



# Inserm

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IIP Placement Summer 2015

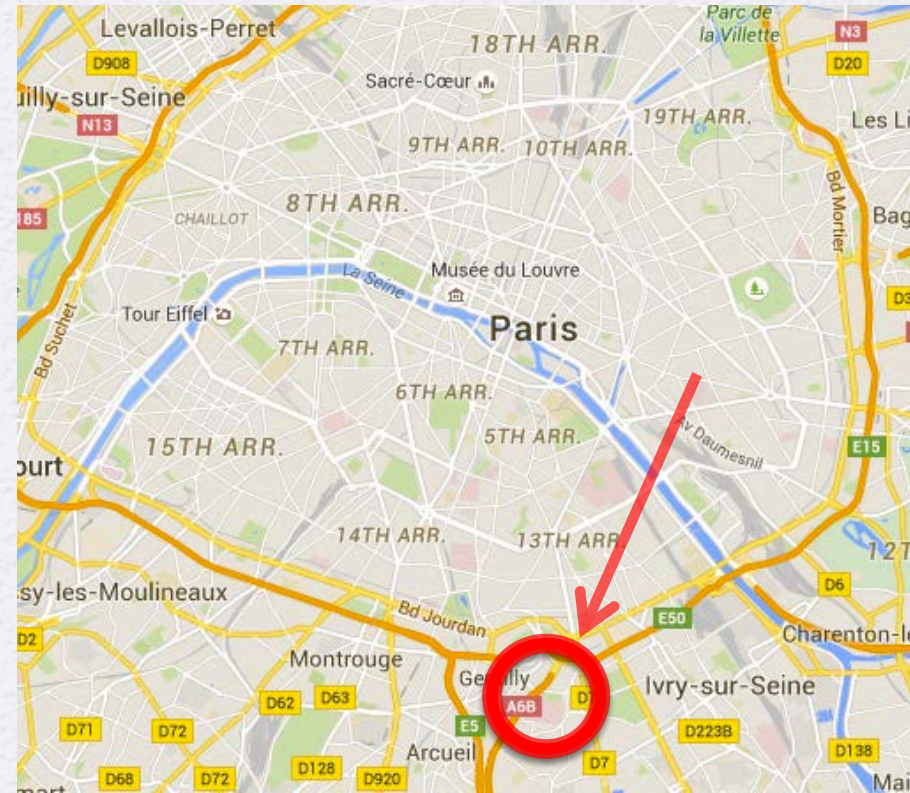
Xavier Bledsoe



# Location



<http://www.tripstance.com/things-to-do/le-kremlin-bic%C3%AAtre-fr/>



<https://www.google.com/maps>

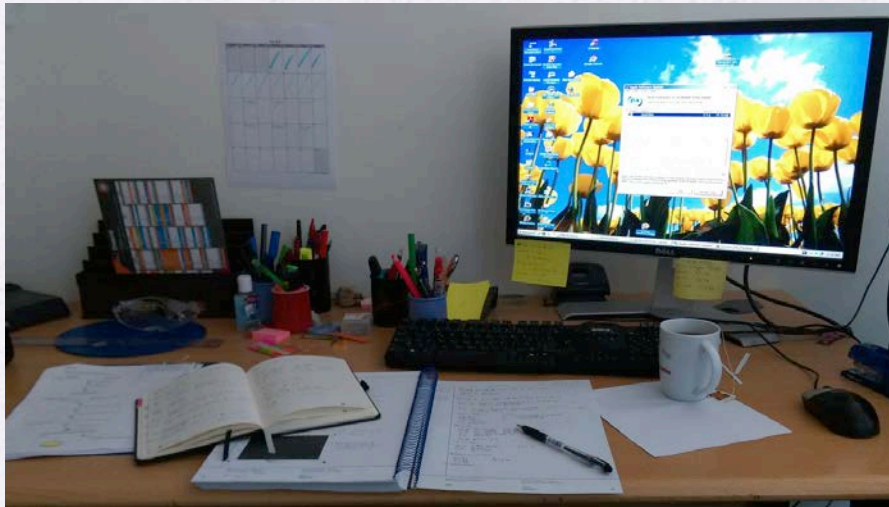
- Located 2 minutes south of the Parisian Border.
- Easily accessible from metro line 7 or the RER B

# Project Overview

- General field: Hemostasis
  - Objective: Optimize artificial enzyme production
    - Enzyme: Human Coagulation Factor X (HFX)
- The Goal
  - Develop an artificial production method for HFX to use as a supplement for individuals who are Factor X deficient.

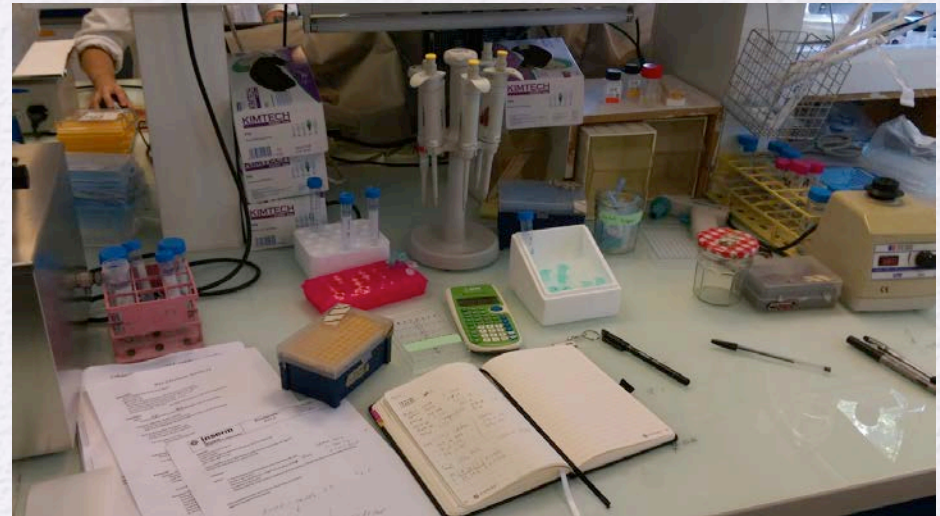


# The Workspace



Office space

Lab Workbench



Inserm provided a desk and computer for data analysis and online research as well as a place at a lab bench for conducting laboratory procedures.

# General Process

The transformation of the factor x polypeptide into the functional enzyme is Vitamin K dependent.

1. Generate recombinant DNA vector containing genetic code for HFX
2. Transform\transfect vector into production organism for protein translation
3. Continue protein production in the presence of Vitamin K to induce enzyme functionality
4. Measure % integrity via ELISA and RVV-X assay



# Techniques

- DNA ligation and recombination
- Vector plasmid amplification via bacterial transformation
- Transfection of Eukaryotic cells with recombinant vector plasmid
- Cultivation and maintenance of cell cultures



# Thoughts

The internship was well structured for a typical undergraduate level of education and experience.

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- I worked under the supervision of a lab technician
- It required developing a deeper understanding of hemostasis and thrombosis mechanisms
- Conceptually straightforward yet technically demanding protocols
- Easily accessible assistance
- Warm and inviting work atmosphere.



# Impact



- This was good solid research experience.
- Excellent opportunity to familiarize oneself with the processes of medical research and develop necessary laboratory skills
- I was able to impact the institute in a positive way simply by being another pair of hands to conduct experiments and perform analyses.