Biomedical Research Seminar Series

Speaker Announcement

Friday, Jan. 19, 2018 @ 3:30 pm

Domenici Hall, Room 109

(Refreshments served at 3:00)

Renato Aguilera, PhD

Professor
Department of Biological Sciences
University of Texas at El Paso

From the Study of DNases to Anti-Cancer Drug Discovery

Our early work involved the search for enzymes involved in site-specific DNA recombination in the immune system. Using crude lymphoma extracts resulted in the discovery of a potent nuclease that preferentially cleaved at G-rich motifs predicted to be involved in oncogene translocations. This enzyme was cloned by my group and subsequently determined to encode DNase II; an enzyme involved in engulfment-mediated DNA degradation. During the past decade, we established a drug screening core facility and have discovered novel compounds with potent anti-cancer activity. Transcriptome analyses have revealed that one of our novel drugs acts as a proteasome inhibitor while another drug inhibits an enzyme that is important for the degradation of superoxide radicals. Ongoing screens have also uncovered additional anti-cancer drugs that function via alternative mechanisms to induce cell death. The ultimate goal of our research is to discover drugs that have specificity and potency against a variety of human cancer types with the hope that some will be useful in the clinical setting.

NM STATE

All About Discovery!™
New Mexico State University
nmsu.edu

The BMRS series is supported by the Office of the Provost, the College of Arts and Sciences, the Departments of Chemistry & Biochemistry and Biology, and the NM-INBRE, RISE, MARC, and HHMI programs.

For more information or to meet with the speaker please contact Ryan Ashley at ryashley@nmsu.edu