

May 6th 2021

Meet & Fly!

First meeting of the European network of
citizen science on adaptation genomics
#MelanogasterCTF

PRÓXIMA PRESENTACIÓN: 9:00h – 9:25h



Dra. Josefa González.

Investigadora Principal del Laboratorio de Genómica Funcional y Evolutiva (González Lab) del Instituto de Biología Evolutiva (CSIC-UPF)

Co-fundadora de DrosEU



FUNDING ENTITIES:



ORGANIZERS:



ACADEMIC RESEARCH CAREER

Chromosome evolution

patterns
rates

molecular mechanisms

Undergrad student Postdoctoral
Researcher

Universitat Autònoma de Barcelona

1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 200

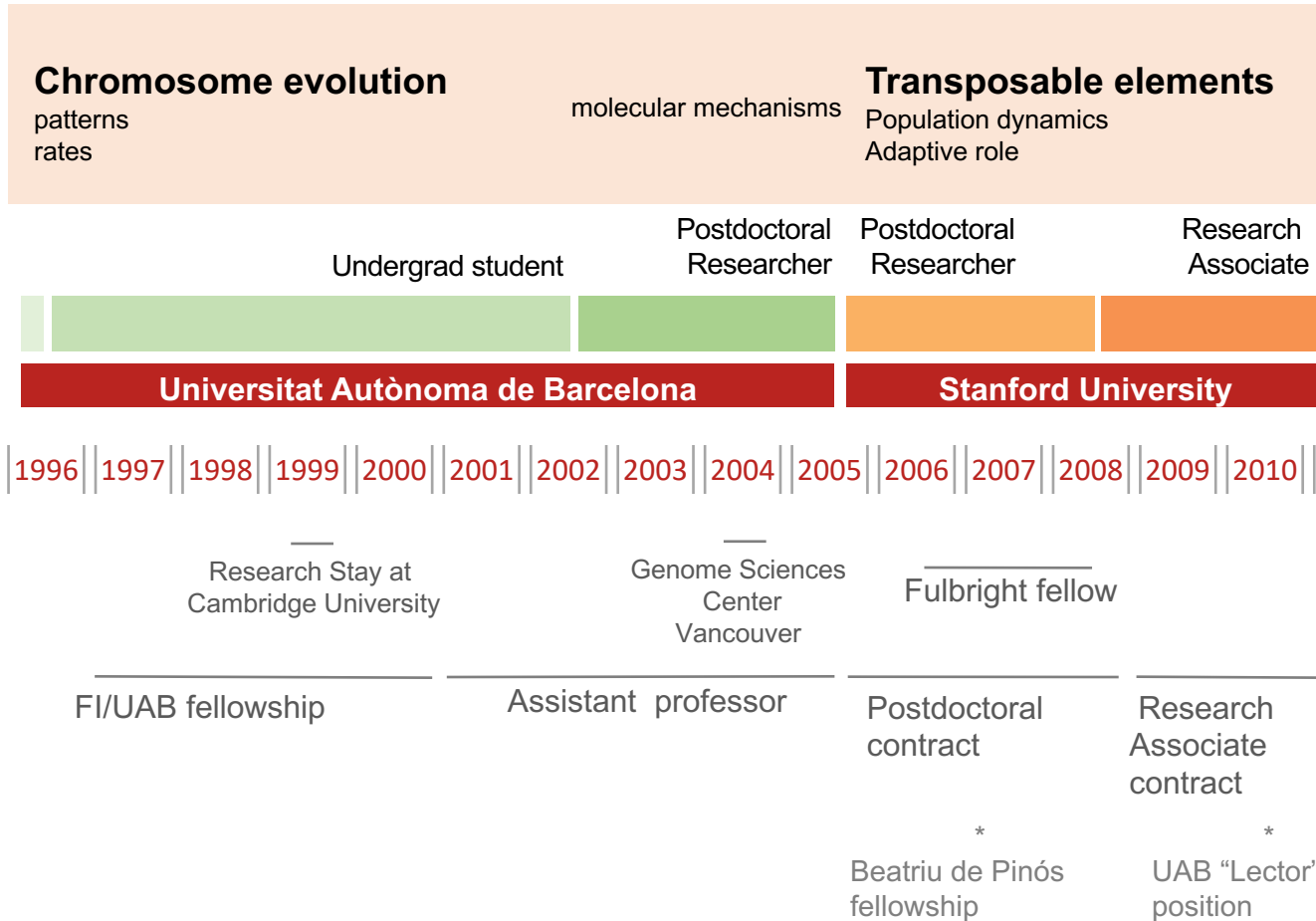
—
Research Stay at
Cambridge University

—
Genome Sciences
Center
Vancouver

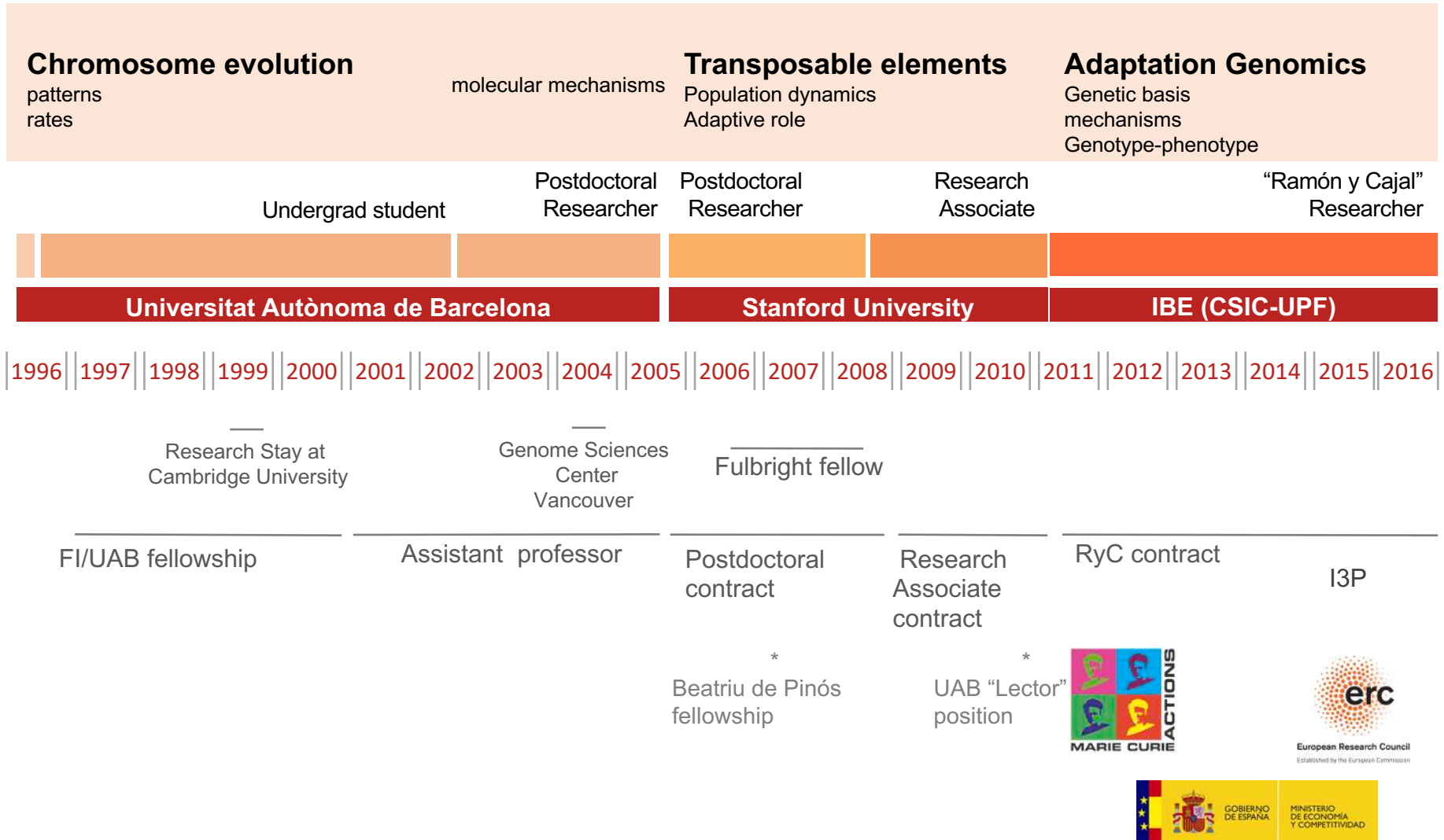
FI/UAB fellowship

Assistant professor

ACADEMIC RESEARCH CAREER



ACADEMIC RESEARCH CAREER



ACADEMIC RESEARCH CAREER

Adaptation Genomics

Genetic basis
Molecular mechanisms
Genotype-phenotype

Científica Titular CSIC

IBE (CSIC-UPF)

2017 | 2018 | 2019 | 2020 | 2021 | 20...



Miriam Merenciano
Postdoc



Llew Green
Postdoc



Marta Coronado
Postdoc



Jesús Ortega
Postdoc



Maria Bogaerts
PhD student



Santiago Radío
PhD student



Hannah Lindstadt
Master Student



Carla García
Master Student



Council member 2021-2023
Current president: Harmit Malik



Council member 2017-2025
Chair of Outreach Fund
Current president: Ophélie Ronce

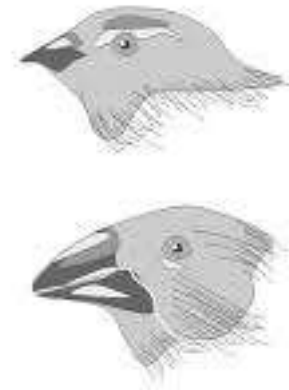


Evolutionary Biology Section: 2014-2021
New coordinator: Aurora Ruiz-Herrera

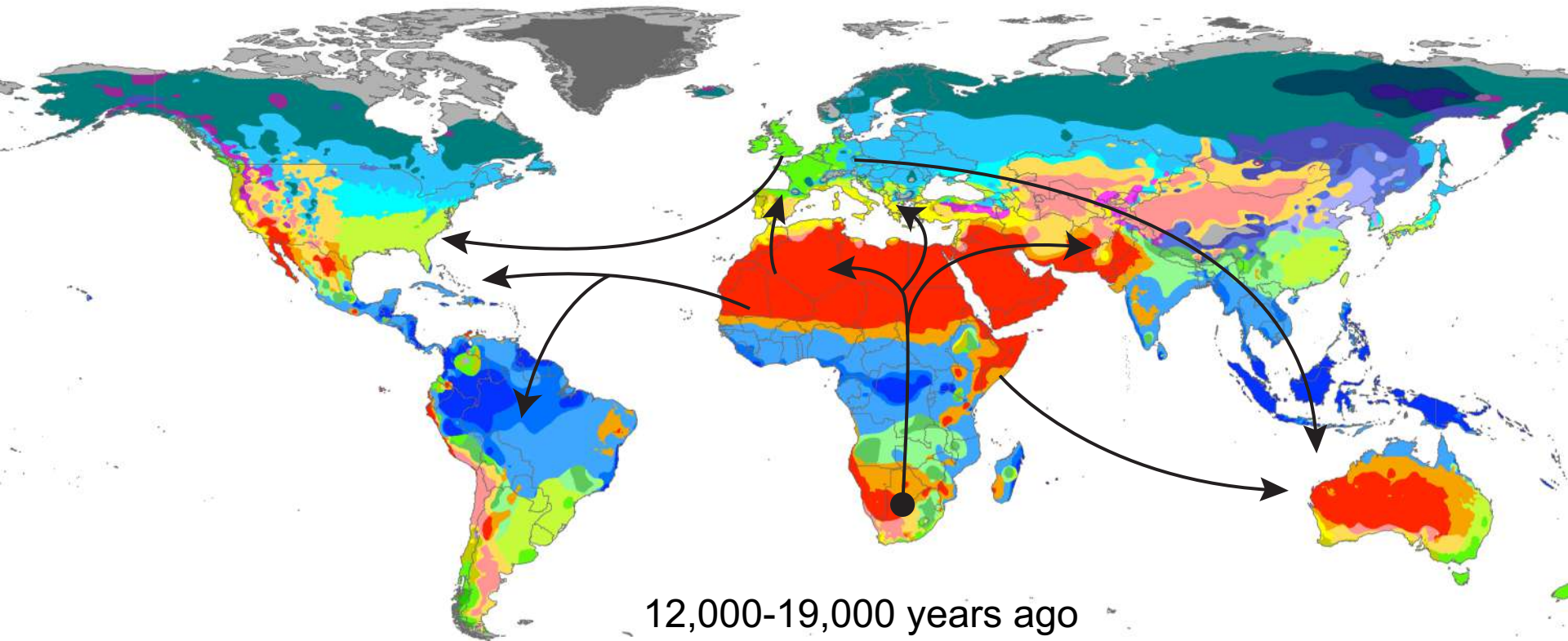


Der Wissenschaftsfonds.

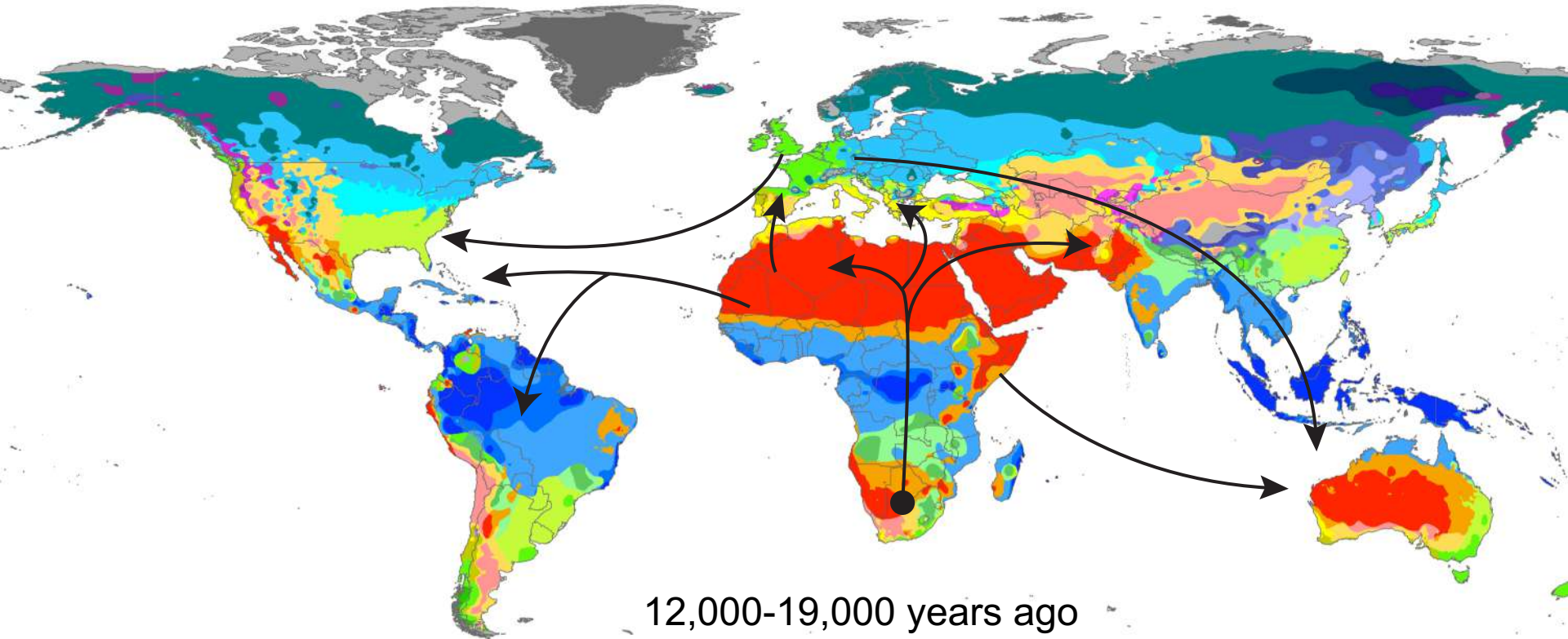
UNDERSTANDING ADAPTATION



DROSOPHILA MELANOGASTER

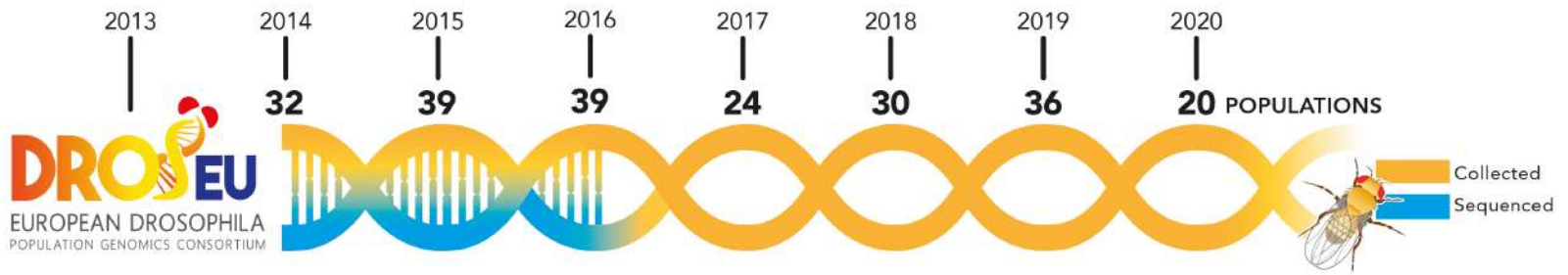


DROSOPHILA MELANOGASTER



Recent adaptations must be common in this species

- new pathogens
- new diet
- range of temperatures
- toxic environments



Thomas Flatt
Uni Fribourg

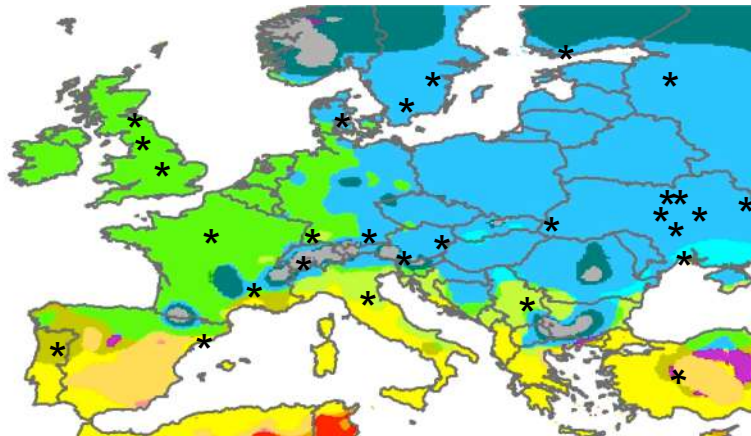


Martin Kapun
Uni Zurich



Josefa González
IBE (CSIC-UPF)

67 labs from 26 countries



Kapun et al 2020 Mol Biol Evol
Wallace et al 2021 Virus Evolution
Kapun et al 2021 bioRxiv

9 publications by DrosEU members











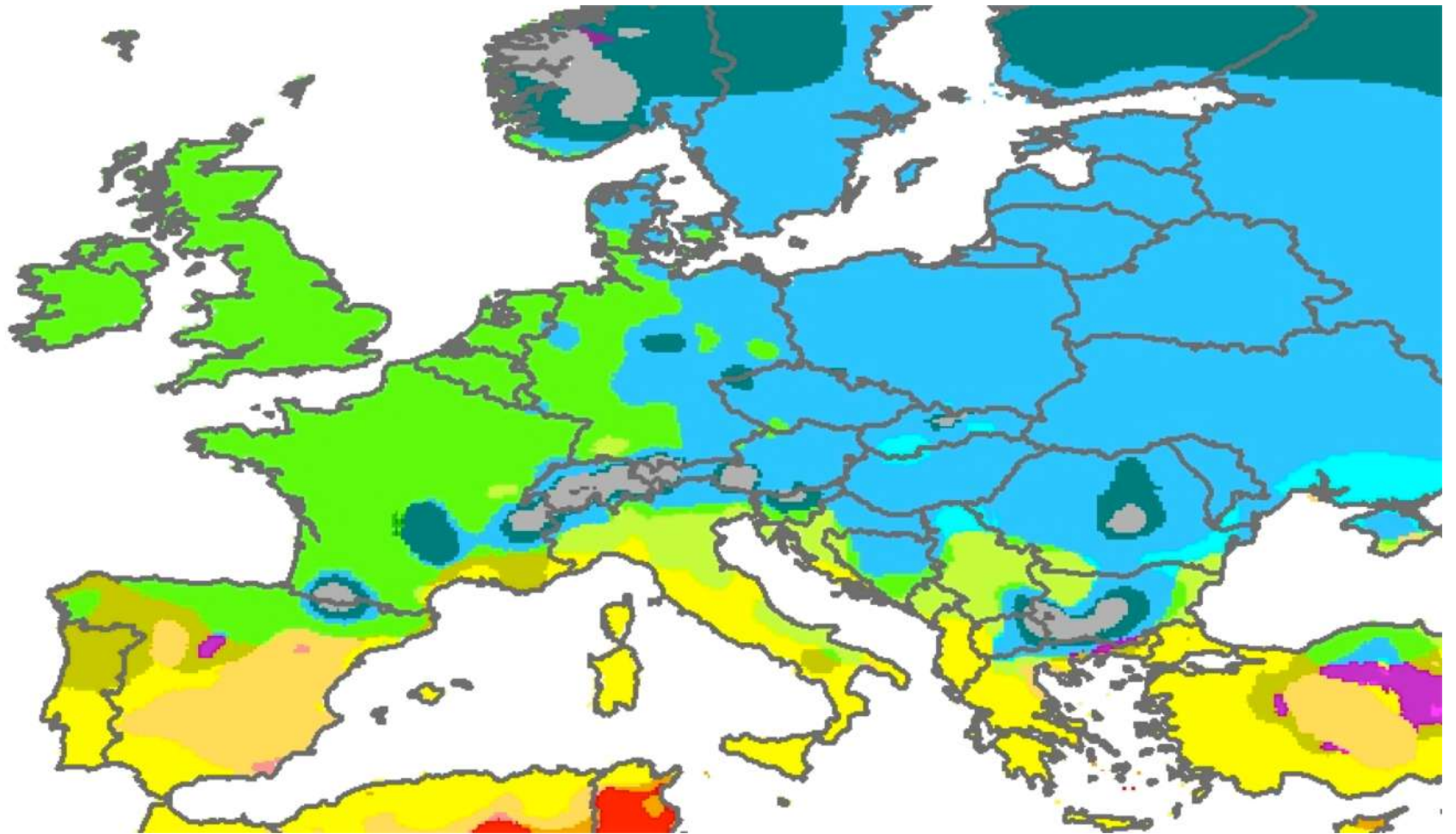
@Dros_EU



www.droseu.net

Genomic Analysis of European *Drosophila melanogaster* Populations Reveals Longitudinal Structure, Continent-Wide Selection, and Previously Unknown DNA Viruses

Martin Kapun ^{*,†§,1,2,3} Maite G. Barrón^{†,1,4} Fabian Staubach^{‡,1,5} Darren J. Obbard^{1,6}
R. Axel W. Wiberg ^{1,7,8} Jorge Vieira^{1,9,10} Clément Goubert^{1,11,12} Omar Rota-Stabelli^{1,13}
Maaria Kankare ^{‡,1,14} María Bogaerts-Márquez^{1,4} Annabelle Haudry^{1,11} Lena Waidele^{1,5}
Iryna Kozeretska^{1,15,16} Elena G. Pasyukova^{1,17} Volker Loeschcke^{1,18} Marta Pascual^{1,19,20}
Cristina P. Vieira^{1,9,10} Svitlana Serga^{1,15} Catherine Montchamp-Moreau^{1,21} Jessica Abbott^{1,22}
Patricia Gibert^{1,11} Damiano Porcelli^{1,23} Nico Posnien ^{1,24} Alejandro Sánchez-Gracia^{1,19,20}
Sonja Grath^{1,25} Élio Sucena^{1,26,27} Alan O. Bergland^{‡,1,28} Maria Pilar Garcia Guerreiro^{1,29}
Banu Sebnem Onder^{1,30} Eliza Argyridou^{1,25} Lain Guio^{1,4} Mads Fristrup Schou^{1,18,22} Bart Deplancke^{1,31}
Cristina Vieira^{1,11} Michael G. Ritchie ^{1,7} Bas J. Zwaan ^{1,32} Eran Tauber^{1,33,34} Dorcas J. Orengo^{1,19,20}
Eva Puerma^{1,19,20} Montserrat Aguadé^{1,19,20} Paul Schmidt ^{‡,1,35} John Parsch^{1,25} Andrea J.
Betancourt^{1,36} Thomas Flatt ^{*,††1,2,3} and Josefa González^{*,††1,4}





Roberto Torres

CITIZEN SCIENCE MELANOGASTER Catch The Fly.



Barcelona

GCCGCACTC
CAA AC
AGC
CAA
GAAACC Evolutionary and Functional Genomics

González·Lab

Scientists

DROSEU
EUROPEAN DROSOPHILA
POPULATION GENOMICS CONSORTIUM

***Drosophila* Evolution over Space and Time (DEST) - A New Population Genomics Resource**

Martin Kapun^{1,2,*},[©],[§] Joaquin C. B. Nunez^{3,*}, María Bogaerts-Márquez^{4,*},[§] Jesús Murga-Moreno^{5,6,*},[§] Margot Paris^{7,*},[§] Joseph Outten³, Marta Coronado-Zamora⁴,[§] Courtney Tern³, Omar Rota-Stabelli⁸,[§] Maria P. García Guerreiro⁵,[§] Sònia Casillas^{5,6},[§] Dorcas J. Orengo^{9,10},[§] Eva Puerma^{9,10},[§] Maaria Kankare¹¹,[§] Lino Ometto¹²,[§] Volker Loeschcke¹³,[§] Banu S. Onder¹⁴,[§] Jessica K. Abbott¹⁵,[§] Stephen W. Schaeffer¹⁶,[#] Subhash Rajpurohit^{17,18},[#] Emily L Behrman^{17,19},[#] Mads F. Schou^{13,15},[§] Thomas J.S. Merritt²⁰,[#] Brian P Lazzaro²¹,[#] Amanda Glaser-Schmitt²²,[§] Eliza Argyridou²²,[§] Fabian Staubach²³,[§] Yun Wang²³,[§] Eran Tauber²⁴,[§] Svitlana V. Serga^{25,26},[§] Daniel K. Fabian²⁷,[#] Kelly A. Dyer²⁸,[#] Christopher W. Wheat²⁹,[§] John Parsch²²,[§] Sonja Grath²²,[§] Marija Savic Veselinovic³⁰,[§] Marina Stamenkovic-Radak³⁰,[§] Mihailo Jelic³⁰,[§] Antonio J. Buendía-Ruíz³¹,[§] M. Josefa Gómez-Julián³¹,[§] M. Luisa Espinosa-Jimenez³¹,[§] Francisco D. Gallardo-Jiménez³²,[§] Aleksandra Patenkovic³³,[§] Katarina Eric³³,[§] Marija Tanaskovic³³,[§] Anna Ullastres⁴,[§] Lain Guio⁴,[§] Miriam Merenciano⁴,[§] Sara Guirao-Rico⁴,[§] Vivien Horváth⁴,[§] Darren J. Obbard³⁴,[§] Elena Pasyukova³⁵,[§] Vladimir E. Alatortsev³⁵,[§] Cristina P. Vieira^{36,37},[§] Jorge Vieira^{36,37},[§] J. Roberto Torres³⁸,[§] Iryna Kozeretska^{25,26},[§] Oleksandr M. Maistrenko^{26,39},[§] Catherine Montchamp-Moreau⁴⁰,[§] Dmitry V. Mukha⁴¹,[§] Heather E. Machado^{42,43},[#] Antonio Barbadilla^{5,6},[§] Dmitri Petrov⁴²,[©],[#] Paul Schmidt¹⁶,[©],[#],[§] Josefa Gonzalez⁴,[©],[#],[§] Thomas Flatt⁷,[©],[#],[§] Alan O. Bergland³,[©],[#],[§]

ACCEPTED MANUSCRIPT

The discovery, distribution and diversity of DNA viruses associated with *Drosophila melanogaster* in Europe

Megan A Wallace, Kelsey A Coffman, Clément Gilbert, Sanjana Ravindran, Gregory F Albery, Jessica Abbott, Eliza Argyridou, Paola Bellosta, Andrea J Betancourt, Hervé Colinet, Katarina Eric, Amanda Glaser-Schmitt, Sonja Grath, Mihailo Jelic, Maaria Kankare, Iryna Kozeretska, Volker Loeschcke, Catherine Montchamp-Moreau, Lino Ometto, Banu Sebnem Onder, Dorcas J Orengo, John Parsch, Marta Pascual, Aleksandra Patenkovic, Eva Puerma, Michael G Ritchie, Omar Rota-Stabelli, Mads Fristrup Schou, Svitlana V Serga, Marina Stamenkovic-Radak, Marija Tanaskovic, Marija Savic Veselinovic, Jorge Vieira, Cristina P Vieira, Martin Kapun, Thomas Flatt, Josefa González, Fabian Staubach, Darren J Obbard 



Drosophila simulans



Drosophila suzukii



Drosophila obscura

Cambio climático y biodiversidad

TRACK THE FLY

Monitoreo de la diversidad y abundancia de especies de *Drosophila*

Monitoreo de variables ambientales: iButtons (temperature y humedad)

Análisis de datos espaciales y temporales

Generación de hipótesis



Lycée Pape Clément
Bordeaux, France



Mriya School and the Science Basis School
Odesa and Kyiv, Ukraine



CEIP Ramón y Cajal,
Pina de Ebro



IES Benjamín James,
Osera de Ebro



IES Alonso de Ercilla,
Toledo, Ocaña.



IES Eladio Cabañero,
Tomelloso



CES Ramón y Cajal,
Granada



IES Miguel Crespo,
Córdoba



IES José de Mora,
Baza



IES Antonio José Cavanilles,
Alicante



Justus-Von-Liebig-Schule
Waldshut-Tiengen, Germany





CITIZEN SCIENCE
MELANOGASTER
 Catch The Fly.



Josefa González, PhD
 Scientific direction



Roberto Torres
 Communications Director



María Bogaerts
 Scientific support



Miriam Merenciano, PhD
 Scientific support

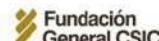


Irene González
 Technological development

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FUNDING ENTITIES:



ORGANIZERS:

