

Graduate School  
**Special Lecture**

On-site lecture with online access via Zoom

**1. Speaker: Assistant Prof. Marylka Yoe Uusisaari**

Neuronal Rhythms in Movement Unit, OIST, Okinawa

**2. Title: Investigation of the inferior olive to understand cerebellar function**

**3. Time: Friday March 3, 2023; 17:00 - 19:00**

**4. Place: Graduate School Lecture Room 2, 13th Floor M&D Tower, Tokyo Medical and Dental University, Yushima Campus**

**5. Abstract:** The cerebellum is a brain structure that plays a crucial role in motor coordination and control. It has been traditionally studied in the context of motor function, but recent research has expanded our understanding of the cerebellum. This shift in focus highlights the need to examine cerebellar function in a comprehensive manner beyond its classic role in error-based motor learning.

In this talk, I will focus on one specific aspect of cerebellar function, the generation of complex spikes in the inferior olive (IO). After a brief historical overview of the current knowledge of the IO structure and function, I will discuss recent findings that suggest these spikes have the potential for a wide range of signaling through the modulation of spike duration and provide an overview of current knowledge about the function of the mouse IO and identify the most pressing questions that remain unanswered. Additionally, I will share our recent findings from investigating input integration in the IO in living animals, which can deepen our understanding of cerebellar function and help provide a more holistic view of the cerebellum..

Contact Dr. Izumi Sugihara for the Zoom address

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# 大学院特別講義

(医歯学先端研究特論) (生命理工学先端研究特論)  
(生命理工医療科学先端研究特論) (医歯理工学先端研究特論)

講義室での講義、Zoom によるオンライン配信付き

## 記

1. 講師 : **Assistant Prof. Marylka Yoe Uusisaari**  
Neuronal Rhythms in Movement Unit, OIST, Okinawa
2. 演題 : **Investigation of the inferior olive to understand cerebellar function**
3. 日時 : 2023 年 3 月 3 日 (金) 17 時 00 分 ~ 19 時 00 分
4. 場 所 : 大学院講義室 2 M&D タワー 13 階
5. 要旨 : The cerebellum is a brain structure that plays a crucial role in motor coordination and control. It has been traditionally studied in the context of motor function, but recent research has expanded our understanding of the cerebellum. This shift in focus highlights the need to examine cerebellar function in a comprehensive manner beyond its classic role in error-based motor learning. In this talk, I will focus on one specific aspect of cerebellar function, the generation of complex spikes in the inferior olive (IO). After a brief historical overview of the current knowledge of the IO structure and function, I will discuss recent findings that suggest these spikes have the potential for a wide range of signaling through the modulation of spike duration and provide an overview of current knowledge about the function of the mouse IO and identify the most pressing questions that remain unanswered. Additionally, I will share our recent findings from investigating input integration in the IO in living animals, which can deepen our understanding of cerebellar function and help provide a more holistic view of the cerebellum.

Zoom での受講ご希望の方は、下記までご連絡下さい

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