



**Mathilde Palmier, PhD Student**

Thesis director: Dr. Delphine Maurel

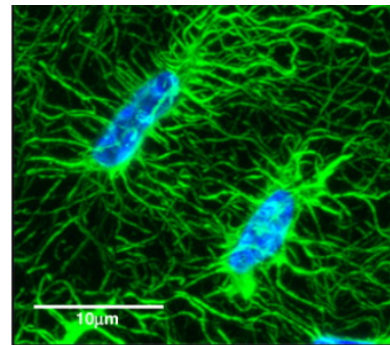


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### Research interests:

Although they represent 90% to 95% of the cells in bone, osteocytes have been thought to be passive for a long time. This is mainly due to their immured location within the bone matrix. However, with the development of recent techniques allowing their extraction and analysis, it has been discovered that osteocytes orchestrate bone remodeling, sending signals to regulate the activity of osteoblasts (bone formation) and osteoclasts (bone resorption).

Our objectives are to investigate 1) the communication *in vitro* and *in vivo* between osteocytes and other cells 2) their reactions to biomaterials in the context of bone regeneration. This will help us to understand how to optimize biomaterials for bone regeneration.



Confocal 3D imaging of phalloidin, DAPI stained osteocytes  
S. A. Kamel-ELSayed 2015

### Keywords/Expertise:

- ✓ bone physiology
- ✓ bone regeneration
- ✓ laser microdissection
- ✓ RNA extraction
- ✓ histology
- ✓ cell culture

**Education:**

2017-2018

**Master Degree Biomedical Engineering BME-Paris (specialization Biomaterials)**

Université Paris Descartes, Ecole des Mines Paristech, ENSAM Paristech

2010-2013

**Top engineering school of chemistry (specialization Optimization and Reliability of Materials)**

Ecole Nationale Supérieure de Chimie de Lille, France

**Work experience:**

2013-2017

**Project manager in the chemical industry (Axalta Coating Systems, BASF)**

France

2018, 5-month internship

**BioTis laboratory, Inserm U1026**, research axis "osteocytes and bone regeneration"

France