Curriculum Vitae

Vítor C. Sousa

September 2018

1. PERSONAL INFORMATION

Full Name	Vítor Martins Conde e Sousa
Birth Date	13 March 1981
Citizenship	Portuguese
Civil status	Single
Current affiliation	Centre for Ecology, Evolution and Environmental Changes (cE3c) Campo Grande, Edificio C2 - 3º Piso, 1749-016 Lisboa, Portugal
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AUTHOR IDENTIFIERS

ORCID ID	0000-0003-3575-0875 https://orcid.org/0000-0003-3575-0875
Researcher ID	P-1871-2016 http://www.researcherid.com/rid/P-1871-2016
Scopus Author ID	ID: 23989723700 https://goo.gl/LbB98n
Scholar Google	https://goo.gl/qzvwU2

2. SUMMARY OF PROFESSIONAL ACTIVITY AND QUALIFICATIONS

2.1. CURRENT PROFESSIONAL STATUS

current - 03.2018 **Researcher**
Marie Sklodowska-Curie Individual Fellow/ FCiências.ID
cE3c – centre for Ecology, Evolution and Environmental changes
Research topics: Population genomics, Genomics of adaptation, Gene flow, Recombination, Experimental evolution.

2.2. PREVIOUS PROFESSIONAL ACTIVITY

08.2018 - 09.2017 **Invited Assistant Professor (0%)**
Faculdade de Ciências da Universidade de Lisboa (FCUL)
Teaching activities: Master programs "Biologia Evolutiva e do Desenvolvimento" http://bed.campus.ciencias.ulisboa.pt, and "Bioinformática e Biologia Computacional" http://bbc.edu.ciencias.ulisboa.pt; PhD program BIODIV (Biodiversity, Genetics and Evolution) http://www.biodiv.pt.

02.2018 - 10.2016 **Independent researcher (Invited Scientist)**
cE3c – centre for Ecology, Evolution and Environmental changes
Research topics: Population genomics, Genomics of adaptation, Human genomics.

09.2016 - 02.2013 **Postdoc Research Fellow, University of Bern**
Institute of Ecology and Evolution, University of Bern, Bern;
Swiss Institute of Bioinformatics, Lausanne, Switzerland
Supervisor: Prof. Laurent Excoffier
Research topics: Population genomics, Human genomics, Genomics of adaptation.

12.2012 - 05.2010 **Postdoctoral Associate, Rutgers University**
Department of Genetics, Rutgers University, NJ, USA
Supervisor: Prof. Jody Hey
Research topics: Statistical population genetics, Population divergence and speciation, Gene flow and hybridization.

2.3. ACADEMIC QUALIFICATIONS

04.2010 - 01.2006 **PhD degree in Evolutionary Biology**, FCUL, University of Lisbon
Research institution: Instituto Gulbenkian de Ciência (IGC)
Granting institution: FCUL, University of Lisbon
Thesis: "Inference of admixture and population size changes in structured populations with applications to conservation genetics".
http://repositorio.ul.pt/handle/10451/1825
Supervisors: Prof. Manuela Coelho (FCUL) and Dr. Lounès Chikhi (IGC)
Grade: Distinction and Honours.

06.2005 - 09.2004 **Post-Graduation in Bioinformatics**, FCUL, University of Lisbon
Average grade: 17/20

02.2004 - 09.1999 **Degree in Biology** ("Licenciatura Ramo Científico"), FCUL, University of Lisbon
Average grade: 16/20
Erasmus exchange program at "Universitat Barcelona", Spain from 02-07.2003.

2.4. RESEARCH INTERESTS

- Population genetics and genomics
- Bioinformatics and Computational biology
- Human genomics
- Genomics of adaptation
- Gene flow and hybridization
- Recombination, demographic history and natural selection

3. SCIENTIFIC PUBLICATIONS

Since 2008 I have authored 28 scientific peer-reviewed publications in top journals of Evolutionary Biology, Genomics and Population genetics. Citation report according to different sources:

	Scopus	Web of Science	Google Scholar
Sum of times cited	918*	911*	1375
Average citation per item	36,72*	36,44*	54,96
h-index	15*	15*	18

*excluding self-citations

3.1. PUBLICATIONS IN PEER REVIEWED JOURNALS

For each scientific article, I indicate the number of citations (#cit) according to Scopus, excluding self-citations, and the five-year impact factor (IF) of each journal, according to Web of Science. Shared first authorship is indicated by an asterisk (*).

28. Hey J, Chung Y, Sethuraman A, Lachance J, Tishkoff S, **Sousa VC**, Wang Y (**in press**) Phylogeny Estimation by Integration over Isolation with Migration Models, **MOLECULAR BIOLOGY AND EVOLUTION** DOI doi.org/10.1093/molbev/msy162. IF: 14.558, #cit: 0
27. Pfeifer SP*, Laurent S*, **Sousa VC***, Linnen CR*, Foll M, Excoffier L, Hoekstra HE, Jensen JD (**2018**) The evolutionary history of Nebraska deer mice: local adaptation in the face of strong gene flow, **MOLECULAR BIOLOGY AND EVOLUTION** 35: 792-806 IF: 14.558, #cit: 0
26. Seabra SG, Fragata I, Antunes, Marta A, Faria GS, Santos MA, **Sousa VC**, Simões P, Matos M (**2018**) Different genomic changes underlie adaptive evolution in populations of contrasting history. **MOLECULAR BIOLOGY AND EVOLUTION** 35: 549-563. IF: 14.558, #cit: 0
25. Sikora M*, Seguin-Orlando A*, **Sousa VC**, Albrechtsen A, Korneliussen T, Ko A, Rasmussen S, Dupanloup I, Nigst PR, Bosch MD, Renaud G, Allentoft ME, Margaryan A, Vasilyev SV, Veselovskaya EV, Borutskaya SB, Deviese T, Comeskey D, Higham T, Manica A, Foley R, Meltzer DJ, Nielsen R, Excoffier L, Lahr MM, Orlando L, Willerslev E (**2017**) Ancient genomes show social and reproductive behavior of early Upper Paleolithic foragers. **SCIENCE** 358: 659-662. IF: 38.062, #cit: 10
24. Bagley R, **Sousa VC**, Niemiller ML, Linnen CR (**2017**) History, geography, and host use shape genome-wide patterns of genetic variation in the redheaded pine sawfly (*Neodiprion lecontei*). **MOLECULAR ECOLOGY** 26: 1022-1044. IF: 6.644, #cit: 3
23. de Manuel M*, Kuhlwilm M *, Frandsen P*, **Sousa VC**, Desai T, Prado-Martinez J, Hernandez-Rodriguez J, Dupanloup I, Lao O, Hallast P, Schmidt J, Heredia-Genestar JM, Benazzo A, Barbujani G, Peter BM, Kuderna LF, Casals F, Angedakin S, Langergraber K, Arandjelovic M, Kühl H, Vigilant L, Boesch C, Novembre J, Gut M, Gut I, Navarro A, Andres A, Siegismund HR, Scally A, Excoffier L, Tyler-Smith C, Castellano S, Xue Y, Hvilsom C, Marques-Bonet T (**2016**) Chimpanzee genomic diversity reveals ancient admixture with bonobos. **SCIENCE** 354: 477-481. IF: 38.062, #cit: 26

22. Meier J, **Sousa VC**, Marques DA, Selz OM, Wagner CE, Excoffier L, Seehausen O (**2016**) Demographic modeling of whole genome data reveals parallel origin of similar *Pundamilia* cichlid species after hybridization. **MOLECULAR ECOLOGY** 26: 123-141. IF: 6.644, #cit: 11

21. Malaspinas AS*, Westaway MC*, Muller C*, **Sousa VC***, Lao O*, Alves I*, Bergström A*, Athanasiadis G, Cheng JY, Crawford JE, Heupink TH, Macholdt E, Peischl S, Rasmussen S, Schiffels S, Subramanian S, Wright JL, Albrechtsen A, Barbieri C, Dupanloup I, Eriksson A, Margaryan A, Moltke I, Pugach I, Korneliussen TS, Levkivsky IP, Moreno-Mayar JV, Ni S, Racimo F, Sikora M, Xue Y, Aghakhanian FA, Brucato N, Brunak S, Campos PF, Clark W, Ellingvåg S, Fourmile G, Gerbault P, Injie D, Koki G, Leavesley M, Logan B, Lynch A, Matisoo-Smith EA, McAllister PJ, Mentzer AJ, Metspalu M, Migliano AB, Murgha L, Phipps ME, Pomat W, Reynolds D, Ricaut F-X, Siba P, Thomas MG, Wales T, Wall C, Oppenheimer SJ, Tyler-Smith C, Durbin R, Dortch J, Manica A, Schierup MH, Foley RA, Lahr MM, Bowern C, Wall JD, Mailund T, Stoneking M, Nielsen R, Sandhu MS^, Excoffier L^, Lambert DM^, Willerslev E^ (**2016**) A genomic history of Aboriginal Australians. **NATURE** 538: 207-214 (*shared first authorship; ^shared corresponding author) IF: 43.769, #cit: 53
Considered by Science Editors and Writers as "Top 10 Breakthrough of the Year 2016".

20. Foote AD, Vijay N, Ávila-Arcos MC, Baird RW, Durban JW, Fumagalli M, Gibbs RA, Hanson MB, Korneliussen TS, Martin MD, Robertson KM, Schiffels S, **Sousa VC**, Vieira FG, Vinař T, Wade P, Worley KC, Excoffier L, Morin PA, Gilbert MTP, Wolf JBW (**2016**) Genome-culture coevolution promotes rapid divergence in the killer whale. **NATURE COMMUNICATIONS** 7:11693. IF: 13.092, #cit: 37

19. Laurent S, Pfeifer SP, Settles ML, Hunter SS, Hardwick KM, Ormond L, **Sousa VC**, Jensen JD, Rosenblum EB (**2016**) The population genomics of rapid adaptation: disentangling signatures of selection and demography in white sands lizards. **MOLECULAR ECOLOGY** 25: 306-323. IF: 6.644, #cit: 12

18. Alves I, Arenas M, Currat M, Hanulova AS, **Sousa VC**, Ray N, Excoffier L (**2016**) Long distance dispersal shaped patterns of human genetic diversity in Eurasia. **MOLECULAR BIOLOGY AND EVOLUTION** 33: 946-958. IF: 14.558, #cit: 12

17. Excoffier L, Dupanloup I, Huerta-Sánchez E, **Sousa VC**, Foll M (**2013**) Robust demographic inference from genomic and SNP data**. PLOS GENETICS** 9: e1003905. IF: 7.058, #cit: 231

16. **Sousa VC**, Carneiro M, Ferrand N, Hey J (**2013**) Identifying loci under selection against gene flow in isolation-with-migration models. **GENETICS** 194 (1): 211-233. IF: 5.092, #cit: 17
Issue Highlight.

15. Salmona J, Salamolard M, Fouillot D, Ghestemme T, Larose J, Centon J-F, **Sousa VC**, Dawson DA, Thebaud C, Chikhi L (**2012**) Signature of a pre-human population decline in the critically endangered Reunion Island endemic forest bird *Coracina newtoni*. **PLOS ONE** 7: e43524. IF: 3.394, #cit: 14

14. Rasteiro R, Bouttier P-A, **Sousa VC**, Chikhi L (**2012**) Investigating sex-biased migration during the Neolithic transition in Europe, using an explicit spatial simulation framework. **PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES** 279: 2409-2416. IF: 5.417, #cit: 13

13. **Sousa VC**, Beaumont M, Fernandes P, Coelho MM, Chikhi L (**2012**) Population divergence with or without admixture: selecting models using an ABC approach. **HEREDITY** 108: 521-530. IF: 3.953, #cit: 28

12. **Sousa VC**, Grelaud A, Hey J (**2011**) On the nonidentifiability of migration times in isolation with migration models. **MOLECULAR ECOLOGY** 20: 3956–3962. IF: 6.644, #cit: 21

11. Chikhi L, **Sousa VC**, Luisi P, Goossens B, Beaumont M (**2010**) The confounding effects of population structure, genetic diversity and the sampling scheme on the detection and quantification of population size changes. **GENETICS** 186: 983-995. IF: 5.092, #cit: 137 *Issue Highlight.*

10. **Sousa VC**, Penha F, Pala I, Chikhi L, Coelho MM (**2010**) Conservation genetics of a critically endangered Iberian minnow: evidence of population decrease and contraction in the distribution area. **ANIMAL CONSERVATION** 13: 162-171. IF: 2.869, #cit: 16

9. Bray T*, **Sousa VC*,** Parreira B, Bruford M, Chikhi L (**2010**) 2BAD: and application to estimate the parental contributions during two independent admixture events. **MOLECULAR ECOLOGY RESOURCES** 10: 538-541. (*shared first authorship) IF: 6.542, #cit: 7

8. Henriques R, **Sousa VC**, Coelho MM (**2010**) Migration patterns counteract seasonal isolation of *Squalius torgalensis*, a critically endangered freshwater fish inhabiting a typical Circum-Mediterranean small drainage. **CONSERVATION GENETICS** 11: 1859-1870. IF: 2.022, #cit: 11

7. **Sousa VC**, Fritz M, Beaumont M, Chikhi L (**2009**) Approximate Bayesian Computation (ABC) without summary statistics: the case of admixture. **GENETICS** 181: 1507-1519. IF: 5.092, #cit: 42

6. Craul M, Chikhi L, **Sousa VC**, Olivieri GL, Rabesandratana A, Zimmermann E, Radespiel U (**2009**) Influence of forest fragmentation on endangered large-bodied lemurs in northwestern Madagascar – Implications for conservation. **BIOLOGICAL CONSERVATION** 142: 2862-2871. IF: 4.546, #cit: 31

5. Parreira B*, Trussart M*, **Sousa VC**, Hudson R, Chikhi L (**2009**) SPAms: A user-friendly software to simulate population genetics data under complex demographic models. **MOLECULAR ECOLOGY RESOURCES** 9: 749-753. (*shared first authorship) IF: 6.542, #cit: 8

4. **Sousa VC**, Penha F, Collares-Pereira MJ, Chikhi L, Coelho MM (**2008**) Genetic structure and signature of population decrease in the critically endangered freshwater cyprinid *Chondrostoma lusitanicum*. **CONSERVATION GENETICS** 9: 791–805. IF: 2.022, #cit: 18

3. Olivieri GL, **Sousa VC**, Chikhi L, Radespiel U (**2008**) From genetic diversity and structure to conservation: Genetic signature of recent population declines in three mouse lemur species (*Microcebus* spp.). **BIOLOGICAL CONSERVATION** 141: 1257-1271.IF: 4.546, #cit: 50

3.1.2. REVIEW ARTICLES (PEER-REVIEWED)

2. **Sousa VC***, Peischl S*, Excoffier L (**2014**) Impact of range expansions on current human genomic diversity. **CURRENT OPINION IN GENETICS & DEVELOPMENT** 29: 22-30 (*shared first authorship) IF: 5.908, #cit: 18

1. **Sousa VC**, Hey J (**2013**) Understanding the origin of species with genome-scale data: modelling gene flow. **NATURE REVIEWS GENETICS** 14(6): 404-414. IF: 42.442, #cit: 92

3.2. PROJECTS, GRANTS AND AWARDS

3.2.1. ONGOING INTERNATIONAL PROJECTS

2020 - 2018 **MAPGenome: Mapping migration and adaptation in genomes**
Marie Sklodowska-Curie Individual Fellowship. Grant No 799729.
Horizon 2020 - Research and Innovation Framework Programme.
Total funding: EUR 148,635

3.2.2. ONGOING INTERNATIONAL PROJECTS AS TEAM MEMBER

2023 - 2018 **Ecological speciation and heterogeneous genomic differentiation in hybridizing haplodiploids**
National Science Foundation NSF DEB-1750946.
PI: Catherine Linnen, Kentucky University, USA.
Total funding: USD 456,167
https://www.nsf.gov/awardsearch/showAward?AWD_ID=1750946&HistoricalAwards

3.2.3. INTERNATIONAL PROJECTS AS TEAM MEMBER

2016 - 2013 **Investigating the impact of range expansions on functional genomic diversity by modeling and experimental approaches**
Swiss National Science Foundation SNSF 143393.
PI: Laurent Excoffier, University of Bern, Switzerland.
Total funding: CHF 870,000
http://p3.snf.ch/Project-143393

2015 - 2012 **Genetic basis of adaptation: the demographic and selective history of camouflaged deer mouse populations**
Swiss National Science Foundation SNSF Sinergia grant CRSII3_141940.
PIs: Laurent Excoffier (University of Bern, Switzerland),
Jeffrey Jensen (EPFL, Switzerland), Hopi Hoekstra (Harvard University, USA).
Total funding: CHF 1,054,585
http://p3.snf.ch/project-141940

2013 - 2009 **Statistical inference under Isolation-with-Migration models**
National Science Foundation NSF DEB-0949561 and DEB-1359087.
PI: Jody Hey, Rutgers University and Temple University, USA.
Total funding: USD 425,032
https://www.nsf.gov/awardsearch/showAward?AWD_ID=1359087&HistoricalAwards

2012 - 2010 **The population genetics of divergence**
National Institutes of Health NIH 5R01GM078204-04.
PI: Jody Hey, Rutgers University and Temple University, USA.
Total funding: USD 214,999
https://projectreporter.nih.gov/project_info_details.cfm?aid=7921487&icde=39539393

2008 - 2006 **"Acções Integradas Luso-Francesas"** (PAUILF) Grant number F-42/08. Funded by "Conselho de Reitores das Universidades Portuguesas" (CRUP, Portugal), "Conferénce des Présidents d'Université" (CPU, France).
Total funding: EUR 3,000

3.2.4. INTERNATIONAL PROJECTS IN SCIENCE COMMUNICATION AS TEAM MEMBER

2018 - 2017 **Genome Odyssey. To the heart of Aboriginal Australian genes**
Swiss National Science Foundation SNSF Agora grant 171636.
PI: Anna-Sapfo Malaspinas, University of Lausanne, Switzerland.
Total funding: CHF 192,111
http://p3.snf.ch/project-171636

3.2.5. NATIONAL PROJECTS FUNDED BY FCT AS TEAM MEMBER

2011 - 2008 **Demographic and genetic responses to habitat fragmentation and habitat loss in large forest mammals**
"Fundação para a Ciência e a Tecnologia" (FCT) PTDC/BIA-BDE/71299/2006.
PI: Lounès Chikhi, IGC.
Total funding EUR 148,000
https://www.fct.pt/apoios/projectos/consulta/vglobal_projecto.phtml.en?idProjecto=71299&idElemConcurso=927

2011 - 2008 **Evolutionary processes in the origin of 'hotspots for biodiversity': insights from southern Portuguese areas based on novel nuclear multilocus approaches in target freshwater fishes and amphibians**
"Fundação para a Ciência e a Tecnologia" (FCT) PTDC/BIA-BDE/69769/2006.
PI: Manuela Coelho, FCUL.
Total funding: EUR 160,000
https://www.fct.pt/apoios/projectos/consulta/vglobal_projecto.phtml.en?idProjecto=69769&idElemConcurso=927

2010 - 2008 **GENESTREAM - Landscape genetics of freshwater fishes: the geographical dimension of genetic diversity**
"Fundação para a Ciência e a Tecnologia" (FCT) PTDC/BIA-BDE/66519/2006.
PI: Judite Alves, FCUL.
Total funding: EUR 142,000
https://www.fct.pt/apoios/projectos/consulta/vglobal_projecto.phtml.en?idProjecto=66519&idElemConcurso=927

3.2.6. INTERNATIONAL GRANTS AND AWARDS

02.2020 - 03.2018 **Marie Sklodowska-Curie Individual Fellowship**
Horizon 2020 - Research and Innovation Framework Programme,
Grant No 799729. Supervisor: Sara Magalhães (cE3c, FCUL).
EUR 148,635 (ranked 94.4%) (mentioned in "international projects" 3.2.1).

03.2003 - 06.2003 **ERASMUS scholarship award**
European grant for undergraduate studies.
"Facultat de Biologia Universitat Barcelona", Spain. EUR 1,500

07.2002 - 08.2002 **Summer course scholarship award**
"Marine algae: seaweeds and phytoplankton"
Friday Harbor Labs, University of Washington, USA. USD 1,500

3.2.7. NATIONAL GRANTS AND AWARDS

02.2018 - 10.2016 **Invited Scientist** ("Bolsa de Cientista Convidado")
cE3c national funds from "Fundação para a Ciência e a Tecnologia" (FCT) UID/BIA/00329/2013). EUR 47,700

12.2009 - 01.2006 **Individual PhD grant**
"Fundação para a Ciência e a Tecnologia" (FCT)
SFRH/BD/22224/2005

3.3. AUTONOMY AND LEADERSHIP

current - 07.2018 **Group leader**
Evolutionary Genetics group
cE3c – centre for Ecology, Evolution and Environmental changes (cE3c)

current - 10.2016 **Independent researcher**
Evolutionary Genetics, cE3c

current - 10.2016 **Leader of bioinformatics and computational biology unit**
Evolutionary Genetics, cE3c

3.4. EDITORIAL AND REVIEWING WORK

Reviewer work for scientific journals

https://publons.com/author/1489534/vitor-sousa#profile

Since 2010, I have reviewed for the following journals, listed according 5-year IF (IF):

IF > 10	Molecular Biology and Evolution
7 < IF < 10	Global Change Biology; PLoS Genetics
5 < IF < 7	Molecular Ecology (considered a Top Reviewer in 2014 and 2015) Genetics; Philosophical Transactions B.; Molecular Ecology Resources; Ecography
4 < IF < 5	Evolution; BMC Genomics; Frontiers in Plant Science; J. Royal Society Interface; Genome Biology and Evolution
3 < IF < 4	Heredity; BMC Evolutionary Biology; BMC Bioinformatics; PLoS ONE
2 < IF < 3	Biological Invasions; Conservation Genetics; BMC Genetics
1 < IF < 2	Journal of Mathematical Biology; Conservation Genetics Resources

Reviewer for grant panels

2017 SNSF – Swiss National Science Foundation

Editorial board

1. Cogent Environmental Science
   https://www.cogentoa.com/journal/environmental-science/editors

Member of Editorial reviewer board

1. Peer Community in Evolutionary Biology
   https://evolbiol.peercommunityin.org

2. Frontiers journals:
   - Frontiers in Ecology and Evolution (Evolutionary and Population Genetics)
   - Frontiers in Genetics (Evolutionary and Population Genetics) IF: 3.789
   - Frontiers in Plant Science (Evolutionary and Population Genetics) IF: 4.672

   https://loop.frontiersin.org/people/231310/editorial