

CytoSMART envisions “a world in which diseases are addressed in an accelerated pace, through live-cell imaging research that is fully automated, time effective, affordable with the ability for continuous sample tracking and analysis”.

Its mission is “to offer affordable products to every mainstream laboratory by leveraging advanced cloud-based that obtain superior results by using artificial intelligence solutions that are robust against hardware imperfections”.

For many years, researchers in labs have conducted experiments by using indirect techniques, for example, the Alamar blue assay technique. Indirect methods add a substance to the cell cultures that highlights some of them. When the cells turn purple, the intensity of the reaction on the substance is visualized by a light or dark purple. However, this technique has a disadvantage. When there are two cells with completely different situations, they could both react to the substance with the same intensity. Therefore, it is not a very reliable method. In addition, the sample will be useless because of the added substance.

To replace the indirect technique, CytoSMART has developed the CytoSMART Omni. This product conducts a live-cell analysis of cell cultures inside any incubator. It is a small and affordable product that offers a stable environment for cell cultures. This revolutionary device needs less equipment and offers high quality for a relatively low price. Furthermore, the CytoSMART Omni is a live-cell analysis, so it does not use substances that lead to unreliable results and influenced samples.

Life science is about studying living organisms. Yet most life science microscopes cannot look at effects over time. The development of microscopes has been held back by the need to process unprecedented amounts of data automated microscopes produce.

Therefore, CytoSMART uses Cloud Computing and Artificial Intelligence in the Azure Cloud.

The market can be divided into four segments. Each segment has its own application.

- Video recording
- Cell counting
- Screening
- Inspection