

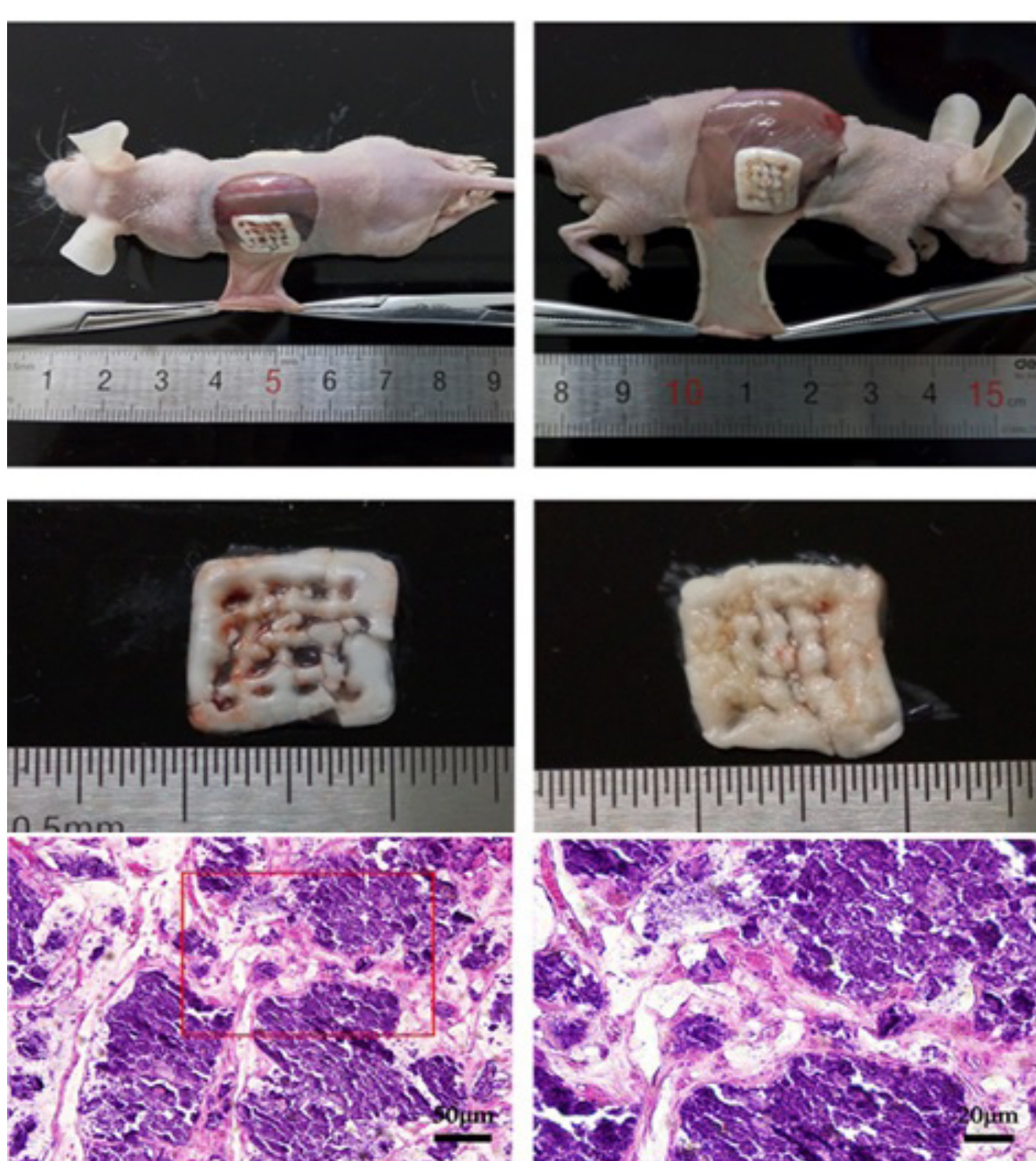
生物细胞打印

生物细胞打印可以构建组织相容性的生物学支架，提供细胞定向生长和器官修复的微环境。目前配置的两个低温头可以同时打印具有精确内部及外部结构的三维支架，打印的支架材料非常广泛，包括柔性的凝胶、生物蛋白、热塑性聚合物、生物陶瓷类，也可以打印多种生物材料包括细胞和生长因子。研究范围包括再生医学方面，用于人工组织和器官的体外构建，实现组织工程再生；药物研究方面，满足药物控释的需要等。

生物细胞打印可以应用于多个方面的研究，比如，细胞生物学方面：构建单细胞或者多细胞组合，研究细胞生长发育、细胞间关系、转基因等基本问题；再生医学方面：人工组织器官制造，构建类神经组织、骨组织、牙龈组织等；药物研究方面：用于药物代谢动力学、药物筛选以及辅助药物研发等研究；

3D Bioplotter biological printer (Envision Germany) is a rapid development tool that can handle a wide range of biological materials. It can print 3D scaffolds with precise internal and external structures for tissue engineering and drug controlled release, as well as biomaterials with controlled mechanical properties and cell adhesion, and through improved pores to improve nutrient-based circulation. Print materials are very broad, ranging from flexible thermoplastic polymers, gels, cells, to hard ceramics and metals.

It can be applied to many aspects of research, such as cell biology, including the construction of single-cell or multi-cell combinations, the study of cell growth and development; Regenerative medicine, including artificial tissue and organ manufacturing, construction of neuro-like tissue, bone tissue, gingiva tissue; Drug researches including pharmacokinetics, drug screening and auxiliary drug development.



生物打印骨组织



生物打印神经组织