

# Dr. Jashodeep Datta Wins Surgical Society Award and Grant to Fuel Further Research in Pancreatic Cancer

Jashodeep Datta, M.D., a surgical oncologist at Sylvester Comprehensive Cancer Center at the University of Miami Miller School of Medicine, has received the prestigious Joel J. Roslyn Faculty Research Award from the Association for Academic Surgery (AAS).

The AAS selected Dr. Datta, who specializes in research into the treatment of hepatopancreatobiliary and gastrointestinal cancers, from among many early-career applicants nationwide, including four finalists who were invited to interview for the award. The award comes with a one-year \$50,000 grant to accelerate his research into how pancreatic cancer eludes the body's immune defenses.



**Dr. Jashodeep Datta**

Omaida Velazquez, M.D., surgeon-in-chief for the University of Miami Health System and Jackson Health System, was a prior recipient of this award in 2003.

“It catapulted her to the highest echelon of academic surgery and to her current position as chair of the Dewitt Daughtry Family Department of Surgery at the Miller School of Medicine. We expect no less from Dr. Datta,” said Henri R. Ford, M.D., M.H.A., dean of the Miller School and former AAS president.

### **Provocative research findings**

Dr. Datta submitted a detailed history of his research to date, his short- and long-term career goals, and a

comprehensive research proposal. His research identifies a provocative and potentially paradigm-shifting mechanism that immunosuppressive cells in the pancreatic cancer tumor “neighborhood” or microenvironment – called myeloid derived suppressor cells (MDSC) – use to inhibit effector T-cell function and other essential immune defenses from reaching and attacking the tumor. His findings indicate that signaling cues from pancreatic cancer tumor cells harboring two high-risk genetic mutations actually initiate and perpetuate the immunosuppressive functions of these MDSCs.

“Dr. Datta is a superb surgeon-scientist, and we were very lucky to have recruited him to University of Miami and Sylvester Comprehensive Cancer Center,” said Nipun Merchant, M.D., Dr. Datta’s mentor and professor of surgery, associate director of translational and director of surgical oncology research at Sylvester. “The AAS Joel Roslyn Faculty Award is a highly competitive and prestigious award given to very promising young faculty based on the merit of their scientific work. His selection for this award is reflective of the outstanding work he has done in such a short period of time since his arrival to UM, as well as his potential to become a leader in academic surgery.”

“The research builds on ongoing work in my laboratory,” Dr. Datta said. “It’s predicated on preliminary data that I’m in the process of publishing.”

The grant also builds on work performed with his prior funding, including another prestigious surgical society grant – the Franklin H Martin, M.D., FACS, Faculty Award (2020–2022) from the American College of Surgeons.

## Orchestrating “immune exclusion”

The research project specific to the [AAS award](#) is called “Reprogramming Tolerogenic Signaling in Myeloid Derived Suppressor Cells by Targeting Tumor-intrinsic Cxcl1 in Ras-p53 Cooperative Pancreatic Cancer.” Dr. Datta and his collaborators have identified certain signaling pathways in pancreatic cancer cells that orchestrate “immune exclusion” – a process that keeps elements of the body’s natural immune defenses away from cancers. They focused on RAS and p53 mutations, two genetic mutations known to be associated with worse survival in many gastrointestinal cancers, including pancreatic cancer, and discovered that these two mutations cooperate to secrete molecules belonging to the CXCL family of chemokines.

Importantly, regarding these CXCL chemokines, Dr. Datta said, “When we genetically silence the ability of cancer cells to produce these chemokines in mouse models of pancreatic cancer, it reverses this immune exclusion and allows the T-cells to come back into the cancer. Impressively, we also see the cancers getting smaller.”

In elucidating the mechanisms by which these genetic manipulations reverse immune exclusion, Dr. Datta and his team have identified MDSCs as the crucial link between these tumor-elaborated chemokines and T-cell function. His ongoing work is defining the mechanisms by which these MDSCs, beckoned into the tumor by these chemokines, inhibit T-cell function and promote immune exclusion.

“I really believe the myeloid-derived suppressor cell is one of the biggest culprits in pancreatic cancer,” Dr. Datta said.

## Targeting inhibitory mechanisms

The research also goes beyond identifying mechanisms that explain how pancreatic cancers keep T-cells at bay, and proposes a potential strategy to target these inhibitory mechanisms in patients with pancreatic cancer.

“Pancreatic cancer is notoriously unresponsive to chemotherapy or immunotherapy,” Dr. Datta said.

He believes this research might help clinicians identify biomarkers to inform which tumors may respond to standard treatments or condition tumors so they are more vulnerable to therapy.

“An exciting road lies ahead,” Dr. Datta said. “The best is yet to come. There is nothing but hope and optimism for patients with pancreatic cancer.”

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