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The Micro-patterned Device for Cell Attachment using New Extracellular Matrix S.K. CHAE, C. KIM, D.S. NA, J.W. LEE, B.K. JU, C.H. LEE, H. LEE, S.U. KIM, C.N. HWANG, Y.S. JUNG, S.H. LEE, MICROSYSTEM RESEARCH CENTER, KOREA INSTITUTE OF SCIENCE TECHNOLOGY COLLABORATION, SCHOOL OF LIFE SCIENCE AND BIOTECHNOLOGY, KOREA UNIVERSITY COLLABORATION, CHEMICAL ENGINEERING, YONSEI UNIVERSITY COLLABORATION — In this study, we tried to culture mouse P19EC (embryonal carcinoma) stem cell on a new ECM substrate, and we found the new source of the bio-compatible ECM material from zebrafish. The new ECM material is composed primarily of polysaccharide and cross-linked by a N-linked saccharide. We integrated the new ECM material into microwalls of a micro-patterned microdevice for cell attachment. The result of cell adhesion and proliferation on the new ECM was compared with those of other ECM substrates. The surface morphology of the new ECM substrate was investigated using atomic force microscope and the surface properties like electrostatic potential and wettability were measured by contact angle, respectively.

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