

Academia-Industry Relationships Driving Drug Discovery



Chris Green, CPA, met with Josephine A. Taverna, M.D. and Nameer Kirma, Ph.D. to discuss the research sponsored agreement with Tolero Pharmaceuticals, Inc.

Research sponsored by academia-industry partnerships are becoming the new normal to drive the development of novel therapeutics. Rising costs for research and development coupled with a highly competitive funding landscape have prompted researchers to explore other pathways to accelerate biomedical research and improve patient outcomes.

[Josephine A. Taverna](#), M.D., assistant professor of medicine (hematology-oncology) noted that one of her top reasons for joining UT Health San Antonio was the institution's reputation and strength in drug development. Shortly after her appointment, Dr. Taverna

was encouraged to apply to the [Mentored Research Career Development Program](#) (KL2), a training and workforce development component of the Clinical and Translational Science Award (CTSA) program. As a KL2 Scholar, Dr. Taverna became eligible for an [industry externship](#) through the [NCATS-Eli Lilly and Company program](#) at the Eli Lilly headquarters in Indiana.

Grateful for this opportunity, she shared that this experience played a large role in launching her career. "I am fully committed to collaborating with a multidisciplinary team of scientists in both academia and industry to conduct translational research that will make significant impact in the clinic for our cancer patients through biomarker drug discovery."

Dr. Taverna's Eli Lilly externship immersed her in an Alzheimer's disease working group, but she took every opportunity to build relationships with scientists working in oncology and other diseases. After completing her externship, she met with Steven Weitman, M.D. who introduced her to Tolero Pharmaceuticals, Inc. co-founder and chief executive officer, [David J. Bearss](#), Ph.D., (alumnus of cell systems and anatomy). Working with Tolero was a natural fit for Dr. Taverna because the pharmaceutical company's interests in understanding biomarkers for drug discovery intersected with her own. "In the rapidly changing pharmaceutical world, academic-industry collaboration can make breakthroughs that provide future novel approaches for drug discovery," said Dr. Bearss, "Dr. Taverna's clinical knowledge and experience with an emerging new technique [CyTOF] has been beneficial identifying potential key biomarkers. We look forward to building this research partnership at my alma mater."

Dr. Taverna proposed to Tolero's leadership how the use of the Cytometry by Time of Flight (CyTOF®) instrument in the [Bioanalytics and Single-Cell Core Lab \(BASiC\)](#) would deliver a more robust analysis of key biomarkers for drug development at the single-cell level. [Nameer Kirma Ph.D.](#), director of the BASiC Core Lab and associate professor (molecular medicine), provided his expertise regarding the CyTOF® instrument and mass cytometry to Dr. Taverna and the Tolero team. This sponsored research highlights the synergistic relationship and leveraging of resources through academia-industry partnerships.



Drs. Taverna and Kirma utilize the CyTOF® instrument in the BASiC core lab to better understand key biomarkers at a more nuanced level.