Report of "Research Award of Oral Sciences"

I confirmed SP6 binding on *Rock1* promoter by ChIP-PCR analysis and identified the transcription start site of rat *Rock1* (DDBJ, accession no. AB861944). The region from -1006 to -471 in *Rock1* promoter, named A, is the detected SP6 binding region by ChIP-PCR analysis. Next, *Rock1* promoter activity was examined by luciferase assay and found that transient SP6 overexpression elevated the promoter activity of A region. Interestingly, cotransfection experiments with *Sp1*, another Sp-family member, showed the reduction of promoter activity. Further truncated studies revealed that region -206 to -150 within A region is critical for SP6 function on promoter activity and confirmed binding evidence by ChIP-PCR. Mithramycin A treatment (200 nM) reduced *Rock1* promoter activity directed by SP6, but not SP1. Further site-directed mutagenesis indicated that the region from −206 to −150 contains responsive elements for Sp6. Those data will be published in The Journal of Medical Investigation (Vol. 61, No. 3, 4, August, 2014).

I continue to determine the consensus binding sites for SP6 in *Rock1* promoter region by EMSA. I am also interested in investigating the difference of binding affinity between Sp6-WT and Sp6-AMI since they showed different dental phenotype (Muto et al., *Orphanet J Rare Dis*. 7:34, 2012). I am very happy to receive the budget as a 2nd winner of "Research Award of Oral Sciences". That is very useful to support my research, such as for reagents and the cost for manuscript proofreading.

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Ryna Dwi Yanuaryska, Keiko Miyoshi, Arya Adiningrat, Taigo Horiguchi, Ayako Tanimura, Hiroko Hagita, Takafumi Noma. Sp6 regulation of *Rock1* promoter activity in dental epithelial cells. *J Med Invest.* 61(3,4): In press. 2014.

55th Annual Meeting of Japanese Association for Oral Biology (Okayama, Japan, September 20th-22nd, 2013). Title: Sp6 Positively Regulates *Rock1* Promoter Activity in Dental Epithelial Cells