

# Validation of synovial capsule tissue response in a novel TMJ OA mouse model

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*2024 Orthodontic Faculty Development Fellowships (OFDFA)*

*Dr. Ginny Ching Yun Hsu*

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# FollowUp Form

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## ***Award Information***

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*In an attempt to make things a little easier for the reviewer who will read this report, please consider these two questions before this is sent for review:*

- Is this an example of your very best work, in that it provides sufficient explanation and justification, and is something otherwise worthy of publication? (We do publish the Final Report on our website, so this does need to be complete and polished.)*
- Does this Final Report provide the level of detail, etc. that you would expect, if you were the reviewer?*

## **Title of Project\***

Validation of synovial capsule tissue response in a novel TMJ OA mouse model

## **Award Type**

Orthodontic Faculty Development Fellowship Award (OFDFA)

## **Period of AAOF Support**

July 1, 2024 through June 30, 2025

## **Institution**

Oregon Health & Science University

## **Names of principal advisor(s) / mentor(s), co-investigator(s) and consultant(s)**

Aaron W James, Laura Iwasaki

## **Amount of Funding**

\$30,000.00

## **Abstract**

(add specific directions for each type here)

*[Unanswered]*

## ***Respond to the following questions:***

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### **Detailed results and inferences:\***

If the work has been published, please attach a pdf of manuscript below by clicking "Upload a file".

OR

Use the text box below to describe in detail the results of your study. The intent is to share the knowledge you have generated with the AAOF and orthodontic community specifically and other who may benefit from your study. Table, Figures, Statistical Analysis, and interpretation of results should also be attached by clicking "Upload a file".

1. Lu AZ, Nickel J, Hsu GC. Identification of Differential Fibrocartilage Degradation Between Sexes in a Burn-Synovectomy Temporomandibular Osteoarthritis Mouse Model. *Orthod Craniofac Res.* 2025 May 31. doi: 10.1111/ocr.12946. Epub ahead of print. PMID: 40448420.

2. Hsu GC. Burn - Synovectomy Mouse Model for Temporomandibular Joint Osteoarthritis. *Eur Cell Mater.* Issue 47 P.51-58. DOI: 10.22203/eCM.v047a04

### **Were the original, specific aims of the proposal realized?\***

The attached eCM publication presented results proposed in Aim1 that burn-synovectomy injuries can indeed result in TMJ OA phenotype, such as cartilage erosion, fissure, subchondral sclerosis. More interestingly, It showed sex-dependent dimorphism in TMJ OA mechanism( unpublished). These results will deepen our knowledge in TMJ OA development and lead to novel therapies or prevention strategies for TMD

### **Were the results published?\***

Yes

### **Have the results of this proposal been presented?\***

No

### **To what extent have you used, or how do you intend to use, AAOF funding to further your career?\***

We have used all the OFDFA fund as we described in the budget.

The preliminary data were being used in my R01 application submission in June 2024. I thank AAOF for supporting my career development and I will look forward to apply for BRA in the next term.

*Comment: The AAOF PARC commends your accomplishments in completing this project, and we wish you the best in your R01 application. We encourage you to continue sharing these and future findings, as you have already done, through publications and presentations.*

## Accounting: Were there any leftover funds?

\$0.00

## *Published*

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### Citations\*

You indicated results have been published. Please list the cited reference/s for publication/s including titles, dates, author or co-authors, journal, issue and page numbers

1. Lu AZ, Nickel J, Hsu GC. Identification of Differential Fibrocartilage Degradation Between Sexes in a Burn-Synovectomy Temporomandibular Osteoarthritis Mouse Model. Orthod Craniofac Res. 2025 May 31. doi: 10.1111/ocr.12946. Epub ahead of print. PMID: 40448420.
2. Hsu GC. Burn - Synovectomy Mouse Model for Temporomandibular Joint Osteoarthritis. Eur Cell Mater. Issue 47 P.51-58. DOI: 10.22203/eCM.v047a04

## Was AAOF support acknowledged?

If so, please describe:

Yes, it was mentioned in the acknowledgment section in the publication.

## *Not Presented*

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### Are there plans to present? If not, why not?\*

We are planning to combine the unpublished data to present at 2025 AADOCR

## *Internal Review*

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### Reviewer comments

PI submitted final report for 2023 OFDAF in error on this project.

### Reviewer Status\*

Approved



## File Attachment Summary

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### *Applicant File Uploads*

*No files were uploaded*