

Genética

Áreas de conocimiento: Genética

Director: Rafael Jiménez Medina

Secretario: Roberto de la Herrán Moreno

Página web: <https://genetica.ugr.es/>

Profesorado: 9 CU, 10 PTU, 2 PCD, 1 PA Interino.

Tesis leídas

- Genetic basis of idiopathic male infertility

Doctorando: Miriam Cerván Martín

Directores: F. David Carmona López y Rogelio J. Palomino Morales

Fecha de lectura: 25/11/2022

- Analysis of herpes simplex virus 1 and host miRNAs during productive and latent infection.

Doctorando: Andreja Zubkovic

Directores: Igor Jurak y Michael Hackenberg

Fecha de lectura: 29/03/2023

Grupos de Investigación.

BIO200 GENETICA MOLECULAR

- Responsable: JOSE CARMELO RUIZ REJON

BIO162 GENOMICA EVOLUTIVA Y BIOINFORMATICA

- Responsable: JOSE L. OLIVER JIMENEZ

BIO109 GENOMICA FUNCIONAL Y EVOLUTIVA

- Responsable: RAFAEL JIMENEZ MEDINA

BIO165 GRUPO DE GENÉTICA EVOLUTIVA

- Responsable: JUAN PEDRO MARTINEZ CAMACHO

Dirección y participación en Proyectos I+D

- 2022 Maintenance, establishment, and ageing of the Drosophila ovarian stem cell niche., Programa Estatal de Generación del Conocimiento. Área de Biociencias y Biotecnología (subárea de Biología Molecular y Celular)., 01/09/2022-31/08/2025

Investigador/a FEDERICO ZURITA MARTINEZ

Publicaciones en revistas

- 2023 Artículo: A chromosome-level genome assembly enables the identification of the follicle stimulating hormone receptor as the master sex determining gene in *Solea senegalensis*, *Molecular Ecology Resources*, 0, , 1-19

FRANCISCA ROBLES RODRIGUEZ

JOSE CARMELO RUIZ REJON

ROBERTO DE LA HERRAN MORENO

- 2023 Artículo: Accumulation of retrotransposons contributes to W chromosome differentiation in the willow beauty *Peribatodes rhomboidaria* (Lepidoptera: Geometridae), *Scientific Reports*, 13, , 534-

EUGENIA ELISABET MONTIEL JIMÉNEZ

- 2023 Artículo: Making the genome huge: the case of *Triatoma delpontei*, a Triatominae Species with more than 50% of its genome full of satellite DNA, *Genes*, 14, , 371-

EUGENIA ELISABET MONTIEL JIMÉNEZ

- 2023 Artículo: Tandem repeat DNA provides many cytological markers for hybrid zone analysis in two subspecies of the grasshopper *Chorthippus parallelus*, *Genes*, 14, , 397-

FRANCISCO JESÚS RUIZ-RUANO CAMPAÑA

JOSEFA CABRERO HURTADO

JUAN PEDRO MARTINEZ CAMACHO

MARIA DOLORES LOPEZ LEON

- 2023 Artículo: Reassessment of miRNA variant (isomiRs) composition by small RNA sequencing, *Cell Reports Methods*, 3, , -

CRISTINA GÓMEZ MARTÍN

JOSÉ MARÍA MEDINA MUÑOZ

MICHAEL HACKENBERG

- 2023 Artículo: Combinatorial blood platelets-derived circRNA and mRNA signature for early-stage lung cancer detection, *International Journal of Molecular Sciences*, 24, 5, -

MICHAEL HACKENBERG

- 2023 Artículo: Comparison between the gametophyte and the sporophyte transcriptomes of the

- endangered fern *Vandenboschia speciosa*, *Genes*, 14, 166, -
MANUEL ANGEL GARRIDO RAMOS
MOHAMMED BAKKALI
RUBÉN MARTÍN BLÁZQUEZ
- 2023 Artículo: Comprehensive, integrative genomic analysis of microRNA expression profiles in different tissues of two wheat cultivars with different traits, *Functional & Integrative Genomics (Internet)*, 23,
CRISTINA GÓMEZ MARTÍN
JOSÉ MARÍA MEDINA MUÑOZ
MICHAEL HACKENBERG
- 2023 Artículo: Genome-Wide Analysis of microRNA Expression Profile in Roots and Leaves of Three Wheat Cultivars under Water and Drought Conditions, *Biomolecules*, 13, 3, 440-
CRISTINA GÓMEZ MARTÍN
JOSÉ MARÍA MEDINA MUÑOZ
MICHAEL HACKENBERG
- 2023 Artículo: ALL-tRNAseq enables robust tRNA profiling in tissue samples, *Genes & Development*, , , -
CRISTINA GÓMEZ MARTÍN
MICHAEL HACKENBERG
- 2023 Artículo: Hybridization and introgression are prevalent in Southern European *Erysimum* (Brassicaceae) species, *Annals of Botany*, 131, 1, 171-184
FRANCISCO PERFECTTI ALVAREZ
- 2023 Artículo: Sex-specific association of *SELL* gene polymorphisms with pattern hair loss in the Thai population: A candidate gene association study and in silico functional characterization, *Journal of Dermatological Science*, 109, 2, 102-105
FRANCISCO DAVID CARMONA LÓPEZ
- 2023 Artículo: Celiac Disease Is a Risk Factor for Mature T and NK Cell Lymphoma: A Mendelian Randomization Study, *International Journal of Molecular Sciences*, 24, 8, 7216-7216
FRANCISCO DAVID CARMONA LÓPEZ
- 2023 Artículo: Tomato *POLLEN DEFICIENT 2* encodes a G-type lectin receptor kinase required for viable pollen grain formation, *Journal of Experimental Botany*, 74, 1, 178-193
RICARDO LEBRÓN AGUILAR
- 2022 Artículo: Occasional paternal inheritance of the germline-restricted chromosome in songbirds, *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 119, 4, -
FRANCISCO JESÚS RUIZ-RUANO CAMPAÑA
JOSEFA CABRERO HURTADO
JUAN PEDRO MARTINEZ CAMACHO
- 2022 Artículo: Functional characterization of the tomato *HAIRPLUS* gene reveals the implication of the epigenome in the control of glandular trichome formation, *Horticulture Research*, 9, , -
CRISTINA GÓMEZ MARTÍN
JOSE L. OLIVER JIMENEZ
MICHAEL HACKENBERG
RICARDO LEBRÓN AGUILAR
- 2022 Artículo: Maxillary sinus floor augmentation comparing bovine versus porcine bone xenografts mixed with autogenous bone graft. A split-mouth randomized controlled trial, *Clinical Oral Implants Research*, , , -
FEDERICO ZURITA MARTINEZ
- 2022 Artículo: Transposable element landscapes illuminate past evolutionary events in the endangered fern *Vandenboschia speciosa*, *Genome (Ottawa. Online)*, 65, , 95-103
FRANCISCO JESÚS RUIZ-RUANO CAMPAÑA
JUAN PEDRO MARTINEZ CAMACHO
MANUEL ANGEL GARRIDO RAMOS
- 2022 Artículo: Satellitome comparison of two oedipodine grasshoppers highlights the contingent nature of satellite DNA evolution, *BMC Biology*, 20, , 36-
FRANCISCO JESÚS RUIZ-RUANO CAMPAÑA
FRANCISCO PERFECTTI ALVAREZ
JOSEFA CABRERO HURTADO
JUAN PEDRO MARTINEZ CAMACHO
MANUEL ANGEL GARRIDO RAMOS
- 2022 Artículo: In-depth Satellitome Analyses of 37 *Drosophila* species illuminates repetitive DNA evolution in *Drosophila* genus, *Genome Biology And Evolution*, , , -
FRANCISCO JESÚS RUIZ-RUANO CAMPAÑA
- 2022 Artículo: Cell adhesion and immune response, two main functions altered in the transcriptome of seasonally regressed testes of two mammalian species, *Journal of Experimental Zoology Part B*:

- Molecular and Developmental Evolution, , , -
FRANCISCO JAVIER BARRIONUEVO JIMENEZ
MIGUEL BURGOS POYATOS
RAFAEL JIMENEZ MEDINA
- 2022 Artículo: Sox9 Is Required for Nail-Bed Differentiation and Digit-Tip Regeneration, Journal of Investigative Dermatology, , , -
FRANCISCO JAVIER BARRIONUEVO JIMENEZ
MIGUEL BURGOS POYATOS
RAFAEL JIMENEZ MEDINA
- 2022 Artículo: Integration of maps enables a cytogenomics analysis of the complete karyotype in *Solea senegalensis*, International Journal of Molecular Sciences, 23, 5353, 1-14
FRANCISCA ROBLES RODRIGUEZ
JOSE CARMELO RUIZ REJON
- 2022 Artículo: Genome-wide compound heterozygote analysis highlights DPY19L2 alleles in a non-consanguineous Spanish family with total globozoospermia, Reproductive BioMedicine Online, , 22, 00224-3-00224-3
FRANCISCO DAVID CARMONA LÓPEZ
- 2022 Artículo: Satellitome comparison of two oedipodine grasshoppers highlights the contingent nature of satellite DNA evolution, BMC Biology, 20, 36, 1-24
FRANCISCO PERFECTTI ALVAREZ
JOSEFA CABRERO HURTADO
MANUEL ANGEL GARRIDO RAMOS
MARIA DOLORES LOPEZ LEON
- 2022 Artículo: Satellitome of the red palm weevil, *Rhynchophorus ferrugineus* (Coleoptera:Curculionidae), the most diverse among insects, Frontiers in Ecology and Evolution, 10, , 826808-
EUGENIA ELISABET MONTIEL JIMÉNEZ
- 2022 Artículo: Complete mitochondrial genome of the blister beetle *Hycleus scutellatus* (Coleoptera, Meloidae), Mitochondrial DNA. Part B. Resources, 7, 6, 986-988
EUGENIA ELISABET MONTIEL JIMÉNEZ
- 2022 Artículo: Phenotypic plasticity guides *Moricandia arvensis* divergence and convergence across the Brassicaceae floral morphospace, New Phytologist, 233, , 1479-1493
FRANCISCO PERFECTTI ALVAREZ
- 2022 Artículo: Common Variation in the PIN1 Locus Increases the Genetic Risk to Suffer from Sertoli Cell-Only Syndrome, Journal of Personalized Medicine, , , -
FRANCISCO DAVID CARMONA LÓPEZ
MIGUEL BURGOS POYATOS
RAFAEL JIMENEZ MEDINA
- 2022 Artículo: sRNAbench and sRNAtoolbox- 2022 update: accurate miRNA and sncRNA profiling for model and non-model organisms, Nucleic Acids Research, , , -
CRISTINA GÓMEZ MARTÍN
JOSÉ MARÍA MEDINA MUÑOZ
MICHAEL HACKENBERG
- 2022 Artículo: Complete Nucleotide Sequence of the Mitogenome of *Tapinoma ibericum* (Hymenoptera: Formicidae: Dolichoderinae), Gene Organization and Phylogenetics Implications for the Dolichoderinae Subfamily, Genes, 13, , 1325-
EUGENIA ELISABET MONTIEL JIMÉNEZ
- 2022 Artículo: Complete mitochondrial genome of the blister beetle *Hycleus scutellatus* Rosenhauer, 1856 (Coleoptera, Meloidae), Mitochondrial DNA. Part B. Resources, 7, 6, 986-988
EUGENIA ELISABET MONTIEL JIMÉNEZ
- 2022 Artículo: Functional Enrichment Analysis of Regulatory Elements, Biomedicines, 10, 3, 590-590
MICHAEL HACKENBERG
- 2022 Artículo: Quantitative proteomics analysis reveals core and variable tick salivary proteins at the tick-vertebrate host interface, Molecular Ecology, 31, 15, 4162-4175
JOSÉ MARÍA MEDINA MUÑOZ
MICHAEL HACKENBERG
- 2022 Artículo: Transcriptomic analysis of the tick midgut and salivary gland responses upon repeated blood-feeding on a vertebrate host, Frontiers in Cellular and Infection Microbiology, 12, , 1125-
CRISTINA GÓMEZ MARTÍN
JOSÉ MARÍA MEDINA MUÑOZ
MICHAEL HACKENBERG
- 2022 Artículo: Bioinformatic Analysis of *Ixodes ricinus* Long Non-Coding RNAs Predicts Their Binding Ability of Host miRNAs, International Journal of Molecular Sciences, 23, 17, 9761-

- JOSÉ MARÍA MEDINA MUÑOZ
MICHAEL HACKENBERG
- 2022 Review: Non-Mendelian segregation and transmission drive of B chromosomes, *Chromosome Research*, 30, 2-3, 217-228
- JUAN PEDRO MARTINEZ CAMACHO
- 2022 Artículo: Satellitome Analysis on *Talpa aquitania* Genome and Inferences about the satDNAs Evolution on Some Talpidae, *Genes*, 14, , 117-
- EUGENIA ELISABET MONTIEL JIMÉNEZ
- 2022 Artículo: Characterization of the complete mitochondrial genome of the striped soldier shrimp, *Plesionika edwardsii* Brandt, 1851 (Crustacea: Decapoda: Pandalidae), and comparison with other species of Caridea, *Journal of Crustacean Biology*, 42, , 1-12
- FRANCISCA ROBLES RODRIGUEZ
- 2022 Artículo: Mendelian nightmares: The germline-restricted chromosome of songbirds, *Chromosome Research*, 30, , 255-272
- FRANCISCO JESÚS RUIZ-RUANO CAMPAÑA
- 2022 Artículo: Rapid gene content turnover on the germline-restricted chromosome in songbirds, *Research Square*, , , 1359388-
- FRANCISCO JESÚS RUIZ-RUANO CAMPAÑA
- 2022 Artículo: Evolution and dosage compensation of nucleolar organizing regions (NORs) mediated by mobile elements in turtles with female (ZZ/ZW) but not with male (XX/XY) heterogamety, *Journal of Evolutionary Biology*, 35, 12, 1709-1720
- EUGENIA ELISABET MONTIEL JIMÉNEZ
- 2022 Artículo: Direct evidence supporting Darwin's hypothesis of cross-pollination promoted by sex organ reciprocity, *New Phytologist*, 235, 5, 2099-2110
- ANTONIO JESÚS MUÑOZ PAJARES
- 2022 Artículo: Selective isolation of extracellular vesicles from minimally processed human plasma as a translational strategy for liquid biopsies, *Biomarker Research*, 10, 1, -
- MICHAEL HACKENBERG
- 2022 Artículo: The association between phenols and thyroid hormones. The role of iodothyronine deiodinase genes, *Environmental Pollution*, 311, , 119926-
- INMACULADA LOPEZ FLORES
- 2022 Artículo: Decoding Gene Expression Signatures Underlying Vegetative to Inflorescence Meristem Transition in the Common Bean, *International Journal of Molecular Sciences*, 23, 23, -
- CRISTINA GÓMEZ MARTÍN
JOSE L. OLIVER JIMENEZ
MICHAEL HACKENBERG
RICARDO LEBRÓN AGUILAR
- 2022 Artículo: The Virus-Induced Upregulation of the miR-183/96/182 Cluster and the FoxO Family Protein Members Are Not Required for Efficient Replication of HSV-1, *Viruses*, , , -
- CRISTINA GÓMEZ MARTÍN
MICHAEL HACKENBERG
RICARDO LEBRÓN AGUILAR
- 2022 Artículo: The Q-junction and the inflammatory response are critical pathological and therapeutic factors in CoQ deficiency, *Redox Biology*, 55, , -
- MOHAMMED BAKKALI
- 2022 Artículo: Lack of ITS sequence homogenization in *Erysimum* species (Brassicaceae) with different ploidy levels, *Scientific Reports*, 12, 16907, -
- FRANCISCO PERFECTTI ALVAREZ
- 2022 Artículo: Common genetic variation in KATNAL1 non-coding regions is involved in the susceptibility to severe phenotypes of male infertility, *Andrology*, 10, 7, 1339-1350
- FRANCISCO DAVID CARMONA LÓPEZ
MIGUEL BURGOS POYATOS
RAFAEL JIMENEZ MEDINA
- 2022 Artículo: Contribution of TEX15 genetic variants to the risk of developing severe non-obstructive oligozoospermia, *Frontiers in Cell and Developmental Biology*, 10, , 1089782-1089782
- FRANCISCO DAVID CARMONA LÓPEZ
MIGUEL BURGOS POYATOS
RAFAEL JIMENEZ MEDINA
- 2022 Artículo: A Tomato EMS-Mutagenized Population Provides New Valuable Resources for Gene Discovery and Breeding of Developmental Traits, *Plants*, 11, 19, 2453-
- RICARDO LEBRÓN AGUILAR

Libros (con ISBN)

- 2022 La Herencia del Mendelismo: la genética 200 años después del nacimiento de Gregor Mendel: Universidad de granada, Granada, 2022, 978-84-338-7045-2
FRANCISCA ROBLES RODRIGUEZ

Capítulos de libros (con ISBN)

- 2023 Titulo Capítulo: sRNAtoolbox: Dockerized Analysis of Small RNA Sequencing Data in Model and Non-model Species, Titulo Libro: MicroRNA Detection and Target Identification: Methods and Protocols: Springer US, , 2023,
MICHAEL HACKENBERG
CRISTINA GÓMEZ MARTÍN
- 2022 Titulo Capítulo: Los genes de Mendel, Titulo Libro: La Herencia del Mendelismo: la genética 200 años después del nacimiento de Gregor Mendel: Universidad de granada, Granada, 2022, 978-84-338-7045-2
ROBERTO DE LA HERRAN MORENO
FRANCISCA ROBLES RODRIGUEZ

Contribuciones en congresos

- 2022 Ponencia de Seminario: Herramientas genómicas para el desarrollo de nuevas variedades de tomate resilientes al cambio climático, I Seminario Red Iberoamericana de Agricultura Resiliente Equitativa y sostenible, 27/04/2022, San Luis Potosí, México, Seminario
RICARDO LEBRÓN AGUILAR
MICHAEL HACKENBERG
JOSE L. OLIVER JIMENEZ
CRISTINA GÓMEZ MARTÍN
- 2022 Poster en Congreso: Deepening the knowledge of the sexual determination and differentiation pathway in sturgeons, 6th Genomics in Aquaculture Symposium (GIA2022), 04/05/2022, Granada, Spain, Congreso
FRANCISCA ROBLES RODRIGUEZ
ROBERTO DE LA HERRAN MORENO
JOSE CARMELO RUIZ REJON
- 2022 Poster en Congreso: Repetitive DNA sequences of senegalese sole (*solea senegalensis*) and its implications in chromosome structure, 6th Genomics in Aquaculture Symposium (GIA2022), 04/05/2022, Granada, Spain, Congreso
FRANCISCA ROBLES RODRIGUEZ
ROBERTO DE LA HERRAN MORENO
JOSE CARMELO RUIZ REJON
- 2022 Poster en Congreso: KATNAL1 polymorphisms confer susceptibility to severe phenotypes of male infertility in a large European cohort, ESHRE 2022, 03/07/2022, Italia, Congreso
FRANCISCO DAVID CARMONA LÓPEZ
- 2022 Poster en Congreso: Common variation in the PIN1 locus increases the genetic risk to suffer from Sertoli Cell Only syndrome., ESHRE 2022, 03/07/2022, Italia, Congreso
FRANCISCO DAVID CARMONA LÓPEZ
- 2022 Ponencia en Congreso: Evolución cariotípica en los insectos vectores de la enfermedad de Chagas, Triatominae (Heteroptera: Reduviidae)., XI Seminario de Citogenética de la SEG., 22/06/2022, Jaén, Congreso
EUGENIA ELISABET MONTIEL JIMÉNEZ
- 2022 Conferencia Congreso no publicada: Con la miel en los labios, XI Seminario de Citogenética de la SEG., 22/06/2022, Jaén, Congreso
JUAN PEDRO MARTINEZ CAMACHO
- 2022 Poster en Congreso: Cytogenomic characterization and chromosome evolution in *Solea senegalensis*, 6TH International Symposium on Genomics in Aquaculture (GIA 2022), 04/05/2022, Granada, Spain, Congreso
JOSE CARMELO RUIZ REJON
ROBERTO DE LA HERRAN MORENO
- 2022 Ponencia en Congreso: A chromosome χ level genome assembly enables the identification on the follicle stimulating hormone receptor as the master sex determining gene in *Solea senegalensis*, 6TH International Symposium on Genomics in Aquaculture (GIA 2022), 04/05/2022, Granada, Spain, Congreso
ROBERTO DE LA HERRAN MORENO
JOSE CARMELO RUIZ REJON
- 2022 Ponencia en Congreso: Location of the sex determining gene rFSH in the karyotypes of *Solea senegalensis*, 2nd European Symposium on Sex Determination in Vertebrates, 16/10/2022, PRESQUILE

DE GIENS, FRANCIA, Congreso

JOSE CARMELO RUIZ REJON

- 2022 Ponencia en Congreso: A chromosome level genome assembly enables the identification of the follicle stimulating hormone receptor as the master sex determining gene in *Solea senegalensis*, XIV International Symposium on Genetics in Aquaculture, ISGA ¿ 2022, 27/11/2022, Santiago de Chile, Chile, Congreso

ROBERTO DE LA HERRAN MORENO

JOSE CARMELO RUIZ REJON

- 2022 Ponencia en Congreso: Caracterización citogenómica del cariotipo de *Solea senegalensis*, XI Seminario de Citogenética de la SEG., 22/06/2022, Jaén, Congreso

ROBERTO DE LA HERRAN MORENO

JOSE CARMELO RUIZ REJON

- 2022 Ponencia en Congreso: Análisis comparativo del satelitoma en varias especies de coccinélidos (Coleoptera), XI Seminario de Citogenética de la SEG., 22/06/2022, Jaén, Congreso

EUGENIA ELISABET MONTIEL JIMÉNEZ

- 2022 Comunicación en congreso: Estudio del cariotipo y del satelitoma de la nueva especie *Talpa aquitania* (Talpidae), XI Seminario de Citogenética de la SEG., 22/06/2022, Jaén, Congreso

EUGENIA ELISABET MONTIEL JIMÉNEZ

- 2022 Poster en Congreso: Caracterización de la familia mir-430 en el lenguado senegalés (*Solea senegalensis*) y estudio evolutivo con otras especies de peces, XVIII Congreso Nacional de Acuicultura, 21/11/2022, Cádiz (Palacio de Congresos), Congreso

FRANCISCA ROBLES RODRIGUEZ

- 2022 Poster en Congreso: Caracterización del genoma mitocondrial de la quisquilla (*Plesionika edwardsii* Brandt, 1851) y comparación con otras especies del infraorden Caridea, XVIII Congreso Nacional de Acuicultura, 21/11/2022, Cádiz (Palacio de Congresos), Congreso

FRANCISCA ROBLES RODRIGUEZ

- 2022 Poster en Congreso: Análisis de secuencias repetidas en el genoma de la quisquilla (*Plesionika edwardsii*), XVIII Congreso Nacional de Acuicultura, 21/11/2022, Cádiz (Palacio de Congresos), Congreso

FRANCISCA ROBLES RODRIGUEZ

- 2022 Comunicación en congreso: Tomato hairplus mutation induces changes in the epigenome and increases glandular trichome density, XXth EUCARPIA Meeting of the Tomato Working Group, 31/05/2022, , , - Valencia, España, Congreso

CRISTINA GÓMEZ MARTÍN

RICARDO LEBRÓN AGUILAR

MICHAEL HACKENBERG

JOSE L. OLIVER JIMENEZ

- 2022 Poster en Congreso: Functional role of SIAGO7 and the Argonaute gene family in modulating tomato plant development, XVI Meeting of Plant Molecular Biology, 14/09/2022, Sevilla, Spain, Congreso

RICARDO LEBRÓN AGUILAR