

Winka LE CLEC'H, PhD

PERSONAL INFORMATION Last Name: LE CLEC'H
First Name: Winka
Sex: female
Date of birth: 07th may 1986
Citizenship: French
Marital status: single
Driving License: Category C - Texas

PROFESSIONAL CONTACT INFORMATION **Texas Biomedical Research Institute**
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San Antonio
Texas 78227 - USA
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RESEARCH INTERESTS Symbiosis, Evolution, Host-parasite interactions, Host specificity, Virulence and transmission, Genetics, Population genomics, Drug resistance, Microbiome

RESEARCH EXPERIENCE **Staff scientist I** **January 2019 to present**
Post-doctoral scientist **March 2013 to October 2018**

Texas Biomedical Research Institute, San Antonio, Texas, USA
Department of Genetics - **Doctor Timothy J.C. ANDERSON**'s laboratory

- **Main research topics:**

- The genetic basis of drug (i.e. Praziquantel, meclonazepam) resistance in the human parasite *Schistosoma mansoni*.
- The genetic basis of virulence and transmission in the human parasite *Schistosoma mansoni*.
- Interaction between the microbiome of the snail intermediate host (*Biomphalaria spp.*) and the schistosome parasite.
- Improvement of the *Schistosoma mansoni* genome using Exome capture libraries, genetic crosses and linkage analysis.
- Population exomics of the human parasites *Schistosoma mansoni* and *Schistosoma haematobium*.

EDUCATION **PhD, Evolutionary and Molecular Biology** (with Honors)
October 2009 to December 2012

University of Poitiers, Poitiers, France

- **Ph.D Thesis:** Horizontal transfers of *Wolbachia* in terrestrial isopods: Immediate and evolutionary consequences for both hosts and symbionts.
 - Supervisors: **Doctor Mathieu SICARD** – **Professor Didier BOUCHON**
 - Funding: PhD Research Fellowship – Tutoring Fellowship.
- **Graduate school trainings:**
 - Electron and optical microscopy.
 - Training courses: sustainable development and major environmental issues.
 - Teaching courses.
 - Scientific studies dissemination *via* the "Action-PLUS" meetings.

Teaching Tutoring

October 2009 to September 2012

University of Poitiers, Poitiers, France

- M.S. level
 - Teaching: 2h of Tutorials – 46h of Practical Courses
 - Classes: Ecophysiology, Biostatistics and data analysis, Population genetics, Evolutionary ecology.
 - Main Masters:
 - Research Master in Ecology and Population Biology.
 - Master *Erasmus Mundus* EMAE (European Master in Applied Ecology).
- B.S. level
 - Teaching: 2h of Tutorials – 144h of Practical Courses
 - Classes: Adaptive responses (Histology), Ecology and systematic, Comparative anatomy.
 - Main Bachelors:
 - Bachelor in Biology and Ecology.
 - Bachelor of Sciences and Geology.

M.Sc., Evolutionary Biology and Ecology (with Honors) – Advisor: **Professor Didier BOUCHON**
September 2007 to June 2009

University of Poitiers, Poitiers, France

- **Second Master's thesis:** Infection dynamics of three *Wolbachia*'s strain in the terrestrial isopod *Armadillidium vulgare*. **January 2009 to June 2009**
 - Supervisor: **Professor Frédéric GRANDJEAN**
 - Laboratory: Ecology Evolution Symbiosis, UMR CNRS 6556, University of Poitiers, Poitiers, France.
- **First Master's thesis:** Comparative phylogeography analysis in the host/parasite system *Armadillidium vulgare*/*Wolbachia*. **April 2008 to July 2008**
 - Supervisor: **Professor Frédéric GRANDJEAN**
 - Laboratory: Ecology Evolution Symbiosis, UMR CNRS 6556, University of Poitiers, Poitiers, France.

B.Sc., Biology and Geology (with Honors)

September 2005 to June 2007

University of Poitiers, Poitiers, France

- Biology (Plant and Animal Biology, Molecular and cellular Biology) and Geology.

TRAININGS AND CERTIFICATIONS

Collaborative Institutional Training Initiative (CITI)

- Investigators, Staffs and Students.
- Working with animals in biomedical research.
- Working with hamsters in research settings.
- Working with mice in research.
- Conflicts of Interest.

Staff Scientist training at Texas Biomed (2018-2019)

- Management training.
- Grant writing training.

GRANTS AND
AWARDS

Travel award

- Symposium for International Research and Innovations in Schistosomiasis, Washington D.C - USA. **February 2016**
- San Antonio Postdoctoral Research Forum - 1st place poster presentation, San Antonio - USA. **September 18th 2018**

Award

- Department of Biochemistry and Structural Biology, Annual Retreat - Best Postdoctoral Fellow Platform Presentation, The University of Texas Health, San Antonio - USA. **October 26th 2018**
- Texas Biomedical Research Institute Annual Symposium 2020 - 1st place poster presentation (Staff Scientist), Texas Biomedical Research Institute, San Antonio - USA. **February 18th to 19th 2020**

Forum grant from Texas Biomedical Research Institute

- **The microbiome of the schistosome snail host - Co-PI** **November 2014 to September 2016**
 - Grant number: 14-04491
 - Amount: 40,000 dollars
- **Genomic Analysis of schistosome hybridization - Co-I** **November 2014 to September 2016**
 - Grant number: 14-04488
 - Amount: 40,000 dollars
- **Genetic manipulation of schistosome parasites - Co-I** **October 2015 to September 2017**
 - Grant number: 15-04566
 - Amount: 50,000 dollars

Cowles and Brackenridge fellowship

March 2013 to March 2015

- **The genetic basis of virulence in the human parasite *Schistosoma mansoni***
 - Grant number: 13-1328.021
 - Amount: 135,926 dollars

STUDENTS'
TUTORING

Ph.D students - Texas Biomed Summer Internship

- Lauren CARRUTHERS (University of Glasgow, UK): The microbiome of the *Biomphalaria* snails anatomy.
- Chrystelle LASICA (University of Perpignan Via Domitia, FRANCE): The genetic basis of *Schistosoma* chronobiology.

June to August 2019

Bachelor students

- Nina ENG (Georges Washington University, USA): Identification of loss-of-function mutations conferring Oxamniquine resistance in a Brazilian schistosome population. **June to August 2014 - May to July 2015**
- Alexandre ZYLINSKY (University of Poitiers, FRANCE): Evolutionary impacts of *Wolbachia*'s injections on the terrestrial isopod *Porcellio dilatatus dilatatus*.

May to July 2011

1. *Striking differences in virulence, transmission, and sporocyst growth dynamics between two schistosome populations.* **Winka Le Clec'h**, Robbie Diaz, Frédéric D. Chevalier, Marina McDew-White, Timothy J.C. Anderson. *Parasites & Vectors*, Vol. 12(485), 2019.
2. *Oxamniquine resistance alleles are widespread in Old World Schistosoma mansoni and predate drug deployment.* Frédéric D. Chevalier, **Winka Le Clec'h**, Marina McDew-White, Vinay Menon, Meghan A. Guzman, Stephen P. Holloway, Xiaohang Cao, Alexander B. Taylor, Safari Kinung'hi, Anouk N. Gouvras, Bonnie L. Webster, Joanne P. Webster, Aidan M. Emery, David Rollinson, Amadou Garba Djirmay, Khalid M. Al Mashikhi, Salem Al Yafae, Mohamed A. Idris, Hélène Moné, Gabriel Mouahid, P. John Hart, Philip T. LoVerde, Timothy J.C. Anderson. *PLoS Pathogens* 15(10), 2019:e1007881.
3. *Ancient hybridization and adaptive introgression of an invadolysin gene in schistosome parasites.* Roy Neal Platt, Marina McDew-White, **Winka Le Clec'h**, Frédéric D. Chevalier, Fiona Allan, Aidan M. Emery, Amadou Garba, Amina A. Hamidou, Shaali M. Ame, Joanne P. Webster, David Rollinson, Bonnie L. Webster, Timothy J.C. Anderson. *Molecular Biology and Evolution*, msz154, June 2019.
4. *Genetic crosses and linkage mapping in schistosome parasites.* Timothy J.C. Anderson, Philip T. LoVerde, **Winka Le Clec'h**, Frédéric D. Chevalier. *Review - Trends in Parasitology*, Vol. 34(11), 982-996, 2018.
5. *Whole genome amplification and exome sequencing of archived schistosome miracidia.* **Winka Le Clec'h**, Frédéric D. Chevalier, Marina McDew-White, Fiona Allan, Bonnie L. Webster, Anouk N. Gouvras, Safari Kinunghi, Louis-Albert Tchuem Tchuente, Amadou Garba, Khalfan A. Mohammed, Shaali M. Ame, Joanne P. Webster, David Rollinson, Aidan M. Emery, Timothy J.C. Anderson. *Parasitology*, 1-9, 2018.
6. *Phenotypic shift in Wolbachia virulence towards its native host across serial horizontal passages.* **Winka Le Clec'h**, Jessica Dittmer, Maryline Raimond, Didier Bouchon, Mathieu Sicard. *Proceedings of the Royal Society Biology*, Vol. 284(1859), 1076, 2017.
7. *Independent origins of loss-of-function mutations conferring oxamniquine resistance in a Brazilian schistosome population.* Frédéric D. Chevalier, **Winka Le Clec'h**, Nina Eng, Anastasia R. Rugel, Rafael Ramiro de Assis, Guilherme Oliveira, Stephen P. Holloway, Xiaohang Cao, P. John Hart, Philip T. LoVerde, Timothy J.C. Anderson. *International Journal of Parasitology*, Vol. 46(7), 417-424, 2016.
8. *Real-time PCR for sexing Schistosoma mansoni cercariae.* **Winka Le Clec'h**, Frédéric D. Chevalier, Ana Carolina Alves de Mattos, Philip T. LoVerde, Timothy J.C. Anderson. *Molecular and Biochemical Parasitology*, Vol. 205(1-2), 35-38, 2016.
9. *Characterization of hemolymph phenoloxidase activity in two Biomphalaria snail species and impact of Schistosoma mansoni infection.* **Winka Le Clec'h**, Timothy J.C. Anderson, Frédéric D. Chevalier. *Parasites & Vectors*, Vol. 9(32), 2016.
10. *The hematopoietic organ: A cornerstone for Wolbachia propagation between and within hosts.* Christine Braquart-Varnier, Maryline Raimond, Gaetan Mappa, Frédéric D. Chevalier, **Winka Le Clec'h**, Mathieu Sicard. *Frontiers in Microbiology*, Vol. 6, 2015.

11. *Bidirectional cytoplasmic incompatibility caused by Wolbachia in the terrestrial isopod Porcellio dilatatus*. Mathieu Sicard, Didier Bouchon, Laura Ceyrac, Roland Raimond, Magalie Thierry, **Winka Le Clec'h**, Isabelle Marcadé, Yves Caubet, Pierre Grève. *Journal of Invertebrate Pathology*, Vol. 121, 28-36, 2014.
12. *Strength of the pathogenicity caused by feminizing Wolbachia to Porcellio dilatatus: strain or dose effect?* **Winka Le Clec'h**, Maryline Raimond, Didier Bouchon, Mathieu Sicard. *Journal of Invertebrate Pathology*, Vol. 116, 18-26, 2014.
13. *Multi-infection of feminizing Wolbachia strains in natural populations of terrestrial isopod Armadilidium vulgare*. Victorien Valette, Paul-Yannick Bitomé-Esson, **Winka Le Clec'h**, Monique Johnson, Nicolas Bech, Frédéric Grandjean. *PLoS One*, 8(12), 2013:e82633.
14. *Feminizing versus non feminizing Wolbachia strains horizontally transferred in Porcellio d. dilatatus: from harmless passengers to pathogens*. **Winka Le Clec'h**, Maryline Raimond, Sylvain Guillot, Didier Bouchon, Mathieu Sicard. *Environmental Microbiology*, Vol. 15, 2922-2936, 2013.
15. *Cannibalism and predation as paths for horizontal passage of Wolbachia between terrestrial isopods*. **Winka Le Clec'h**, Frédéric Chevalier, Lise Genty, Joanne Bertaux, Didier Bouchon, Mathieu Sicard. *PLoS One* 8(4), 2013:e60232.
16. *High virulence of Wolbachia after host-switching: when autophagy hurts*. **Winka Le Clec'h**, Christine Braquart-Varnier, Maryline Raimond, Jean-Baptiste Ferdy, Didier Bouchon, Mathieu Sicard. *PLoS Pathogens* 8(8), 2012:e1002844.

CONFERENCE
PARTICIPATIONS

Oral communications (* presenting author)

1. *Anthelmintics: Discovery to Resistance IV: The genetic basis of praziquantel resistance in Schistosoma mansoni*. **Winka Le Clec'h***, Frédéric D. Chevalier, Marina McDew-White, Robbie Diaz, Amanda Strickland, Meghan Guzman, Ana Carolina Alves de Mattos, Philip T. LoVerde & Timothy J.C. Anderson. Santa Monica, USA, February 3rd to 7th 2020.
2. *Anthelmintics: Discovery to Resistance IV: Oxamniquine resistance alleles are widespread in Old World Schistosoma mansoni and predate drug deployment*. Frédéric D. Chevalier*, **Winka Le Clec'h**, Marina McDew-White, Vinay Menon, Meghan Guzman, Stephen P. Holloway, Xiaohang Cao, Alexander B. Taylor, Aidan M. Emery, David Rollinson, Salem Al Yafae, Hélène Moné, Gabriel Mouahid, P. John Hart, Phillip T. LoVerde & Timothy J.C. Anderson. Santa Monica, USA, February 3rd to 7th 2020.
3. *American Society for Microbiology - Texas Branch 2019 Fall Meeting - Invited speaker: The genetic basis of praziquantel resistance in Schistosoma mansoni*. **Winka Le Clec'h***, Frédéric D. Chevalier, Marina McDew-White, Robbie Diaz, Amanda Strickland, Meghan Guzman, Ana Carolina Alves de Mattos, Philip T. LoVerde & Timothy J.C. Anderson. San Antonio, USA, November 7th to 9th 2019.
4. *Molecular Helminthology: An Integrated Approach - Invited speaker: The genetic basis of praziquantel resistance in Schistosoma mansoni*. **Winka Le Clec'h***, Frédéric D. Chevalier, Marina McDew-White, Robbie Diaz, Meghan Guzman, Ana Carolina Alves de Mattos, Philip T. LoVerde & Timothy J.C. Anderson. San Antonio, USA, April 7th to 10th 2019.

5. 14th International Conference on Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases: *The blood microbiome of Biomphalaria snails: the missing link in snail-schistosome interactions?*. **Winka Le Clec'h**^{*}, Marina McDew-White, Robbie Diaz, Timothy J.C. Anderson & Frédéric D. Chevalier. Sitges, Spain, November 6th to 8th 2018.
6. 14th International Conference on Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases: *Oxamniquine resistance alleles are widespread in Old World Schistosoma mansoni and predate drug deployment*. Frédéric D. Chevalier^{*}, **Winka Le Clec'h**, Marina McDew-White, Vinay Menon, Meghan Guzman, Stephen P. Holloway, Xiaohang Cao, Alexander B. Taylor, Aidan M. Emery, David Rollinson, Salem Al Yafae, Hélène Moné, Gabriel Mouahid, P. John Hart, Phillip T. LoVerde & Timothy J.C. Anderson. Sitges, Espagne, 6-8 Novembre 2018.
7. Department of Biochemistry and Structural Biology, Annual Retreat: *The genetic basis of praziquantel resistance in Schistosoma mansoni*. **Winka Le Clec'h**^{*}, Frédéric D. Chevalier, Marina McDew-White, Robbie Diaz, Meghan Guzman, Ana Carolina Alves de Mattos, Philip T. LoVerde & Timothy J.C. Anderson. San Antonio, USA, October 26th 2018.
8. The 2nd Symposium for International Research and Innovation in Schistosomiasis: *The genetic basis of praziquantel resistance in laboratory selected Schistosoma mansoni*. **Winka Le Clec'h**^{*}, Frédéric D. Chevalier, Marina McDew-White, Robbie Diaz, Meghan Guzman, Ana Carolina Alves de Mattos, Philip T. LoVerde & Timothy J.C. Anderson. Washington, D.C., USA, May 22nd to 23rd 2018.
9. The 2nd Symposium for International Research and Innovation in Schistosomiasis: *The blood microbiome of Biomphalaria snails: the missing link in snail-schistosome interactions?*. Frédéric D. Chevalier^{*}, Marina McDew-White, Robbie Diaz, Timothy J.C. Anderson & **Winka Le Clec'h**. Washington, D.C., USA, May 22nd to 23rd 2018.
10. 92nd Annual Meeting of the American Society of Parasitologists: *Genetic analysis of transmission stage production in schistosome parasites*. **Winka Le Clec'h**^{*}, Frédéric D. Chevalier, Marina McDew-White, Vinay Menon & Timothy J.C. Anderson. San Antonio, TX., USA, June 27th to July 1st 2017.
11. 92nd Annual Meeting of the American Society of Parasitologists: *A journey into the blood microbiome of Biomphalaria snails, intermediate host of the human blood-fluke Schistosoma mansoni*. **Winka Le Clec'h**^{*}, Timothy J.C. Anderson & Frédéric D. Chevalier. San Antonio, TX., USA, June 27th to July 1st 2017.
12. The Symposium for International Research and Innovation in Schistosomiasis: *Independent origins of loss-of-function mutations conferring oxamniquine resistance in Brazilian schistosome parasites*. **Winka Le Clec'h**^{*} Frédéric D. Chevalier, Nina Eng, Anastasia R. Rugel, Rafael Ramiro de Assis, Guilherme Corrêa-Oliveira, Stephen P. Holloway, Xiaohang Cao, John Hart, Philip T. LoVerde & Timothy J.C. Anderson. Washington, D.C., USA, February 3rd to 4th 2016.
13. The Symposium for International Research and Innovation in Schistosomiasis: *Genetic analysis of transmission-related traits in schistosome parasite*. **Winka Le Clec'h**^{*}, Frédéric D. Chevalier, Marina McDew-White & Timothy J.C. Anderson. Washington, D.C., USA, February 3rd to 4th 2016.
14. Invited speaker at 2nd International Congress on Bacteriology and Infectious Diseases: *From vertical to horizontal transmission: when the Wolbachia endosymbiont turns to a deadly pathogen for its hosts*. **Winka Le Clec'h**^{*}. Chicago, Ill. USA, November 17th to 19th 2014.
15. 8th Network meeting of sustainable ecological interactions: *Horizontal transfers of Wolbachia in Porcellio dilatatus : proximal and distal consequences on partners life history traits*. **Winka Le Clec'h**, Romain Pigeault, Elmina Mottin, Christine Braquart-Varnier, Didier Bouchon & Mathieu Sicard^{*}. Bordeaux, France, February 4th to 6th 2013.

16. Invited speaker at **Texas Biomedical Research Institute**: *Virulence and transmission of Wolbachia, a bacteria that manipulates host reproduction* : **Winka Le Clec'h***. San Antonio, TX., USA, August 21st 2012.
17. **7th International Wolbachia conference**: *High virulence of Wolbachia after host switching: tolerance versus lethal autophagy*. **Winka Le Clec'h***, Christine Braquart-Varnier, Maryline Raimond, Didier Bouchon & Mathieu Sicard. Oleron island, France, June 7th to 14th 2012.
18. **COST-FA0701 Final meeting**: *Experimental evolution on symbiosis*. **Winka Le Clec'h**, Joanne Bertaux, Didier Bouchon & Mathieu Sicard*. Oleron island, France, June 7th to 14th 2012.
19. **7th Network meeting of sustainable ecological interactions**: *Tolerance vs resistance: when Wolbachia kills its new hosts*. **Winka Le Clec'h***, Christine Braquart-Varnier, Maryline Raimond, Didier Bouchon & Mathieu Sicard. Rennes, France, February 6th to 8th 2012.
20. **7th Network meeting of sustainable ecological interactions**: *Experimental evolution of Wolbachia endosymbiont*. **Winka Le Clec'h**, Joanne Bertaux, Didier Bouchon & Mathieu Sicard*. Rennes, France, February 6th to 8th 2012.
21. **Jacques Monod Conferences - Coevolutionary arms race between parasite virulence and host immune defence: challenges from state of the art research**: *Experimental selection of hyper-virulent Wolbachia through horizontal transfer*. **Winka Le Clec'h**, Joanne Bertaux, Didier Bouchon & Mathieu Sicard*. Roscoff, France, September 3rd to 7th 2011.
22. **8th International Symposium of Terrestrial Isopod Biology**: *Wolbachia can cause early death of Porcellio dilatatus dilatatus*. **Winka Le Clec'h***, Maryline Raimond, Christine Braquart-Varnier, Didier Bouchon & Mathieu Sicard. Bled, Slovenia, June 19th to 23th 2011.
23. Immuninv (French community of invertebrate immunologists): *Host-switching and virulence: when Wolbachia is a killer*. **Winka Le Clec'h***, Maryline Raimond, Christine Braquart-Varnier, Didier Bouchon & Mathieu Sicard. Nice, France, May 4th to 6th 2011.
24. **COST-FA0701 Action Workshop**: *From vertical to horizontal transmission: when Wolbachia shows its killer face*. **Winka Le Clec'h**, Maryline Raimond, Joanne Bertaux, Didier Bouchon & Mathieu Sicard*. Badbevensen, Germany, 30th June to 02nd July 2010.
25. The University of Poitiers' Microbiology Day: *From silence to death, the double face of Wolbachia*. **Winka Le Clec'h***, Didier Bouchon & Mathieu Sicard. Poitiers, France, December 9th 2009.

Poster communications

1. **Anthelmintics: Discovery to Resistance IV**: *Genetic basis of meclonazepam resistance in Schistosoma mansoni*. **Winka Le Clec'h***, Frédéric D. Chevalier, Amanda Strickland, Robbie Diaz, John D. Chan & Timothy J.C. Anderson. Santa Monica, USA, February 3rd to 7th 2020.
2. **The 6th San Antonio Postdoctoral Research Forum**: *The genetic basis of praziquantel resistance in Schistosoma mansoni*. **Winka Le Clec'h***, Frédéric D. Chevalier, Marina McDew-White, Robbie Diaz, Meghan Guzman, Ana Carolina Alves de Mattos, Philip T. LoVerde & Timothy J.C. Anderson. San Antonio, USA, 18th September 2018.
3. The 2nd Symposium for International Research and Innovation in Schistosomiasis: *Hybridization and introgression within the Schistosoma haematobium species group inferred from exome sequencing*. Roy N. Platt II*, **Winka Le Clec'h**, Marina McDew-White, Frédéric D. Chevalier, Fiona Allan, Bonnie L. Webster, Amadou

Garba, Khalfan A. Mohammed, Shaali M. Ame, Joanne P. Webster, David Rollinson, Aidan M. Emery & Timothy J. C. Anderson. Washington, D.C., USA, May 22nd to 23rd 2018.

4. **Annual Meeting of the Society for Molecular Biology and Evolution 2017: Genetic analysis of transmission stage production in schistosome parasites.** **Winka Le Clec'h***, Frédéric D. Chevalier, Marina McDew-White, Vinay Menon & Timothy J.C. Anderson. Austin, TX., USA, July 2nd to 6th 2017.
5. **Annual Meeting of the Society for Molecular Biology and Evolution 2017: A journey into the blood microbiome of Biomphalaria snails, intermediate host of the human blood-fluke Schistosoma mansoni.** **Winka Le Clec'h***, Timothy J.C. Anderson & Frédéric D. Chevalier. Austin, TX., USA, July 2nd to 6th 2017.
6. **92nd Annual Meeting of the American Society of Parasitologists: An intriguing resistance phenotype in praziquantel-selected Schistosoma mansoni.** **Winka Le Clec'h***, Frédéric D. Chevalier, Ana Carolina Alves de Mattos, Philip T. LoVerde & Timothy J.C. Anderson. San Antonio, TX., USA, June 27th to July 1st 2017.
7. **SMBE satellite meeting on the Genetics of Admixed Populations: Genomic analysis of hybridization in schistosome parasites.** **Winka Le Clec'h***, Frédéric D. Chevalier, Marina McDew-White, Bonnie Webster, David Rollinson & Timothy J.C. Anderson. San Antonio, TX., USA, May 18th to 20th 2016.
8. **The Symposium for International Research and Innovation in Schistosomiasis: Invertebrate immunity: Phenoloxidase activity in the schistosome snail host.** **Winka Le Clec'h***, Frédéric D. Chevalier & Timothy J.C. Anderson. Washington, D.C., USA, February 3rd to 4th 2016.
9. **64th Annual Meeting of the American Society of Tropical Medicine and Hygiene: Genetic analysis of transmission-related traits in schistosome parasites.** **Winka Le Clec'h***, Frédéric D. Chevalier & Timothy J.C. Anderson. Philadelphia, PA., USA, October 25th to 29th 2015.
10. **64th Annual Meeting of the American Society of Tropical Medicine and Hygiene: Independent origins of loss-of-function mutations conferring oxamniquine resistance in Brazilian schistosome parasites.** **Winka Le Clec'h***, Frédéric D. Chevalier, Nina Eng, Rafael Ramiro de Assis, Guilherme Corrêa-Oliveira, Philip T. LoVerde & Timothy J.C. Anderson. Philadelphia, PA., USA, October 25th to 29th 2015.
11. **19th Evolutionary Biology Meeting: Genetic analysis of transmission-related traits in schistosome parasites.** **Winka Le Clec'h***, Frédéric D. Chevalier & Timothy J.C. Anderson. Marseilles, France, September 15th to 18th 2015.
12. **19th Evolutionary Biology Meeting: Independent origins of loss-of-function mutations conferring oxamniquine resistance in Brazilian schistosome parasites.** **Winka Le Clec'h***, Frédéric D. Chevalier, Nina Eng, Rafael Ramiro de Assis, Guilherme Corrêa-Oliveira, Philip T. LoVerde & Timothy J.C. Anderson. Marseilles, France, September 15th to 18th 2015.
13. **2nd San Antonio Postdoctoral Research Forum: Invertebrate immunity: Phenoloxidase activity in the schistosome snail host.** **Winka Le Clec'h***, Frédéric D. Chevalier & Timothy J.C. Anderson. San Antonio, TX., USA, September 16th 2014.
14. **7th International Symbiosis Society Congress: "The earth's vast symbiosphere": When Wolbachia becomes a pathogen in a new host: tolerance vs lethal autophagy.** **Winka Le Clec'h***, Christine Braquart-Varnier, Maryline Raimond, Didier Bouchon & Mathieu Sicard. Krakow, Poland, July 22th to 28th 2012.
15. **7th International Wolbachia conference: What do we know about the impacts of Wolbachia on Armadilidium vulgare immunity?** Frédéric Chevalier, Mathieu Sicard, Joanne Bertaux, **Winka Le Clec'h**, Didier Bouchon, Pierre Grève & Christine Braquart-Varnier*. Oleron island, France, June 7th to 14th 2012.

16. **8th International Symposium of Terrestrial Isopod Biology: Multi-infection of Wolbachia in natural population of Armadillidium vulgare.** Frédéric Grandjean*, **Winka Le Clec’h**, Carine Delaunay, Yannick Bitome & Monique Johnson. Bled, Slovenia, June 19th to 23th 2011.

TECHNICAL SKILLS

Experimental skills

- **Nucleic acids:** DNA and RNA extraction, PCR, RFLP-PCR, RT-PCR, qPCR, Genotyping, Sanger sequencing, Whole Genome Amplification, NGS libraries preparation, Exome capture, DNA fragment analysis (Bioanalyzer and TapeStation, Agilent).
- **Cell biology:** Automated cell counting, optical microscopy, epifluorescent microscopy, Fluorescence *in situ* hybridization (FISH), sample preparation for electron microscopy.
- **Microbiology:** Bacterial cultures, Bacterial injections, *Schistosoma mansoni* adult worms long-term culture.
- **Biochemistry:** Spectroscopy analysis (development of phenoloxidase activity assays, lactate assays in *Schistosoma mansoni* adult worms culture media).
- **Phenotypic measurements:** Behavioral tests (monitoring of animals activity), animals monitoring (growth rate of animals, survival, localisation in their rearing boxes, fecundity).
- **Genetic crosses:** Setup and maintenance of *Schistosoma mansoni* genetic crosses (F0 to F3).
- **Breeding:** Woodlice (terrestrial isopods), Freshwater snails (*Biomphalaria*, *Bulinus*, *Lymnaea*).

Bioinformatic skills

- **Nucleic sequence similarity search:** BLAST (local or online blast).
- **Nucleic sequence alignment:** BIOEDIT, Clustal.
- **Genotyping software:** GeneMapper.
- **Statistics:** General linear model, Survival rate analysis: LogRank test and Cox Models.
- **New-generation sequencing data analysis:** notions - MIRA (sequence assembly), Phred / Phrap / Consed (sequence assembly), SAMtools (sequence alignment), BWA (sequence alignment), GATK (variant calling), Artemis (genome annotation), Cufflinks (RNA-Seq data analysis).

OTHER SKILLS

Informatic skills

- **Statistical softwares:** R, JMP.
- **Programming:** R and Bash scripting.
- **Applications:** Microsoft Office, OpenOffice.org, LibreOffice for GNU/Linux or Windows platforms, L^AT_EX, B_IB_TE_X, JabRef.
- **Image processing:** ImageJ, GIMP, Inkscape, AxioVision.
- **Operating systems used:** GNU/Linux (Ubuntu distribution), Microsoft Windows (2000/XP/Vista/10).

Language skills

- French: Native speaker
- English: Fluent
- Latin: Good comprehension

SCIENTIFIC DISSEMINATION ACTIVITIES

Peer-reviewing activities

Peer-reviewed Journals

- *Journal of Invertebrate Pathology, Molecular and Biochemical Parasitology, Annals of Aquaculture and Research, International Journal of Biological Macromolecules, Journal of Asia-Pacific Entomology, Scientific Reports, PLoS One, Parasitology Research, The Journal of Parasitology, Medical Sciences, Antioxidants.*

Scientific disseminations

Science Festival

- Presentation of the "Ecology, Evolution and Symbiosis" lab research thematics to general public. **November 2009 and October 2011**

Action-PLUS

- Presentation of the "Ecology, Evolution and Symbiosis" lab research thematics and the graduate school to high school students. **January to December 2010**

Texas Biomed Outreach

- Presentation of my academic training and current research thematics at *Texas Biomedical Research Institute* to high school and college students. **February 2018 to present**
- Presentation of my academic training and current research thematics at *Texas Biomedical Research Institute* (Presentation: "Snails, parasites and human disease: The Schistosome worm case") to the **SciGirls** group at the Alamo drafthouse, San Antonio. **July 26th 2019**

Texas Biomed Family Night

- Set up activities and presentation of my current research on schistosomiasis and schistosome parasites to employees of Texas Biomed and their families. **August 2018 & October 2019**

Teaching disseminations

Open house at the University of Poitiers

- Presentation of the Bachelor of Science academic training.
- Presentation of the Research Master in Biology, Ecology, Evolution academic training.
- Presentation of the Master *Erasmus Mundus* EMAE (European Master in Applied Ecology) academic training.
- Presentation of the Professional Master in Ecological Engineering academic training.

Other activities

Chairman activity

- "Evolution of complex traits" session at the **19th Evolutionary Biology Meeting** in Marseilles, France, September 15th to 18th 2015.
- "Malacology and vaccine development" session at the **2nd Symposium for International Research and Innovation in Schistosomiasis** in Washington D.C., USA, May 22nd to 23rd 2018.

- “**Vector of transmissible diseases: Molluscs and Insects**” session at the 14th International Conference on Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases in Sitges, Spain, November 6th to 9th 2018.

Organizing committee membership

- **Co-leader** of the **The Texas Biomed Journal Club** at *Texas Biomedical Research Institute*.

February 2018 to present

- Member of the Outreach committee at *Texas Biomedical Research Institute*.

July 2018 to present

- 2nd San Antonio Postdoctoral Research Forum at the UTHSCSA. San Antonio, TX., USA, September 16th 2014.

Association membership

- American Society of Tropical Medicine and Hygiene (ASTMH). **2015 to 2016**
- Society for Molecular Biology & Evolution (SMBE). **2017 to present**
- American Society of Parasitologists (ASP). **2017 to present**

HOBBIES

Sports

Horse riding

- Federal horse riding diploma, level 7 (15 years of practice).
- Competition at Regional and National level (10 years of practice).