

**Organizers: Takaki Koide (Faculty of Engineering, The University of Tokushima)
Motoyoshi Nomizu (Graduate School of Environmental Earth Science, Hokkaido University)**

Cells in multicellular animals cross-talk with one another through direct and indirect cell-to-cell attachments to form higher-order structures, such as tissues and organs. The organization of multicellular structures enables the cells to perform specialized roles in the body. The extracellular matrix (ECM) is a complex of various proteins and polysaccharides which plays important roles not only in cell adhesion but also in the regulation of cell functions. Many of the components in the ECM have structural support functions and are biologically active. Accumulating evidence shows that the functions of ECM proteins are also deeply involved in the pathogenesis of various diseases, i.e., cancer metastasis, fibrosis, inflammation, and angiogenesis. Thus regulation of ECM protein function is a promising mechanism for the treatment of such diseases. In addition, cell attachment sequences derived from ECM proteins are candidates for drug-targeting signals in drug delivery systems.

In this session, the invited speakers will report their recent research progress on cell-adhesion molecules. The topics include strategies to characterize ECM proteins, novel functions of cell-adhesion molecules, applications to drug delivery systems, and the discovery of bioactive molecules from ECM proteins. We expect that this session will provide new strategies for drug discovery and development.