

Emilie Pihan

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Objective

Research scientist in molecular modeling applied to biology and pharmacology

Skills and expertise

- **Cheminformatics :**
 - Data mining in chemical databases :* SciFinder, ChemSpider, eMolecules, Ambinter...
 - Visualization :* Pymol, VMD
 - Environment :* OpenEye, ChemAxon (InstantJChem), Sybyl, Schrödinger, MOE
 - Homology modeling :* Modeller9v8, SwissModel, I-TASSER, MetaTASSER, HHpred, @TOME
 - Molecular dynamics :* Amber9, AmberTools
 - Pharmacophore :* Align-It, Pharmer, PepMMsMIMIC, LigandScout
 - Docking:* Autodock4.2, Vina, Plants
 - Miscellaneous :* Rocs, Ligplot, Openbabel, Voidoo, Ghemical
 - Systems :* Linux, Mac, Windows
- **Computer languages :** Python, bash, R, PBS, SQL, PHP, HTML, UML, CSS, C++ (elementary)
- **Business skills :** Intellectual Property, Project Management
- **Languages :** French (mother tongue), English (fluent, TOEIC 870/990), German (elementary)

Work experience

- 10/2010 - to date **IPMC, CNRS-UNSA UMR7275.** Sophia Antipolis. *PhD student* (supervisor : Dr D. Douguet)
- Identification of new antimalarial molecules by structural bioinformatics and chemoinformatics
- Preparation of several databases containing 7 million of compounds
 → 2D, 3D, stereoisomers, tautomers, conformers
- Virtual screening pipeline, ligand-based virtual screening, structure-based virtual screening
- Homology modeling, pharmacophore, docking, molecular dynamics, SAR
- Pihan et al, *Bioinformatics*. 2012 and Maheshwari et al, *Biochem J*. 2013.
- 02/2010 - 09/2010 **CEA, LSOD, Detoxification enzymes and xenobiotics team.** Saclay. *Engineer*
- Molecular Interactions, substrate recognition, binding and docking between P450 cytochromes and nicotine (*Kwiecień et al, J Phys Chem B*. 2012) (Supervisor : Dr. F. André)

Internships

- 02/2009 - 07/2009 **INRIA, Algorithms Biology Structure Team-Project.** Sophia Antipolis.
- Study of surface matching techniques for the identification of similarities between ligands
- Supervisors : Dr. J. Bernauer and Dr. D. Douguet
- 06/2008 - 08/2008 **Computational Biomedicine and Bioinformatics, Complex and Adaptative Systems Laboratory.** Dr. Denis Shields Team, Dublin, Ireland.
- Discovery of small molecule inhibitors of protein-protein interactions through computational docking (*Casey et al, J Chem Inf Model*. 2009)
- 07/2007 **INSERM, U522.** Dr. Georges Baffet Team, Rennes.
- Implication of ERK1 and ERK2 kinases in liver cells survival
- Cell culture, electrophoresis, western-blot...

Education

- 2010 - 2013 **PhD in Molecular Modeling.**
University of Nice Sophia Antipolis. (Defending date : July 2013)
- 2006 - 2009 **Engineering Degree in Pharmacology and Biotechnology specialized in bioinformatics and biology modeling**
Polytech'Nice-Sophia Antipolis

References

[Dominique Douguet](#), [Henri Vial](#) (biologist collaborator during my PhD), [François André](#), [Julie Bernauer](#)

Interests

Leisure : Basket-ball, alpine skiing, swimming, music theory