FAQ: General Questions

Q1: WHAT IS 3D CELL CULTURING?

A: Cells cultured in standard flat (2D) culturing flasks or wells tend to adapt to this unfamiliar environment by stretching out randomly along the surface and thus becoming more or less flat. This causes the cells to effectively lose roughly 50 % of their surface area in contact with surrounding culture medium as well as reducing possible cell-to-cell interactions by the same amount.

By creating a network of electrospun nanofibers for the cells to grow on, we provide the cells with a three-dimensional (3D) environment, similar to collagen and elastin fibers of the extracellular matrix (ECM) that cells normally reside in.

Adding a third dimension to a cell's environment creates significant differences in cellular characteristics and behavior such as differentiation, drug metabolism, gene expression and proliferation. Importantly, these differences normally create a greater similarity between the cultured cells and the living organism (e.g., human being) the cells are meant to represent and leading to more useful data and more relevant research.

For more information and a collection of relevant publications please have a look at www.3DCellculture.com.

Q2: WHAT MAKES CELLEVATES ELECTROSPUN SCAFFOLDS DIFFERENT FROM OTHERS?

A: Cellevates scaffolds are produced with our patented high-throughput electrospinning technique which significantly improves well-to-well and batch-to-batch consistency and thereby reduce experimental variation. Our scaffolds provide cells with a true 3D micro-environment as opposed to many other 3D cell culturing products available on the market, that rather resemble more or less rugged 2D surfaces. Furthermore, Cellevates scaffolds are sterilized and ready to use out of the box and comes in a range of cell culturing formats according to industry standard sizes. Our products are compatible with light- and fluorescent microscopy and are designed to be compatible with both standard as well as high-throughput equipment. By creating a network of electrospun nanofibers for the cells to grow on, we provide the cells with a three-dimensional (3D) environment, similar to collagen and elastin fibers of the extracellular matrix (ECM) that cells normally reside in. Adding a third dimension to a cell's environment creates significant differences in cellular characteristics and behavior such as differentiation, drug metabolism, gene expression and proliferation. Importantly, these differences normally create a greater similarity between the cultured cells and the living organism (e.g. human being) the cells are meant to represent and leading to more useful data and more relevant research. For more information and a collection of relevant publications please have a look at www.3DCellculture.com.

Q3: WHY NANOFIBER SCAFFOLDS?

A: Cellevate 3D scaffolds effectively mimics the structural properties of ECM and are easily tailored for specific applications through functionalization etc. Adaptable to work with just about any method of analysis applicable to standard 2D cell culturing alternatives, easing the impending transfer from 2D to 3D. Nanofiber

scaffolds allows for a true 3D environment and allows cells to stretch and migrate throughout the whole scaffold material.

Q4: IF I AM LOOKING FOR SOMETHING SPECIFIC, CAN YOU HELP ME OUT?

A: Cellevate specialize in custom scaffolds based on your experimental needs, send us an e-mail at info@cellevate.com and we will discuss a specific solution that works for you!