Poster presentation:

In vitro research method for screening inhibitors of protein translation

CONTINUING EDUCATION (CME/CE/CEU) CREDITS: P.A.C.E. CE | Florida CE

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Biography: Krishna's Ph.D. and postdoctoral work focused on understanding control mechanisms regulating the initiation of protein translation in eukaryotes. Following his academic training, he joined Thermo Fisher Scientific and has led multiple projects including the development of the HeLa and CHO lysate based cell-free translation systems, also known as Thermo Scientific™ 1-Step *In Vitro* Translation (IVT) Systems, which contain all the necessary reagents to express proteins of interest in as little as one hour.

Abstract:

In vitro translation (IVT), or cell-free expression, offers a unique and powerful research tool to screen for translational inhibitors that regulate both cellular and viral protein expression. Here we discuss a simple, quick method to identify inhibitors of both cap-dependent and cap-independent protein translation, using the Thermo Scientific™ 1-Step Human Coupled IVT Kit. Rapid assay readout (60–90 min), amenability for miniaturization, and insensitivity to compound toxicity make *in vitro* translation an attractive alternative to cell-based screens for high-throughput screening (HTS) of novel inhibitors of protein synthesis.

Learning objectives—in this presentation you will learn the following information:

- Understand how *In vitro* translation systems offer a novel approach to studying protein synthesis inhibition.
- Demonstrate how the 1-Step Human Coupled IVT Kit can be utilized for high-throughput screening of protein synthesis inhibitors in a rapid, miniaturized format.
- Identify the unique advantages of using dual luciferase assays