GESINAS - ImmunoTools Award 2014

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30 years ago Professor Claude Jasmin (Hematologist at the Paul Brouse Hospital of Villejuif France and Director of the Inserm Research Unit 245) decided to found the Association Nouvelles Recherches Biomedicales- Vaincre le Cancer (NRB-Vaincre le Cancer) for supporting the research on the Campsus of the Paul Brousse Hospital where three different research institutions (Inserm CNRS and, Faculty of Medicine) coexisted with very few interactions. The ambitious original idea was that, through the Association, of triggering partnerships among the three organisms developing technology platforms commons to all research laboratories that could be supported by NRB-Vaincre le Cancer. Since the beginning, I participated to this project organizing the Scientific Board of NRB-Vaincre le Cancer and inviting scientists of the three institutions to enter in the Scientific Board.

At the same time, interacting with a young MD Scientist Doctor Claude Boucheix we tried to develop interactions among the different research institutions organizing football challenges and research collaborations. This approach resulted efficient and within two years an extended network of collaborations developed. At this point, it was very easy (almost natural) to create common scientific platforms aiming to render the Paul Brousse Campus independent on technological point of view. Since then, NRB-Vaincre le Cancer contributed supporting the development of the cytometry platform, the video-microscopy platform, the SCID factory, and more recently the transcriptomic, the proteomic and the Stem Cell platforms. As secretary of the Scientific Board I personally encouraged the attribution of doctoral and post doctoral fellowships contributing to develop sportive satellite events that in the last twenty years have assured the funding of the fellowships.

Five years ago, I moved from the Scientific Board to the Administration Board, where my job is that of developing and strengthening the links among the new generations of scientists the donors and NRB-Vaincre le Cancer. This is possible encouraging the young scientist to participate to the different challenges (football, athletic races and so on) where the scientists come in close contact with the donors and/or patrons who learn to appreciate the man and the scientist and constantly renew their financial support to the Association . By this approach, we perpetuate a continuous personal involvement among the different parts so that the young scientist are interested to develop these social partnerships that may be very advantageous for their research projects, the donors coming in contact with the scientists/athletes continue to offer their financial support and NRB-Vaincre le Cancer continues after 30 years, maintaining its character of a “family association”, to support the research of about 200 scientists.

Finally I have also contributed to create a small trimestral news letter that is emailed to thousands of small donors. In this news letter, Senior scientist present their own and general breakthroughs in the field of cancer research and all the young researchers that receive

funding from the association describe their own projects creating a further link between the Paul Brousse research Campus the donors and the association. All over the last 25 years, I have dedicated a lot of my free time to NRB-Vaincre le Cancer, and I am proud of what we have contributed to create: a broad family of scientists that goes on and continues through the new generations of scientists that actively participate and are personally concerned by the preservation of NRB-Vaincre le Cancer and of its way of existing.

Renal clear cell carcinoma (RCC) is a very aggressive cancer resistant to conventional chemio and radiotherapy with an early metastatic evolution. These properties recall those of Cancer Stem Cells (CSC) and it seems likely that renal CSCs may have a relevant role in tumor establishment, progression, and recurrence and recent data from our laboratory and from the literature suggest that RCC could be characterized by the existence of CSC subsets different for phenotype and functions. We have purified and characterized at least three different subsets of Renal CSC ($CD105^+/CD133^-$, $CD133^+/CD105^-$, $CD133^-/CD105^-$:$EPCAM^+$).

The aim of our project is to study the phenotypic (by flow cytometry), secretory (by ELISA assay) and functional (interactions with BM- MSC, PB-NK, PB-monocytes and PB-CD8 cells) stability of these different CSC subsets both *in vitro* and *in vivo*. We are also investigating the possibility of obtaining the stable differentiation (epithelial, endothelial) of this different CSC through the use of cytokines involved in renal patho- physiology such as IL-15 TGFβ, IL-4, VEGF. The aim of this study is that of obtaining a better knowledge of the properties of these CSC for developing new therapeutic strategies.

In this context, the use of monoclonal antibodies, ELISA Assays and recombinant cytokines produced by ImmunoTools is certainly important for the development of the project.

GESINAS ImmunoTools AWARD for

Bruno Azzarone includes 50 reagents

FITC - conjugated anti-human CD3, CD45, CD45RA, CD62L,

PE - conjugated anti-human CD8, CD11a, CD11b, CD11c, CD14, CD25, CD33, CD34, CD43, CD44, CD45, CD45RB, CD56, CD62L,CD69, CD105, IL-6,

PerCP - conjugated anti-human CD3, CD4, CD45,

APC - conjugated anti-human CD25, CD56, CD69,

human IL-6 ELISA-set for 96 wells, human IL-8 ELISA-set for 96 wells, human IL-12p40 differential (detect IL-12p40 but not IL-12p70) ELISA-set for 96 wells, human TNFa ELISA-set for 96 wells (each 3 reagents),

recombinant human cytokines: rh IL-1beta /IL-1F2, rh IL-4, rh IL-8, rh IL-15, rh IP-10 /CXCL10, rh MCP2 / CCL8, rh MIP-1α/ CCL3, rh MIP-3 / CCL19, rh SDF-1α / CXCL12a, rh SDF-1β /CXCL12b, rh VEGF-A/VEGF-165,

FITC - conjugated anti-mouse CD45,

recombinant mouse cytokines: rm IL-7, rm IL-15, rm M-CSF

DETAILS more AWARDS