, Journal of Neurosurgery

***Awards and Honors:***

1975	Award for High Academic Standing, Medical Academy, Sofia, Bulgaria
1976	Award for High Academic Standing, Medical Academy, Sofia, Bulgaria
1982	Most Outstanding Presentation, Clinical Review Day, Children's Hospital of Eastern Ontario, University of Ottawa, Ottawa, Canada
1984	Best Poster Presentation, Resident Review Day, University of Ottawa, Ottawa, Canada
1996	Young Investigator award, Joint section on Tumors, AANS
1998	Who's Who of American Women
1999	Who's Who in the World
2003	Who's Who in Medicine and Health Care
2003-2004	Best Doctors in America

***Research, Teaching and Clinical Contributions***

***A. Narrative report of Research, Teaching and Clinical Contributions***

***Research:*** My area of research has been in the role of neurotrophins in cerebellar development and in tumorigenesis. As such, I have collaborated over the years with Dr. Scott Pomeroy and Dr. Segal and we have had a number of publications that have demonstrated the role of a particular neurotrophin (trkC) in medulloblastoma and its role as a potential marker of disease behavior. This work continues and we are investigating the role of other neurotrophins in medulloblastoma and the role of angiogenesis in that tumor, as well. This is work that I have started in collaboration with Dr. Giannoula Klement and hope to continue over the years.

***Clinical:*** I am also interested in the management of pediatric brain tumors and am one of the Co-Directors of the Pediatric Brain Tumor Program at Children's Hospital/Dana Farber Cancer Institute. As such, I am involved in the clinical management of these patients and also in the organizational issues related to the program and its development since its inception in the early 1990's. Our program is considered a leader in the USA and is viewed as the model according to which other programs are being developed. I see most of the neurosurgical consults and we serve as a referral basis for complex patients and second opinions from local, national and international sources.

My second area of interest is in neuroendoscopy and its application for the management of neurosurgical disorders. I have established a vigorous referral practice for this condition for all of Massachusetts and most of New England and my intent is to establish a center for Neuroendoscopy at CH.

I also have a busy clinical practice dealing with other aspects of pediatric neurosurgery, including the management of children with myelodysplasia and am one of the co-attending for the Myelodysplasia Clinic at CH. This is the largest such clinic in New England and we see complex patients referred for care and second opinions from other institutions.

I also provide neurosurgical consultations for the AFCC at CH.

My patient load is between 220 and 250 operative cases per year and I perform over 50% of all brain tumor operations on the neurosurgical service at CH. I see approximately 20-30 patients per week in my office and various clinics (CH and DFCI).

The complexity of the patients ranges from mild to a large number of highly complex brain tumors, congenital malformations and consultations for neuroendoscopy.

In recognition of my clinical expertise, I have been nominated to Best Doctors in America by my peers.

## ***B. Research Funding Information:***

### **Past:**

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|-----------|---|
| 7/94-6/95 | Fibrinolysis and the Prevention of Posthemorrhagic Hydrocephalus Hansen A, Volpe J, Goumnerova LC, Madsen JRM. The William Randolph Hearst Grant, collaborator  |
| 1997-2000 | Metabolic and hemodynamic MR Characterization of Pediatric Brain Tumors. Tzika AA, Barnes PD, Mulkern RV, Tarbell NJ, Billett AL, Goumnerova LC, Scott RM, Black PMcL, Vajapeyam S, Anthony DC, Zurakowski D. American Cancer Society, collaborator |

**Current:**

1999- Pediatric Brain Tumor Consortium NIH grant #5UO1CA81452-02  
5% salary support, co-investigator

***D. Report of Teaching***

***1. Local contributions***

***a. 1994-1997 Introduction to Clinical Medicine, HMS, preceptor***

teaching of second year medical students in groups of six  
3 hours weekly over a period of two months  
additional review of histories and write-ups by the students (30 minutes per student)

***b. 1990-present Children's Hospital/Brigham and Women's Hospital, HMS, Boston, MA***

As an attending neurosurgeon in the Department of Neurosurgery at The Children's Hospital and Brigham and Women's Hospital I have extensive daily interactions with the residents, interns and medical students on the service. This includes teaching both on the wards and in the operating room (approximately 20 hours per week in the OR) and 4-6 hours per week in various clinics and out-patient settings. In addition to that, I will give one hour teaching presentations on an ad hoc basis (this occurs at our weekly teaching rounds seminar). As the person in our department responsible for Quality Improvement, I also teach the residents issues surrounding QI (weekly one hour conference). I also have served as mentor for visiting medical students from the USA, Canada, etc.

***1992,1997,1999,2000-2003***

***Tumors of the Central nervous system, Post-Graduate Course, HMS, invited lecturer***

The attendees of this course included practicing neurosurgeons, neurologists, radiation oncologists, medical oncologists, medical students, post-graduate students and researchers in the field of neuro-oncology, as well as residents in the above specialties. The number of attendees was approximately 75 per session and the course was offered on a yearly basis and ran over two days. My presentations would vary from 1-2 lectures per course (usually one hour each), as well as moderating the sessions dedicated to pediatric neuro-oncology. These presentations would require an average of 2-4 hours of preparation for each talk given.

**1991** *Trauma Course, Department of Surgery, Brigham and Women's Hospital, invited speaker*  
Management of Spinal injuries

The course was directed towards surgical residents and faculty at the Brigham and Women's Hospital and there were approximately 50 attendees. The course ran over a whole day and my presentation was one hour. The preparation time was approximately one day.

**c.** *1991, 1993-1996*  
*Neurology Grand Rounds, Department of Neurology, Brigham and Women's Hospital, invited speaker*

These rounds were directed towards members of the Departments of Neurology and Neurosurgery at Brigham and Women's Hospital and Children's Hospital and were attended by faculty and trainees in those departments. The rounds were one hour long and the amount of preparation varied from several hours to several days, depending on the topic. The attendees varied in number from 30 to 50 per session.

*1994-98, 2000, 2003*  
*Neurosurgery Grand Rounds, Department of Neurosurgery, Children's Hospital, invited speaker*

These rounds were directed towards members of the Department of Neurosurgery and Neurology at Children's Hospital and were attended by faculty and trainees in those departments. The rounds were one hour long and the amount of preparation varied from several hours to several days, depending on the topic. The attendees varied in number from 30 to 50 per session.

**1994** *Oncology Grand Rounds, Dana Farber Cancer Institute*  
*Management of spinal cord compression, invited speaker*

These rounds were directed towards the pediatric oncology fellows and residents, as well as interested faculty. One hour lecture with four hour preparation time. There were approximately 30 attendees.

**2001, 2003-4** *CCS Firm Rounds, Pediatrics, Children's Hospital, invited speaker*

Rounds directed towards pediatric residents on topics of Neurosurgical and pediatric interest. One hour rounds with approximately 30-40 attendees, both trainees and faculty. Preparation time approximately one hour per session.

**2001** *Anesthesia Grand rounds, Children's Hospital, invited speaker*

Neuro-endoscopy in the management of pediatric brain tumors.

Rounds for both faculty and trainees in anesthesia. One hour presentation with approximately one hour preparation time. Approximately 70 attendees.

**2001**                      ***Nursing Staff Rounds, Children's Hospital, invited speaker***  
Pediatric Neurosurgery in the MRT environment.

Rounds for the OR nursing staff, one hour.  
Preparation time approximately two hours.

***e. Advisory and Supervisory responsibilities in clinical setting***

- 1990-**                      Multidisciplinary Spina Bifida Clinic, Children's Hospital (60 hours/year)  
I supervise Neurosurgical residents in the clinic and do teaching for residents in other specialties, as well.
- 1993-**                      Multidisciplinary Pediatric Brain Tumor Clinic, Children's Hospital/Dana Farber Cancer Institute (120 hours/year)  
I supervise and teach neuro-oncology fellows and pediatric oncology fellows who are in the clinic during that time.

***f. 1998***                      ***Course Director, Endoscopy, Children's Hospital***

I organized a course on endoscopy discussing the theoretical and practical aspects of neuro-endoscopy. This was attended by both Neurosurgical trainees in the residency program at Children's Hospital and by local neurosurgeons from the community (Boston and Providence, RI). The course ran over one day and involved approximately one full day of preparation time, as well as one week of ancillary preparation in relation to the advertising, scheduling, etc. of the course itself.

***g. Pediatric Neurosurgical Fellows Trained and Subsequent Positions:***

- |           |   |
|-----------|---|
| 1991-1992 | Benjamin Warf, University of Kentucky, currently in Uganda                    |
| 1992-1993 | Mark Luciano, Cleveland Clinic  |
| 1993-1994 | P. David Adelson, University of Pittsburgh, Professor of Neurological Surgery |

1994-1995 General Hospital	Michael Medlock, Georgetown University, currently at Massachusetts
1995-1996	David Frim, University of Chicago, Associate Professor
1996-1997	Faith Barnett, Scripps Clinic
1997-1998	Mark Proctor, Boston Children's Hospital, Assistant Professor, HMS
1998-1999	Jeffrey Campbell, Rochester, NY
1999-2000	Jodi Smith, Indianapolis, Assistant Professor
2000-2001	Michael McCue, Minnesota
2001-2002	David Sacco, Dallas, TX
2002-2003	Ethan Benardete, SUNY, Brooklyn, NY
2003-2004	Edward Smith, Boston Children's Hospital, Instructor in Surgery, HMS

***g. Pediatric Neuro-Oncology Fellows Trained and Subsequent Positions:***

2001-2002	John Heath, Melbourne, Australia
2002-2003	Giannoula Klement, Boston Children's Hospital, Instructor, HMS
2003-2004	Stergios Zacharoulis, Children's Hospital of Los Angeles, CA, Assistant Professor

***g. Graduate/Undergraduate Students:***

2000	Christine Hong, Columbia University, NY (summer student)
2001	Bijal Mehta, Memorial University, Newfoundland, Canada (summer student)
2004	Hansilla Pandya, UK, (summer student)

***2. Regional, National and International Contributions***

<b><i>a. 1990</i></b>	The <i>neu</i> Oncogene. The 1990 E. Bruce Hendrick Professor of Pediatric Neurosurgery, University of Toronto and The Hospital for Sick Children. Invited speaker
<b><i>1991</i></b>	Oncogenesis and the role of oncogenes in central nervous system tumors. University of Ottawa, Canada. Invited speaker
<b><i>1991</i></b>	Management of the Chiari Malformation. Brown University, Providence, RI. Invited speaker
<b><i>1995</i></b>	Recent advances in pediatric brain tumor management. Grand Rounds, MetroWest Medical Center. Invited speaker
<b><i>1994-97, 99, 2000</i></b>	Breakfast seminars, Annual meeting of the CNS, invited speaker
<b><i>1996, 99-00</i></b>	Luncheon seminar, Annual meeting of the AANS, invited speaker
<b><i>1998</i></b>	Management of pediatric Head Injury. Issues in Pediatric Trauma '98 Conference, Bridgeport, CT. Invited speaker
<b><i>2001</i></b>	Symposium III, The Role of Tumor Biopsy Revisited. Annual meeting of the ASPN, invited speaker

- 2001** Brain Tumors in Children. Pediatric CME lecture, Caritas Good Samaritan Medical Center, Brockton, MA. Invited speaker
- 2002** Endoscopy in the management of pineal area tumors. Annual meeting of the ASPN, invited speaker
- 2001** Breakfast seminars, 12<sup>th</sup> World Congress of Neurosurgery meeting, 2 invited talks
- 2001** **Invited professor, Annual meeting of the Japanese Society for Pediatric Neurosurgery, Shizuoka, Japan**
1. The role of Radiation and Stereotactic Radiosurgery in management of craniopharyngiomas.
  2. Updated biology of medulloblastoma
  3. Endoscopic Neurosurgery for hydrocephalus and cystic lesions
- 2002** National Youth Leadership on Medicine, invited seminar speaker Babson College, Wellesley, MA
- b. 2000** **Chairman, Special Courses, Scientific Program**, Annual meeting of the CNS
- 2000** **Guest examiner, ABNS** (Board certification exam)

### ***E. Report of Clinical Activities***

My clinical practice consists of taking care of patients primarily at Children's Hospital, although I will consult and provide care on patients at the Brigham and Women's Hospital, as well. I also have an appointment as a consultant at the Dana Farber Cancer Institute and I attend one outpatient clinic weekly on a regular basis there, as well as provide ad hoc consultations for the Pediatric Brain Tumor Program. My office and practice are based at Children's Hospital.

My areas of major interest are neuro-endoscopy for the management of hydrocephalus and associated conditions and pediatric brain tumors. In addition to that, I also take care of patients with a variety of Neurosurgical conditions, including congenital abnormalities, patients with spina bifida/myelodysplasia and tethered spinal cord and hydrocephalus.

The complexity of the patients with brain tumors and for Neuroendoscopy is high, since a large number of them are referred specifically for the expertise that can be provided here. In addition to that, I have introduced neuroendoscopic techniques and procedures in the management of certain types of brain tumors and intracranial congenital conditions for which patients are referred here. As a result, Children's Hospital has become established as the referral center for most neuroendoscopic procedures in most of Massachusetts and New England.

As a result, I have been nominated to **Best Doctors in America, 2003-2004**, by my peers.

## **Bibliography:**

### **Original Articles**

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2. Walters BC, **Goumnerova L**, Hoffman HJ, Hendrick EB, Humphreys RP, Levinton C. A randomized controlled trial of perioperative rifampin/trimethoprim in cerebrospinal fluid shunt surgery. *Childs Nerv Syst* 8:253-257, 1992.
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5. Tarbell NJ, Barnes P, Scott RM, **Goumnerova L**, Pomeroy SL, Black PMcL, Sallan SE, Billett A, LaVally B, Helmus A, Kooy HM, Loeffler JS. Advances in radiation therapy for craniopharyngiomas. *Pediatr Neurosurg* 21(suppl 1):101-107, 1994.
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18. ***Goumnerova LC***, Frim DM. Treatment of hydrocephalus with third ventriculocisternostomy: Outcome and CSF flow patterns. *Pediatr Neurosurg* 27: 149-152, 1997.
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