

UF and Moffitt to Bring Myeloid Cell Scientists Together

Striving to gain a big picture understanding of a key cell's role in a variety of different inflammatory diseases, including cancer, the University of Florida College of Medicine and the H. Lee Moffitt Cancer Center and Research Institute are organizing a symposium to assemble leading researchers from around the country. The focus of the symposium is a poorly understood cell, the myeloid derived suppressor cell, whose functions are still unknown in both health and disease.

“Regulatory Myeloid Suppressor Cells in Health and Disease” will be held March 12 to 15 in Clearwater Beach, Fla. The four-day conference will bring together – for the first time – investigators in fields such as cancer, trauma, autoimmunity and chronic inflammation, who are studying what appears to be similar populations of these immature myeloid cells, which arise from the bone marrow and have the capability to modify the immune system.

“The goals are to learn why the numbers of these cells expand so dramatically during these diverse diseases, what are the common mediators that drive the expansion of these cells, whether these cells in cancer patients are similar to those seen in other inflammatory diseases, and whether therapeutic efforts to modulate these cells in one disease can be applied to other diseases,” said organizing committee co-chair Lyle L. Moldawer, Ph.D., vice chairman of research for the UF department of surgery.

Organizing committee chair Dmitry I. Gabrilovich, M.D., Ph.D., a professor immunology at Moffitt, said as always with new, emergent fields there are concerns and confusion, so the best way to resolve these issues is to meet and discuss discoveries and resolve questions.

“We want to put together a more cohesive picture of the role of regulatory myeloid suppressor cells in pathology and so that we can then develop therapeutic strategies to block their negative role in disease.”

He added, very often we need to know how to control the cells – we don't know how to do this yet.

Researchers do know that the number of these cells expand dramatically during infection and inflammation. In cancer, the cells are thought to suppress the anti-tumor activities of the host immune system, allowing the tumor to grow faster and metastasize. In addition, they appear to interfere with current therapeutic approaches aimed at stimulating the patient's own immune system to attack and kill the tumors.

“The allure is that if we can prevent their expansion in tumors or sepsis then we can prevent the immune suppression that accompanies these diseases, resulting in therapies working more effectively for tumors and a decline in secondary infections for sepsis patients,” concluded Dr. Gabrilovich.

Initial funding to support the symposium has come from the UF College of Medicine and Moffitt Cancer Center.

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