

Growing cells in 2D under static conditions has long been the gold standard of cell culture, despite this method not being representative of the complex in vivo environment. The use of animal models also has clear ethical and scientific limitations, and increasingly the 3Rs (replacement, refinement, reduction) in relation to animal models are being integrated into the modern-day scientific practice.

Focusing on new 3D in vitro methods now available to researchers, this book brings together examples of leading-edge work being conducted internationally for improving in vitro cell culture methods, in particular the use of systems for enabling cell culture under laminar flow and the use of 3D scaffolds for providing cells with a structure which replicates the function of the extracellular matrix and encouraging interactions more akin to an in vivo environment.



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