Cell Biology Tools Offer Unique Benefits

University of South Florida

Cell proliferation assays are widely used in cell biology research, in academia, and in the burgeoning global biotech and pharmaceutical sectors. Assays, or scientific tests, are used to measure the impact of a given substance or environmental treatments on cells (such as sunlight, temperature, and other factors) by detecting whether the impacted cells proliferate, stay the same or die. Whether they're used to test new cancer drugs or anti-dandruff shampoos, cell proliferation assays are critically important scientific tools at the heart of the cellular fact-finding process.

In the past, these assays typically involved radioactive methods that included the following sequence: adding radioactivity to the cells, incubating for several hours or overnight, harvesting the cells, washing the cells, applying the cells to a special filter in a vial, adding a hazardous reagent (a substance used in a chemical reaction) and finally reading the results. But this all changed, due to University of South Florida's Professor Terence C. Owen, who worked in conjunction with Promega Corp.'s assay development group.

Owen, now a retired professor emeritus, devised a new chemical compound for use in cell proliferation analysis methods that has made it easier and faster to conduct experiments since it involves a simpler and shorter sequence of actions: adding the reagent to cells, mixing the cells and the reagent and reading the results.

> *By reducing the number of steps and thereby reducing variability, the new chemical compound technology used in the cell proliferation assay helps researchers obtain more reliable data.*

An added benefit is that the non-radioactive process reduces the cost of waste disposal. This technology was licensed to Promega Corp. and is the cornerstone in the assays now known as the CellTiter 96 AQueous product line of cell proliferation analysis tools.

The CellTiter 96 AQueous One Solution Cell Proliferation Assay remains widely used throughout the academic community, largely due to ease-of-use and speed with which research data may be generated.

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