



Stony Brook University

Departments of Chemistry and Pharmacological Sciences
present

The Eighth Francis Johnson Lecture



Prof. Craig M. Crews

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Professor of Chemistry and Pharmacology
Yale University

Induced Proximity Drug Modalities: Hijacking Mother Nature to Control Protein Function

Friday, May 1, 2026, 3:30 pm

Wang Center Lecture Hall 1

Reception 4:30 pm, Wang Center East Hall

My lab uses 'Applied Chemical Biology' to develop novel therapeutic modalities. Enzyme inhibition has proven to be a successful paradigm for pharmaceutical development, however, it has several limitations. Alternatively, for the past 25+ years, my lab has focused on developing Proteolysis Targeting Chimera (PROTAC), a new 'controlled proteolysis' technology that overcomes the limitations of the current inhibitor pharmacological paradigm. Based on an 'Event-driven' paradigm, PROTACs offer a novel, catalytic mechanism to irreversibly inhibit protein function, namely, the intracellular destruction of target proteins. This approach employs heterobifunctional molecules capable of recruiting target proteins to the cellular quality control machinery, thus leading to their degradation. More recently, we have developed RIPTACs to exploit heterobiofunctional mediated neo-PPIs to elicit tumor-specific 'super occupancy' of essential proteins, leading to tumor cell death.