

# Osteoclast interactions with the bone microenvironment

Record number : OPR-872

## Overview

### RESEARCH DIRECTION

Sophie Roux, Professeure - Department of Medicine

### INFORMATION

[sophie.roux@usherbrooke.ca](mailto:sophie.roux@usherbrooke.ca)

### ADMINISTRATIVE UNIT(S)

Faculté de médecine et des sciences de la santé  
Département de médecine  
Département d'immunologie et de biologie cellulaire

### LEVEL(S)

2e cycle  
3e cycle

### LOCATION(S)

Campus de la santé

---

## Project Description

The generation of human osteoclasts in culture is essential for the study of bone diseases.

Our study aims to determine the proteins interacting with the surface proteins of human osteoclasts and the associated signalling pathways and functions. The formation of multinucleated osteoclasts and derived cells, as well as bone resorption, allow us to characterize these cells. Modulation of surface and matrix protein expression under different conditions will complete the study.

Because of the heterogeneity of the cells obtained at the end of culture, single-cell technologies will be applied.

Specific requirements:

Motivation, reliability and team spirit

## Discipline(s) by sector

Sciences de la santé

Biologie cellulaire, Biologie moléculaire, Rhumatologie

## Funding offered

Yes

The last update was on 1 March 2024. The University reserves the right to modify its projects without notice.