BOOK OF ABSTRACTS

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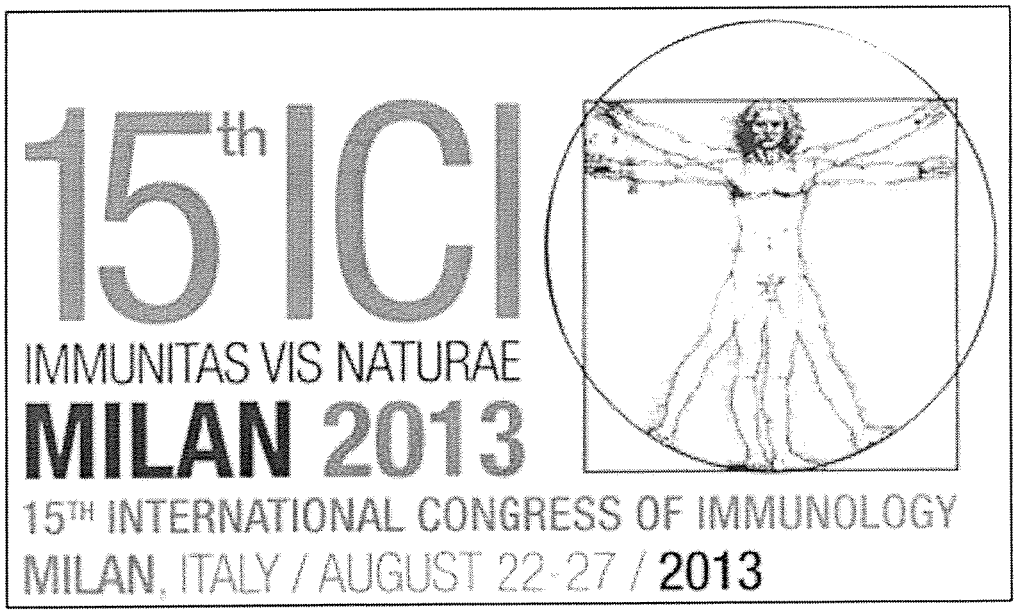

ANNOTATIONS

In the following we are publishing the abstracts as submitted by the authors.

Missing session numbers represent sessions with no abstracts associated.
Missing presentation numbers represent talks with no abstracts received as per date of production. Bold presentation numbers indicate the presenting author.

The sessions are in numerical order.

Keys and Abbreviations:

IL1.01.01	Invited Lecture
LB.1	Late Breaking Session 01
LL.1	Lunchtime Lecture
P1.01	Poster Presentation
PL.1	Plenary Lecture
PS.1	Lecture: Perspectives in Immunology
S.1	Symposium
SS.1	Sponsored Session
W1.01	Workshop

The Editors

and recurrence, and indeed, it is reasonable to hypothesize that evolution has supported these cells and/or their niches with mechanisms of immune evasion. Here we provide experimental evidence that prostate CSC (PCSC) from the prostate of transgenic adenocarcinoma of the mouse prostate (TRAMP) mice induce anergy in T lymphocytes. Indeed, PCSC-conditioned T cells showed reduced activation of TCR and IL-2 pathways, that resulted in inhibited proliferation and cytokine production. Inducible oxide synthase (iNOS), a molecule that has been already implicated in prostate cancer aggressiveness both in TRAMP and human prostate cancer, appeared to be one of the mechanisms adopted by PCSC to inhibit T cells, as treatment of PCSC with the iNOS inhibitor L-NAME reduced their immunosuppressive activity. This phenomenon was restricted to T cells in the phase of priming or ristimulation, being activated T cells resistant to PCSC immune suppression. Even if other candidate immunosuppressive molecules expressed by PCSC, such as Galectin-3, are being currently investigating, all together, these findings confirm iNOS as a strategic target molecule for therapeutic applications against prostate adenocarcinoma.

P5.20.041
Inflammatory stress upregulates chemokine expression in uveal melanoma cell lines and increases monocyte migration

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Purpose: Uveal melanoma (UM) is the most common primary intraocular tumor in adults and the presence of infiltrating leukocytes is associated with a poor prognosis. This study investigates the effect of activated T-cells on UM cell differential gene and protein expression, and the ability to attract monocytes.Methods: T-cells were purified from healthy human donors, activated with anti- CD3/CD28 beads and co-cultured over three UM cell lines for 64 h in a membrane insert. Supernatants were collected and RNA was purified from the UM cell lines. Gene expression analysis was performed with microarrays. Protein expression in the supernatants was quantified with a multiplex bead array. For the migration assay, CD14+ monocytes purified from healthy human donors were added in the upper chamber of a transwell plate. Supernatants were added to the lower chamber and plates were incubated for 2.5 h. Migrated cells were counted using flow cytometry.Results: Gene expression analysis of UM cell lines co-cultured with activated T-cells resulted in an upregulation of chemokines such as CXCL8, CXCL9, CXCL10, CXCL11, CCL2 and CCL5. The expression of these was confirmed on the protein level. This increase of chemokines coincided with increased monocyte attraction towards co-culture supernatants in a migration assay.Conclusions: Soluble factors derived from activated T-cells shift the UM cell-transcriptome towards a more inflammatory state, including the upregulation of several chemokines, which lead to an increased migration of monocytes. Therefore, UM cells might actively participate in generating an inflammatory environment around the tumor which corresponds to a worse prognosis.

P5.20.042
Interleukin-33/ST2 Axis Promotes Breast Cancer Progression and Angiogenesis by Intratumoural Accumulation of Immunosuppressive and Natural Helper Cells

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Interleukin-33 through binding to its receptor ST2 promotes Th2 responses, but whether IL-33 signaling affects antitumour immunity is not fully understood. Using 4T1 mammary tumour model that shares many characteristics with human breast cancer we demonstrate that IL-33 is expressed in endothelial and tumour cells. Administration of IL-33 accelerated tumour growth and development of lung metastases which was associated with increased intratumoural accumulation of CD11b+Gr-1+ myeloid derived suppressor cells, CD4+Foxp3+IL-10+ Tregs and IL-13 expressing Lin-Sca-1+ natural helper cells. A marked reduction of NKp46+FasL+ tumoricidal cells with pronounced increase of PD-1 expressing NK cells were observed in tumours after IL-33 treatment. A deficiency of the ST2 gene significantly reduced myeloid suppressor cells and highly enriched FasL expressing NK cells at tumour site. IL-33 promoted intratumoural proliferation and neovascularization which was attenuated in ST2-deficient mice. Higher number of immune suppressor cells and IL-10 expressing immature CD11c+ dendritic cells in spleens and increased serum levels of IL-10 and IL-13 were observed only in IL-33 treated tumour-bearing mice. A significantly reduced NK cell, but not CD8+ T-cell cytotoxicity in IL-33-treated mice was observed and the dispensable role of CD8+ T cells in mammary tumour progression was confirmed by their in vivo depletion. We show a previously unrecognized role for IL-33 in promoting breast cancer progression through increased intratumoural accumulation of immunosuppressive cells and neoangiogenesis and by diminishing innate antitumour immunity. IL-33 may be therefore considered as an important mediator in regulation of breast cancer progression.

P5.20.043
The role of memory T lymphocytes during growth of SL2 tumours in DBA/2 mice

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The purpose of this study was to evaluate the role of central memory (TCM) and effector memory (TEM) T lymphocytes in the murine DBA/2-SL2 concomitant immunity system.
Tumours were implanted by injecting 107 SL2 lymphoma cells subcutaneously on the left (primary tumour) and the right side (secondary tumour) of the chest with the interval of 2 days. Peripheral blood was collected from the tail vein of individual mice on day 0 (prior tumour implantation) and on day 9 after primary tumour implantation. Percentages of TCM (CD8+CD44highCD62L+) and TEM (CD8+CD44highCD62L-) lymphocytes in the CD8+ subset in peripheral blood of tumour-bearing mice were analysed by flow cytometry. The weights of the tumours were measured after sacrificing the mice on day 9.
The percentage of TEM lymphocytes in the CD8+ subset significantly increased in peripheral blood of tumour-bearing mice on day 9 of experiment compared to day 0. The percentage of TCM lymphocytes was lower on day 9 compared to day 0. No correlation between the level of TEM lymphocytes in peripheral blood and the mass of primary or secondary tumour was found. Significant negative correlation was found between levels of TCM in peripheral blood and the mass of the secondary tumour.
Thus, expanded TEM lymphocytes do not influence the growth of tumours in the murine DBA/2-SL2 concomitant immunity system. TCM seem to inhibit the growth of the secondary tumour, despite their failure to expand during tumour growth.

P5.20.044
Myeloma with biclonal IgG lambda and IgD kappa in serum : a case report

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IgD myeloma is a rare entity (1-3%). Kappa subtype contributes only 10-30% of IgD myelomas and biclonal gammopathies involving IgD are even more rare. In fact, biclonal bands constitute only 3-4% of all myelomas.
Case report : We report the case of a 57 years old women, who presented inflammatory low back pain and experienced a severe decline in general health. The symptoms were present 3 months before diagnosis. Laboratory test abnormalities included an elevated erythrocyte sedimentation rate (100mm /h), normochromic normocytic aplastic anemia, hypercalcemia (2,92 mmol/l), hyper-β2-