−大学院歯学独立研究科−
第　１１１　回　中　間　発　表　会　プ　ロ　グ　ラ　ム

大学院学生等が、これまでの研究成果を発表します。
どなたでも聴講できますので、多数の参加をお待ちしております（聴講申込不要）

場　所：実習館２階　総合歯科医学研究所セミナー室
日　時：2020 年 12 月 16 日（水）17 時 25 分　開会

−2020 年 12 月 16 日（水）−

No.	発表区分・予定時間	演題名・発表者	審査委員
	17:25	開会挨拶　平岡研究科長	
1	［中　間］ 17:30〜18:00 司会:長谷川 教授	「Contribution of transglutaminases and their substrate proteins to the formation of cornified cell envelope in oral mucosal epithelium」 （口腔粘膜上皮における角質化細胞エンベロープの形成へのトランスグルタミナーゼと基質タンパク質の寄与） ３年　硬組織疾患制御再建学講座　硬組織疾患病態解析学 RITA　RANI　ROY	主査:各務教授 副査:中村教授 :小出准教授

問合わせ先：本館２階　学事室（大学院）内線 2215

発表内容の要旨(課程博士)
Abstract of Presented Research (For the Doctoral Course)

学籍番号 Student ID No.	ID＃G　1811	入学年 Entrance Year	2018　年 3rd Year
(ふりがな)	リタ ラニ ロイ		
氏名 Name in Full	Rita Rani Roy		
専攻分野 Major Field	硬組織疾患病態解析		
主指導教員 Chief Academic Advisor	長谷川 博雅		
発表会区分 Type of Meeting	中間発表会 ・ 大学院研究科発表会 ・ 松本歯科大学学会 Midterm Meeting / Graduate school research meeting presentation /The Matsumoto Dental University Society		

演題名 / Title of Presentation

Contribution of transglutaminases and their substrate proteins to the formation of cornified cell envelope in oral mucosal epithelium（口腔粘膜上皮における角質化細胞エンベロープの形成へのトランスグルタミナーゼと基質タンパク質の寄与）

発表要旨 / Abstract

Cornified envelope (CE) formation is crucial for the final differentiation of keratinized epithelium; however, CE formation in the oral epithelium remains unclear. The aim of this study was to clarify the differences in the distribution and expression of CE-related proteins and genes between keratinized and non-keratinized oral epitheliums. We immunohistochemically investigated the distribution pattern of transglutaminase 1 (TG1), transglutaminase 3 (TG3), and their substrate proteins involucrin (IVL), loricrin (LOR) and small proline rich proteins (SPRs) in 19 keratinized oral epithelium samples and 14 non-keratinized oral epithelium samples obtained from archived specimens. *TG1* and *TG3* mRNA levels were investigated in both types of epithelium by real time RT-PCR using paraffin-embedded specimens. All data were statistically analyzed to identify the factors involved in CE formation. As a result, we demonstrated that 11 localization patterns namely, the localization of TG1, TG3, and IVL in the cytoplasm of the superficial layer and on membranes of the upper spinous layer; IVL on membranes of the lower spinous layer; LOR in the cytoplasm of the upper spinous layer; SRR1b in the cytoplasm of the lower spinous layer; and SPR3 in the cytoplasm of the superficial and lower spinous layers showed statistically significant differences between keratinized oral epithelium and non-keratinized oral epithelium. These factors clearly drove the separation of the two groups during cluster analysis. TG1 mRNA levels in keratinized oral epithelium were significantly higher than those in non-keratinized oral epithelium. In conclusion, the characteristic distribution of TGs and their substrates and the mRNA levels of TG1 can regulate CE formation in keratinized oral epithelium, together with the contribution of TG3 first reported in this paper.