Preface

An organoid is a miniaturised and simplified version of an organ produced in vitro in three dimensions that mimics the key functional, structural, and biological complexity of that organ. It is derived from one or a few cells from a tissue, embryonic stem cells, or induced pluripotent stem cells, which can self-organize in three-dimensional culture owing to their self-renewal and differentiation capacities. The technique for growing organoids has rapidly improved since the early 2010s, and The Scientist named it one of the biggest scientific advancements of 2013. Scientists and engineers use organoids to study development and disease in the laboratory, for drug discovery and development in industry, personalized diagnostics and medicine, gene and cell therapies, tissue engineering, and regenerative medicine.[i]

In the present book, twelve typical literatures about organoid published on international authoritative journals were selected to introduce the worldwide newest progress, which contains reviews or original researches on organoid. We hope this book can demonstrate advances in organoid as well as give references to the researchers, students and other related people.

The Editorial Board of Academic Archives

Scientific Research Publishing

November 10th, 2025

[i] https://en.wikipedia.org/wiki/Organoid