Masaki Yanagishita

1 .Topic in Research Achievements in the Year 2006

During the years of 2006 and 2007, we tried to focus on the demonstration of the presence of a molecular complex on the cell surface involving heparan sulfate proteoglycans. Biochemical properties of heparan sulfate proteoglycans point to the presence of intimate molecular interactions in specialized domains of cell surface and their importance in the cellular signaling mechanisms. Research results, using isolation procedures of plasma membrane and identification of several membrane proteins together with heparan sulfate proteoglycans, indicated that cholesterol-rich, cell surface microdomains constitute one of specialized functional units of the plasma membrane and are associated with a species of cell surface heparan sulfate proteoglycan, syndecan-4. Biological significance of heparan sulfate proteoglycans in specialized membrane domains will be further investigated.

2 .Publications in the year 2006

Kaori Ueno-Noto, Miki Hara-Yokoyama and Keiko Takano, Recognition of tandem sialic acid residues by CD38: A theoretical study, J. Comput. Chem., 27, 53-60 (2006)

Miki Hara-Yokoyama, Ganglioside potentially inhibit extracellular nucletide metabolism, Current Medicinal Chemistry, 13, 2233-2239 (2006)

Watari, I., Kaneko, S., Podyma-Inoue, K. A., Yanagishita, M. and Soma, K., The effect of leptin on rat maxillary alveolar bone under mechanical stimuli, J. Oral Biosciences (2007) in press

Praweena Sopapornamorn, Masayuki Ueno, Kayoko Shinada, Masaki Yanagishita and Yoko Kawaguchi, Relationship between total salivary protein content and VSC levels in malodor patients, Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontology (2007) in press

Hideki Ohta, Ken-ichi Katsube, Jyun-ichi Ogawa and Masaki Yanagishita, Hyaluronic acid promotes the expression of LYVE-1 in *in vitro* model of lymphangiogenesis, Akita Journal of Medicine (2007) in press

Shibata, S., Abe, T., Dias, R. A., Hashimoto-Uoshima, M., Yamashita, Y. and Yanagishita, M., An Immunohistochemical Study of Syndecan-1 in the Dental Follicle of Postnatal Mouse Teeth, (2007) in press

3 . Abstracts in the year 2006

Katarzyna A. Podyma-Inoue, Miki Yokoyama, Tomoko Kimura and Masaki Yanagishita, Syndecan-4 is a major heparan sulfate proteoglycan in detergent-resistant membrane isolated from a parathyroid cell line, in "Extracellular Glycomatrix in Health and Disease" June 15-17, 2006, Awaji Island, Japan