

Paper ID	1570763666
Title	Engineering of high-density network-shape muscle tissue using magnetic particles
Author	Yuji Kiriwara (Tokyo Institute of Technology & School of Engineering, Japan); Kenta Shimba (The University of Tokyo, Japan); Yoshitaka Miyamoto (National Center for Child Health and Development, Japan); Tohru Yagi (Tokyo Institute of Technology, Japan)
Email	kiriwara.y.aa@m.titech.ac.jp

Abstract

The construction of skeletal muscle tissue has received much attention for clinical applications such as muscle replacement and treatment of muscle-related diseases, but there are various problems with the currently constructed tissue. In this study, we cultured mouse C2C12 myoblasts in reticular sheets to control cell orientation and examined the orientation of fibers. As a result, we were able to generate a strong local orientation and align the fiber direction as a whole.