Paris Veltsos

Research Assistant, 10% ZAP
Ecology, Evolution and Genetics Research Group
Biology Department
Vrije Universiteit Brussel

Pleinlaan 2
1050 Brussels, Belgium
paris.veltsos@vub.be
+32 455 14 43 20
ORCID: 0000-0002-8872-6281
www.parisveltsos.com/research

Academic Employment

01.2023 - now Research Assistant - 10% ZAP - Vrije Universiteit Brussel

Topic	**The interplay of environmental adaptation, sexually antagonistic selection and sex chromosome evolution**
Supervisor	Wen-Juan Ma
Questions	How does environmentally dependent sexually antagonistic selection affect sex chromosome evolution? Does outcrossing always allow adaptation to a new niche? Establishment of an experimental system allowing introgression of beneficial alleles from one population into another.
Experience	Nematode maintenance, experimental evolution, experimental design

08.2020 - 12.2022 Associate Researcher - University of Kansas

Topic	**The effects of chromosomal inversions in monkeyflowers**
Supervisor	John Kelly
Questions	What are the effects of chromosomal inversions to gene expression? What is the contribution of inversion variation to gene expression relative to DNA sequence variation?
Experience	High molecular weight DNA extraction, pacbio sequencing and assembly, RNA extraction >5,000 samples, RNA/DNA library prep, RNAseq analysis, genomic analysis of inversions

03.2018 - 07.2020 Postdoctoral Fellow - Indiana University

Topic	**QTL for sexual dimorphism, local adaptation, sex-specific selection and sex-chromosome evolution in the plant *Silene latifolia***
Supervisor	Lynda Delph
Questions	Are QTL associated with sexual dimorphism and environmental adaptation concentrated on the sex chromosome? Are the genes responding to selection for large and small flowers the same? Are the same-sex biased genes responding to selection for large and small flower size? Does the emergence of dioecy increase male- and female- biased genes equally on the sex chromosome?
Experience	Genetic mapping, segregation distortion analysis, QTL analysis, RNAseq extraction and analysis, plant maintenance

09.2014 - 02.2018 SNSF Premier Assistant - University of Lausanne

Topic	**The evolution of homomorphic sex chromosomes in the common frog *Rana temporaria* and the annual plant *Mercurialis annua***
Supervisors	John Pannell, Nicolas Perrin
Questions	Why do some chromosomes remain homomorphic? *Mercurialis*: Is there a common Y in all species? How degenerated is the Y in terms of gene density, gene function and gene expression compared to the rest of the genome? Are YY plants viable and fertile? *Rana*: Are frogs with Y chromosomes of different degeneration statuses different in fitness in the field? How does their gene expression differ, including during development? Can sexually antagonistic genes drive a transition from random to genetic sex determination and how does it interact with sex-limited recombination (simulations)?
Experience	DNA/RNA extractions from plants and frogs, RNAseq analysis, PCR, field collections of plants and frogs, plant hairy root transformation and cytogenetics visiting Institute of Biophysics (Brno, Czech republic), BAC screening, sequencing and analysis, genetic mapping, computer simulations.

07.2011 - 06.2014 NERC Postdoctoral Research Fellow - University of St Andrews

Topic	**Genomic response to experimental sexual selection in *Drosophila pseudoobscura***
Supervisors	Michael Ritchie, Rhonda Snook (Sheffield)
Questions	What are the effects of evolution unfer monogamy and polyandry in gene expression? Is the direction of feminisation of gene expression always towards monogamy in different tissues, sexes and courtship statuses? How does sexual selection history affect the response to mating with males of the same and different sexual selection histories?
Experience	Large-scale tissue collection including dissected reproductive tissue from recently mated pairs, RNA extraction, experimental design, gene expression analysis including interaction effects, GO analysis

03.2008 - 05.2011 NERC Postdoctoral Research Fellow - University of St Andrews

Topic	**QTL for pre-mating isolation in *Drosophila montana***
Supervisors	Michael Ritchie, Roger Butlin & Jon Slate (Sheffield), Anneli Hoikkala (Jyvaskyla)
Questions	Are within- and between- population QTL associated with reproductive isolation the same?
Experience	International field sampling, RNA/DNA extractions, SNPchip design from 454 data, selection analysis, genetic mapping, QTL analysis, fly courtship song recording and analysis, chc analysis, pedigree maintenance.

Education

10.2003 - 03.2008 PhD - Queen Mary University of London

Thesis title	**The involvement of a sex chromosome fusion and rDNA diversity in the grasshopper *Podisma pedestris* hybrid zone**
Supervisor	Richard Nichols
Questions	Is rDNA locus variation contributing to hybrid inviability? Are sex chromosome combinations in hybrids deleterious? Does sexually antagonistic selection on the Y lead to the spread of a neo-XY system throughout the species range?
Experience	FISH & GISH cytogenetics, field collections, grasshopper rearring, hybrid zone simulations in Java. Sex ratio distortion scoring in field.

09.2000 - 06.2003 BSc (Hons) Genetics - The University of Liverpool

Lab project	Isolation and characterisation of microsatellite loci from the Indonesian damselfish *Neoglyphidodon nigroris*
Grade	1st class (also first in the class).

Honors, Awards, Fellowships and Grants Experience

2025	ESEB EO CAA Grant €250
2025	Caregiver award SMBE attendance $2,000
2024	'Co-PI'* FWO junior research project (with Prof. Ma, pending result) €556,984
2023	'Co-PI' FWO research project (with Prof. Ma, overall score 5.9/7) €541,476
2022	KU postdoc grant (not funded) $20,000
2021	KU postdoc grant (not funded) $20,000
2011	Finish Academy of Sciences Fellowship (not funded) €200,000
2009	Genetics Society Fieldwork grant £300

Publications

on 21/2/2025 32 peer-reviewed papers, 737 citations, i10-index: 22

* = co first author, $^{+}$ = student author

All pdfs and associated data/scripts are at https://www.parisveltsos.com/research/cv/

ORCID: https://orcid.org/0000-0002-8872-6281

Google Scholar: https://scholar.google.com/citations?user=FiQLAD8AAAAJ

In review

35. Carpentier F, Houtain A, Unal E, Doucette KL, Fontserè R, Brelsford A, Toups MA, Perrin N, **Veltsos P**, Ma W-J (in review) Coexisting Y haplotypes reveal cyclic sex chromosome differentiation around a shared sex-determining region
34. Kabota S, Bagheri M, Esselens L, Leonard H, Rweyemamu E, Bakengesa J, Tairo J, Mullens N, Janssens S, de Meyer M, Kudra A, Svardal H, Dorchin A, Mwatawala M, **Veltsos P**, Majubwa R, Jordaen K, Virgilio M (in review) Beyond honey bees: flower flies support complementary pollen transport in African smallholder cucurbit landscapes

Selected

33. Moraga C, Branco C, Rougemont Q, Jedlička P, Mendoza-Galindo E, **Veltsos P**, Hanique M, Rodríguez de la Vega RC, Tannier E, Liu X, Lemaitre C, Fields PD, Cruaud C, Labadie K, Belser C, Briolay J, Santoni S, Cegan R, Linheiro R, Adam G, El Filali A, Mossion V, Boualem A, Tavares R, Chebbi A, Cordaux R, Fruchard C, Prentout D, Velt A, Spataro B, Delmotte S, Weingartner L, Toegelová H, Tulpová Z, Cápal P, Šimková H, Štorchová H, Krüger M, Abeyawardana OAJ, Taylor DR, Olson MS, Sloan DB, Karrenberg S, Delph LF, Charlesworth D, Muyle A, Giraud T, Bendahmane A, Di Genova A, Madoui Amin, Hobza R, Marais GAB (2025) The *Silene latifolia* genome and its giant Y chromosome (**Science**) 387(6734): 630-636
32. **Veltsos P***, **Ridout KE***, Toups MA, González-Martinez S, Muyle A, Emery O⁺, Rastas P, Hudzieczek V⁺, Hobza R, Vyskot B, Marais GAB, Filatov DA, Pannell JR (2019) Early sex-chromosome evolution in the diploid dioecious plant *Mercurialis annua*. **Genetics** 212(3): 815-835
31. **Veltsos P**, Fang Y, Cossins AR, Snook RR, Ritchie MG (2017) Mating system manipulation and the evolution of sex-biased gene expression in *Drosophila*. **Nature Communications** 8(1):2072
30. **Veltsos P**, Keller I, Nichols RA (2008) The inexorable spread of a newly arisen Y chromosome. **PLoS Genetics** 4(5): e10000082

Published

29. Shinde S, **Veltsos P**, Ma WJ (2025) Gene duplication, translocation, and molecular evolution of *DMRT1* and related sex-determining genes in anurans **Biomolecules** 15(9): 1306
28. **Veltsos P**, Madrigal-Roca, LJ and Jelly JK (2024) Testing the evolutionary theory of inversion polymorphisms in the wildflower *Mimulus guttatus* **Nature Communications** 15: 10397
27. **Veltsos P**, Shinde S and Ma W-J Sex chromosome evolution: The classical paradigm and so much beyond (2024) **Reference Module in Life Sciences** http://doi.org/10.1016/B978-0-443-15750-9.00043-4
26. **Veltsos P** and Jelly JK (2024) The quantitative genetics of gene expression in *Mimulus guttatus* **PLoS Genetics** 20(4): e1011072
25. **Veltsos P,** Porcelli D, Fang Y, Cossins A, Ritchie MG, Snook RR (2022) Experimental sexual selection reveals rapid divergence in male and female reproductive transcriptomes and their interactions **Molecular Ecology** 31(12):3374-3388
24. Gerchen JF, **Veltsos P**, Pannell JR (2022) Recurrent allopolyploidization, Y-chromosome introgression and the evolution of sexual systems in the plant genus *Mercurialis***. Phil. Trans. R. Soc. B** 377: 20210224
23. Ma, W-J, **Veltsos P** (2021) The diversity and evolution of sex chromosomes in frogs. **Genes** 12(4): 483
22. Wiberg RA, **Veltsos P**, Snook RR, Ritchie MG (2021) Experimental evolution confirms signatures of sexual selection in genomic divergence. **Evolution Letters** 5(3): 214-229
21. Ma W-J, Pannebakker BA, Li X, Geyverink E, Anvar SY, **Veltsos P**, Schwander T, van de Zande L, Beukeboom LW (2021) A single QTL with large effect is associated with female functional virginity in an asexual parasitoid wasp. **Molecular Ecology** 30(9): 1979-1992
20. **Veltsos P***, **Rodrigues N***⁺, Studer T⁺, Ma W-J, Sermier R, Leunberger J⁺, Perrin N (2020) No evidence that Y-chromosome differentiation affects male fitness in a Swiss population of common frogs. **Journal of Evolutionary Biology 33**(4): 401-409 ***Shared co-authors**
19. Li X*⁺, **Veltsos P***, Cossard G⁺, Gerchen J⁺, Pannell JR (2019) YY males of the dioecious plant *Mercurialis annua* are fully viable but produce largely infertile pollen. **New Phytologist** 244(3):

1394-1404 ***Shared co-authors**

18. **Veltsos P**, Delph LF (2019) The X chromosome is necessary for ovule production in *Silene latifolia*. **PLoS ONE** 14(5): e0217578
17. **Veltsos P** (2018) Not all sex-biased genes are the same. **New Phytologist** 221(1): 10
16. **Veltsos P**, Cossard G[+], Beaudoing E, Beydon G, Savova-Bianchi D, Roux C, González-Martínez SC, Pannell JR (2018) Size and content of the sex-determining region of the Y chromosome in dioecious *Mercurialis annua*, a plant with homomorphic sex chromosomes. **Genes** 9(6): 277
15. Ma WJ, **Veltsos P**, Sermier R, Parker DJ, Perrin N. (2018) Evolutionary and developmental dynamics of sex-biased gene expression in common frogs with proto-Y chromosomes. **Genome Biology** 19(1): 156
14. Ma WJ, **Veltsos P**, Toups MA, Rodrigues N[+], Sermier R, Jeffries DL, Perrin N (2018) Tissue specificity and dynamics of sex-biased gene expression in a common frog population with differentiated, yet homomorphic, sex chromosomes. **Genes** 9(6): 294
13. Rodrigues N[+], Studer T[+], Dufresnes C, Ma W, **Veltsos P**, Perrin N (2017) *Dmrt1* polymorphism and sex chromosome differentiation in *Rana temporaria*. **Molecular Ecology** 26(19): 4897-4905
12. Ala-Honkola O, Ritchie MG, **Veltsos P** (2016) Postmating-prezygotic isolation between two allopatric populations of *Drosophila montana*; fertilisation success differs under sperm competition. **Ecology and Evolution** 6(6): 1679-1691
11. **Veltsos P**, Gregson E, Morrissey B[+], Slate J, Hoikkala A, Butlin RK, Ritchie MG (2015) The genetic architecture of sexually selected traits in two natural populations of *Drosophila montana*. **Heredity** 115(6): 565-572
10. **Veltsos P**, Wicker-Thomas C, Butlin RK, Hoikkala A, Ritchie MG (2012) Sexual selection on song and cuticular hydrocarbons in two distinct populations of *Drosophila montana*. **Ecology and Evolution** 2: 80-94. DOI: 10.1002/ece3.75
9. **Toups M***, **Veltsos P***, Pannel JR (2015) Plant sex chromosomes: Lost genes with little compensation. **Current Biology** 25(10) R427-430 ***Shared co-authors**
8. Tyukmaeva VI[+], **Veltsos P**, Slate J, Gregson E, Kauranen H[+], Kankare M, Ritchie MG, Butlin RK Hoikkala A (2015) Localisation of QTL for diapause and other photoperiodically regulated life-history traits important in adaptation to seasonally varying environments. **Molecular Ecology** 24: 2809-2819
7. Ala-Honkola O, **Veltsos P**, Anderson H, Ritchie M (2014). Copulation duration, but not paternity share, potentially mediates inbreeding avoidance in *Drosophila montana*. **Behavioral Ecology and Sociobiology** 68(12) 2013-2021
6. Bailey NW, **Veltsos P**, Tan YF, Millar AH, Ritchie MG, Simmons LW (2013) Development of tissue-specific transcriptomic resources in a non-model insect, the field cricket *Teleogryllus oceanicus*. **G3** 3(2): 225-230 DOI: 10.1534/g3.112.004341
5. **Veltsos P**, Ritchie MG (2011) Sympatric Speciation. In: **eLS** 2011, John Wiley & Sons, Ltd: Chichester http://www.els.net/ DOI:10.1002/9780470015902.a0001749.pub2
4. **Veltsos P**, Keller I, Nichols RA (2009) Geographically localised bursts of ribosomal DNA mobility in the grasshopper *Podisma pedestris*. **Heredity** 103: 54-61
3. Keller I, **Veltsos P**, Nichols RA (2008) The frequency of rDNA variants within individuals provides evidence of population history and gene flow across a grasshopper hybrid zone. **Evolution** 64 (4): 833-844
2. Keller I, Chintauan-Marquier IC, **Veltsos P**, Nichols RA (2006) Ribosomal DNA in the grasshopper *Podisma pedestris*: Escape from concerted evolution. **Genetics** 174 (2): 863-874.
1. Watts PC, **Veltsos P**, Soffa BJ, Gill AB, Kemp SJ (2004) Polymorphic microsatellite loci in the black-and-gold chromis, *Neoglyphidodon nigroris* (Teleostei: Pomacentridae). **Molecular Ecology Notes** 4 (1): 93-95

Invited Talks

12 invited talks

03.2026 **Departmental seminal** "Different Y chromosomes coexist in a single frog population: Theory, consequences and evolutionary dynamics", University of Antwerpp, Antwerp,

Belgium

06.2025 **Departmental seminal** "Gene expression response to experimental sexual selection in *Drosophila*", Royal Museum for Central Africa, Tervuren, Belgium

09.2023 **Departmental seminal** "Homomorphic sex chromosomes in the *Mercurialis* species complex", ULB, Brussels, Belgium

03.2023 **Departmental seminal** "Sexual selection and sex chromosome evolution", VUB, Brussels, Belgium

10.2021 **Departmental seminal** "The Y chromosome(s) of the *Mercurialis* species complex?", KU Genomics centre, Kansas, USA

08.2021 **Conference speaker** "Is the PAR a hotspot for genes involved with sexual antagonism and local adaptation in *Silene latifolia*?", ESEB sex chromosome satellite symposium, Prague, Czech Republic

02.2019 **Departmental seminar** "Insights into sex chromosome evolution from genetic mapping", Amherst College, USA

09.2018 **Departmental seminar** "Homomorphic sex chromosomes in plants and frogs", Indiana University, USA

06.2016 **Departmental seminar** "Sexual selection and homomorphic sex chromosomes", Chinese Academy of Sciences, Xishuangbanna, China

06.2016 **Departmental seminar** "Investigation of a homomorphic Y chromosome", DEE Lausanne, Switzerland

05.2015 **Departmental seminar** "Detecting sexual selection in the field in frogs", DEE Lausanne, Switzerland

11.2006 **Genetics society prize winner talk** "The inevitable accession of XY systems", Promega Young Geneticist of the Year, Mammalian genetics and development, London, UK

Workshop Presentations

11.2016 "Transcriptomic response to courtship in *D. pseudoobscura*", The mechanism of the behaviour regulation and its research method in pest or insect workshop, **Guangzhou, China**

04.2014 "My experience with RNAseq", RNAseq workshop, Centre for Genes and Genomics, **Liverpool, UK**

Conference Presentations

28 talks and 10 posters in national and international meetings.

06.2026 **Poster** "Coexisting Y haplotypes reveal cyclic sex chromosome differentiation around a shared sex-determining region" SMBE26, **Copenhagen, Denmark**

04.2026 **Poster** "Epigenetic memory for salt preference in *C. remanei*" 8th Belgian worm meeting, **Leuven, Belgium**

09.2025 **Talk** "The effect of chromosomal inversions on gene expression and molecular evolution *Mimulus guttatus*" Evolutionary Genomics symposium at RBINS, **Brussels, Belgium**

08.2025 **Poster** "The effect of chromosomal inversions on gene expression in *Mimulus guttatus*" ESEB, **Barcelona, Spain**

07.2025 **Poster** "The effect of chromosomal inversions on gene expression in *Mimulus guttatus*" SMBE, **Beijing, China**

02.2024 **Talk** "Sexual selection, environmental adaptation and hybrid zones with nematodes" Belgian *C. elegans* annual meeting, **Brussels, Belgium**

09.2023 **Talk** "Sex-specific, population-specific segregation distortion in *Silene latifolia*", 2nd *Silene* meeting **Lille, France** (virtual)

08.2022 **Talk** "The effect of chromosomal inversions on gene expression", ESEB **Prague, Czech Republic**

08.2021 **Talk** "Is the PAR a hotspot for genes involved with sexual antagonism and local adaptation in *Silene latifolia?*", (virtual) ESEB sex chromosome symposium, **Prague,**

Czech Republic

01.2021 **Talk** "Sex-specific, population-specific segregation distortion in *Silene latifolia*", (virtual) Popgroup 55, **Norwich, UK**

01.2020 **Talk** "Artificial selection on flower size disproportionately affects sex-biased genes in *Silene latifolia*", Popgroup 53, **Leicester, UK**

06.2019 **Talk** "Y-chromosome degeneration in plants the effect of 10 million years", Evolution, **Providence, USA**

06.2019 **Poster** "An updated genetic map in *Silene latifolia* shows sex-specific selection", Evolution, **Providence, USA**

08.2017 **Talk** Evolution of semi-independent homomorphic Y chromosomes in an annual plant species complex", ESEB, **Groningen, Netherlands**

01.2017 **Talk** "Comparison of gene expression between XX and XY males in the common frog", Popgroup, **Cambridge, UK**

06.2016 **Talk** "Investigation of a homomorphic Y chromosome", Evolution of sex determination workshop, **la Sage, Switzerland**

12.2015 **Talk** "Investigation of a homomorphic Y chromosome in an annual plant", Popgroup, **Edinburgh, UK**

08.2015 **Talk** "Sex-biased expression as a sexually antagonistic trait", ESEB, **Lausanne, Switzerland**

01.2014 **Talk** "Genomic response to experimental sexual selection", Popgroup, **Bath, UK**

09.2013 **Talk** "Genomic response to experimental sexual selection", Entomology conference, **St Andrews, UK**

08.2013 **Talk** "DNA sequence response to experimental sexual selection", ESEB, **Lisbon, Portugal**

12.2012 **Talk** "Are QTLs for behavioural variation within populations different to between populations?", Popgroup, **Glasgow, UK**

01.2012 **Poster** "Genetic maps of reproductively isolated populations of *Drosophila montana*", Popgroup, **Nottingham, UK**

08.2011 **Talk** "QTLs for courtship song and CHCs in natural populations of *Drosophila montana*", ESEB, **Tuebingen, Germany**

03.2011 **Talk** "Speciation through behaviour", SCAB symposium, **St Andrews, UK**

01.2011 **Talk** "Selection and population differentiation for song and cuticular hydrocarbons in *Drosophila montana*", PopGroup, **Hull, UK**

09.2010 **Talk** "Selection and population differentiation for song and cuticular hydrocarbons in *Drosophila montana*", New directions in sexual selection unifying behavioural and genomic approaches conference, **Bath, UK**

01.2010 **Talk** "Differential introgression of ribosomal DNA subgroups across a hybrid zone in the grasshopper *Podisma pedestris*", Popgroup, **Liverpool, UK**

08.2009 **Poster** "Distinct genetic determination of cuticular hydrocarbon profiles in divergent *D. montana* populations", ESEB, **Turin, Italy**

08.2009 **Talk** "Studying natural variation in reproductive isolation characters with QTLs", The role of behaviour in Speciation, **St Andrews, UK**

12.2007 **Talk** "Evidence of selection on rDNA in the *P. pedestris* hybrid zone", PopGroup, **Warwick, UK**

09.2006 **Talk** "Ribosomal DNA and reproductive isolation in the grasshopper *Podisma pedestris*", L.E.R.N conference , **London, UK**

07.2006 **Poster** "A tool to better understand early sex chromosome evolution", BBSRC evolutionary genetics summer school, **Edinburgh, UK**

02.2006 **Talk** "The effects of a sex chromosome fusion in a naturally occurring hybrid zone", Royal Entomological Society Postgraduate forum, **London, UK**

12.2005 **Talk** "Simulating a hybrid zone between two different sex chromosome system populations", PopGroup, **Edinburgh, UK**

09.2005 **Talk** "Ribosomal RNA and reproductive isolation in the grasshopper *Podisma pedestris*",

L.E.R.N conference, **London, UK**

09.2005 **Talk** "Ribosomal RNA and reproductive isolation in the grasshopper *Podisma pedestris*", 11th meeting of PhD students in evolutionary biology, **Bordeaux, France**

08.2005 **Talk** "Ribosomal RNA and reproductive isolation in the grasshopper *Podisma pedestris*", ESEB, **Krakow, Poland**

02.2005 **Poster** "Grasshoppers, rDNA and FISH", Royal Entomological Society Postgraduate Symposium, **London, UK**

12.2005 **Poster** "Grasshoppers, rDNA and FISH", PopGroup, **Reading, UK**

Additional Training (Workshop / Conferences)

Participated in 33 meetings.

06.2026 **Navigating Belgian, foreign & international academic cultures**, (VUB, Belgium)

06.2026 **PhD supervisor training: Motivational conversations**, (VUB, Belgium)

05.2026 **PhD supervisor training: Group culture and motivation**, (VUB, Belgium)

04.2026 **PhD supervisor training: Five approaches to supervision**, (VUB, Belgium)

04.2026 **Human-based in vitro and ex vitro models as alternatives to animal testing: From bone development to Immunotoxicity**, (virtual, VUB, Belgium)

04.2026 **PhD supervisor training: Five approaches to supervision**, (VUB, Belgium)

12.2025 **Planetary limits and complex risks: Developing interdisciplinary perspectives**, (ULB, Belgium)

10.2025 **3rd *Silene* meeting**, (virtual, Meise-Lille, Belgium-France)

02.2025 **Non-animal approaches in infection and immunity**, (virtual, Togeth3R Consortium, Belgium)

02.2025 **AI for ERC grant writing**, (VUB, Brussels, Belgium)

07.2024 **2nd Tree of Sex meeting**, (virtual, Prague, Czech Republic)

06.2024 **RSPCA/NC3Rs Amphibian Care and Welfare** (virtual, Sussex, UK)

05.2023 **1st Tree of Sex meeting**, (virtual, Cambridge, UK)

05.2021 **Silene international meeting**, (virtrual)

01.2021 **Popgroup**, Liverpool, UK (virtrual)

02.2020 **Advocates and allies equity workshop**, Indiana University, USA

09.2019 "**Sex differences in the brain**", Gill Centre for Biomolecular Science, Indiana University, USA

08.2018 **ESEB**, Montpellier, France

04.2018 "*De novo* **transcriptome assembly**", CGAS Indiana University, USA

06.2016 "**Evolution of sex determination**", University of Lausanne, Switzerland

12.2011 **Association for the study of animal behaviour**, London, UK

04.2011 "**Transposable elements - Their functional and evolutionary biology**", Genetics Society symposium, Edinburgh, UK

01.2010 "**Genetics and Genomics of speciation workshop**", Peak District, UK

11.2009 "**Genetics and the causes of evolution 150 years of progress since Darwin**", London, UK

04.2009 "**Theory of Speciation**", Groningen, Netherlands

09.2008 "**Challenges in speciation research**", Sheffield, UK

05.2008 "**New frontiers in epigenetics**", Genetics Society, London

02.2008 "**Genes & Behaviour**" Gordon Research Conference, Lucca (Barga), Italy

11.2006 "**Comparative genomics and diversity**", London, UK

10.2006 "**Nature, nurture or neither - Genetics in the post genome era**", London, UK

11.2005 "**Speciation Symposium**", Natural History Museum, London, UK

11.2005 "**C.E.E Evolutionary inferences from phylogenetic trees**", London, UK

03.2005 "**Life at the Boundaries the physics of survival and endurance**", London, UK

11.2004 "**A walk from the wild side the genetics of domestication of livestock and crops**", London, UK

11.2004 "**Evolution and Medicine**", London, UK

Teaching

Lecturing

I have written **20 lectures** on various subjects on evolutionary biology, incorporating recent advances in the subject and my own research. I also acted as a **tutorial group leader for 2 years**.

Spring 2025 **5 lectures, 2 MCQ, oral exams** BSc course on "Molecular Biology of the Cell" co-titular, VUB, Brussels, Belgium.

Autumn 2024 **1 lecture, 4 paper in class discussions, student evaluation** Master course on "Evolutionary genetics and genomics of sex" co-titular, VUB, Brussels, Belgium.

Autumn 2024 **1 guest lecture** 3rd year students on "Sex chromosome evolution" ULB, Belgium.

Spring 2024 **5 lectures, 1 multiple choice quiz, oral exams** BSc course on "Molecular Biology of the Cell" co-titular, VUB, Brussels, Belgium.

Autumn 2023 **1 lecture, 4 paper in class discussions, student evaluation** Master course on "Evolutionary genetics and genomics of sex" co-titular, VUB, Brussels, Belgium.

Autumn 2023 **1 guest lecture** 3rd year students on "Sex chromosome evolution" ULB, Belgium.

Autumn 2018 **1 "brown bag" lecture on my research** to PhD students at Indiana University, USA

Spring 2010 **5 evolution lectures** to 3rd year students, St Andrews, UK
"Coadapted gene complexes", "Reproductive isolation", "Hybrid zones", "Evolution in islands"

Autumn 2009 **3 speciation lectures** to 2nd year students, St Andrews, UK
"Speciation definitions", "Geographic modes of speciation", "Speciation comparison between plants and animals"

Autumn 2008 **1 guest lecture** 4th year students, St Andrews, UK
"The evolution of sex chromosomes and sex determination"

2003-2008 **4 guest lectures**, to 2nd and 3rd year students.
The lectures introduced sex chromosome evolution, my research on cytogenetics, and hybrid zone computer simulations.

2008-2009 **Tutorial group lecturer**, 3rd year students, group of 8, St Andrews, UK
"Hardy Weinberg exercises", "Favourite paper discussion", "Essay writing", "Poster preparation", "Public speaking"

Teaching assistance

I was involved in running **19 large practical classes and 3 field trips** on many topics during my PhD, including marking. I also **helped run practicals and exams** for undergraduate classes in Lausanne, including setting questions and marking for one.

2023-2024 **Examiner 3 BSc, 2 master theses**, VUB, Brussels, Belgium

2022-2023 **Examiner 2 BSc theses**, VUB, Brussels, Belgium

2021-2022 **5-part workshop on Unix, Bioinformatics, R for genomics (over Zoom)**, University of Kansas, USA (20 PhD - Teaching assistant)

2014-2017 **14 Botany practicals, 1st year Biology and Pharmacology students**, University of Lausanne, Switzerland (150 BSc - Teaching assistant)

2015-2016 **4 population genetics practicals, 1st year Biology students**, University of Lausanne, Switzerland (80 BSc - Teaching assitant/examiner)

2003-2008 First and second year undergraduates, **3 days every 2 weeks** during semester, Queen Mary University of London, UK
22 Subjects covered: Meiosis, Chromosome genetics, Viruses, Evolutionary genetics snail field trip, PCR and BLAST, DNA extraction and analysis, Algae and cyanobacteria, Mitosis video, Basic techniques in biochemistry, Genetic drift, Phage lambda, Reproductive systems in land plants, Molluscs and arthropods, Biology summer school, Osmosis - plasmolysis, Introduction to microscopy, Essential microbiological techniques, Linkage analysis, Evolution - Natural History Museum visit, Cladistics, Evolution - Kew Gardens visit, Open day bioinformatics.
Class size 200-380 BSc - Teaching assistant and examiner

Mentoring

I have mentored **1 technician and 15 students** in the lab and supervised their written work. I have also worked closely with many PhD students both in my lab and on related projects in other labs (not listed). Some of this collaboration has resulted in **joint publications**, indicated by ⁺ in the publications section. More recently I have been co-supervising/mentoring all PhD students and postdocs of the Ma lab.

PhD student supervision

02.2024 -now **Ricard Fontsere,** VUB, Brussels, Belgium (with Wen-Juan Ma)
"The genetic mechanisms and role of transposable elements in sex chromosome turnover in frogs"

12.2022 -now **Hatice Ezgi Unal,** VUB, Brussels, Belgium (with Wen-Juan Ma)
"Evolution and genetic mechanism of extreme sexual dimorphism in recombination in frogs and its effects on sex chromosome evolution"

Master student supervision

2026-2027 **Ezel Bahar Balci,** VUB, Brussels, Belgium
"Interspecific hybrids between *C. remanei* and *C. brennerii*"

2025-2026 **Gabriele Campanile,** VUB, Brussels, Belgium
"Integrated practical"

2024-2025 **Pouamoun Zouberou Njimbe,** VUB, Brussels, Belgium
"The response of intra and interspecific hybrids to selection for high and low salinity in *Caenorhabditis*"

2024-2025 **Marzie Bagheri,** VUB, Brussels, Belgium (with Massimiliano Virgilio - Royal Museum of Central Africa, Tervuren, Belgium)
"Pollen metabarcoding and pollination networks of insects of agricultural importance in Morogoro,Tanzania"

2023-2024 **Marzieh Bagheri** (1st step Master), VUB, Brussels, Belgium (with Wen-Juan Ma)
"Microsatellite genotyping for Swiss and Belgian *Rana temporaria*".

2015-2016 **Nela Bacovska**, Institute of Biophysics, Brno, Czech Republic (with Roman Hobza)
"Cytogenetics and BAC libraries of sex chromosomes in *Mercurialis*".

Bachelor and technician supervision

2025-2026 **Sebastian Gronlund Capelle**, VUB, Brussels, Belgium
"Temperature effects on hybrid reproductive isolation between *C. brenneri* and *C. remanei*"

2025-2026 **Maëliss Laurence M Hanson**, VUB, Brussels, Belgium
"Epigenetic memory for salt concentration preference in *Caenorhabditis remanei*"

2025-2026 **Julie Bouvin**, VUB, Brussels, Belgium
"Transgenerational epigenetic memory of salt preference in mixed strains of *Caenorhabditis remanei*"

2024-2025 **Luca Silvio Pignatti**, VUB, Brussels, Belgium
"Differences in salt chemotaxis in *Caenorhabditis* species and sexes"

2023-2024 **Tristan Cornelis**, VUB, Brussels, Belgium
"The salinity preference of *Caenorhabditis elegans*".

2023-2024 **Marie Aerts**, VUB, Brussels, Belgium (with Wen-Juan Ma)
"Sex-specific splicing and histology in *Rana temporaria*".

2020-2022 Lab supervision of 5 BSc students (**Aisha Mohamed, Guled Abdi, Apolonia Arteaga, Mae Morrison, Gabe Effiong**) University of Kansas, USA (with John Kelly)
>2000 of RNA and DNA extraction from plants, greenhouse work, library preparation for sequencing.

2015 **Yi Huang** (8 week summer internship), University of Lausanne, Switzerland (with Guillaume Cossard, John Pannel)
"The viability and fertility of YY plants"

2009 **Holden Sheffield,** University of St Andrews, Scotland
"Identification of sex ratio distortion in *D. montana* lines".

2008-2009 **Barbara Morrissey** (lab technician) (with Roger Butlin), University of Sheffield, UK

2005 **Alem Gebreselassie**, Queen Mary University of London (with Richard Nichols, Andrew Leitch)
"Fluorescent *in-situ* hybridisation and genomic *in-situ* hybridisation in *P. pedestris*".

2004 **Hussna Jahan**, Queen Mary University of London (with Irene Keller, Richard Nichols)
"Fluorescent *in-situ* hybridisation in *P. pedestris*"

2003 **Undergraduate student lab project**
"Is the *P. pedestris* hybrid zone position stable over time?".

Service

Master thesis committee

2024-2025 **Joke Baekeland** "From control to coexistence: entomopathogenic pest control and vegetation diversity in conventional and agriwilding farm systems", VUB, Brussels, Belgium

2023-2024 **Gies Van Craesbeek** "Development of LbCDF-A and LbCDF-B RNAi knock-down mutants to investigate zinc homeostasis in the ectomycorrhizal mutualist *Laccaria bicolor*", VUB, Brussels, Belgium

2023-2024 **Joran Daems** "On sexual dimorphism of water and carbon interactions between European mistletoe (*Viscum album*) and its hosts", VUB, Brussels, Belgium

BSc thesis committee

2024-2025 **Yorben Coppens** "Comparative transcriptomics reveals loss of skin secreted antimicrobial peptides in *Mantella betsileo* (Mantellidae)", VUB, Brussels, Belgium

2023-2024 **Febe Geeraerts** "Evolutionary analysis of β-defensins reveals the conservation of ancient genes from fishes to reptiles", VUB, Brussels, Belgium

2023-2024 **Lola Kums** "DNA barcoding of the coral *Acropora spp.* from Sri Lanka", VUB, Brussels, Belgium

2023-2024 **Nina Vandeperre** "Limited gene flow among populations of the Yellow clownfish *Amphiprion sandaracinos* across the Indo-Malay Archipelago", VUB, Brussels, Belgium

2022-2023 **Emma Camphyn** "Nanobodies as tool to block the Lipocalin-2/24p3R interaction", VUB, Brussels, Belgium

Outreach

2018 **Creator of podcast** discussing papers and presenting them to the public through improvisational sketches (13 episodes http://thecatalyst.ch/category/projects/podcasts/science-beer-review/).

12.2013 **STEM Ambassador**: Interviews with students on career choices in St Modans school in Stirling, UK.

03.2013 **STEM Ambassador**: Fife Open Day Science Festival demonstrator on ear and eye function.

01.2009 **Radio interview** by St Andrews radio on *Drosophila* courtship song.

Academic Service and Leadership

2023 - 2025 **Postdoc lunch organiser** Brussels, Belgium

2024 - now **BDiV website portrait photos**, Brussels, Belgium

2019 - 2020 **Journal club** on plant evolution, Indiana, USA

2016 - 2017 **Journal club** on sex chromosomes founder, Lausanne, Switzerland

08.2015 **Volunteer conference organiser** for ESEB in Lausanne (1,200 participants)

2009 - 2010 **Founding member of Post Graduate BioNetwork**, St Andrews, UK
This brought together students from 4 different buildings in weekly talks and social

activities, and eventually run the 2-day post-graduate symposium.

2004 - 2006 **Biolunch weekly staff seminar organiser**, Queen Mary University of London, UK

2005 - 2006 **PhD student induction**, Queen Mary University of London, UK

Bioinformatics experience

Github: https://github.com/parisveltsos

Programming	R, Perl, Python, bash, vim
RNAseq analysis	Experimental design, Kallisto, EdgeR, Blast2GO, topGO
Genomics	RepeatMasker, BWA, Picard Tools, GATK, vcftools, Blast, FASTQC, BWA-MEM, samtools, augustus
QTL analysis	rqtl, Lep-Map 3, Cri-map, Asreml
Population genetics	Popoolation 2, adegenet

Professional Membership

2019 - now Society for the Study of Evolution (SSE)

2004 - now The Genetics Society

2004 - now The European Society for Evolutionary Biology (ESEB)

2010 - 2012 Association for the study of animal behaviour (ASAB)

2004 - 2009 The Royal Entomological Society

Academic Reviewing

(**34 on Publons** https://www.webofscience.com/wos/author/record/803139)

- BMC Evolutionary Biology
- BMC Genomics
- Biological Journal of the Linnean Society
- Current Biology
- Evolution
- Evolutionary Ecology
- Genetica
- Genes
- Genome Biology and Evolution
- Heredity
- Insects
- Journal of Evolutionary Biology
- Journal of Heredity
- Journal of Zoology
- Molecular Biology and Evolution
- Molecular Ecology Resources
- Molecular Ecology
- Molecular Phylogenetics and Evolution
- New Phytologist
- PlosOne
- Proceedings of the Royal Society B

Grant Reviewing

6 Czech Science Foundation grants

1 Polish Science Foundation grant

Website administration

My site (http://www.parisveltsos.com/research/ (included distribution of teaching material)

Creation of Twitter bots to report on literature (@sexChr_papers, @silenepapers, @mimuluspapers)

2009-2014 Ritchie lab website

2009-2014 Seminar shared calendars for departmental events in St Andrews

2009-2010 BioNetwork site

2004-2006 Biolunch site

References

John Kelly - Current postdoc supervisor
jkk@ku.edu
Department of Ecology & Evolutionary Biology
University of Kansas
Haworth Hall, 1200 Sunnyside Ave
Lawrence, KS 66045
USA
+1 785-864-3706

Lynda Delph - Previous postdoc supervisor
ldelph@indiana.edu
Department of Biology, Jordan Hall
1001 East Third Street
Indiana University
Bloomington, IN 47405
USA
+1 812-855-1831

John Pannell - Previous postdoc supervisor
John.Pannell@unil.ch
DEE University of Lausanne
Le Biophore, Unil Sorge
CH-1015
Switzerland
+41 216-924-170

Richard Nichols - PhD supervisor
r.a.nichols@qmul.ac.uk
Queen Mary University of London
Mile End Road
London E1 4NS
UK
+44 20-7882-3362

Mike Ritchie - Previous postdoc supervisor
mgr@st-andrews.ac.uk
Dyers Brae
University of St Andrews
St Andrews
Fife
KY16 9TH
UK
+44 1334-463495