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SNO News: Annual Neuro-Tumor Club

Dinner Meeting Recap

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94



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Annual Neuro-Tumor Club Dinner Meeting Recap

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The 20th Annual Neuro-Tumor Club Dinner Meeting took place on April 7, 2014, in San Diego, California. This meeting, for brain tumour researchers attending the AACR Annual Meeting, was organised by the Society for Neuro-Oncology with the support of Genentech, Novocure, and the National Brain Tumor Society. Frank Furnari of the Ludwig Institute for Cancer Research, University of California, San Diego, and Shi-Yuan Cheng of Northwestern University, served as cochairs for the dinner.

The event drew approximately 150 investigators from diverse disciplines relevant to brain tumour research, and was very successful in strengthening existing personal research connections and collaborations, generating new associations and presenting the group with updates in topics important to brain tumour research.

40 abstracts were received of uniformly high quality. Submissions came from 8 countries and were reflective of cuttingedge, thought-provoking basic and translational research in the field of neuro-oncology. Trying to reduce this to 14 talks was difficult given the standard of the submissions. The talks were arranged in 4 consecutive sessions that encompassed the following topic areas:

- Genomic Phenotyping and Personalized/Combinatorial Therapy
- Tumour Microenvironment, Signalling, and Cancer Stem Cells
- Novel Agents, Markers, and Immunotherapy
- Animal Models and CNS Metastases

Each topic area was excellently framed by overviews from authority figures in those areas including: Dr Richard Gilbertson, St. Jude Children's Research Hospital; Albert Wong, Stanford University; Isabella Taylor, Johns Hopkins University; and Carol Kruse, University of California, Los Angeles.

The dinner took place at the Hotel Solamar, a boutique property located near the 2014 Annual AACR Meeting venue. Attendees' registration continued right up to the dinner and in the end there were over 150 researchers present. The 14 speakers were scheduled over 3 hours, requiring a tight time-line, which was kept judiciously by all presenters. All speakers managed to finish on time and yet conveyed an astonishing amount of background information and experimental data. The talks were followed by lively discussions. There were many excellent presentations during the night. In the first session, Richard Gilbertson presented data derived from whole-genome and RNA sequencing of supratentorial ependymomas showing a highly recurrent oncogenic fusion occurring between RELA and an uncharacterised gene, C11orf95, in 70 % of these tumours. Expression of the C11orf95-RELA fusion protein in neural stem cells drove their transformation in conjunction with an oncogenic NF-κB transcription signature, raising the possibility of new avenues for therapeutic intervention.

In the next session, Albert Wong showed that the mutant EGF receptor, EGFRvIII, is frequently co-expressed with the stem cell marker, CD133, and that EGFRvIII+/CD133+ tumour cells were highly aggressive. Targeting these double positive cells with a bi-specific monoclonal antibody greatly enhanced survival of tumour-bearing mice. Also in this session, Terry Johns showed that extracellular domain mutants of EGFR found in glioma are more sensitive to the pan-ErbB inhibitor, dacomitinib, when compared to the wild-type receptor, and that Ras mutations cause up-front resistance to EGFR-based therapy. In session 3, Chien-Tsun Kuan provided updates on the development of recombinant immunotoxins (RIT) that target wild-type EGFR and EGFRvIII on the surface of glioma cells and a new surface marker for gliomas, glycoprotein NMB. He also described new approaches of reducing immunogenicity of these RITs in humans and the next generation of RITs. Elizabeth Maher reported detection of 2HG by MR spectroscopy, which proved to be a robust clinical biomarker in low-grade gliomas. The initial success of using 2HG levels to guide therapies for gliomas, especially for these low-grade gliomas, was highly encouraging. The final session had 4 excellent presentations that described studies using various animal models of brain tumours to demonstrate the role of ATRX in glioma progression and response to DNA damage, initial characterisation of a new de novo animal model of leptomeningeal metastasis, combination of cellular and gene therapies to treat breast cancer patients with brain metastases, and deciphering circulating tumour cells from patients with breast cancer metastatic to the brain. The evening concluded with many of the attendees remaining to engage in informal conversation prompted by the presented topics.

The Society thanks Drs Furnari and Cheng for organising a stimulating and enjoyable evening. The next Neuro-Tumor Club Dinner is scheduled to take place on Monday, April 20, 2015, in Philadelphia, PA.

Members of EANO are encouraged to save the date for the 19th Annual Scientific Meeting and Education Day of the Society for Neuro-Oncolgy, to be held November 13–16, 2014, at the Loews Hotel South Beach in Miami. Following the format of past SNO meetings, the main conference will be abstract-driven, with a pre-conference Education Day entitled "Metastasis Biology and Treatment" along with concurrent quality-of-life sessions entitled "Neurologic Rehabilitation, Pediatric Survivorship and Caregivers".

The abstract deadline for submitting an abstract to the SNO meeting is June 9, 2014. Details can be found on the SNO website, www.soc-neuro-onc.org.

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