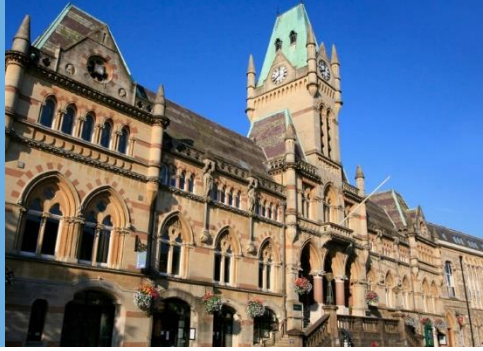
PIVAC-17



17th International Conference on

Progress in Vaccination Against Cancer

27 - 30 September 2017

Loutraki, Corinth, Greece

Scientific Organising Committee

Costas Baxevanis (Chair)
Graham Pawelec
Per Thor Straten
Victor Umansky
Sonia Perez
Menelaos Manoussakis
Marinos Tsiatas

PIVAC-16

17th International Conference

Progress in Vaccination Against Cancer

27 – 30 September 2017 • Loutraki, Corinth, Greece

Day 1 – Wednesday 27 September 2017

13.00 – 20.00 REGISTRATION *Entrance Lobby of the Alexandrion Conference Hall*

13.00 – 14.30 WELCOME LUNCH

13.00 – 20.45 POSTER EXHIBITION

15.00 – 15.15 WELCOME BY THE MAJOR OF LOUTRAKI

George Gionis

WELCOME BY THE PIVAC-17 CHAIR

Costas Baxevanis Cancer Immunology and Immunotherapy Center, St Savas Hospital (GR)

SESSION 1

Session Chair:

15.15 – 15.45 **Per thor Straten** Center for Cancer Immune Therapy , Department of Hematology, University Hospital Herlev
"**Therapy of solid tumors using T cells and running shoes**"

15.45 – 16.15 **Rolf Kiessling** Karolinska Institutet, CCK, Stockholm, Sweden
"**Combining Adoptive Cell Therapy with DC vaccination for therapy of malignant melanoma**"

16.15 – 16.45 **Rafael Solana** Maimonides Biomedicine Institute of Cordoba (IMIBIC), Reina Sofia Hospital, University of Cordoba "**New insights on NK cell-based immunotherapy of cancer**"

16.45 – 17.15 COFFEE BREAK

SESSION 2

Session Chair:

17.15 – 17.45 **Barbara Seliger** Institute of Medical Immunology, Martin-Luther-University Halle-Wittenberg, Halle
"**Tumor-induced immune escape mechanisms due to deregulation of immune relevant components**"

17.45 – 18.15 **Federico Garrido** Departamento de Bioquimica, Biologia Molecular III e Inmunologia, Facultad de Medicina, Universidad de Granada **"Cancer Immune Escape: HLA Class I Loss And Tumour Tissue Architecture"**

18.15 – 19.45 POSTER SESSION 1

20.00 - WELCOME RECEPTION serving drinks and a light buffet

Day 2 - Thursday 28 September 2017

SESSION 3

Session Chair:

09.00 – 09.30 **Giuseppe Masucci** Department of Oncology-Pathology, The Karolinska Hospital, Stockholm
"**Prognostic factors and Immmunoscore in personalized cancer treatment**"

09.30 – 10.00 **Francesco Marincola** Division of Translational Medicine, Research Branch, Sidra Medical and Research Center, Doha
"**Markers of cancer immune responsiveness**"

10.00 – 10.30 **Wolf Herve Fridman** INSERM Paris, France; Université Paris Descartes/Paris V, Sorbonne Paris Cité, Paris "**Cancer microenvironments: prognostic and theranostic impacts**"

10.30 – 11.00 **Doriana Fruci** Immuno-Oncology Laboratory, Ospedale Pediatrico Bambino, Rome
"Clinical relevance of tumor-infiltrating immune cells in neuroblastoma"

11.00-11.30 COFFEE BREAK

SESSION 4

Session Chair:

11.30 – 12.00 **Gustav Gaudernack** Department of Immunology, Institute for Cancer Research, University Hospital-Radiumhospitalet, Oslo
"**Clinical trials with a second generation hTERT vaccine, UV1. Single agent therapy and combination with checkpoint inhibitors"**

12.00 – 12.30 **Sjoerd van der Burg** Leiden University Medical Center
"**Cancer Immunotherapy, not without vaccination**"

12.30 – 13.00 **Carl Figdor** Department of Tumor Immunology, Radboud Institute for Molecular Life Sciences, Nijmegen
"**21st Century Cancer Vaccines**"

13.00-13.30 COFFEE BREAK

SESSION 5

Session Chair:

13.30 – 14.00 **Federica Cavallo**
Molecular Biotechnology Center, University Turin
"**The cystine/glutamate antiporterxCT: A new cancer stem cell target for anticancer vaccines**"

14.00 – 14.30 **Pierre Coulie** de Duve Institute, Université Catholique de Louvain, Brussels
"**Immunogenicity of primary breast carcinomas**"

14.30 – 15.00 LUNCH

SESSION 5

Session Chair:

Proffered Papers

15.30 – 17.00 Proffered Papers 1-6

17.00 – 17.30 COFFEE BREAK

17.30 – 19.00 Proffered Papers 7-10

19.00 – 19.30 **"Satellite Session by the industry"**
Paul Lehmann Case Western Reserve University, USA.
"Tumor antigen recognition by healthy individuals and cancer patients"

19.30 – 20.30 POSTER SESSION 2

20.30 – Free evening

Day 3 - Friday 29 September 2017

SESSION 6
Session Chair:

09.00 – 09.30 **Victor Umansky** Skin Cancer Unit, German Cancer Research Center (DKFZ), Heidelberg
"**Accumulation of myeloid-derived suppressor cells in melanoma microenvironment and their targeting**"

09.30 – 10.00 **Vincenzo Bronte** Department of Medicine, University Hospital, University of Verona, Verona
"**Myeloid cells assist tumor progression by molecular mechanisms either dependent or independent from adaptive immunity**"

10.00 – 10.30 **Suzanne Rosenberg** Department of Biological Sciences, University of Maryland Baltimore County, Baltimore, MD "**The good, the bad, and the in-between: immune suppression, obesity, and tumor progression**"

10.30 – 11.00 **Vincenzo Cerundolo** MRC Human Immunology Unit, University of Oxford, UK
"Amino acid degrading enzymes and their role in tumour immune escape mechanisms"

11.00-11.30 COFFEE BREAK

SESSION 7
Session Chair:

11.30 – 12.00 **Ignacio Melero** Division of Immunology and Immunotherapy, Center for Applied Medical Research (CIMA), University of Navarra and Instituto de Investigacion Sanitaria de Navarra "**On combined strategies of cancer immunotherapy based on CD137 (4-1BB)"**

12.00 – 12.30 **Nathan Karin** Department of Immunology, The B. Rappaport Faculty of Medicine, Technion-Israel Institute of Technology, Haifa
"**CXCL10 as an immune checkpoint chemokine in the regulation of cancer diseases**"

12.30 – 13.00 **Benoit van den Eynde** Ludwig Institute for Cancer Research, Oxford
Title TBA

13.00-13.30 COFFEE BREAK

SESSION 8

Session Chair:

13.30 – 14.00 **Gunter Hammerling** Division of Molecular Immunology, German Cance rResearch Center Heidelberg
Reprogramming of the tumor microenvironment for efficient cancer immunotherapy"

14.00 – 14.30 **Graham Pawelec** Second Department of Internal Medicine, University of Tübingen
"**Immunotherapy of Cancer: triumphs and challenges, and the impact of immunosenescence**"

14.30 – 15.00 **Cornelis Melief** Department of Immunohematology and Blood Transfusion, Leiden University Medical Center "**Combination immunotherapy against cancers expressing viral or neo-antigens**"

15.00 – 16.30 LUNCH

SESSION 9

Session Chair:

16.30 – 17.00 **Gosse Adema** Department of Tumor Immunology, Radboud Institute for Molecular Life Sciences, Nijmegen
"Immuno-combination therapies for cancer"

17.00 – 17.30 **Antonia Dimitrakopoulou-Strauss** Clinical Cooperation Unit Nuclear Medicine, German Cancer Research Center, Heidelberg
"Therapy monitoring of immune checkpoint inhibitors in patients with metastatic melanoma with PET-CT"

17.30 – 18.00 **Cecile Gouttefangeas ,** Group leader at the Institute for Cell Biology, Department of Immunology, Tübingen,
"**Immunomonitoring as a tool to identify biomarkers predicting the outcome of immunotherapy-treated patients**"

18.00 – 19.30 **Cancer Immunology and Immunotherapy editorial board meeting**

Saturday 30 September 2017

Free day – ***Excursion to Epidaurus old theater***, ***Ancient Mycenae***, ***Nafplion***

The organisers wish to express their appreciation for the significant support provided by sponsors at the **17th International Conference on Progress in Vaccination Against Cancer.** Their interest and enthusiasm for the meeting has enabled the organizers to provide an impressive scientific programme.

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Example for speakers' abstract (from PIVAC16; up to 300 words). Deadline: July 15

Viral therapy - combinations with other targeted agents?

Kevin Harrington[1]

1Joint Head of Division of Radiotherapy and Imaging, Targeted Therapy Team, The Institute of Cancer Research, UK

Talimogene laherparepvec (T-VEC) is a herpes simplex virus type 1-derived injectable oncolytic virus that is genetically modified to be selectively replication-competent in tumour cells (especially those with MAPK pathway activation). It also expresses human granulocyte-macrophage colony-stimulating factor as an immunostimulatory cytokine[1]. In a phase 3 trial in 436 pts with unresected stage IIIB-IV melanoma (the OPTiM trial[2]), intralesional T-VEC improved durable response rate (continuous partial response [PR] or CR ≥6 months; primary endpoint) from 2% to 16% vs subcutaneous recombinant GM-CSF. Overall response rates for T-VEC and GM-CSF were 26% and 6%, respectively. Median overall survival (OS; secondary endpoint) was 23.3 months with T-VEC vs 18.9 months with GM-CSF (hazard ratio [HR] = 0.79, 95% CI: 0.62–1.00, P = 0.051). Exploratory subgroup analysis demonstrated median OS of 41.1 months with T-VEC vs 21.5 months with GM-CSF (HR = 0.57, 95% CI: 0.40–0.80, P < 0.001) in stage IIIb, IIIC and IVM1a disease. For those patients who achieved a durable response prior to the 12-month landmark, there was a 94% decrease in the risk of death (HR = 0.06, P = 0.0002)[3]. Responses were seen in 64% of injected non-visceral lesions, 34% of uninjected non-visceral lesions and 15% of uninjected visceral lesions. The majority of lesion level responses were complete remissions. T-VEC was well tolerated.

Subsequent phase Ib studies of T-VEC and immuno-oncology (IO) agents (ipilimumab[4] and pembrolizumab[5]) have now completed recruitment. Each of these studies has demonstrated tolerable toxicity profiles (with no dose-limiting toxicities) and impressive anti-tumour efficacy. Detailed data from these studies will be presented and plans for subsequent phase III evaluations of T-VEC plus pembrolizumab (in melanoma and head and neck cancer) will be discussed. In addition, opportunities for synergistic interactions between oncolytic immunotherapies and other targeted drugs will be introduced.

1. Liu BL, et al. Gene Ther 2003;10:292–303.
2. Andtbacka RHI, et al. J Clin Oncol 2015;33:2780–8.
3. Middleton MR, et al. EADV 2016: abstract FC07.09 (and oral presentation).
4. Puzanov I, et al. J Clin Oncol 2016 (in press).
5. Long G, et al. ECC 2015:abstract 24LBA.

Example for Poster abstracts (from PIVAC16; up to 300 words). Deadline: July 15

Development of exosomes and OMVs complexes as an innovative nanovesicle-based cancer vaccine

Luisa Ganfini[3], Matteo Parri[2], Elena Caproni[3], Susanna Campagnoli[1], Piero Pileri[1], Renata Grifantini[1], Laura Fantappiè[3], Alberto Grandi[3], Guido Grandi

[31] *Externautics Spa, Siena, ITALY,* [2] *Toscana Life Sciences, Siena, ITALY,* [3] *University of Trento, Trento, ITALY*

In the last years great effort, expense and patient volunteers have been employed in order to develop therapeutic cancer vaccines. However, results have been so far relatively disappointing. The main hurdles are the identification of the appropriate Tumor Specific and Tumor Associated Antigens (TSAs, TAAs) and the selection of the optimal delivery system which can induce potent and protective immune responses against TSAs/TAAs.

Cancer cells are known to release exosomes, nanovesicles with the unique property to carry many TSAs/TAAs

expressed by the parental cells. Gram negative bacteria release Outer Membrane Vesicles (OMVs), carrying many Pathogen Associated Molecular Patterns (PAMPs) which potently stimulate innate immunity and adaptive immune responses. OMVs interact with membranes and are efficiently taken up by eukaryotic cells, including antigen presenting cells.

Because of the peculiarities of both vesicles, we are testing the hypothesis that mixing exosomes with OMVs should form complexes/fusions with the result that TSAs/TAAs become physically associated to PAMPs. Such situation should be ideal to elicit protective responses against cancer antigens.

To test the ability of exosomes to generate complexes with OMVs, fluorescent vesicles were mixed together and visualized by confocal microscopy. Preliminary results showed that these nanovesicles spontaneously interact when simply mixed together in solution. In order to assess the immunogenicity of OMV-exosomes complexes, mice were immunized with exosome+OMV formulation. ELISA assays revealed high antibody titers induction against specific TAAs. Notably, this formulation skewed the immune response towards a Th1 type (IgG2a prevalence), whereas exosomes alone formulated with Alum showed a Th2 (IGg1 prevalence) response.

To assess the ability of the complexes to protect against tumour growth in immunocompetent mouse models, exosomes from mouse cancer cell lines combined with OMVs have been used to immunize syngeneic mice and the effect in tumour growth inhibition is under investigation.