

口腔顎顔面矯正学分野 特別講演のお知らせ

『Accelerating Next-Generation Therapies Through Generation of Tissue-Mimetic Microenvironments』

日 時 : 2024年 5月17日(金) 16:30~18:30

場 所 : 歯学部3階 講堂

演 者 : A.J. Mellot, PhD

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Abstract

We live in a 3D world, and so do our cells. Yet, for nearly 70 years, we have grown cells on flat hard plastic surfaces. Interestingly, the surfaces of organs and tissues in the human body are contoured and sophisticated. Different tissues have different mechanical as well as osmotic properties that contribute both to the structure and function of the tissue. So, it begs the question: “Why do we grow cells on flat plastic surfaces?” A better question is “What if we could grow cells in formats that facilitate the generation of native environments?” Can a tissue-mimetic microenvironment yield high-quality cells with stable phenotypes? Can cells maintain function better in an environment that mimics their native environment? These are the questions we ask at Ronawk. Ronawk’s Bio-Block Universe™ sits at the precipice of biotechnology. The future of next generation therapies is not only about inventing them but manufacturing them in a better way. We deploy innovative tissue engineering strategies and findings in epigenetics to guide our thinking and have developed a state-of-the-art Bio Factory™. Ronawk’s technology enables cells to generate tissue-like microenvironments that produce healthy cells and subsequent biologics which can be captured for therapeutic applications. Ronawk’s Bio-Blocks™ enable cells to generate tissue-like microenvironments that accelerate research in regenerative medicine, wound healing, hearing restoration, vaccine production, liver disease treatment, and remediation of neuromuscular degeneration. By designing a system that allows for consistent, repeatable, and scalable experiments, Ronawk is driving research forward across multiple disciplines.

*本講演は、大学院医学研究科、医科栄養学研究科、口腔科学研究科の大学院特別講義
ならびにクラスターコアセミナー(骨・筋とCaクラスター)を兼ねています

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