

2023年 1月 6日

Fellowship ID : BR 220401

独立行政法人日本学術振興会理事長 殿  
To: President, Japan Society for the Promotion of Science

## 研究活動報告書

### Research Report

1. 受入研究者/ Host researcher

受入研究機関・部局・職  
Name of Host Institution, Department and Title  
京都大学・薬学研究科・教授

受入研究者氏名  
Host Researcher's Name  
土居 雅夫

2. 外国人再招へい研究者/ Fellow

所属研究機関・部局・職  
Name of Institution, Department and Title  
The University of Texas at Austin  
Dept. Neurology, Dell Medical School, Dept. Integrative Biology, College  
of Natural Sciences  
Professor

外国人再招へい研究者氏名  
Fellow's Name  
SCHWARTZ, William Joseph

3. 採用期間/ Fellowship Period

2022年 11月 2日 ~ 2022年 12月 1日

4. 研究課題/ Research Theme

ヒトの朝型夜型クロノタイプ・小型霊長類マーモセットの社会性概日行動リズムの解析

5. 研究活動報告/ Research Report

(1) 研究活動の概要/ Summary of Research Results

BRIDGE Fellowship 220401 offered an invaluable opportunity to follow up and expand my scientific relationship with Professor Masao Doi and his laboratory in the Department of Systems Biology, Graduate School of Pharmaceutical Sciences, Kyoto University; our collaboration was first initiated during a JSPS Invitation Fellowship in 2015 with Professor Hitoshi Okamura (and then-Associate Professor Doi). Professor Doi's laboratory is presently conducting wide-ranging, multidisciplinary, and sophisticated investigations in mammalian circadian biology, and a large volume of data has been collected. During the Fellowship, I was "embedded" in the laboratory and engaged in an in-depth review of experimental rationales, assumptions, and designs; identification of outliers and unexpected results; data analysis and interpretation; and suggestions for presentation and exposition. In so doing, I was able to informally teach and advise the trainees and junior faculty on their works as well as their plans. In addition, and significantly, Professors Doi (and Okamura) and I were able to hold deep scientific and strategic discussions about future directions and projects, the kind of discussions that can only take place by conditions

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that the Fellowship provided.



Shown above are members of the Doi laboratory, with whom I was engaged:

***Left to right, standing (name; position; research area):***

Nguyen Pham, Khanh Tien (Ms.); 1<sup>st</sup> year doctoral course; meibomian gland lipid biochemistry  
Wang, Tianyu (Ms.); 4<sup>th</sup> year doctoral course; suprachiasmatic nucleus G-protein-coupled-receptors  
Hsiao, Sui-Wen (Dr.); post-doctoral fellow; suprachiasmatic nucleus anatomical connectivity  
Doi, Masao (Prof.); head of laboratory  
Schwartz, William (Prof.); BRIDGE fellow  
Yamaguchi, Yoshiaki (Dr.); lecturer; vasopressin receptors and jet lag

***Left to right, sitting (name; position; research area):***

Zhou, Huihua (Ms.); 2<sup>nd</sup> year masters course; suprachiasmatic nucleus anatomical compartmentalization  
Shao, Xinyan (Ms.); 1<sup>st</sup> year doctoral course; molecular biology of circadian clock genes  
Tanaka, Youichi (Mr.); 1<sup>st</sup> year doctoral course; suprachiasmatic nucleus cAMP biology  
Otani, Tomohiro (Mr.); 2<sup>nd</sup> year doctoral course; adrenal circadian clock

***Not shown:***

Miyake, Takahito (Dr.); assistant professor; molecular biology of circadian clock genes  
Okamura, Hitoshi (Prof.); former head of laboratory; marmoset circadian clock and rhythms

Additional activities included (1) lecture presentation entitled “A Tale From the Neurology Clinic: The Man Who Had an Upside-Down Circadian Clock,” at Kyoto University and Kyoto Prefectural University of Medicine; (2)

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informal research meetings with Drs. Yuh Sasawaki (Assistant Professor) and Nobuya Koike (Lecturer) in the laboratory of Kazuhiro Yagita (Professor), Department of Physiology and Systems Bioscience, Kyoto Prefectural University of Medicine; and (3) informal meetings with Japanese circadian biologists Keiko Tominaga (Assoc. Prof., Graduate School of Frontier Biosciences, Osaka University), Wataru Nakamura (Prof., Graduate School of Biomedical Sciences, Nagasaki University), Takahiro Nakamura (Prof., School of Agriculture, Meiji University), and Ken-ichi and Sato Honma (Profs., Graduate School of Medicine, Hokkaido University).

## (2) 研究キーワード/Keywords

Circadian; suprachiasmatic nucleus; vasopressin

## (3) 主な研究発表 (雑誌論文、学会、集会、知的財産権等)/Main Research Publications

Based on my contributions to data interpretation / analysis / presentation and expected role in writing for publication, I have been invited as a co-author on 4 anticipated original research papers.

## (4) その他/Remarks

Thank you for a most productive month catalyzing a face-to-face collaborative effort that has been beneficial for both the Doi laboratory and myself, with expected publications of high impact to the field. And, of course, for the ever-delightful experience of Japanese culture, aesthetic, gastronomy, hospitality, and Kyoto in autumn!

## 受入研究機関事務担当者記入 / Filled in by Host Institution

部署・氏名	京都大学研究推進部研究推進課研究助成掛・高祖	電話番号	075-753-2046
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※ 部局名等の名称含め、内容に誤りが無いか必ずご確認ください。

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