

# Dr. Julie Djeu, *TRAILBLAZER*

Moffitt's First Basic Research Scientist  
Describes 30 Years Of Progress

*By Janan Talafer*

Julie Djeu, Ph.D., recalls the day in 1992 that she received a phone calling recruiting her to be the first research scientist at Moffitt Cancer Center.

“I was working at the University of South Florida College of Medicine, where I had been teaching for about eight years,” said Dr. Djeu. “I got a call from the chairman of pathology at Moffitt. He told me the cancer center had four labs and I could have all of them.

“It caught me by surprise,” said Dr. Djeu. “I had been so busy at USF that I hadn’t even realized there was a new cancer center next door. I said, ‘No I’m not interested. I don’t need four labs in the hospital.’”

Luckily for Moffitt Cancer Center, its incoming director wouldn’t take “no” that easily. Dr. Djeu got a personal phone call before he’d even moved into his office. Moffitt was putting together a top-notch team, and she was his first recruit.

## **EARLY RESEARCH LAYS GROUNDWORK FOR IMMUNOTHERAPY**

A respected immunologist, Dr. Djeu trained at the National Cancer Institute and built the Cytokine Biology Section of the Food and Drug Administration in Bethesda, Md. While there, she had done landmark work in unlocking some of the secrets of the body’s immune system, helping lay the foundation for the future growth of immunotherapy as a novel treatment for cancer.



*Photography: Ray Reyes*



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JULIE DJEU, PH.D.  
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“I became the first scientist to look at immunomodulators in cancer,” said Dr. Djeu. “I set many of the guidelines at FDA that are still in existence today.” Among her accomplishments: helping identify the role of natural killer (NK) cells in activating the immune system to kill tumor cells. She also did pioneering work with interferon, a class of proteins that also trigger the immune system.

Within a half hour of that initial phone call about the Moffitt position, Dr. Djeu had changed her mind. “I was charmed into joining to build the best cancer center in the country,” said Dr. Djeu. “And we worked really hard to put together the program here.”

Today Moffitt’s research program is highly respected. There are more than 150 research scientists, five research programs, a respected post-doctoral fellowship program, graduate training in cancer biology and cutting-edge work being done in basic, translational, clinical and population science research.

But 30 years ago, that wasn’t the case. A world-class research program at Moffitt was still a far-in-the-future goal.

“When I first arrived, everyone I knew told me it was the most foolish thing to think that we could take a little hospital and build a cancer center out of it,” said Dr. Djeu. “I just smiled and said let us see about that.” A dedicated scientist with a passion for her work, Dr. Djeu’s courage and perseverance in the face of obstacles is evident. “I love a challenge,” she admits.

She realized that Moffitt’s small size might offer an advantage over a larger, better established institution. “I thought there was a real opportunity for us to be able to try something new,” said Dr. Djeu.

She was also impressed with the sense of duty that she saw from the staff. “I felt the people here at Moffitt were very passionate about making it one of the top places in the country. Everyone from the clinicians and the nurses to the housekeepers was dedicated to patient care.”

#### **YOUNGEST CANCER CENTER EARNS NCI COMPREHENSIVE STATUS**

That level of commitment paid off. By 1998, Moffitt had achieved a significant milestone – National Cancer Institute designation. It was an amazing achievement in a short period of time. The moment when she heard the good news is one of the most memorable moments in Dr. Djeu’s 24-year career at Moffitt.

“We were in this big open hall in the former Moffitt Research Building,” says Dr. Djeu. “The center director was waving what we called the pink sheet and saying, ‘Guess what? We’ve done it!’ We were so proud. We still hold the record of establishing NCI designation in the shortest amount of time.”

Just three years later, Moffitt broke another record when the center’s programs in patient care, research and cancer prevention met NCI approval, giving the organization recognition as an NCI-designated Comprehensive Cancer Center. Today, 15 years later, Moffitt is still the only comprehensive cancer center based in Florida.

As the former chair of the Immunology Department, Dr. Djeu says her career at Moffitt has been an incredible journey. What sets Moffitt apart, she says, is the cancer center’s focus on integrating clinical, translational, population science and basic science research activities to fast-track discoveries in the lab to the patient’s bedside.

“Right from the start, we knew we wanted to develop a molecularly-based research program that would be immediately translational,” said Dr. Djeu. “We felt that whatever we discovered must go into improving patient care rather than just into a research paper that you never hear about again.”

#### **OPPORTUNE CAREER CHOICE**

Dr. Djeu says the decision to dedicate her life’s work to immunology was really a matter of being in the right place at the right time. “Life is really serendipitous,” she said. “It’s not always what you choose, but what comes to you and I was really good at grabbing everything that came my way and making the best of it.”

While she was a doctoral student at George Washington University, a colleague suggested that she instead apply to the NCI to complete her dissertation. “I sent my CV to the NCI, and a physician-scientist immediately called me,” said Dr. Djeu. “He was a tumor immunologist and within six months of working with him we discovered natural killer cells. The rest is pretty much what I’ve been working on ever since.”

Over the decades, the progress made in immunology research has been nothing short of dramatic. Major breakthroughs in the ability to clone genes, the discovery of T cells and natural killer cells, and a better understanding of how the immune system recognizes cancer cells have led to novel new therapies.



Photography: Ray Reyes

More recently, said Dr. Djeu, new awareness of how cancer cells “blind” the immune system and avoid detection has led to breakthrough drug discoveries with a new class of therapeutic agents called checkpoint inhibitors.

And in August 2016, Moffitt was named one of only five institutions that make up the Production Assistance for Cellular Therapies (PACT) group for the National Heart, Lung and Blood Institute within the National Institutes of Health. This exclusive group includes the only NHLBI-approved facilities to produce cell-based therapies for scientific research.

Cell-based therapies are treatment in which living cells are injected into a patient. Immunotherapy using T cells to fight cancer cells is an example of this. As part of the NHLBI PACT group, Moffitt will manufacture human cells that will be used to help develop early-stage clinical trials to evaluate the safety and effectiveness of new therapies.

#### **PREPARING THE NEXT GENERATION OF PHYSICIAN-SCIENTISTS**

As the current associate center director for Education and Training, Dr. Djeu oversees Moffitt’s many programs focused on training the next generation of cancer researchers. That includes a postdoctoral fellowship program, a cancer biology Ph.D. program, and several programs for undergraduate and high school students.

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Dr. Djeu is proud of the programs’ many success stories. She points to the more than 50 graduates of the cancer biology doctoral program, several of whom are now faculty members at such prestigious organizations as Johns Hopkins University, MD Anderson Cancer Center, and the University of Nebraska, helping spreading Moffitt’s legacy across the country.

The future of cancer research at Moffitt continues to be bright, she says. “Research is not so much changing as it is evolving,” said Dr. Djeu. “As new technologies come to the forefront, we need to embrace them. The next generation of physician-scientists will have amazing tools to work with that will move us ever closer to the cure for many types of cancers.” 🍷