Junta de Andalucía
Consejería de Salud y Consumo

FPS groups are looking for R1, R2 and R3 researchers who can apply for competitive HR grants from the 2023 call of the *Acción Estratégica en Salud* of the *Instituto de Salud Carlos III*. Specifically:

CONTRATOS RÍO HORTEGA 2023/ RIO HORTEGA CONTRACTS 2023

Submission of applications: **expected to be launched in March.**

The candidate will be linked to the Unit of Clinical Management or centre with clinical healthcare activity that applies for the contract and may collaborate with a research group.

Eligibility requirements:

- Hold the **official certificate of specialisation** in Medicine (MIR), Pharmacy (FIR), Biology (BIR), Chemistry (QIR), Biochemistry, Psychology (PIR), Nursing (EIR) or Hospital Radiophysics (RIR). If the certificates have been obtained abroad, they must be recognised or homologated by the competent body.
- **To have completed the FSE programme that qualifies to participate in this action during 2018, or at a later date**, including those who do so in 2023, provided that this is prior to the date established for the end of the period for allegations to the provisional award decision. In accounting for this deadline, interruptions due to duly justified reasons (maternity/paternity, serious illness or accident, pregnancy or care for people in a situation of dependency) will be excluded.
- **Not to be enjoying a Rio Hortega Contract** at the time of the application, **nor to have completed it** previously.

More information

CONTRATOS SARA BORRELL 2023/ SARA BORRELL CONTRACTS 2023

Submission of applications: **expected to be launched in March.**

Eligibility requirements:

- **To have obtained the doctorate, understood as the date of reading and approval of the doctoral thesis, after 1 January 2019.**
  When there is a justified interruption of the activity, the date of reading and approval will be allowed to be prior to 1 January 2019, extending the time limit for the periods covered by each of these situations, provided that they are between 1 January 2019 and the closing date for the submission of applications.
- **Not to be enjoying a Sara Borrell Contract** at the time of application**, nor to have completed it** previously.

When the candidate holds more than one doctorate, the above requirements will refer to the first of those obtained.

More information

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CONTRATOS JUAN RODÉS 2023/ JUAN RODES CONTRACTS 2023

Submission of applications: **expected to be launched in March.**

The candidate will be linked to the Unit of Clinical Management or centre with clinical healthcare activity that applies for the contract and may collaborate with a research group.

Eligibility requirements:

- Hold the **official certificate of specialisation** in Medicine (MIR), Pharmacy (FIR), Biology (BIR), Chemistry (QIR), Biochemistry, Psychology (PIR), Nursing (EIR) or Hospital Radiophysics (RIR).
- Hold a **doctoral degree** and, either have completed the **Rio Hortega** programme or be enjoying an Rio Hortega Contract of the **AES 2020 or 2021** at the end of the application deadline. When the candidate has completed a postdoctoral stay abroad, with a continuous duration of at least two years, it will not be necessary that he/she has completed or is currently developing a Rio Hortega Contract.
- **Not to be enjoying a Juan Rodes Contract** at the time of application**, nor to have completed it** previously.

More information

CONTRATOS MIGUEL SERVET 2023/ MIGUEL SERVET CONTRACTS 2023

Submission of applications: **expected to be launched in March.**

Eligibility requirements:

- To have obtained the **doctoral degree**, understood as the date of reading and approval of the doctoral thesis**,** between 1 January 2011 and 31 December 2018. In the case of candidates who have completed the **Rio Hortega** or **Sara Borrell** research training programme, or who are in the second or third year of these contracts respectively, the thesis reading date may be later than 2018. In these cases, it is necessary to have completed the programme prior to the incorporation of the candidate to the Miguel Servet contract. In accounting for the period indicated previously, duly justified interruptions (maternity, paternity, long-term illness, etc.) will be excluded.
- **Not to be enjoying a Miguel Servet Contract** at the time of application**, nor to have completed it** previously.

When the candidate holds more than one doctorate, the above requirements will refer to the first of those obtained.

More information

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Information on host group:

CONTRATOS RÍO HORTEGA 2023/ RIO HORTEGA CONTRACTS 2023

1. **Unit of Clinical Management/Centre with clinical healthcare activity:** Rheumatology Unit (San Cecilio University Clinical Hospital, Granada)

   Collaborative Group: Genetics of Complex Diseases.

   Principal Investigators of the Project:

   1. Enrique Raya Álvarez. Rheumatology Unit (San Cecilio University Clinical Hospital, Granada)

   2. Concepción Marañón Lizana. Pfizer - University of Granada - Junta de Andalucía Centre for Genomics and Oncological Research (GENYO).

Research line in which the candidate will work: Urine biomarkers for the non-invasive diagnosis of renal disease in systemic autoimmune diseases.

Summary of research line: Systemic Autoimmune Diseases (SADs) constitute a heterogeneous group of complex inflammatory diseases involving the connective tissue with autoimmune origin. In these diseases the inflammation is not restricted to a specific organ, in a way that every single patient can show a unique combination of clinical manifestations, giving to overlapping diagnosis. Among the possible symptoms, nephritis constitutes the most severe manifestation, which can only be assessed by renal biopsy, which is an invasive procedure. Currently the monitoring of the renal state is carried out using low-specific analytical parameters in the blood and the urine. These markers do not have the power to differentiate between activity and chronicity, given the low clinicopathologic correlation found in this group of diseases. Thus, there is a real need to set up new methods for the diagnosis and stratification of SADs patients in risk to suffer from renal disease. We propose the urine as a non-invasive source of information about the renal inflammatory state in SADs patients. The integration of the data of excreted autoantibodies, the cell composition of the urine sediment and the profile of extracellular microvesicles will give us useful information about the inflammatory state of the kidney. Moreover, we will be able to estimate the role of the deposed immunocomplexes and the infiltrated populations in the induction of a local pathogenic immune response in SADs patients. In addition, we expect that the resulting data will give the tools for a better risk estimation for renal disease, as well as for the monitoring of the responses to the treatments.

Profile of the desired candidate:

- Specialisation in Medicine, Pharmacy, Biology, Chemistry or Biochemistry. If the certificates have been obtained abroad, they must be recognised or homologated by the competent body.
- Background or interest in the area of autoimmunity, rheumatology or biomarkers
- Willing to integrate a dynamic, translational team

Part of the research will be performed at **GENYO Centre**.

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More information about the Unit of Clinical Management/Centre with clinical healthcare activity here: https://www.husc.es/especialidades/reumatologia/quienes_somos; https://www.ibsgranada.es/en/grupos-de-investigacion/mp11-reumatologia/

More information about the collaborative group here: https://www.genyo.es/research-groups/genetics-of-complex-diseases/?lang=en or Twitter: @MaranonGenyo

Principal investigators contact: 1. enriraya@gmail.com 2. concepcion.maranon@genyo.es

2. **Unit of Clinical Management/Centre with clinical healthcare activity:** Hematology Unit (Reina Sofia University Hospital, Cordoba)

   Collaborative Group: Genomic Editing applied to Advanced Therapies.

   Principal Investigators of the Project:

   1. Inmaculada Herrera. Hematology Unit (Reina Sofia University Hospital, Cordoba)

   2. Karim Benabdellah. Pfizer - University of Granada - Junta de Andalucía Centre for Genomics and Oncological Research (GENYO).

Research line in which the candidate will work:

The main research lines where the candidate will be involved are:

1. Improvement of the outcome of CAR-T cell therapy in AML, by the design and the validation of a combinatorial approach involving the use of "Off-the-shelf" CAR-T lymphocyte.
2. The development of an allogeneic exosome-based system that allows the selective recognition of AML cells and the blockade of humoral immunosuppression.

Profile of the desired candidate:

- Previous experience in Gene editing
- Authored papers in the field (Articles Q1 as First or last authors)
- Previous skill with mice handling is essential
- Previous experience in FACS procedure and analysis is indispensable

More information about the Unit of Clinical Management/Centre with clinical healthcare activity here: Equipo de profesionales (juntadeandalucia.es)

More information about the collaborative group here: https://www.genyo.es/grupos-de-investigacion/edicion-genomica-aplicada-a-terapias-avanzas-egata/?lang=en

Principal investigators contact: 1. inmaculada.herrera.sspa@juntadeandalucia.es 2. karim.benabdel@genyo.es

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3. **Unit of Clinical Management/Centre with clinical healthcare activity:** Liquid Biopsies & Cancer Interception Group. Oncology Unit (Virgen de las Nieves University Hospital, Granada)

   Collaborative Group: Proteases and Extracellular Matrix.

   Principal Investigators of the Project:

   1. María José Serrano. Liquid Biopsies & Cancer Interception Group. Oncology Unit (Virgen de las Nieves University Hospital, Granada)

   2. Juan Carlos Rodríguez-Manzaneque. Pfizer - University of Granada - Junta de Andalucía Centre for Genomics and Oncological Research (GENYO).

Research line in which the candidate will work: Development of cellular and animal models to study tumor dormancy and optimization of liquid biopsy methods.

Summary of research line: During last decades, revolutionary studies have endorsed great advances in the diagnostic and treatment of oncological disorders. Significantly, the development of liquid biopsy technologies provoked the identification of tumor dormant cells at earlier stages and challenging the effectiveness of advanced treatments. Still, the generation of relevant cellular and animal models is required to identify new biomarkers and improve current therapies.

Profile of the desired candidate:

- Expertise in the study and characterization of cell populations, using techniques such as cytometry, western blot, multiplex, and others
- Advanced knowledge and understanding of the complexity of tumor heterogeneity
- Knowledge of the use and manipulation of tumor mouse models
- Knowledge of bioinformatic tools to analyze RNAseq and cancer-related big data

More information about the Unit of Clinical Management/Centre with clinical healthcare activity here: https://www.genyo.es/research-groups/liquid-biopsy-cancer-interception/?lang=en or https://www.genyo.es/research-groups/liquid-biopsy-cancer-interception/dr-maria-jose-serrano/?lang=en

More information about the collaborative group here: https://www.genyo.es/research-groups/proteases-and-extracellular-matrix/?lang=en

Principal investigators contact: 1. mjose.serrano@genyo.es 2. juancarlos.rodriguez@genyo.es

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4. **Unit of Clinical Management/Centre with clinical healthcare activity:** Clinical Intensive Care Unit (Virgen Macarena University Hospital, Seville)

   Collaborative Group: Big Data Department - Computational Medicine Platform

   Principal Investigators of the Project:

   1. Jose Garnacho Montero. Clinical Intensive Care Unit (Virgen Macarena University Hospital, Seville)

   2. Miguel Ángel Armengol de la Hoz. Big Data Department - Computational Medicine Platform - Andalusian Public Foundation Progress and Health - FPS (Seville)

Research line in which the candidate will work: Electronic Health Records Analytics for Decision Support in Critical Care.

Summary of research line: The project aims to develop and validate clinical decision support tools based on electronic health record data analytics for the management of critically ill patients. The candidate will work in a multidisciplinary team, including clinicians, developers, data engineers, and experts in the Andalusian Public Health System.

Profile of the desired candidate:

- The ideal candidate will have expertise in both healthcare and data science, with a background in developing and validating clinical decision support tools using electronic health record data.
- Strong programming skills and experience in machine learning, data mining, and statistical analysis are required.
- Excellent communication and collaboration skills are essential, as the candidate will work in a multidisciplinary team.

More information about the Unit of Clinical Management/Centre with clinical healthcare activity here: https://www.hospitalmacarena.es/blog/cuidados-intensivos/

More information about the collaborative group here: http://www.sspa.juntadeandalucia.es/fundacionprogresoysalud/investigamas/solucion/recGruposInvestigacionDet/2179/4814

Principal investigators contact: 1. jgarnacho.sspa@juntadeandalucia.es 2. mangel.armengol@juntadeandalucia.es

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CONTRATOS SARA BORRELL 2023/ SARA BORRELL CONTRACTS 2023

1. **Group:** Genetics of Complex Diseases.

   Principal Investigator of the Project: Marta E. Alarcón Riquelme. Pfizer - University of Granada - Junta de Andalucía Centre for Genomics and Oncological Research (GENYO).

Research line in which the candidate will work: Genetics of systemic lupus erythematosus.

Summary of research line: The role of candidate genes in the development of lupus in *in vivo* preclinical models.

Profile of the desired candidate:

- Scientific experience through publications of the use of animal models of autoimmunity (CIA or K/BxN, lupus, autoimmune allergic encephalomyelitis). Understanding of advanced cellular immunology of the mouse.
- Knowledge in mouse cell populations through flow cytometry and cell culture.
- Experience in the design of mouse experiments, experience in designing and doing mouse crosses.
- Good English language, spoken and written.
- PhD or postdoc experience outside of Spain.

More information about the research group here: https://www.genyo.es/grupos-de-investigacion/genetica-de-enfermedades-complejas/

Principal investigator contact: marta.alarcon@genyo.es

2. **Group:** Proteases and Extracellular Matrix.

   Principal Investigator of the Project: Juan Carlos Rodríguez-Manzaneque. Pfizer - University of Granada - Junta de Andalucía Centre for Genomics and Oncological Research (GENYO).

Research line in which the candidate will work: Control of tumor progression and its immune response by remodelling the extracellular matrix.

Summary of research line: Fight against cancer requires a deep knowledge of multiple players withing the complex tumor heterogeneity, including the composition and nature of the dynamic **extracellular matrix (ECM**). In this scenario, many studies of extracellular proteases as modifiers of the tumor microenvironment have revealed their participation as oncogenic as well as tumor-protective molecules. Given their extracellular nature, the identification of their substrates together with their modulatory tasks promoting or inhibiting immune infiltration will disclose new and underexplored targeting pathways.

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Profile of the desired candidate:

- Expertise in the study and characterization of cell populations, using techniques such as cytometry, western blot, multiplex, and others.
- Expertise in the use and manipulation of tumor mouse models.
- Advanced knowledge and understanding of the complexity of tumor heterogeneity.
- Knowledge of bioinformatic tools to analyze RNAseq and cancer-related big data.

More information about the research group here: https://www.genyo.es/research-groups/proteases-and-extracellular-matrix/?lang=en

Principal investigator contact: juancarlos.rodriguez@genyo.es

3. **Group:** Genetics of Complex Diseases.

   Principal Investigator of the Project: Concepción Marañón Lizana. Pfizer - University of Granada - Junta de Andalucía Centre for Genomics and Oncological Research (GENYO).

Research line in which the candidate will work: IFN-directed drugs as a therapeutic approach for systemic autoimmune diseases.

Summary of research line: Systemic autoimmune diseases (SADs) cause chronic suffering and vital organ failure and present unique challenges to health care delivery. For some of them, type I interferons (IFN) have a pathogenic role. Since plasmacytoid dendritic cells (pDC) are key players in the control of autoimmune responses through the production of high amounts of IFN, we propose a multidisciplinary pDC-based strategy for the discovery of novel strategic approaches for the management of prototypic IFN-mediated diseases, namely psoriasis (PSO), systemic lupus erythematosus (SLE) and Sjögren syndrome (SjS). Our approach integrates computational methods, in vitro screening and in vivo testing, in the search of both new repurposing strategies and the discovery of new active molecules.
We will firstly identify the molecular signatures and pathological signs dependent on IFN-I in relevant mouse models for PSO, SLE and SjS. The interference of marketed drugs with the IFN pathway will be firstly predicted using computational methods and public data bases, and then tested in vitro using a newly developed pDC-based screening method. Finally, their therapeutic activity will be assessed in vitro using an innovative pDC-based screening system, ex vivo using blood cells from patients and in vitro using well-established preclinical models for PSO, SLE and SjS. For the screening of new therapeutic compounds, a high throughput pDC-based screening will be carried out using a collection of 1500 extracts from natural products and a library of 400 repositioning molecules. After pharmacodinamic validation, their therapeutic value will be evaluated in using blood samples of SADs patients presenting the IFN signature and in animal models as before.
In summary, this project proposes novel and integrative strategies allowing the advance in the development of new therapeutic options of SADs patients.

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Profile of the desired candidate:

- PhD in the area of Biomedicine
- Experience in cellular immunology, cell/animal models or data analysis
- Willing to integrate a dynamic, translational team

More information about the research group here: https://www.genyo.es/research-groups/genetics-of-complex-diseases/?lang=en or Twitter: @MaranonGenyo

Principal investigator contact: concepcion.maranon@genyo.es

4. **Group:** Pancreatic Islet Development & Regeneration.

   Principal Investigator of the Project: Benoit Gauthier. CABIMER (Andalusian Centre of Molecular Biology and Regenerative Medicine).

Research line in which the candidate will work:
The successful candidate will integrate a dynamic team implicated in the development and testing of anti-autoimmune drugs in pre-clinical mouse models and in human organoids.

Profile of the desired candidate:

- PhD in Life Sciences
- Experience with mouse models of disease
- Experience with primary tissue cultures.

More information about the research group here: https://www.cabimer.es/en/research-groups/pancreatic-islet-development-regeneration/

Principal investigator contact: benoit.gauthier@cabimer.es

5. **Group:** Genomic Editing applied to Advanced Therapies.

   Principal Investigator of the Project: Karim Benabdellah. Pfizer - University of Granada - Junta de Andalucía Centre for Genomics and Oncological Research (GENYO).

Research line in which the candidate will work:

The main research lines where the candidate will be involved are:

1. Improvement of the outcome of CAR-T cell therapy in AML, by the design and the validation of a combinatorial approach involving the use of “Off-the-shelf” CAR-T lymphocyte.
2. The development of an allogeneic exosome-based system that allows the selective recognition of AML cells and the blockade of humoral immunosuppression.

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Profile of the desired candidate:

- Previous experience in Gene editing
- Authored papers in the field (Articles Q1 as First or last authors)
- Previous skill with mice handling is essential
- Previous experience in FACS procedure and analysis is indispensable

More information about the research group here: https://www.genyo.es/grupos-de-investigacion/edicion-genomica-aplicada-a-terapias-avanzas-egata/?lang=en

Principal investigator contact: karim.benabdel@genyo.es

6. **Group:** Biomedical Magnetic Resonance Laboratory (BMRL).

   Principal Investigator of the Project: María Luisa García Martín. Biomedical Research Institute of Malaga and Nanomedicine Platform (IBIMA-BIONAND Platform).

Research line in which the candidate will work: Development of theragnostic magnetic nanosystems to tackle solid tumors.

Summary of research line: This research is focused on the development of multifunctional magnetic nanoparticles with capabilities as in vivo imaging probes (mainly MRI) and as therapeutic agents acting as hyperthermia mediators and/or delivery carriers, with special emphasis on tumor targeting strategies.

Profile of the desired candidate:

- Ph.D. in an area of knowledge related to the work to be developed (Health Sciences, Biological Sciences, Biotechnology, Chemical Sciences, Chemical Technology, Nanomedicine).
- Experience in the development of nanoparticles for in vivo applications (synthesis, functionalization, and characterization).
- Knowledge of techniques related to the physicochemical characterization of nanoparticles (FTIR, DLS, VGA, TEM...)
- Experience in cell cultures applied to nanoparticle testing (cytotoxicity assays, cell targeting).
- Experience working with tumor animal models.
- Fluency in English, spoken and written.

More information about the research group here: https://www.ibima.eu/grupo_investigacion/biomedical-magnetic-resonance-laboratory-bmrl/

Principal investigator contact: mlgarcia@ibima.eu

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7. **Group:** Big Data Department - Computational Medicine Platform

   Principal Investigator of the Project: Miguel Ángel Armengol de la Hoz. Big Data Department - Computational Medicine Platform - Andalusian Public Foundation Progress and Health – FPS (Seville)

Research line in which the candidate will work: Development and validation of predictive models and decision support systems based on data from the Andalusian Public Health System for intensive care units.

Summary of research line: The objective of this research line is to develop and validate predictive models and decision support systems that allow clinicians in intensive care units to improve the clinical management of patients. These models will be based on data from the Andalusian Public Health System, which will be processed and analyzed by the Big Data Department of the Junta de Andalucía.

Profile of the desired candidate:

- Strong background in statistics, machine learning, and data analysis.
- Knowledge of programming languages such as Python and R.
- Experience working with large datasets and databases.
- Familiarity with electronic health records and clinical data.
- Ability to work in a multidisciplinary team and communicate effectively with clinicians and other stakeholders.
- PhD in a related field or equivalent research experience.

More information about the research group here: http://www.sspa.juntadeandalucia.es/fundacionprogresoysalud/investigamas/solucion/recGruposInvestigacionDet/2179/4814

Principal investigator contact: mangel.armengol@juntadeandalucia.es

8. **Group:** Big Data Department - Computational Medicine Platform

   Principal Investigator of the Project: Miguel Ángel Armengol de la Hoz. Big Data Department - Computational Medicine Platform - Andalusian Public Foundation Progress and Health – FPS (Seville)

Research line in which the candidate will work: PRAETORIA, *'PlatafoRma Andaluza de dEsarrollo de sisTemas de sOpoRte a la decIsión clínicA*'.

Summary of research line: SSDC development service in which tools to support decision-making are trained and validated in multidisciplinary teams composed of developers, data engineers, clinicians, managers, and experts in different use cases within the SSPA.

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Profile of the desired candidate:

- A full stack electronic health record data scientist with expertise in developing and validating tools to support decision-making in multidisciplinary teams composed of developers, data engineers, clinicians, managers, and experts in different use cases within the SSPA.

More information about the research group here: http://www.sspa.juntadeandalucia.es/fundacionprogresoysalud/investigamas/solucion/recGruposInvestigacionDet/2179/4814

Principal investigator contact: mangel.armengol@juntadeandalucia.es

CONTRATOS JUAN RODÉS 2023/ JUAN RODES CONTRACTS 2023

1. **Unit of Clinical Management/Centre with clinical healthcare activity:** Rheumatology Unit (San Cecilio University Clinical Hospital, Granada)

   Collaborative Group: Genetics of Complex Diseases.

   Principal Investigators of the Project:

   1. Enrique Raya Álvarez. Rheumatology Unit (San Cecilio University Clinical Hospital, Granada)

   2. Concepción Marañón Lizana. Pfizer - University of Granada - Junta de Andalucía Centre for Genomics and Oncological Research (GENYO).

Research line in which the candidate will work: Urine biomarkers for the non-invasive diagnosis of renal disease in systemic autoimmune diseases.

Summary of research line: Systemic Autoimmune Diseases (SADs) constitute a heterogeneous group of complex inflammatory diseases involving the connective tissue with autoimmune origin. In these diseases the inflammation is not restricted to a specific organ, in a way that every single patient can show a unique combination of clinical manifestations, giving to overlapping diagnosis. Among the possible symptoms, nephritis constitutes the most severe manifestation, which can only be assessed by renal biopsy, which is an invasive procedure. Currently the monitoring of the renal state is carried out using low-specific analytical parameters in the blood and the urine. These markers do not have the power to differentiate between activity and chronicity, given the low clinicopathologic correlation found in this group of diseases. Thus, there is a real need to set up new methods for the diagnosis and stratification of SADs patients in risk to suffer from renal disease. We propose the urine as a non-invasive source of information about the renal inflammatory state in SADs patients. The integration of the data of excreted autoantibodies, the cell composition of the urine sediment and the profile of extracellular microvesicles will give us useful information about the inflammatory state of the kidney. Moreover, we will be able to estimate the role of the deposed immunocomplexes and the infiltrated populations in the induction of a local pathogenic immune response in SADs patients. In addition, we expect that the resulting data will give the tools for a better risk estimation for renal disease, as well as for the monitoring of the responses to the treatments.

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Profile of the desired candidate:

- Specialisation in Medicine, Pharmacy, Biology, Chemistry or Biochemistry. If the certificates have been obtained abroad, they must be recognised or homologated by the competent body.
- PhD in the area of Biomedicine
- Experience in the area of autoimmunity, rheumatology or biomarker discovery
- Willing to integrate a dynamic, translational team

Part of the research will be performed at **GENYO Centre**.

More information about the Unit of Clinical Management/Centre with clinical healthcare activity here: https://www.husc.es/especialidades/reumatologia/quienes_somos; https://www.ibsgranada.es/en/grupos-de-investigacion/mp11-reumatologia/

More information about the collaborative group here: https://www.genyo.es/research-groups/genetics-of-complex-diseases/?lang=en

Principal investigators contact: 1. enriraya@gmail.com 2. concepcion.maranon@genyo.es

CONTRATOS MIGUEL SERVET 2023/ MIGUEL SERVET CONTRACTS 2023

1. **Group:** Genomic Editing applied to Advanced Therapies.

   Principal Investigator of the Project: Karim Benabdellah. Pfizer - University of Granada - Junta de Andalucía Centre for Genomics and Oncological Research (GENYO).

Research line in which the candidate will work:

The main research lines where the candidate will be involved are:

1. Improvement of the outcome of CAR-T cell therapy in AML, by the design and the validation of a combinatorial approach involving the use of "Off-the-shelf" CAR-T lymphocyte.
2. The development of an allogeneic exosome-based system that allows the selective recognition of AML cells and the blockade of humoral immunosuppression.

Profile of the desired candidate:

- PI of national and regional Grants focused in Gene Therapy and/or Gene Editing
- Authored papers in the field (Articles Q1 as First or last authors)
- Previous skill with mice handling is essential
- Previous experience in FACS procedure and analysis is indispensable

More information about the research group here: https://www.genyo.es/grupos-de-investigacion/edicion-genomica-aplicada-a-terapias-avanzas-egata/?lang=en

Principal investigator contact: karim.benabdel@genyo.es

Junta de Andalucía
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2. **Group:** Biomedical Magnetic Resonance Laboratory (BMRL).

   Principal Investigator of the Project: María Luisa García Martín. Biomedical Research Institute of Malaga and Nanomedicine Platform (IBIMA-BIONAND Platform).

Research line in which the candidate will work: Development of theragnostic magnetic nanosystems to tackle solid tumors.

Summary of research line: This research is focused on the development of multifunctional magnetic nanoparticles with capabilities as in vivo imaging probes (mainly MRI) and as therapeutic agents acting as hyperthermia mediators and/or delivery carriers, with special emphasis on tumor targeting strategies.

Profile of the desired candidate:

- Ph.D. in an area of knowledge related to the work to be developed (Health Sciences, Biological Sciences, Biotechnology, Chemical Sciences, Chemical Technology, Nanomedicine).
- Experience in the development of nanoparticles for in vivo applications (synthesis, functionalization, and characterization).
- Knowledge of techniques related to the physicochemical characterization of nanoparticles (FTIR, DLS, VGA, TEM...)
- Experience in cell cultures applied to nanoparticle testing (cytotoxicity assays, cell targeting).
- Experience working with tumor animal models.
- Fluency in English, spoken and written.
- Strong track record of scientific publications related to the area of research.

More information about the research group here: https://www.ibima.eu/grupo_investigacion/biomedical-magnetic-resonance-laboratory-bmrl/

Principal investigator contact: mlgarcia@ibima.eu

Junta de Andalucía
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3. **Group:** Big Data Department - Computational Medicine Platform

   Principal Investigator of the Project: Miguel Ángel Armengol de la Hoz. Big Data Department - Computational Medicine Platform - Andalusian Public Foundation Progress and Health - FPS (Seville)

Research line in which the candidate will work: Development of artificial intelligence and machine learning models for clinical decision support in Intensive Care Units (ICU) and Hospital Emergency Departments (HED).

Summary of research line: The aim of this research line is to develop AI and ML models for clinical decision support in critically ill patients admitted to the ICU and HED. The candidate will work on the development and validation of predictive models for early identification of high-risk patients, classification of disease severity, and prediction of patient outcomes. The research will be conducted using electronic health record data from the Andalusian Public Health System.

Profile of the desired candidate:

- PhD in Biomedical Engineering, Computer Science, or a related field.
- Experience in machine learning, deep learning, and data analysis.
- Strong programming skills in Python, R or similar languages.
- Experience in working with electronic health record data is highly desirable.
- Excellent communication skills and ability to work in a multidisciplinary team.

More information about the research group here: http://www.sspa.juntadeandalucia.es/fundacionprogresoysalud/investigamas/solucion/recGruposInvestigacionDet/2179/4814

Principal investigator contact: mangel.armengol@juntadeandalucia.es