

Highlights and prizes, of an International Meeting

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Abstract

A short description selected from the presentations which had been awarded prizes in the 4th International Meeting of Nuclear Medicine, of the Hellenic Society of Nuclear Medicine, in Thessaloniki, Greece, is as follows: Professor L. G. Strauss from Heidelberg received the first prize for his original paper under the title: "Modulation of FDG kinetics in tumors by gene expression". He studied 25 patients with colorectal tumors with dynamic PET-FDG within 2 days prior to surgery and he finally came to the conclusion that angiogenesis has a significant impact primarily on the kinetic data (k_1 , k_3), but also on the global FDG uptake. A detailed analysis of the FDG kinetics can help to classify the grade of angiogenesis in primary colorectal tumors. The cell cycle associated genes have a comparable impact on the FDG kinetics as compared to the angiogenesis related genes. Furthermore, hypoxia was associated with the FDG parameters. Enhanced expression of HIF-1 α was primarily associated with an enhanced influx of FDG. The results demonstrated the impact of dedicated groups of genes on the FDG kinetics. Furthermore, if the FDG kinetics are quantitatively analyzed, the expression of certain genes may be predicted from these data.

Dr. P. Bouziotis et al. received the second prize for their original paper under the title: "Labeling of bevacizumab, an anti-VEGF monoclonal antibody, with technetium-99m and rhenium-188". The authors were from Athens and Oxford and studied the reduction of the endogenous disulphide bonds of bevacizumab by treatment with 2-mercaptoethanol and TCEP-HCl. The number of generated-SH groups was estimated before each labelling experiment. The results of the present study show that VEGF expression in tumors can be detected and visualized specifically with the anti-VEGF monoclonal antibody bevacizumab, labelled with gamma-emitting radioisotopes.

The third prize went to Dr C. H. Tsopelas et al. from Adelaide who presented an original paper under the title: "Evaluation of visceral sensitivity after transient inflammation-An experimental model". Their aim was to characterise the inflammatory response to the transient chemically-induced colitis after instillation of trinitrobenzenesulfonic acid. Inflammation was tested by ^{99m}Tc-Sn-colloid-leucocytes. They concluded that the Group of Lewis rats compared to Fisher rats, developed a prolonged visceral hyperalgesia and more severe inflammation following colorectal instillation of TNBS/ethanol doses, possibly involving the systemic immune response. The Lewis rat species appears to be a good model of transient colitis, because of its heightened sensitivity to the chemical stimulus, and due to detectable visceral changes long after administration of the above stimulus.

Professor A. M. Peters from England, received the fourth prize for his original paper: "New quantitative techniques for investigating and predicting lymphoedema resulting from breast cancer

treatment". In lymphoedema from breast cancer treatment he investigated local uptake via putative peripheral lympho-venous communications (LVCs), using intradermally injected labelled red cells. He concluded that his results suggest that protective mechanisms could include i) interstitial proteolysis, ii) increased peripheral trans-endothelial protein transport or iii) development of peripheral LVCs

Other prizes were awarded to: Professor G.P. Bandopadhyaya et al. from New-Delhi for their original paper: "Molecular targeting of infective bacterial maltose binding protein for infection imaging using Tc-99m hydroxypropyl cyclodextrin in patients with knee joint replacement and other prostheses", to Dr P.J. Marsouvanidis et al. from Demokritos Athens and Patras for their original paper: "Synthesis, radiochemistry and preclinical comparison of [¹¹¹In-DOTA⁰]SS-14 and [¹¹¹In-DOTA⁰, (D)Trp⁸]SS-14 in AR4-2J cells and Swiss albino mice", to Professor B. Singh et al. from Chandigarh and New Delhi for their original paper: "Efficacy of indigenously developed single vial kit preparation of ^{99m}Tc-ciprofloxacin in the detection of bacterial infection-An Indian experience" and to Dr. A. Bantis et al. from Alexandroupolis for their original paper: "The prognostic value of serum chromogranin A in patients with advanced prostate cancer".

On 7-9 November 2008 in Grand Palace Hotel in Thessaloniki took place the 4th International Meeting of the Hellenic Society of Nuclear Medicine with the cooperation of 10 other Medical Societies. A hundred and six papers, twenty eight of them original, were presented. About two hundred colleagues and thirty distinguished speakers from ten different countries, participated. Professors Abass Alavi from Philadelphia and C. Anagnostopoulos from London gave special lectures.

Professors Abass Alavi also presented an original paper about "Evolving role of FDG-PET imaging in assessing infection and inflammation". Professor Alavi was awarded a diploma of honour for his scientific contribution to the meeting. We were all pleased to have him with us.

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ics can help to classify the grade of angiogenesis in primary colorectal tumors. The cell cycle associated genes have a comparable impact on the FDG kinetics as compared to the angiogenesis related genes. Furthermore, hypoxia was associated with the FDG parameters. Enhanced expression of HIF-1 α was primarily associated with an enhanced influx of FDG. The results demonstrated the impact of dedicated groups of genes on the FDG kinetics. Moreover, if the FDG kinetics are quantitatively analyzed, the expression of certain genes may be predicted from these data.

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gested "but along with increased pre-operative lymph production, it may turn out to be a useful predictor of BCRL".

Professor G.P. Bandopadhyaya et al. from New-Delhi took the fifth prize with their original paper under the title: "Molecular targeting of infective bacterial maltose binding protein for infection imaging using Tc-99m hydroxypropyl cyclodextrin in patients with knee joint replacement and other prostheses". Patients with prosthesis including knee joint replacement having a positive indication of infection were injected with Tc-99m β -hydroxypropyl cyclodextrin-maltose binding protein and were successfully visualized under SPECT gamma camera at different time intervals. The in silico and in vivo studies were well correlated.

The sixth prize went to Dr P.J. Marsouvanidis et al. from Demokritos Athens and Patras who presented the original paper under the title: "Synthesis, radiochemistry and preclinical comparison of [^{111}In -DOTA 0]SS-14 and [^{111}In -DOTA 0 ,(D)Trp 8]SS-14 in AR4-2J cells and Swiss albino mice". They had shown that in vitro and in vivo targeting with the radiolabeled analogs of native SS-14 is in principle feasible. Substitution of Trp 8 by (D)Trp 8 appears to be crucial for effective in vivo targeting, most probably due to rapid enzymatic attack of endogenous peptidases at this site. Further studies are in progress to reveal the applicability of [^{111}In -DOTA 0 ,(D) Trp 8]SS-14 as a pansomatostatin-like radiotracer.

The seventh prize was received by Professor B. Singh et al. from Chandigarh and New Delhi for their original paper under the title: "Efficacy of indigenously developed single vial kit preparation of ^{99m}Tc -ciprofloxacin in the detection of bacterial infection-An Indian experience". They mentioned that bone scanning had a 100% sensitivity, but it could not differentiate bone osteomyelitis from bone reaction/inflammation/infection. It is thus recommended that patients' management protocol may include bone scan (to identify lesion) followed by the single vial kit ^{99m}Tc -ciprofloxacin scan (to characterize the lesion). A scan with lesion to background ratio of ≥ 2.0 at 1h and remaining consistent till 24h can be considered as positive for active bacterial infection. However, detection of lesions harboring microorganism owing resistance to ciprofloxacin at the membrane level is a limitation of this technique. In the absence of any other single radiopharmaceutical or a combination of tracers for the accurate diagnosis of all the orthopedic infections, ^{99m}Tc -ciprofloxacin therefore could be of significant interest especially in the developing countries.

Another prize was awarded to Dr A. Bantis et al. from Alexandroupolis for their original paper under the title: "The prognostic value of serum chromogranin A in patients with advanced prostate cancer". They concluded that elevated levels of serum CgA were significantly higher in patients with PC and bone metastases in comparison to patients with PC without bone metastases ($P < 0.001$). Serum CgA levels, higher than those of PSA were found in patients with multiple bone metastases and Gleason score more than 7. For CgA (at 70 ng/ml) the sensitivity were 58% and the Specificity 78%. The sensitivity and the specificity of the study in combination

CgA with PSA and bone scan increase to 75% and 89% respectively.

A prize for the best research paper was awarded to Professor Adil Al-Nahas from London for his paper under the title: "Gallium-68 peptides: A new horizon in PET imaging". He presented his experience with Gallium-68 peptides in the diagnosis of neuroendocrine and neuroectodermal tumours compared to other imaging modalities. He concluded that gallium peptides are a new horizon in PET imaging.

Honorary diplomas were awarded to Professor A. Otte, from Freiburg for his educational presentation under the title: "Nuclear medicine technologies in the development of pharmaceuticals" mainly in brain studies and to Dr J. van Isselt from Utrecht for his educational presentation under the title: "Thyroid scanning and radioiodine uptake measurements: what is their clinical significance?" referring also to radioiodine treatment in benign and malignant thyroid diseases.

This Meeting had some prototype characteristics: a) the cooperation of non-nuclear medicine societies. These Societies are consisted as we know of physicians and fellow colleagues who evaluate our work in practice. b) an attempt by the organisers of this Meeting to include in the programme many prototype-original papers which were presented in three separate sessions and c) this Meeting had a "moto" which was the word: "enthusiasm". This word in Greek has

the meaning: "place in yourself (heart) zest for something". Not to forget that Hippocrates had great respect to physicians who were philosophising. He had said: "Physicians-philosophers are like semi-gods". Of course in ancient Greece the word "God" meant a very exceptional person, to be admired and remembered in ages to come".

Many of those attending the Meeting, participated in an excursion, visiting the Museums of Thessaloniki, of Pella where Alexander the Great was born and also visiting the beautiful Edessa waterfalls and the unique warm waterfalls of Loutraki.

Some of the comments about this Meeting written by distinguished Professors are as follows: "The Congress was the Highlight of my year 2008". "It is a big step forward to initiate such a Meeting on an international level. This was really an outstanding Congress. I have never attended a similar Meeting in Greece", "It was an excellent academic programme, a great opportunity to interact with Nuclear Medicine specialists from other parts of the world...", "The Meeting was successful well organised with impressive number of intercontinental participants. Congratulations", "This Meeting was a resounded success with interesting papers and a marvellous opportunity to meet up with researchers-some very successful from around the globe."

We hope that the next Meeting will be even better.