

PRESS & MEDIA RELEASE

A half million Swiss francs for two research projects on the tumor environment

Zurich, 25.10.2017 – This year's Swiss Bridge Award goes to a research group from Israel and a research group from Switzerland. With the 250 000 Swiss Francs awarded to each, the researchers aim to investigate interactions between cancer cells and the somatic cells in their immediate environment.

The 2017 Swiss Bridge Foundation's Award is being presented to researchers under the age of 45 years old who are pursuing the investigation of the complex interactions with which tumor cells and cells within their immediate environment influence each other. These interactions are not only theoretically of interest, but that they also have practical implications, since increasingly more therapeutic approaches are not directed at cancer cells, but instead are trying to prevent blood supply to tumors or are inciting the immune cells to fight against cancer cells.

A total of 59 scientists applied for this year's Swiss Bridge Award. In a two-step evaluation process, a eleven-member jury selected two projects. Today, both project leaders, Yaron Carmi, from the Tel Aviv University, Israel, and Johanna Joyce, from the University of Lausanne, Switzerland, receive 250 000 Swiss francs each for the implementation of their research projects.

Interaction of different immune cells

In their project, Yaron Carmi and his team would like to find out what prevents the so-called cytotoxic T cells from penetrating into the area occupied by the tumor. In fact, within the immediate vicinity of most tumors, many other immune cells, such as dendritic cells, are found. These play an important role in the maturation and activation of cytotoxic T cells. Upon closer examination of this interaction among different classes of immune cells, Carmi's research team hopes for new insights and ideas on how immunotherapies could be improved, which until now, unfortunately, are currently only effective in a small percentage of patients.

New Points of Attack against Brain Metastases

In Johanna Joyce's project, the role of immune cells within the vicinity of metastases in the brain is investigated. For a long time, science assumed that the so-called blood-brain barrier prevents immune cells from entering the brain. However over time, evidence has grown which shows that the blood-brain barrier is increasingly

leaky in advanced cancer diseases; and that tumor cells, as well as immune cells can infiltrate the brain. Therefore, immune cells coming from breast and lung cancer can often be found in brain metastasis biopsy specimens. The majority of these are so-called neutrophilic cells. Johanna Joyce and her team would like to decipher the role of this class of immune cells, with the hope of identifying new therapeutic points of attack.

The Swiss Bridge Foundation was founded with the support of the Swiss Cancer League, over 20 years ago. Its goal is to financially support high-quality research projects in the fight against cancer, with the help of private donors and foundations. Since the Foundation's inception, Swiss Bridge has received more than 30 million Swiss Francs and has been supporting research projects in Belgium, Brazil, England, France, Germany, Israel, Italy, Norway, Sweden, Spain and Switzerland.

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