

From the President

Dear Esteemed Colleagues,

SNO leadership has been quite active over the last six months since my previous interim report to you. As expected, a major focus has been preparations for the upcoming 2015 annual SNO meeting. This year's meeting co-chairs, Tracy Batchelor and Gelareh Zadeh, have been working tirelessly and have organized what is shaping up to be our best meeting ever.

The meeting includes two outstanding special minisymposia. On Friday, there will be a minisymposium focused on precision medicine and adaptive trial designs that will feature a keynote presentation by Don Berry. On Saturday, there will be an immunotherapy minisymposium that features James Allison and Carl June as keynote speakers. This year's meeting includes more sunrise sessions which have been extended to 90 minutes. We will also expand the e-posters introduced at last year's meeting and attendees at this year's meeting will have access to a much more robust meeting app. Finally, we will wrap-up the meeting with a "best of SNO" presentation which will be available online to meeting attendees and SNO members after the meeting.

Education Day for the 2015 annual meeting is entitled *Cancer Immunology and Immunotherapy*. The Education



David Reardon, MD

Recap of the 19th Annual Scientific Meeting and Education Day of the Society for Neuro-Oncology

By Nicholas Butowski, MD

The 19th Annual Scientific Meeting and Education Day of the Society for Neuro-Oncology was held on November 13-16, 2014 in Miami, Florida. The meeting enjoyed record attendance for a stand-alone SNO meeting with close to 2000 registrants from 41 different countries in attendance.

We congratulate scientific meeting chairs, Drs. Patrick Wen and Gelareh Zadeh, for composing a comprehensive program which highlighted cutting-edge laboratory and clinical research. The meeting provided a fervent environment for the exchange of ideas among clinical and laboratory scientists involved in the research, diagnosis, care and treatment of patients with central nervous system tumors. Special thanks are also extended to Education Day Chairs, Louis Burt Nabors, David Schiff, Eudocia Quant Lee and Quality of Life Chairs, Terri Armstrong and Alasdair Rooney.

The 2014 Education Day was entitled *Metastasis to the CNS: Biology and Consequences* which included concurrent Quality of Life Sessions focused on "Neurologic Rehabilitation, Pediatric Survivorship, and Caregiving".

The main Scientific Meeting built on the traditional SNO format

presenting top-scoring abstracts, plenary talks, mini-symposia and early morning meet-the-expert sessions. Notably, the 2014 meeting also incorporated several important new features, including the addition of a third concurrent session each day; an increase in the number of sunrise sessions; the introduction of e-posters viewable via kiosks located around the meeting space; more educational content during lunch breaks; and the introduction of discussed rapid reports allowing for an increased number of oral presentations.

The Scientific Meeting began on Friday with sunrise sessions followed by the start of the first general session. The Sunrise Sessions included topics on 1) Molecular Pathology for the Clinician; 2) 5-ALA Guided Surgery Update; 3) ASNO session: CNS Germ Cell Tumor; 4) Ependymoma; and 5) Menigiomas.



The meeting was held in the vibrant city of Miami

SNO 19th Annual Meeting Abstract Award Winners

Adult Clinical Research

Supported by the Sontag Foundation

Final analysis of the BELOB trial (A randomized phase II study on bevacizumab versus bevacizumab plus lomustine versus lomustine single agent in recurrent glioblastoma) and first radiology review results.

Martin van den Bent

Adult Clinical Research

R9802: Phase III study of radiation therapy (RT) with or without procarbazine, CCNU, and vincristine (PCV) in low-grade glioma: Results by histologic type.

Jan Buckner

Pediatric Clinical Research

Randomized trial of high-precision conformal radiation therapy compared to conventional radiotherapy in preservation of long-term neuro-cognitive outcomes in young patients with progressive or residual benign/low-grade brain tumors.

Rakesh Jalali

Adult Basic Research

Comprehensive and integrative genomic characterization of diffuse lower grade gliomas.

Roel Verhaak

Adult Basic Research

Distinct EGFR signaling in glioblastoma: Wild-type EGFR promotes invasion while EGFRvIII drives prototypical SFK c-SRC activation to foster angiogenesis.

Eskil Eskilsson

Pediatric Basic Research

Enhancer hijacking activates GFI1 family oncogenes in medulloblastoma.

Paul Northcott

Pediatric Basic Research

Notch-mediated suppression of multiciliate differentiation promotes choroid plexus tumor initiation from epithelial progenitor in response to Shh signals.

Haotian Zhao

Adult Translational Research

Genomic characterization of brain metastases reveals branched evolution and metastasis-specific mutations.

Priscilla Brastianos

Adult Translational Research

TERT promoter mutation, IDH mutation and 1p/19q codeletion define five glioma molecular groups with specific clinical characteristics and germline variant associations.

Jeanette Eckel-Passow

Pediatric Translational Research

Drastic genomic divergence of recurrent medulloblastoma invalidates targeted therapies discovered at diagnosis.

Felix Sahm

Adult Quality of Life Research

Health-related quality of life, cognitive functioning and survival in patients treated with stereotactic radiotherapy for brain metastases: a prospective study.

Esther Habets

Pediatric Quality of Life Research

Training the brain to repair itself: an exercise trial in pediatric brain tumor survivors.

Donald Mabbott

Adult Epidemiology Research

Inherited variants near TERC and TERT are associated with longer telomeres and increased glioma risk: genome-wide association results from the UCSF Adult Glioma Study and the ENGAGE Consortium Telomere Group.

Kyle Walsh

Young Investigator Clinical Research

Prognostic factors for SRS-treated patients with cerebral metastasis: implications on randomized control trial design and inter-institutional collaborative efforts.

Clark Chen

Young Investigator Clinical Research

Oligoastrocytoma does not exist: in-situ molecular genetics favors classification as either oligodendrogloma or astrocytoma.

Felix Sahm

Young Investigator Basic/Translational

Therapeutically engineered induced neural stem cells are tumor-homing and inhibit progression of glioblastoma.

Shawn Hingtgen

Young Investigator Basic/Translational

Proneural transcription factor Atoh1 drives leptomeningeal metastasis of the Sonic Hedgehog subgroup of medulloblastoma.

Haotian Zhao



Kenneth Aldape delivered the Abhijit Guha Award Lecture entitled *Neuropathologists: Who Needs Them?*



The Victor Levin Award Lecture was given by Michael Prados (R), entitled *Thoughts on the Meaning of Success or Significance (or both) in Translational Neuro-Oncology*. Shown here with Victor Levin (L).



SNO President David Reardon (L) presented the 2014 Lifetime Achievement Award to Darell Biger (R) for his contributions to the field of neuro-oncology.



The Keynote presentation was delivered by Craig Thompson, President and Chief Executive Officer, Memorial Sloan Kettering Cancer Center, on the *Role of IDH Mutations in Glioma Pathogenesis*.

Meeting Recap continued from page 1

After the sunrise sessions, the first plenary session started with an official meeting welcome by Drs. Zadeh and Wen followed by Top Scoring Abstracts. The plenary session also included the EANO Travel Award on the role of tumor infiltrating lymphocytes and PDL1 expression in glioblastoma and brain metastases given by Anna Sophie Berghoff. Next up was the Abhijit Guha Award Lecture delivered by Kenneth Aldape entitled *Neuropathologists: Who Needs Them?* This lecture was followed by the Victor Levin Award Lecture by Michael Prados entitled *Thoughts on the Meaning of Success or Significance (or both) in Translational Neuro-Oncology*. David Reardon then delivered his Presidential Address which featured the presentation of the 2014 SNO Lifetime Achievement Award to Darell Biger and 2014 Public Service Award to Denis Strangman. Lunch sessions were followed by afternoon concurrent sessions including Clinical Trials, Preclinical Models, and Pediatric Clinical and Tumor Biology. Friday evening, a special meeting reviewed emerging advances in immune-oncology in brain tumors followed by a poster viewing reception.

Saturday Sunrise Sessions featured the following topics: Targeted Therapies, Focused Ultrasound, Pediatric Gliomas, Epilepsy in Brain Tumor Patients and a special SNO/EANO Session entitled *Controversies in the Management of Lymphoma*. These sessions were followed by concurrent sessions on tumor biology, clinical trials, and a RANO Town Hall on clinical trial endpoints. A Young Investigators Luncheon provided trainees and early phase independent investigators grant writing tips and instruction. Then there was the not to be missed Keynote Speaker, Craig Thompson, President and Chief Executive Officer, Memorial Sloan Kettering Cancer Center, who discussed tumor metabolism. A poster session was organized after the oral sessions concluded for the day. That evening, the SNO Gala Dinner, held at the Perez Art Museum, was the social highlight of the meeting and allowed us to recognize the important service of those who make the meeting possible. As a special treat for Gala attendees, the Tübinger Saxophon-Ensemble performed with selections from their repertoire of classical saxophone music.

The Sunday Sunrise Sessions included 1) Vaccine Therapy, 2) The Cancer Genome Atlas, 3) Neuro-imaging, 4) Stem Cell Biology, 5) Animal Modeling. Concurrent meetings followed the sunrise sessions on several topics including bioinformatics and the WHO and Molecular Classification Forum ensued by the meeting's adjournment.

Society members are urged to make their plans now for SNO's 20th Annual Scientific Meeting and Education Day, which will be held in San Antonio, Texas, on November 19-22, 2015.

Day co-chairs, Jeff Wefel, Ian Dunn, Hideho Okada, Michael Lim and Michael Scheurer have put together a superb agenda that includes a number of esteemed speakers.

Just prior to the 2015 main meeting, there will be two conferences. Michael Vogelbaum will lead a Society for CNS Interstitial Delivery of Therapeutics (SCIDOT) conference, while Maciej Mrugala will extend his neuro-oncology review course to a full day program.

Three final comments on the annual meeting. First, the venue is an outstanding, new hotel located on the San Antonio Riverwalk. Second, the Saturday Gala Dinner should be a great evening hosted at a working ranch outside of San Antonio. Finally, this year's meeting represents a noteworthy landmark for SNO – our 20th anniversary.

Several other activities have been prioritized over the past months. Key SNO leadership participated in a technology retreat earlier this spring which led to further advances for our website and the annual meeting. Our journals, *Neuro-Oncology* and *Neuro-Oncology Practice* have continued to flourish under the leadership of Patrick Wen and Susan Chang, respectively. *Neuro-Oncology Practice* is now listed in PubMed and rumor is that the impact factor for *Neuro-Oncology* has strengthened. Importantly our European colleagues have agreed to formally partner with our journals while SNO will partner with EANO to develop the World Federation of Neuro-Oncology publication. Our international outreach efforts continue to progress: the first SNO-supported and organized conference in a developing country is expected to initiate in 2016.

As my term as President winds down, I plan to finish strong. Our Society continues to grow but much remains to be done. Please contact me, our executive director Chas Haynes, our vice-president Nino Chiocca, our secretary/treasurer Eva Galanis or any member of the Board of Directors for suggestions on other initiatives or to volunteer to help.

Looking forward to seeing you all in San Antonio!

Respectfully,

David A. Reardon, MD

2015 Annual Neuro-Tumor Club Dinner Meeting Recap

The 21st Annual Neuro-Tumor Club Dinner Meeting took place in Philadelphia, PA, on April 20, 2015. This meeting, which is organized every year by the Society for Neuro-Oncology, has been a long-standing venue for brain tumor researchers attending the annual meeting of the AACR. The meeting took place at the Hotel Monaco Philadelphia, which provided an excellent location in downtown Philadelphia near the main AACR venue, and was co-chaired by Steven Brem, from the University of Pennsylvania, and Mariano Viapiano, from the Brigham and Women's Hospital / Harvard Medical School. Generous support for the meeting was provided by the companies Celldex Therapeutics, Genentech, and Novocure.

IMPORTANT NOTE: Attendees or SNO members who would like an electronic library of published current papers relevant to the presentations at the Neuro Tumor Club, please send an email request to linda@soc-neuro-onc.org.

Following the growing trend in participants to Society for Neuro-Oncology sponsored meetings, this event was attended by a large number of investigators (over 175) from diverse areas of neuro-oncology. Forty-seven abstracts of outstanding quality were received, the largest number since the beginning of the Neuro-Tumor Club series. The task of selecting the abstracts to a number compatible with the length of the dinner was difficult and required careful consideration from the Chairs, who ended up selecting 16 abstracts to be presented in four thematic sessions:

- Brain Tumor Microenvironment and CNS Metastases
- Biomarkers and Novel Technologies
- Novel Agents and Translational Approaches
- Stem Cells and Molecular Phenotyping

The first session opened with a novel look at the role of the tumor microenvironment, showing that active neurons release a synaptic protein (neuroligin-3) that promotes glioma growth (Humsa Venkatesh, Stanford University). Two additional talks in this session described the immunosuppressive effect of myeloid-derived suppressor cells in glioma (Neha Kamran, University of Michigan) and PI3K/Src-dependent invasive mechanisms in glioblastoma cells, including a novel inhibitor, BKM-120 (Maria Speranza, Harvard Medical School).



Close to 200 researchers and clinician-scientists attended the 20th Annual Neuro-Tumor Club Dinner that was held in the ballroom of the beautiful Hotel Monaco in downtown Philadelphia.

In the second session, two presentations highlighted novel technologies used to detect biomarkers and improve brain tumor profiling: The first described the use of tumor-produced microvesicles to predict response (progression vs. pseudoprogression) of glioblastoma patients to therapy (Sydney Evans, University of Pennsylvania), while the second described the sequencing of the whole T cell receptor complement (TCRseq) in tumors as a new method to profile glioma patients by "immuno-phenotyping" (Jennifer Sims, Columbia University). The following two presentations in this session described novel and exciting technologies to differentiate brain tumor tissue from normal tissue, including real-time optical coherence tomography to measure light scattering (Carmen Kut, Johns Hopkins University) and real-time mass-spectrometry of tumor tissue "vaporized" during electrosurgery (Kevin O'Neill, Imperial College of London).

The next session focused on translational studies and novel agents for tumor detection or therapy, including CNS tumors other than gliomas. Allison Hanford (Johns Hopkins University) provided a novel, unbiased pathway analysis in medulloblastoma, involving neural stem cells that revealed cyclin-dependent kinases as a key therapeutic target; the second presentation focused on pathway analysis of pediatric diffuse intrinsic pontine gliomas and demonstrated the therapeutic efficacy of HDAC inhibitors (e.g., panobinostat) identified through molecular phenotyping (Catherine Grasso, Oregon Health Sciences Center and the Children's Oncology Group). The next two presentations in this session described

novel agents to detect and treat brain tumors: Ana Krtolica (Omniox, Inc.) described a novel oxygen-carrier protein that improves therapeutic efficacy against glioma while John Lee (University of Pennsylvania) described fluorescent-guided tumor resection using enhanced permeability and retention to enhance resectability of tumors using a FDA-approved cyanine dye (indocyanine green).

Without delay, the next and final session brought a wealth of "-omics" knowledge from novel strategies used to profile brain tumors and stratify their therapeutic responses.

Patrick Paddison (Fred Hutchinson Cancer Center) described the novel use of CRISPR technology to identify tumor-suppressor genes in engineered glioma cells. This exciting new technology was followed by an interesting analysis of clonal heterogeneity and its impact on tumor recurrence (Shiyuan Zeng, MD Anderson Cancer Center), and epigenetic regulation of EGFR expression in gliomas (Nadejda Tsankova, Mount Sinai Health Systems). The last two talks of the evening focused on breast metastases to the CNS: The first of these talks detailed a large-scale genomic study showing a pattern of mutations specific to metastatic cells homing to the brain, with 56% of patients having a clinically "actionable" genomic alteration (Priscilla Brastianos, Massachusetts General Hospital). In the final presentation of the evening, a whole genomic sequencing (WGS) of circulating metastatic tumor cells highlighted the existence of mutations and mechanisms (e.g., hyperactive DNA repair) that drive the dormancy, "stemness", and therapeutic resistance of metastases to the brain (Dario Marchetti, Baylor College of Medicine).

Overall, the meeting was a lively event much enjoyed by the participants. Both co-chairs kept a brisk pace to allow sufficient time for discussions, which followed almost all the presentations and provided great feedback to the studies presented. The tone of the venue was informal, cheerful, and driven by great enthusiasm towards the data shown by the speakers. At the conclusion of the event several researchers remained engaged in informal and animated conversations prompted by the thought-provoking presentations.

The Society thanks Drs. Brem and Viapiano for leading a stimulating and enjoyable evening, and for encouraging the attendees to join them at the next Annual Meeting of the Society for Neuro-Oncology, from November 19 to 22 in San Antonio, Texas.

Members are also encouraged to mark their calendars for the next Neuro-Tumor Club Dinner, scheduled to take place on Monday, April 18, 2016, in New Orleans, LA.

Report from the Seventh Annual Conference of the Indian Society of Neuro-Oncology

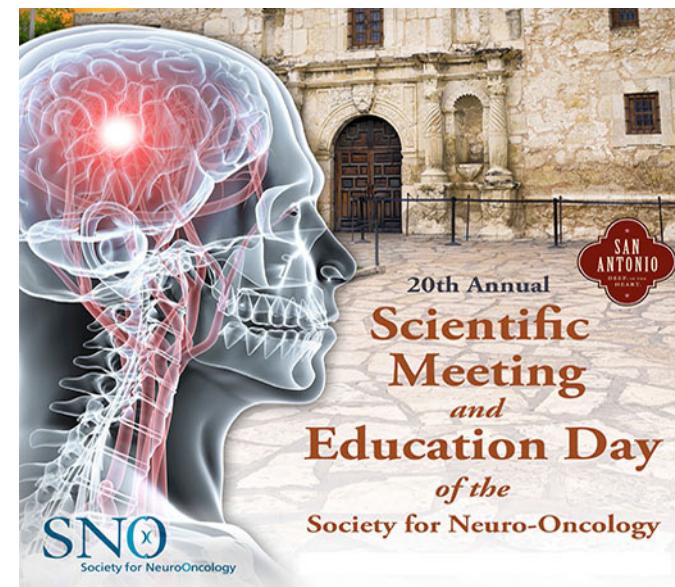
By Vinay Puduvalli

The Seventh Annual Conference of the Indian Society of Neuro-Oncology (ISNO) was held in Kochi, India from March 26–29, 2015. The scientific program was co-directed by Drs. Ashok Pillai and Durga Menon from the Amrita Institute of Medical Sciences.

The main program was preceded by a unique preconference workshop which included live neurosurgical case demonstrations including functional mapping and electro physiologic monitoring during tumor resection with an interactive live telecast to remote attendees at the conference venue.



The main conference began with technical sessions including image guided radiation oncology contouring and planning, routine and special techniques in molecular pathology and neurosurgical functional preservation sessions with topics focused on practical tips, pitfalls and troubleshooting. Dedicated sessions followed which were focused on tumor biology, translational advances, preclinical studies of novel therapeutics, and pediatric neuro-oncology. A special "Don't miss it" session consisted of talks by international and national speakers which brought the audience up to date on recent practice changing landmark studies and new international consensus guidelines. The presidential oration by ISNO



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In Memoriam

Andrew (Andy) T. Parsa



Members of the Society for Neuro-Oncology will be saddened to know that Andrew (Andy) T. Parsa, Chairman of the Department of Neurological Surgery at the Feinberg School of Medicine, Northwestern University, passed away on the morning of April 13th, 2015.

Andy was remembered by Northwestern officials as a distinguished scholar and an extraordinarily

talented surgeon. Known for his research on brain tumor immunology, he published more than 300 peer-reviewed articles, reviews, chapters and monographs in the past decade. Andy joined Feinberg in 2013 after serving as a professor and vice chairman of the Department of Neurological Surgery at the University of California at San Francisco, where he led an innovative approach to treating brain cancer by removing patients' tumors and creating individual vaccines from their malignant masses. In July, his team released results from the study's second phase, and his research is currently in its third-phase of clinical trials at Feinberg. Andy completed his undergraduate degree in molecular biophysics and biochemistry at Yale University. He pursued medical and graduate degrees at Downstate Medical Center, and later finished his neurosurgical training at Columbia University. Andy strove for and achieved excellence in all his endeavors: as a neurosurgeon, researcher, educator, administrator, and, most importantly to him, as a husband to his wife, Charlotte, and father to his two daughters and one son.

He was a long-time member of the Society for Neuro-Oncology and previously served on the Society's Board of Directors. His passing is a tremendous loss to our community. He touched the lives of many, and will be sorely missed, both as a colleague and friend.

A special symposium on immunotherapy, jointly supported by SNO and the Section on Tumors of the AANS/CNS, will be held in Andy's honor at the SNO annual meeting in San Antonio.

Many have asked for more information about gifts to the Parsa family for the education of their children. An anonymous donor has come forward who will match gifts up to a total of \$200,000. The following is the information received from the family to make a gift: Juju, Michi and Issay Parsa, c/o Charlotte Shum, 2726 North Mildred Avenue, Chicago, IL 60614. Memo: Parsa Children Education Fund.

Carol Kruse

Carol Kruse, a UCLA scientist and recognized leader in immunological therapy for brain cancer, passed away on March 28, 2015, at her home in Los Angeles. Kruse was a professor of neurosurgery and member of UCLA's Jonsson Comprehensive Cancer Center, where she was pioneering effective immunotherapies for men



and women with brain cancer. At the time of her passing, she was working on better understanding the immune-resistance mechanisms used by tumor cells to facilitate the development of alternative therapies for treating patients with primary malignant brain tumors.

A tireless contributor to her field, Kruse is best known for having conceived of Allogeneic Cytotoxic T Lymphocytes (AlloCTL), which target brain tumors by their expression of the HLA Class I of human leukocyte antigens that are responsible for regulation of the immune system that is not expressed on normal quiescent neuroglia. Through research grants and private funding, she initiated two separate clinical trials to treat primary brain tumor patients with AlloCTL.

Generous with her knowledge and experience, Kruse supported basic research for over 25 years. She mentored dozens of graduate and postdoctoral students and research assistants, and is responsible for training many individuals who went on to become leaders in their field. However, her most important legacy are the patients whose lives have been extended by the experimental therapies she helped to develop, bringing renewed hope to those who so often had few other options for treatment.

Donations in her name may be made to the UC Regents for the "Carol Kruse-Gerschenson Memorial Fund" to UCLA Neurosurgery, Development Office 300 Stein Plaza, Suite 562 Los Angeles, CA, 90024.

News on SNO's International Outreach Efforts

By Gelareh Zadeh

Neuro-Oncology Course

The Society for Neuro-Oncology recently launched an important new initiative to support the organization of an educational neuro-oncology course in developing and emerging regions of the world. This initiative is supported by Dr. Mark Bernstein, the Greg Wilkins-Berrick Chair at the University Health Network, University of Toronto, with additional matching support from the SNO Foundation.

The inaugural call for proposals was sent out prior to the 2014 SNO Annual Scientific Meeting, and a total of 17 applications were received. The applications were reviewed by a committee comprised of Drs. Mark Gilbert, Mark Bernstein, Gelareh Zadeh and David Reardon.

Two proposals were selected from the 17 submission, based on the merit of the proposal, quality of multidisciplinary team and potential for accomplishment of goals for the meeting. The winning applications were submitted by teams lead by Drs. Gustavo Quispe (Peru) and Jafri Abdullah (Malaysia).

Applications for the next round of funding will be posted to the SNO website in the coming months with an application deadline of mid-October so that the awards can be announced at the 2015 SNO meeting in San Antonio.

Travel Scholarships

A total of ten individual travel scholarships to attend the 2014 SNO meeting in Miami were awarded through a competitive process to applicants from low income or developing nations. A record number of 90 applications were received from the following geographical regions: South America/Central America & the Caribbean, Central and Southern Africa, China & associated countries, Indian Sub-Continent, North Africa & the Middle East and Eastern Europe.

Since the inception of this initiative in 2010, SNO has awarded travel scholarships to delegates from over 30 developing nations.

Last but not least, thanks to the generosity of SNO member Ali Choucair, SNO is exploring ways to make copies of our journals, *Neuro-Oncology* and *Neuro-Oncology Practice*, available at no cost to developing regions, with a focus on the Middle East.

The Society for Neuro-Oncology congratulates the winners of the 2014 SNO meeting travel scholarships.

Deepal Sanjeева Gunasekera
Sri Lanka

Mazda K. Turel
India

Subhy Houissa
Tunisia

Kaunda Ibebuike
Nigeria

Wendy Cristhyna Gomez Garcia
Dominican Republic

Daysi Chi-Ramirez
Cuba

Mian Guo
China

Vladyslav Buryk
Ukraine

Berrada Narjiss
Morocco

Lorena Baroni
Argentina



Drs. Gelareh Zadeh and Mark Bernstein (center) pictured with recipients of SNO's 2014 travel scholarships at the annual meeting in Miami, Florida.

SNO International Outreach Research Fellowship Recap: Rahul Krishnatry Fellowship term: July 2013 – June 2015

Mentors

Chief Mentor: Dr Eric Bouffet, The Hospital for Sick Children, Toronto.

Translational Research: Dr Uri Tabori, The Hospital for Sick Children, Toronto.

Radiation Oncology: Dr Normand Laperriere, Princess Margaret Cancer Center, Toronto.

I would like to begin by expressing my sincere gratitude to my guide in India, Dr. Rakesh Jalali who introduced me to the world of neuro-oncology and helped me become a successful applicant for this internationally competitive fellowship grant. SNO and its membership have been very kind and generous to provide this unique opportunity to young clinical scientists like me to visit and receive training at one of the best places and under the best mentors in the world.

The journey of last two years at Hospital for Sick Children, Toronto, has been an opportunity of life time for me under the great mentorship of Drs. Bouffet, Tabori and Laperriere. During the early months of my training I was exposed to the clinical environment where I learnt how to manage pediatric brain tumors as part of a multidisciplinary group. I especially learnt the art of chemotherapy in kids and how some of the gentlest treatment can provide great cure without affecting much of quality of life. During this period I worked with four different neuro-oncologist in clinics at Sick Kids, which proved that even similar looking things can be done and thought very differently by individual experts. And so I understood that, it is not just another branch of science but also an art to practice pediatric neuro oncology. I was responsible for taking care of patients in clinics, in-patients and had great exposure to learn from multidisciplinary rounds, videoconferences with several international outreach centers and the national cancer grid in Canada as well.

During those early months, I developed interest in translational research involving pediatric low grade glioma (PLGG). Dr. Tabori and his wonderful team in the research lab were kind enough to provide me great support and valuable mentorship. Since September 2013, apart from learning basic techniques like RNA, DNA extraction, PCR, cell cultures, FISH, etc., we could develop a specific

project with translational implications. Appropriate time is usually the most important factor in determining success. Most of the discovery trails have already been published for PLGG, several phase I and phase II trials are active to target the known pathways. But we still do not have a very robust CLIA approved test to guide this therapy and also the clinical prognostification for the known genetic alterations is largely unknown or disputed in literature.

There was already a PLGG task force at Sick Kids which had collected clinical data with short and long term outcomes for all PLGG (>1000) diagnosed and treated at Sick Kids since 1985. We have a large tumor bank for the samples for these patients. Hence in last two years we worked as a large group in Tabori lab with the collaboration of Dr. Cynthia Hawkins' lab to uncover the biology for our patient samples so far and correlate with outcomes. One of the recent publications from our group provided a glimpse of possible risk stratification for PLGG treatment in clinics (Mistry et al, JCO 2015). At the same time we optimized and validated these tests to make them CLIA approved for future patient's benefit and treatment according to modern risk stratification and better targeted agents.



EMD Serono

Along with this I helped in completing an ambitious project to ascertain the clinical factors which determine very long term (in adulthood) survival outcomes in PLGG patients. Prognostic value for various newer pathological groups, location and radiation treatment were important findings in this huge population based study including whole Ontario patients treated since 1985 and these were validated with independent cohort from US population based data by SEER. This data was presented in several International conferences including ISPNO 2014, SNO 2014, Pediatric SNO 2015 and is now being considered for publication.

We also looked at the influence of puberty on PLGG tumor progression and presentation as well as effect of various pubertal hormones on several PLGG cell lines procured from different centers. This work was also presented at ISPNO 2014 meeting and has been submitted for publication.

Continued over



Rahul Krishnatry

In addition to the activities above, I tried to sharpen my skills as a radiation oncologist specializing in neuro-oncology under Dr Laperriere's mentorship. I attended several clinics at Princess Margaret Cancer Center and was exposed to long term pediatric brain tumor survivors and their issues; re-irradiation for ependymomas and DIPG; treatment of adult brain tumors and gamma knife applications to name a few.

I attended several courses and conferences to improve my skill as well as expose myself to experts from different centers to mature as a clinical scientist. These included several teaching courses organized at university of Toronto campus itself: like pediatric research updates, statistics courses, UHN stereotactic radiotherapy courses; international meetings including SNO 2013, ISPNO 2014, and the 2015 Pediatric SNO meeting to name a few. Along with this I tried to pursue an important goal of my fellowship "education" by attending Indian Society of NeuroOncology (ISNO) meetings every year and presenting guest lectures on PLGG, PNET etc to share my experiences with my colleagues in India.

To summarize, the experience in last two years has been critical in shaping me as a mature clinical scientist and develop unique skills I can use to lead and develop a program upon my return to India. Specifically I can summarize that:

1. I learned how to develop and work on large clinical databases and more importantly to generate, validate and use this information to publish key findings and to correlate biological data.
2. Lead a large group of people to perform high throughput analysis of more than 100 tumors which can be thoughtfully implemented in Indian settings as well.
3. Understand the new molecular alterations which can change decision making in childhood brain tumors.

I will be joining the Mazumdar Shaw Cancer Center, Begaluru (Bangalore), India starting in July 2015. Before I go, I would like to extend my sincere thanks to SNO and its membership for the support for this fellowship. I would also like to acknowledge the American Brain Tumor Association and EMD Serono for their generous financial assistance. Finally, I would like to extend my sincere gratitude towards all of my mentors for sharing their vision and making me a part of their large family. I feel fortunate to metamorphosize under your able wings and wish that there will be an everlasting love and collaboration to help me with my future endeavors in India as well.

2016 SNO Election Candidate Slate

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Terri Armstrong, Frank Furnari

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Russell Pieper, Gelareh Zadeh

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Michael Knopp, Whitney Pope

Voting for the 2016 slate of SNO officers will take place in August. Members will be sent an electronic ballot containing the personal statements and CV's of each candidate.



The SNO News is published two times per year and is distributed to members and friends of the Society for Neuro-Oncology.

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