

# 大学院特別講義

(医歯学先端研究特論)

(生命理工医療科学先端研究特論) (医師理工学先端研究特論)

## Zoomによるオンライン講義

受講希望者は前日 16 : 00 までに下記へご連絡をお願いいたします。

記

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演題： Necessity of Dental Drug Delivery System (3DS) for the  
Prevention of Dental Caries and Trench Mouth

日時： 2024年3月7日(木) 15 : 00 ~ 16 : 30

内容：

During World War I (July 1914 – November 1918), intense trench warfare was occurred on the Western Front in Europe, resulting in the spread of painful acute necrotizing ulcerative gingivitis (ANUG) caused by intense stress, malnutrition, smoking, poor oral hygiene, and other factors. This is known as the trench mouth. It was an oral infection before the discovery of penicillin (1928); therefore, at that time, there was no treatment for trench mouth.

Although treatments for trench mouth are now well established, bacteriological studies of dental caries and periodontal disease have revealed new threats to organs throughout the body. Poor oral health affects both the oral and systemic health. Although the development of endotoxemia and aspiration pneumonia due to inadequate tooth brushing has been noted, it has recently been scientifically proven that oral bacteria can affect intestinal bacteria. Improvement of the oral microflora using dental drug delivery systems (3DS) is also necessary to improve the intestinal microflora. The main feature of 3DS is the use of custom trays. In the event of an earthquake or other disaster, 3DS is especially necessary. Following the Noto Peninsula earthquake, according to the Ministry of Land, Infrastructure, Transport, and Tourism, there is a 70–80% probability of a magnitude 8–9 class giant Nankai Trough earthquake occurring within 30 years. Originally, fluoride application for caries prevention was recommended by using custom trays (individual trays). We would like to promote 3DS in Japan for two purposes: daily caries prevention through fluoride application with 3DS, and prevention of trench mouths in times of disaster.

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