

Chemist Shoulders Additional Role: RESEARCH ADVOCATE

by Michelle Bearden

For someone who hated chemistry in high school, Marilena Tauro, Ph.D., surprised a lot of people — including herself — when she eventually fell in love with the subject during her university years.

“Who would have guessed?” says Dr. Tauro, 29, with a laugh. “Maybe it’s because I love a challenge. But once I realized you could always combine existing matter to make something new, I began to appreciate the power of chemical knowledge and application. Here was an opportunity to do something practical and to do something that would help others.”

Dr. Tauro, born and raised in Italy, earned her Ph.D. in pharmaceutical chemistry at the University of Bari in March 2013. Among her accomplishments: developing a number of molecules based on novel strategies to improve their selectivity for bone metastases.

It’s important work. Cancer metastases are the primary causes of death for multiple myeloma, breast and prostate cancer patients. Metastatic cancers induce extensive bone destruction by manipulating normal bone physiology, which causes a great deal of pain to patients and can lead to bone fracture. Ultimately, this greatly impacts the patient’s quality of life.

Despite medical advances, Dr. Tauro says, the treatments available remain limited and geared toward pain management rather than actually curing the lesions.

Her intense focus on making a difference led Dr. Tauro to leave her comfort zone and family behind in Italy and come to Tampa in September 2013 to work as a postdoctoral fellow in the Lynch Lab at Moffitt Cancer Center, led by Conor Lynch, Ph.D. Here she would get the opportunity of a lifetime to hone her skills under the tutelage of the respected researcher.

An admitted workaholic, Dr. Tauro doesn’t have much time to be homesick. Her current project is based on understanding the factors through which metastatic breast cancer cells interact

with normal cells of the bone. She has given herself a lofty goal: to develop new therapies to prevent bone metastases.

“Given the clinical significance of breast cancer and its mortality, I felt this would be the best area in which to focus my combined chemistry and biology efforts,” she says.

In a field traditionally dominated by men, Dr. Tauro has her own personal science heroine: the late Rita Levi-Montalcini, an Italian developmental neurobiologist who was a co-winner of the 1986 Nobel Prize in Physiology or Medicine with colleague Stanley Cohen for their discovery of nerve growth factor. That accomplishment serves as a reminder that gender is no factor in achieving notable advances in the world of science.

But the outgoing Dr. Tauro would not be content isolated in a lab and spending all of her time peering under a microscope. That desire to make a difference and help others once again takes her out of her comfort zone and into a more public position. She serves on Moffitt’s Government Relations Task Force, and in July, she became chair of the Moffitt Postdoc Association, a group that unites Dr. Tauro’s peers on campus to work toward similar goals, offer each other support, resolve concerns and give them more visibility outside the confines of the lab.

And Dr. Tauro’s role as chair gives her an outlet to advocate for one of her strongest passions: the importance of research funding. Because without the money to support the work, “there is no pursuing your dream and accomplishing your goals.” She, like many postdocs, devotes a significant amount of time to writing grant proposals in order to finance her own research.

And it’s becoming more and more competitive. According to the National Institutes of Health (NIH), budget cuts in 2013 meant that the agency awarded 640 fewer research grants. What does all this mean?

“It discourages talented men and women from pursuing careers in science. It drives people to other countries where they are more willing to invest in science,” Dr. Tauro says. “And it’s driving early-stage investigators right out of the field. What we lose by not giving enough funding is hard to measure immediately, but the long-term ramifications are substantial.”



“When it becomes personal — like having a family member survive a cancer because of a new discovery — then people can grasp the significance.”

MARILENA TAURO, PH.D.

In September 2014, Dr. Tauro traveled to Washington, D.C., on behalf of Moffitt to take part in the Rally for Medical Research organized by the American Association for Cancer Research, a one-day blitz on Capitol Hill by advocates of research funding. She was part of a broad coalition of groups representing the medical research community that met with members of Congress, urging them to make funding for the NIH a national priority.

For Dr. Tauro, still new to this country and how the political process works, it was a fascinating experience. She got a range of responses from one-on-one meetings with Florida representatives, such as Bill Nelson, Kathy Castor and Marco Rubio. In the limited time she got with her audience, Dr. Tauro kept her message on point and summed up why research funding is so critical.

“Because we’re working on giving hope to patients,” she says. “When it becomes personal — like having a family member survive a cancer because of a new discovery — then people can grasp the significance.”

With financial support, “the possibilities are endless” on the impact researchers can make, from eradicating cancer to slowing down the ravages of Alzheimer’s disease. 

*“Be an advocate
for science.”*