Alise **PONSERO,** PhD

alise.ponsero@gmail.com
8 rue du Grand Léjon
F-22120 Yffiniac

SCHOOLING

2016 : Master's degree in Computer science
Master 2 Compétences complémentaires en informatique.
Université Rennes 1.

2012-16 : **PhD in molecular and cellular biology**
Supervised M. Toledano,
CEA Saclay/University Paris-Saclay

2010-12 : **Master's degree in microbiology**
Master Microbiologie fondamentale et appliquée.
Université de Rennes 1

2007-10 : **Graduate degree in cellular biology**
Licence de biologie cellulaire
Université de Rennes 1,

CERTIFICATIONS

2015 : Radioactivity experimentation in biology certificate,
CEA Saclay

2016 : First aid training certificate
Croix Rouge Française

2007 : PADI advanced Open diver

EXPERTISE DOMAINS

COMPUTER SCIENCE

Languages: CAML, C, Java, Python, Javascript, Perl, PHP.
Parralelization on high performance computing systems.

BIOLOGY

Cellular and molecular biology, redox biology, yeast biology
Microbial ecology: metagenomics, viral ecology

DATA SCIENCE

Database conception: Relational,Document-based, network databases
Machine learning, R programming and vizualization.

SCIENTIFIC EXPERIENCES

Since 2017: Postdoctoral fellow, university of Arizona, USA
Computational methods for the detection of phage-host clues in metagnomes.
Department of Agricultural and biosystems Engineering, Bonnie Hurwitz

2012-2016: PhD project: CEA centre de Saclay, France
Redox control of protein secretion in *Saccharomyces cerevisiae* and its implications on age-ralated diseases
I2BC, Laboratoire stress oxydant et cancers, supervised by Michel Toledano

2012 : graduate intern (6 months), university of Tennessee, USA
Study of the global viral and cyanophage production rate across environmental gradients in a marine ecosystem.
Department of microbiology, Steven Wilhelm lab

2011: graduate intern (3 months) , INRA Le Rheu, France
Study of the T6SS apparatus of Pseudomonas aeruginosa and its imortance in the competition interaction with Gaeumanomyces graminis, the takeall pathogen of wheat.
UMR Bio3P, supervised by Alain Sarniguet

2010: undergraduate intern (3 months), CNRS Lyon, France
Research of a chemical mediator between the common alder and its symbiotic bacteria Frankia alni.
Équipe Frankia, UMR 5557, supervised by Petar Pujic

REFERENCES

Bonnie L. Hurwitz : bhurwitz@email.arizona.edu
Department of Biosystems engineering, University of Arizona, USA

Agnès DELAUNEY-MOISAN : agnes.delaunay-moisan@cea.fr
Laboratoire stress oxydant et cancers, CEA Saclay, FRANCE

Steven WILHELM : wilhelm@utk.edu
department of microbiology, university of Tennessee, USA

ARTICLES

RESEARCH ARTICLES

Ponsero A.J., Hurwitz B.L. The promises and pitfalls of machine learning for detecting viruses in aquatic metagenomes. (2019) Frontiers in Microbiology

I. Choi, **A.J Ponsero**, M. Bomhoff, K. Youens-Clark, J.H Hartman, B.L Hurwitz. Libra: scalable k-mer based tool for massive all-vs-all metagenome comparisons. (2018) Gigascience

Lurthy T, Alloisio N, Fournier P, Anchisi S, **Ponsero A**, Normand P, Pujic P, Boubakri H Molecular response to nitrogen starvation by Frankia alni ACN14a revealed by transcriptomics and functional analysis with a fosmid library in Escherichia coli. (2018) Research in Microbiology

Ponsero A.J, Igbaria A., Darch M., Miled S., Outten C., Winther J.R., Benoit D'Autreaux, Delaunay A., Toledano M. Sec61-dependent transport of GSH into the ER is regulated by the ER chaperone Kar2 and by the activity of the ER oxidase Ero1 (2017) Molecular Cell.

Ponsero A.J., Chen F., Lennon J.T., Wilhelm S.W. Complete genome sequence of cyanobacterial siphovirus KBS2A. (2013) Genome Announcement.

Matteson A.R., Rowe J.M., **Ponsero A.J.**, Pimentel T.M., Boyd P.W and Wilhelm S.W. High abundances of cyanomyoviruses in marine ecosystems demonstrate ecological relevance. (2013) FEMS Microbiology ecology.

REVIEW ARTICLES

Delaunay A., **Ponsero A.J.**, Toledano M. Reexamining the function of glutathione in protein folding and secretion. (2017) Antioxid Redox Signal.

B.L. Hurwitz , **A.J Ponsero**, J. Thornton Jr., J.M. U'Ren. Phage Hunters: computational strategies for finding phages in large-scale 'omics datasets (2018) Virus research

SCIENCE OUTREACH ARTICLES

J-S Steyer, **A Ponsero** and R. Lehoucq. (2019) "Les monstres de la science-fiction : des morphologies et des gènes hors-norme", Bifrost magazine n°93

COMMUNICATIONS

2014. **Vice-chair** Gordon research seminar, "thiol-redox based regulation and signaling", Girona, Spain

2015. **Ponsero A.,** "Redox control of protein secretion", EMBO symposium Thiol-based redox switches in life science, San Feliu, Spain

2019. **Ponsero A.**, "Promises and pitfalls in Machine learning for the detection of viruses in metagenomes", Ecosystem genomics seminar series, University of Arizona, USA

LANGUAGES

FRENCH (mother tongue)

ENGLISH ● ● ● ●

Published translations:
(from English to French)

Nancy Kress, Le Nexus du Dr Erdmann,
2016, (novella), éd. du Bélial

Daryl Gregory, « Dead Horse Point »,
2014 (short story), Bifrost#74

Eric Brown, « Exorciser ses fantômes »,
2011 (short story), Bifrost#63

ITALIAN ● ● ○ ○

SPANISH ● ○ ○ ○

OTHER PROJECTS

Restauration project of the "Herber Moreau", herbarium conserved at the University of Brest

Articles and conferences:

• Sawchuck J., **Ponsero A.,** 2009 Les herbiers du massif armoricain, N°22 E.R.I.C.A.

• Sawchuck J., **Ponsero A.,** 2009, « La Restauration de l'herbier Moreau », Colloque « Patrimoine scientifique en Bretagne », Brest.

AWARDS

2012 : IRTELIS program
3 years grant for PhD student
CEA, France

2015: Young researcher program
1 year grant for PhD student
ARC (Association recherche contre le cancer), France