The Technology Portfolio of

Spanish Accredited Health Research Institutes

GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES
Instituto de Salud Carlos III
Subdirección General de Evaluación y Fomento de la Investigación

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On behalf of the Alliance of Health Research Institutes

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Publication included in the publishing programme of the Ministry of Science, Innovation and Universities.
General Catalogue of Official Publications:
https://cpage.mpr.gob.es/

To obtain this report free on the Internet: https://hdl.handle.net/20.500.12105/26962

Published by: Institute of Health Carlos III
Ministry of Science, Innovation and Universities

NIPO pdf: 156250391
NIPO epub: 156250386
Design and layout: Editorial MIC

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Introduction

The Alliance of Health Research Institutes provides a stable framework for collaboration and joint work between the Institute of Health Carlos III (hereinafter ISCIII) and the Health Research Institutes accredited by the Spanish Ministry of Science, Innovation and Universities (hereinafter IIS). Established by the ISCIII in November 2019, the Alliance has, over these five years, consolidated itself as a forum for reflection, shared learning and cooperative innovation in biomedical R&D&I, with a particular focus on the Spanish National Health System. As such, it forms part of the Spanish System of Science, Technology and Innovation (SECTI).

In line with the growing recognition of the role of public research in driving European innovation, as highlighted by the European Patent Office (EPO) in its recent report *Public Research and Innovation in Europe (2025)*, the accredited IIS constitute an essential pillar in the generation of knowledge and the creation of value in health through technological innovation. This document, *The Technology Portfolio of Spanish Accredited Health Research Institutes*, is an exercise in transparency aligned with Open Science policies, and is structured around three specific objectives:

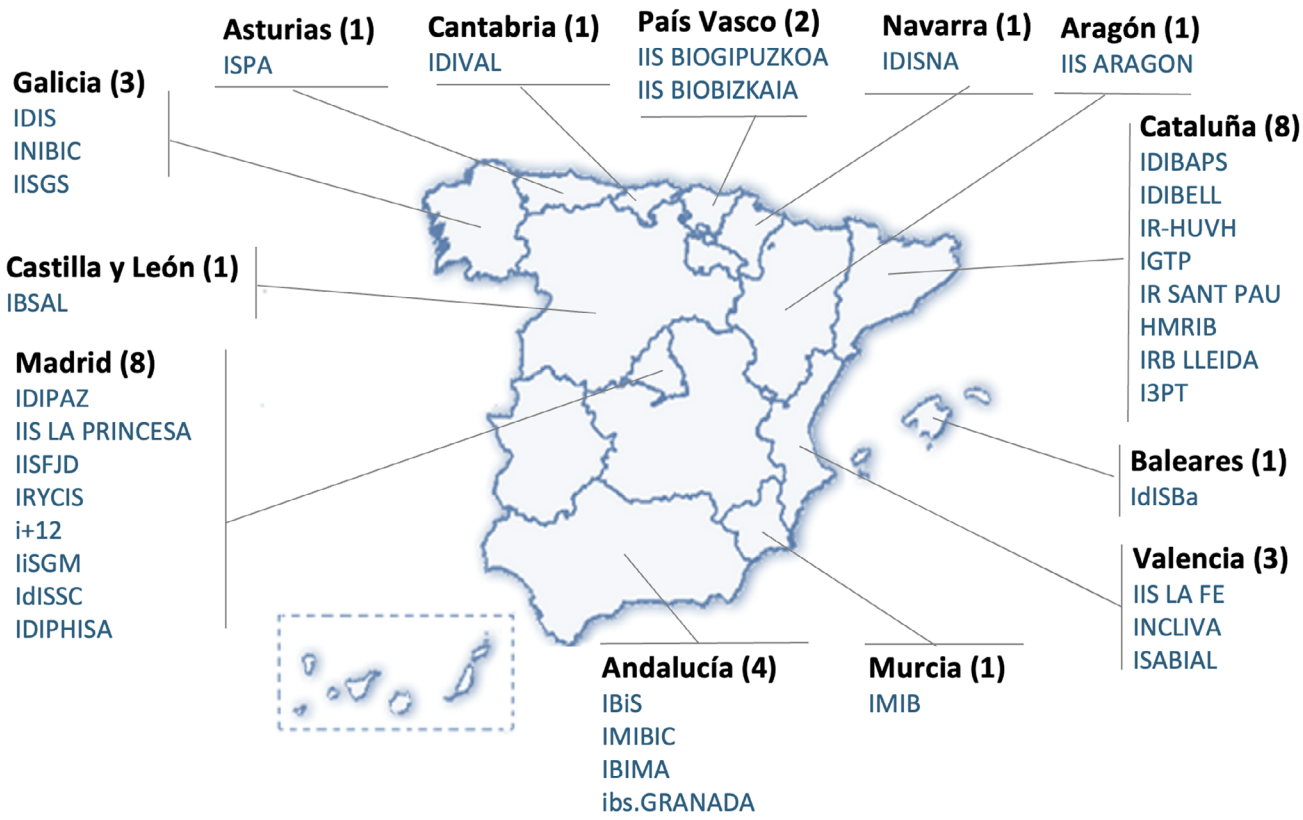
1. **To identify and systematise** the portfolio of technologies developed within the IIS environment, highlighting their contribution to the generation of research results with potential for transfer and practical application.
2. **To characterise and classify** these technologies according to their scientific and technological nature, grouping them into five main categories. To facilitate consultation, the document organises the technologies into the following categories:
    1. Pharmaceuticals and Biotechnology.
    2. Medical Devices.
    3. Diagnostics and Imaging.
    4. Digital Health and IT.
    5. Others.
3. **To promote their valorisation and transfer**, fostering connections between the IIS, the industrial sector and other stakeholders, with the aim of transforming research results into products, services and solutions that have a real impact on improving citizens' health.

Overall, this portfolio is conceived as a tool to highlight the role of the IIS within the European research and innovation system, contributing to the valorisation of scientific results, the promotion of public-private collaboration, and the transformation of knowledge into solutions that improve people's lives.

Health Research Institutes' Patent Portfolio

Total Intellectual Property Rights from **35 accredited HRI**:

- Pharmaceuticals & Biotechnology: 229
- Medical Devices: 151
- Diagnostics & Imaging: 138
- Digital Health & IT: 69
- Other: 31

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IDIBAPS
Institut d'Investigacions Biomèdiques August Pi i Sunyer


IBIS
INSTITUTODEBIOMEDICINADESEVILLA


IDI BELL
Institut d'Investigació Biomèdica de Bellvitge


Vall d'Hebron
Institut de Recerca


IGTP
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EUSKAL OSASUN IKERKUNTZA
INVESTIGACIÓN VASCA EN SALUD
BASQUE HEALTH RESEARCH


IBSAL
Instituto de Investigación
Biomédica de Salamanca


IiSGM
Instituto de Investigación Sanitaria
Gregorio Marañón


IdISSC
INSTITUTO de INVESTIGACIÓN SANITARIA
Hospital Clínico San Carlos


Hospital del Mar
Research Institute
Barcelona


IRBLleida
Institut de Recerca Biomèdica


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PUERTA DE HIERRO - SEGOVIA DE ARANA
SaludMadrid
Hospital Universitario Puerta de Hierro Majadahonda


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BASQUE HEALTH RESEARCH


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Plataforma BIONAND


IMIB
Instituto Murciano de
Investigación Biosanitaria
Pascual Parrilla


Valdecilla
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ISABIAL
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Institut d'Investigació i
Innovació I3PT

The Technology Portfolio of Spanish Accredited Health Research Institutes

Pharmaceuticals & Biotechnology

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Instituto de Salud Carlos III
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HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP22707100	Msi2 as a therapeutic target for the treatment of myotonic dystrophy.	Musashi 2 (MSI2) protein as novel therapeutic target for the treatment of the muscle dysfunction in dystrophy myotonic 1. The RNA-binding protein MSI2 acts as regulator, promoting excessive autophagy through miR-7 biogenesis repression and affects the muscle phenotype.	INCLIVA | VLC Instituto de Investigación Sanitaria innovacion@incliva.es
EP21383162	Haloperidol for use in the treatment of spinal muscular atrophy.	Repurposing of haloperidol as a new therapy for the spinal muscular atrophy. Changes in half-life, weight gain, neuroprotective and anti-inflammatory effects at the spinal cord level in mice are observed. A transdermal patch is being developed to improve its delivery.	
EP24382406	Prenylated tetrahydroquinolines and quinolines with PPAR agonist activity.	Development of a dual PPARα/γ agonist and pan-ppar modulator, based on quinoline and prenylated tetrahydroquinoline derivatives. Thus, the technology may prove to be a novel treatment for metabolic diseases by improves lipid and glycaemic parameters.	
EP24383371	Lipid nanoparticles and their use in the treatment of ischemic heart diseases.	Genetically modified mesenchymal stromal cell line, resulting in increased secretion of small extracellular vesicles with enhanced therapeutic effects. This finding, tested in mice and porcine models, is a promising solution for the treatment of myocardial infarction.	
EP23382997	New generation of antithrombotics targeting LRP5.	A new target has been identified to treat and reduce thrombosis. It is as effective as commercially available antithrombotic drugs (clopidogrel and aspirin), but with a significant reduction in bleeding.	Institut de Recerca Sant Pau innovacio@santpau.cat
EP18382527	Therapeutic use of afatinib in cancer.	Reprofiling of afatinib as a treatment for HNSCC in patients with Fanconi Anemia currently the main cause of death in adulthood for this population.	
EP23382178	Method for the diagnosis or prognosis of Huntington's disease.	Novel biosignature of small-RNAs in plasma for the early diagnosis and prognosis of human neurodegenerative diseases. The sRNA biomarkers have been validate for Huntington disease from the premanifest stage.	
EP24382133	Car and modified CD200R combination.	New chimeric antigen receptor (car) that targets an antigen highly expressed in cancers (i.e., CD30) which also typically express CD200, such as Hodgkin lymphoma, with a modified CD200R that has been found useful in the treatment of such cancers.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
PCT/EP2020/079374	Compounds for immunomodulation.	Project based on the development of a first-in-class biologic (heptammune) derived from a blood protein for the treatment of autoimmune diseases ands specifically inflammatory bowel disease.	IDIBELL Institut d'Investigació Biomèdica de Bellvitge innovacio@idibell.cat ltraveset@idibell.cat
PCT/EP2024/061679	1,2,4-triazole-3-thione inhibitors of TREX2 for use in the treatment of psoriasis, atopic dermatitis or ichthyosis.	First-in-class TREX2 inhibitors with high potency, specificity and selectivity over related TREX1 enzyme. Preclinical data demonstrate that TREX2 inhibitors significantly reduces psoriasis-induced inflammation in mouse models.	
PCT/EP2024/057204	Biomarkers discriminating the phenotypes of xadrenoleukodystrophy.	In-vitro analysis method for the classification of the phenotype of the patient with x-linked adrenoleukodystrophy (A-ALD), allowing the discrimination between ccald and AMN based on lipid biomarkers.	
PCT/EP2025/058307	Oncolytic adenovirus with controlled replication.	Conan: controlled-replication oncolytic adenovirus. immunotherapy for cancer patients with solid tumors based on the use of mesenchymal cells that serve as carriers of an adenovirus designed to selectively target and eliminate tumor cells.	
EP24383089.0	Psychrophilic and thermolabile CRISPR ribonucleoprotein complex and the use thereof.	Exploiting a cold-adapted crispr-cas9 nuclease from the deep ocean (deepcas). By expanding the cas9 nucleases catalog, deepcas aims to enhance the precision and applicability of CRISPR technology, contributing to advances in biotechnology, medical research and even agriculture.	
EP25382180.5	Treatment of aging-related diseases.	RhoA inhibitors, alone or with other Rho GTPase inhibitors (excluding RhoA), for preventing or treating aging-related diseases, enhancing tissue regeneration, and reducing visible signs of skin aging for medical and cosmetic use.	
EP25382323.1	Catecholamine-Based membrane for use in the treatment of cancer.	Self-standing catecholamine-based membrane shows strong anti-cancer activity, especially against glioblastoma. It is bioadhesive, antimicrobial, biodegradable, and enhance post-surgical outcomes. CATH-M shows synergy with temozolomide and traps cancer cells via chemoattraction.	
PCT/EP2025/059983	Antitumor toxin.	Recombinant protein comprising a protease site allowing N-term seq removal that inhibits the pore-formation and, optionally, a further heterologous protease site allowing C-term seq removal that inhibits the pore-formation, and to the medical uses thereof.	
PCT/ES2018070840	Ursodeoxycholic acid derivatives for the treatment of polycystic diseases.	Ursodeoxycholic acid-derived compounds of formula (i), their preparation methods, and use in treating polycystic diseases, including autosomal dominant polycystic liver/kidney disease and autosomal recessive polycystic kidney disease.	
US201815957601	Nrf2 activators for the prevention and/or treatment of axonal degeneration.	Therapeutic methods for axonal degeneration include administering NRF2 activators, such as GSK3 inhibitors or compounds of formula (i), where R1 and R2 are H or C1-6 alkyl groups. Includes salts, metabolites, or precursors of dimethyl fumarate for prevention or treatment.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
ES201230474	System for conveying antigenic molecules in recombinant polymers similar to elastin.	A system based on recombinant elastin-like proteins capable of self-assembly under physiological conditions for antigen delivery. Such a system is capable of generating the development of an effective immune response in the absence of adjuvants.	IBSAL Instituto de Investigación Biomédica de Salamanca itsal@ibsal.es
EP17382546	Anti-presenilin antibody for use in the prevention and/or treatment of cancer.	Specific antibody, or fragment thereof, that specifically binds to SEQ ID NO: 1 of presenilin. This antibody is intended for the prevention and/or treatment of cancer by modulating presenilin activity.	
ES202030337	Closed-loop drug infusion system with synergistic control.	Electronic mimo-pid system for automatic drug perfusion, enhancing patient safety in surgery. it adjusts perfusions via physiological monitors, reducing specialist decisions. safety, correction, and pre-feeding systems prevent infusion errors, lowering post-surgery risks.	
ES201930298	In vitro method to calculate the dosage of adalimumab or biosimilar drug for treating inflammatory bowel diseases.	An in vitro method for determining the optimal dose of adalimumab or biosimilars for inflammatory bowel diseases by applying a mathematical formula based on three individual patient factors. The invention also proposes a dosing schedule for adalimumab or its biosimilars.	
EP24382780	Renal calcium excretion as a biomarker of genitourinary cancer: methods and uses thereof.	System for evaluating renal calcium excretion for the identification and prognosis of genitourinary cancer diseases, as well as to monitor the response of a subject suffering from genitourinary cancer to a treatment against genitourinary cancer.	inibic instituto de investigación biomédica de a coruña alexandre.de.la.fuente.go nzalez@sergas.es graciela.fernandez.arrojo @sergas.es
No. 2021800494974	Ubiquitin-ligase inhibitors for the treatment of cancer.	New class of compounds and compositions comprising them as well as their use as drugs in the treatment of cancer.	
EP19805945.3	Compounds that selectively and effectively inhibit hakai-mediated ubiquitination, as anti-cancer drugs.	New class of compounds that can be used as drugs in the treatment of cancer.	
EP22382101.8	Microspheres for extended release of fenofibrate.	Fenofibrate prolonged release system, for the treatment of diseases that affect the joints, such as osteoarthritis.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP25382240.7	Alginate based hydrogel compositions and uses thereof.	Hydrogel composition suitable for encapsulating active ingredients, such as T cells, with optimal rheological and injectability properties, hence they can be advantageously used in the treatment of solid tumors.	
EP25382149.0	New selective drugs against hdacs in biliary cancer.	Compounds derived from ursodeoxycholic acid with a high selective capacity in reducing hepatobiliary tumors, specifically cholangiocarcinoma, and with a high natural metabolization capacity of the compound, due to its origin in endogenous ursodeoxycholic acid.	
EP24382973.6	Composition for the treatment of a disease linked to aberrant endoplasmic reticulum and mitochondria connections.	Composition comprising manganese for use in the treatment of diseases linked to aberrant endoplasmic reticulum and mitochondria contact sites (ermcs), to an in vitro method for designing a personalised therapy to a subject suffering from a disease linked to aberrant ermcs.	
P202231032	Polyelectrophilic metallated heterocycles derived from 2-(pyridin-2-il)imidazo[1,2-a]pyridine and their use as chemotherapy agents.	2New therapeutic treatment aimed at various types of cancer, with special interest for those tumors resistant to cisplatin or analogues in clinical use. These compounds have no effect on the viability of normal cells, which makes them potent as well as selective.	
EP23382368.1	Histone deacetylase derivatives for the treatment of cancer.	Histone deacetylase derivatives, as well as to pharmaceutical compositions comprising them and to their use in therapy, particularly to their use for the treatment of cancer, specifically glioblastoma.	
EP23382142.0	3D bioprinted breast tumor-stroma model.	Realistic 3D breast tumor model, developed using 3D bioprinting, composed of a core of breast tumor cells surrounded by stroma, namely fibroblasts and endothelial cells, resembling the typical multicellular and spatial organization of breast tumors.	
EP23382070.3	Diagnostic test in saliva for eosinophilic esophagitis.	Rapid, non-invasive diagnostic and monitoring test for eosinophilic esophagitis in saliva samples.	
P202030782	Circular rna as a biomarker in multiple sclerosis.	Circular RNA molecular pattern as a biomarker to support the diagnosis of multiple sclerosis and as a biomarker of response to treatment, which allows the study to be carried out in a non-invasive and efficient manner.	
EP20382463.6	In vitro method and tools for the prognosis of amyotrophic lateral sclerosis.	Non-invasive method capable of determining the prognosis and monitoring the efficacy of treatment in amyotrophic lateral sclerosis. The invention is also proposed as a therapeutic strategy to alleviate the symptoms of the disease.	

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BASQUE HEALTH RESEARCH

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HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP24382019.8	Biomaterial film, uses and preparation method thereof.	Biomaterial film suitable for wound healing applications. tympanic membrane implant comprising the biomaterial film for use in the treatment of chronic perforations of the tympanic membrane.	olatz.arrizabalagagarde @bio-gipuzkoa.eus
EP18382566.0	Identification of molecular patterns for the diagnosis and stratification of frail individuals.	It identifies new biomarkers and molecular patterns, validated in a primary care cohort that allows stratifying individuals into robust, frail and dependent individuals, allowing the diagnosis of frail individuals and the prediction of their risk of dependency.	
P201731488	Combined therapeutic strategy for polycystic liver diseases using novel udca.	New hdac6i inhibitors, based on the ursodeoxycholic acid (UDCA) structure as a treatment for polycystic liver disease, thanks to their great inhibitory selectivity against HDAC6 and low/zero toxicity.	
PCT/ES2022/070528	silica particles for encapsulating nucleid acids.	Silica particles comprising nucleic acids encapsulated inside the same. a method for producing said particles and the uses thereof in gene transfer or cell marking and as a medicinal product, specifically as a medicinal product for protein/enzyme replacement therapy.	otri@idival.org
PCT/ES2025/070090	Synthetic viral nanostructures and uses thereof.	The present invention pertains to the biomedical field, particularly immunology, vaccine development, and analysis of viral inhibitors. The present invention relates to synthetic viral nanostructures composed of a magnetic core coated with a cell membrane containing viral ligand proteins.	
PCT/EP2025/054944	Therapy for inflammatory lung diseases.	Therapeutical combinations or compositions comprising at least two miRNAs selected from the group consisting of miR-297, miR-93, and miRlet-7b, and their use in preventing and/or treating inflammatory lung diseases such as acute respiratory distress syndrome.	innovacioi3pt@tauli.cat

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
ES201431855	Byohibrid for use in the regeneration of neural tracts.	A biodegradable, biocompatible tubular biohybrid scaffold of three porous hyaluronic acid layers for neural tract regeneration, optionally containing poly-L-lactic fibers, useful for treating central nervous system diseases such as Parkinson's.	IdISSC INSTITUTO de INVESTIGACIÓN SANITARIA Hospital Clínico San Carlos otc.hcsc@salud.madrid.org
ES2016070583	Method and device for analysis of biological material, method of obtaining and using the same.	Method for producing a device for detecting biological material, said device including a series of micromotors that can be selectively functionalised and guided inside a microfluid device in which they are inserted such that the required analytes can be detected quickly and effectively. The device uses autonomous nanomotors that are produced using different cathode sputtering and/or deposition techniques.	
ES2018070666	Pharmaceutical composition for the treatment of cardiovascular diseases.	Pharmaceutical composition for the treatment of cardiovascular diseases.The present invention relates particularly to a pharmaceutical composition comprising or consisting of berberine, statins, and optionally ubiquinol or coenzyme Q10 (CoQ10), for the treatment of cardiovascular diseases.	
ES2645028	A unnnique and stable pharmaceutical containing berberine, in a slow-release formulation, a statin and ubiquinol for the treatment of cardiovascular disease and the associated risk factors.	A unique and stable pharmaceutical preparation containing berberine, in slow formulation, with a statin and ubiquinol for the treatment of cardiovascular disease and its associated risk factors.	
PCT/EP2024/058951	Genetic signature for predicting the response to inmunotherapies in a subject.	Methods relating to the prediction of the response of a subject to immunotherapies, preferably immune checkpoint inhibitors, wherein said methods are based on the determination of the expression levels of a set of genes, and subsequent comparison with control values.	
PCT/EP2024/088205	Composition for promoting hair growth.	Comprises isolated and expanded MSCs, preferably adipose derived stem cells, ATP and a pharmaceutically acceptable vehicle. It further refers to a kit of parts comprising individual vials with MDCs and ATP. It refers also to said composition or said kit for use in androgenic alopecia.	
MX/E/2025/019467	Thermogelling formulary for the administration of cell therapy and cell-derived therapeutic agents.	Process for the development and composition of a thermogelling formulation, designed for use as a vehicle in intranasal cell therapy targeting the central nervous system.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP25382367.8	rAAV-hEPM2B. Nucleic acid vector comprising a coding sequence of the EPMB2B gene.	Nucleic acid vector to be used in the context of gene therapy, particulary in the treatment of Lafora disease (LD).	INSTITUTO DE INVESTIGACIÓN SANITARIA FUNDACIÓN JIMÉNEZ DÍAZ innovacion.invest@iis-fjd.es
EP25382612.7	Exosomes derived from pancreatic tumor cells for use as selective drug delivery vehicles in the treatment of pancreatic cancer.	Exosomes derived from pancreatic tumor cells 5 for use as selective drug delivery vehicles in the treatment of pancreatic cancer, wherein the exosomes exhibit preferential uptake by pancreatic tumor cells over non-tumoral cells.	
P201430081	Pharmaceutical composition and its use for the manufacture of a medicine for the treatment of chronic kidney disease and method for selecting compounds.	Composition with RNA for treating chronic kidney disease. It includes a method for selecting compounds by incubating them with kidney cells and analyzing BASP1 expression, identifying compounds that reduce this expression as potential treatments.	
P201531933	Preparation of a medicine to prevent premature aging in humans, pharmaceutical composition, and method for selecting compounds based on the use of NFKbiz siRNA.	Composition with NFKbiz siRNA to prevent premature aging. It includes a method for selecting compounds by incubating kidney cells and analyzing NFKbiz expression, identifying compounds that reduce its expression as therapeutic candidates.	
P201531328	Use of a pharmaceutical composition for the manufacture of a medicine for the treatment and/or prevention of acute kidney injury.	Use of a composition with RNA sequences similar (≥80%) to SEQ ID NO: 1–3 for treating or preventing acute kidney injury (AKI) by inhibiting MAP3K14, reducing inflammation through cytokine regulation, and preserving kidney function by inhibiting apoptosis.	
P201531677	Crotonate derivatives for the manufacture of a medicine for the treatment of chronic kidney disease and acute renal failure.	Crotonate derivatives for manufacturing a medication against chronic kidney disease and acute renal failure. Includes crotonic acid, its derivatives, and CoA forms. Also relates to pharmaceutical compositions containing these compounds for therapeutic use.	
P201631183	Pharmaceutical composition comprising a vector in which the BCL3gene has been cloned, its use, and the vector.	Pharmaceutical composition comprising a vector containing the Bcl3 gene (SEQ ID NO: 1) for manufacturing a medication that prevents premature aging in humans, associated with the deficiency of the anti-aging hormone Klotho. Includes the use of the vector and its therapeutic application.	
P201830849	Gdf15 in urine as a biomarker of kidney damage.	GDF15 in urine is a biomarker of acute and chronic kidney damage. It allows differentiation between diabetics with and without nephropathy and predicts the risk of death in patients with chronic kidney disease (CKD): levels >13.8 ng/mg are associated with 100% mortality over an average follow-up of 30 months.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP24383261.5	Glycosaminoglycan, or pharmaceutical composition comprising thereof, for use in a method for the prevention and/or treatment of anaphylaxis.	Glycosaminoglycan (GAG), or pharmaceutical composition comprising thereof, for use in a method for the prevention and/or treatment of anaphylaxis; and also to the use of GAG for the diagnosis of anaphylaxis.	INSTITUTO DE INVESTIGACIÓN SANITARIA FUNDACIÓN JIMÉNEZ DÍAZ innovacion.invest @iis-fjd.es
EP24383262.3	Treatment and/or prevention of atherosclerosis.	Annexin A8 inhibitors, or pharmaceutical composition comprising thereof, for use in a method for the treatment and/or prevention of atherosclerosis. Preferably, the method comprises preventing atherosclerotic plaque formation.	
PCT/EP2024/056084	Dipyridamole as a novel therapy for muscular myogenesis disorders and inflammatory arthritis.	Use of dipyridamole in a method of treatment, amelioration or prevention of muscular myogenesis disorders, specifically sarcopenia. The invention also relates to the use of dipyridamole in a method of treatment, amelioration or prevention of inflammatory arthritis.	
PCT/EP2024/054692	Nucleic acid vector comprising a coding sequence of the EPM2A gene.	A nucleic acid vector to be used in the context of gene therapy in the treatment of Lafora disease.	
PCT/EP2024/088035	Car t-cells against CD79B for the treatment of non-hodgkin lymphoma.	The present invention provides therapeutics for the treatment non-Hodgkin lymphoma (NHL). In particular, the present invention provides nucleic acid.	
EP25382040.1	Prevention and/or treatment of acute kidney injury.	Method for the prevention and/or treatment of acute kidney injury (AKI).	
WO2020165482	BRITE-A: Precision medicine for the treatment of obesity.	A nanosystem consisting of a gold nanoparticle + surfactant + miRNA that acts as an anti-obesity drug and a nanosystem targeting system that allows its specific capture by adipose tissue (AT) in localized areas. The miRNA acts activating browning and thermogenesis.	ibima Plataforma BIONAND maria.mengual@ibima.eu
WO2017109257	i-SOL.	I-SOL is a recombinant protein with broad-spectrum antiviral properties designed to provide effective protection against a variety of emerging and re-emerging viral infections. Validated in vitro and in vivo.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP16706590.3	Topical composition.	Development of a topical treatment for mucosal lesions.	IGTP Institut de Recerca Germans Trias i Pujol innovation@igtp.cat
EP24 382 291.3	RUTI for bladder cancer (NMIBC).	Immunotherapy based on liposome technology for targeted treatment of cancer.	
EP13804005	Mycobacteria for TB.	A formulation of inactivated mycobacteria for preventing tuberculosis through oral administration.	
EP12781352.5	Apotransferrin.	Despite progress in brain ischemia, stroke remains a leading cause of death and disability due to ineffective treatments. We propose using apotransferrin to reduce brain damage by up to 75% and improve neurological function, benefiting both eligible and underserved stroke patients.	
EP16728659.0	Exosomes and their use as vaccines.	Using exosomes for vaccine development and delivery.	
EP18 795 618.0	Anti-CD5L antibody.	Development of an anti-CD5L antibody for therapeutic applications.	
EP18 786 778.3 EP22 170 787.0	Vectors for ataxia.	Developing vectors for gene therapy to treat Friedreich's ataxia.	
EP20734402.9	Intermediate filament-derived peptides and their uses.	Developing peptides derived from intermediate filaments for therapeutic uses.	
EP20 838 477.6	New protein markers of renal damage.	Identifying novel protein markers for detecting renal damage.	
P21710 318.3	B-ALL.	Targeting CD22 to treat B-cell acute lymphoblastic leukemia.	
EP23 708 467.8	CAR CD1.	Creating a humanized CD1a-targeting moiety for the treatment of CD1a-positive cancer.	
EP22382940	Anti-SARS-CoV-2 antibodies.	Developing antibodies for the treatment and prevention of SARS-CoV-2.	
PCT/EP2024/053734	CCR9.	Developing CCR9-targeted immunotherapy for treating relapse/refractory T-cell acute lymphoblastic leukemia.	
EP24382291	LIPOSOME FORMULATIONS.	Therapeutic agent based on cell wall fragments of a virulent strain of Mycobacterium tuberculosis-complex for the preparation of a drug for the treatment of cancer in human subjects.	
EP25382534	Legionella.	Desinfectants against Legionella.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
P202330254	Biomarker for acute coronary syndrome.	Detection of single nucleotide genetic polymorphisms associated with acute coronary syndrome (ACS).	IMIB Instituto Murciano de Investigación Biosanitaria Pascual Parrilla innovacion@imib.es
EP23382485	ZAK alpha kinase (MAP3K20) inhibitors for use in the treatment of anemia.	New molecular pathway that controls the formation of blood cells, offering the potential for repurposing existing drugs to be used for new therapeutic purposes. Particularly, the repurposing of several tyrosine kinase (MAP3K20) inhibitors, that are approved by regulatory agencies FDA/EMA, for use in the treatment of congenital anemias.	
P202330502	Antidote.	Low molecular weight heparins (LMWH) increase of bleeding risk and, to date, no antidote for the hemorrhagic complications is available in the clinic. The present invention is a recombinant mutant antithrombin effective in blocking the anticoagulant effect of low molecular weight heparins.	
EP23382932	Process to complex oleanolic acid with cyclodextrins and products obtained thereof.	Oleanolic acid (OA) is a promising healing agent for difficult wounds but is limited by its hydrophobic nature. This invention enables OA encapsulation and delivery, enhancing its preservation, protection, and efficacy in wound treatment.	
EP24382860	Compound for use as inhibitor of fascin1 in cancer.	Compound for use as inhibitor of fascin1 in cancer.	
P202430866	Treatment of diseases caused by netosis or diseases associated with neutrophil extracellular traps (NETs).	Use of a recently approved drug by the FDA, EMA, and AEMPS as a PAD4 inhibitor, leading to a reduction in neutrophil extracellular trap (NET) levels.	
P202430991	Sulforaphane for the treatment of thalassaemia and sideroblastic anaemia.	Sulforaphane (SFN), a natural compound in cruciferous vegetables, is known for its health benefits and anti-inflammatory properties. It modulates key pathways and molecules involved in inflammation. This invention identifies SFN as a potent anti-inflammatory agent with potential to treat thalassemia and sideroblastic anemia.	
P202530039	In vitro method for assessing cardiovascular disease risk or diagnosing cardiovascular disease in patients with infectious diseases.	Integrating molecular and clinical biomarkers into a machine learning model to predict cardiovascular events in patients with infectious diseases. The model achieves 90% accuracy at 30 days, offering potential for more personalized in-hospital management to help prevent adverse cardiovascular events.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP23383012.4	Thiosugar based isothiocyanates and uses thereof.	These derivatives show impressive in vitro efficacy against MM and AML, and preliminary in vivo results show a low toxicity profile, further confirming the efficacy of these compounds.	IBiS INSTITUTODEBIOMEDICINADESEVILLA ecruces-ibis@us.es ahoyos-ibis@us.es
EP23383113.0	Sulforaphane analogues (SFNAs) as well as CD/SFNAs inclusion complexes and uses thereof.	These derivatives show impressive in vitro efficacy against MM and AML, and preliminary in vivo results show a low toxicity profile, further confirming the efficacy of these compounds.	
P202330883	Aggregate polymeric nanoparticles, their production process and their use in the treatment of venous thromboembolism.	Aggregate of nanoparticles sensitive to endogenous changes that allow them to disintegrate in the area of the injury, thus releasing synergistic fibrinolytic therapeutic enzymes causing targeted thrombolysis.	
P202430507	Use of oleuropein for the prevention of neonatal hypoxic-ischemic encephalopathy.	Use of the compound oleuropein, present in the olive tree (Olea europaea L.), or of plant extracts enriched in this compound, for the prevention of neonatal hypoxia-ischemia and diseases with similar symptoms.	
EP21744872.9	Novel Salicylamide derivatives for the treatment of viral infections.	Library of niclosamide-derived molecules to treat viral infections. These molecules maintain their broad-spectrum antiviral activity but have improved pharmacokinetic profiles.	
EP25382611.9	Compounds for treating cancer.	Novel compounds which exhibit potent anti-proliferative activity against a range of hematological cancer cell lines, including multiple myeloma, acute myeloid leukemia, T-cell leukemia, histiocytic lymphoma, and cells overproducing monoclonal gammopathy proteins.	
P201630856	Compositions for the treatment of striae distensae and ischemic ulcers.	Use of benzotiazepines in the prevention, improvement, relief and/ or treatment of striae distensae, and more specifically, of cutaneous ischemic ulcers.	
EP18382367.3	A neural stem cell-based therapy for the treatment of premature infants with intraventricular hemorrhage.	Neural Stem Cells (NSCs) isolated from the cerebrospinal fluid (CSF) of preterm infants with intraventricular haemorrhage (IVH) suitable as advanced therapy for the autologous treatment of infants with IVH or for developing allogeneic therapies for different neurological disorders.	
EP22383074.6	Novel cell suspension for use in the treatment of stroke patients.	A cell suspension based on bone marrow-derived cells that can be used for the treatment or amelioration of ischemic or hemorrhagic stroke patients.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
PCT/ES2020/070315	Gene therapy with hokD and ldrB genes for cancer treatment.	Isolated RN or DNA polynucleotides from hokD and lrdB genes for gene therapy of cancer treatment.	ibs.GRANADA INSTITUTO DE INVESTIGACIÓN BIOSANITARIA palvarez@fibao.es
PCT/ES2024/070701	Narrow leafed lupin ß-Conglutin proteins as new radiosensitizing agents against breast cancer cells.	A class of ß-congglutinated proteins have been discovered as potential anti-breast cancer agents. Their potential ranges from prevention to early remission of the disease.	
PCT/ES2024/070727	Use of a nanobody for the recognition and treatment of Herpes Simplex virus infection.	A fragment of an antibody (nanobody) has been developed with inhibitory effects against the herpes simplex virus. This nanobody binds to a viral glycoprotein, rendering ir non-toxic to human cells and underscoring its potential as an antiviral agent.	
PCT/ES2023/070261	Functional compound for intestinal nutrition and rehabilitation.	Composition for restoring functional stool formation and bowel function in patients with temporary diverting ileostomy, based on soluble fibers, including at least one prebiotic oligosaccharide and a soluble cellulose derivative.	
PCT/ES2025/070219	Pyrvinium derivatives with antiparasitic and antibiotic activity.	The invention consists of new pyrvinium-derived compounds, with modified carbohydrates linked to a terminal phenyl group via a triazole ring. These compounds enhance bacterial uptake and incorporation into cell membranes, optimizing their therapeutic use.	
EP24382099.0	Nanoformulations comprising biomimetic magnetite nanoparticles as antimicrobial agents.	The invention consists of nanoformulations based on biomimetic magnetite nanoparticles with antimicrobial properties, intended for biomedical use to support the prevention and treatment of infections.	
EP24382364.8	Novel fibrinogen-based bioinkd for wound healing and tissue regeneration.	This study develops a fibrinogen-based bioink enriched with GAGs/collagen, applied through a dual-head spray system to deliver cells and biomaterials onto wounds. The bioink forms hydrogels with suitable properties that support cell viability and effective wound healing.	
EP24382365.5	System for providing a bioink in the form of a spray and method thereof.	An innovative portable bio-printing device, working like an airbrush or multi-biopen, enables direct application of fibrinogen-based bioinks with living cells and bioactive components onto the skin. It can spray for wide coverage or extrude for precise deposition, with a dual-syringe system for simultaneous bioink/gel delivery and integrated UV curing to ensure stability and retention.	
EP24382441.4	Compounds capable of acting on S1R as well as on sEH and uses thereof.	Compounds capable of acting on both the sigma-1 receptor (S1R) and the soluble epoxide hydrolase enzyme (sEH). The patent proposes an innovative therapeutic strategy aimed at leveraging this dual action for the development of new medical applications and improving existing treatment options.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
P202430145	Compound to stimulate mitochondrial metabolism in gametes and embryos.	The invention uses 4-hydroxybenzoic acid (4HB) to boost endogenous CoQ production, restoring mitochondrial function more effectively than CoQ10 and showing strong potential for therapy.	ibs.GRANADA INSTITUTO DE INVESTIGACIÓN BIOSANITARIA palvarez@fibao.es
P202430192	Inhibitors of SWI/SNF enzymatic activity for the treatment of carcinoma.	Inhibitors of the enzymatic activity of the SWI/SNF complex for use in the treatment of NUT carcinoma, a rare and highly aggressive tumor. The patent proposes an innovative therapeutic strategy aimed at limiting tumor progression and improving current treatment options.	
P202430364	Sigma-1 receptor inhibitors for the treatment of rheumatoid arthritis.	This patent shows that sigma-1 receptor antagonists can relieve pain and modify rheumatoid arthritis, offering a dual analgesic and anti-arthritic therapy not achieved by current drugs. Experimental evidence confirms their potential as a novel disease-modifying treatment.	
P201830961	New strain for the treatment and/or prevention of pathologies involving hepatic or intestinal inflammation.	New strain for the treatment and/or prevention of pathologies involving hepatic or intestinal inflammation. In addition to its use as a probiotic, it can restore intestinal dysbiosis associated with complications or prevent non-selective eradication of the microbiota and the emergence of resistance.	ISABIAL INSTITUTO DE INVESTIGACIÓN SANITARIA Y BIOMÉDICA DE ALICANTE innovacion@isabial.es
EP20382850.4	Memory T cells as adoptive cell therapy for viral infections.	Memory T cell suspension derived from blood of convalescent patients recovered from an infection with Coronavirus which have specific lymphocyte antiviral reactivity against Coronavirus antigens, for use in the treatment of immunocompromised patients suffering from lymphopenia.	
P201530997	Biomarker to determine response to therapy in ovarian or lung cancer.	Method for determining the response to an anti-tumour compound based on platinum, specifically cisplatin, in a patient with lung or ovarian cancer.	IdiPAZ Instituto de Investigación Hospital Universitario La Paz innovacion.legal@idipaz.es

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
PCT/EP2021/070650	Combined therapy against cancer.	LCoR activator and immune checkpoint inhibitor (ICI) for the treatment of cancer and as marker of response to immunotherapy in cancer treatment.	Hospital del Mar Research Institute Barcelona iavila@researchmar.net
EP23382234.5	Mutants of a ligand-dependent corepressor (LCOR) and uses thereof - LSKAA	Novel and improved cancer therapy based on an isolated or synthesized polynucleotide sequence coding for a mutant of a Ligand-dependent corepressor (LCOR), or a fragment thereof, capable of inducing expression of the antigen processing/presentation machinery (APM) genes.	
PCT/EP2023/057957	Immune cells expressing chimeric antigen receptors and bispecific antibodies and uses thereof .	Immune cells expressing chimeric antigen receptors against p95HER2 and bispecific antibodies for HER2 and CD3 and uses thereof in the treatment of cancer, in particular cancers which overexpress p95HER2.	
PCT/EP2024/083236	Rodent models obtained by knock-in of the human HER2 gene.	Novel HER2 transgenic rodent as a tumor model to test HER2-directed cancer therapies.	
PCT/EP2023/082832	Cell culture system and cell culture method .	Novel cell culture system that can be used for testing immunotherapies.	
PCT/EP2012/065090	Mutations in the epidermal growth factor receptor gene.	New identified mutation in the EGFR gene that correlates with resistance to cetuximab and sensitivity to panitumumab, useful in the therapy regimen of metastatic colorectal cancer and head and neck cancer.	
PCT/EP2014/079477	Mutations in the extracellular domain iii of epidermal growth factor receptor gene.	New identified mutation in the EGFR gene that correlates with resistance to cetuximab and sensitivity to panitumumab, useful in the therapy regimen of metastasic colorectal cancer and head and neck cancer.	
EP23383142.9	SMAD4 engineered cytotoxic lymphocytes for cell therapy.	NK cell-based platform to treat advanced disease in several tumor types with high TGF-β expression.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
PCT/EP2021/077942	Use of TRAIL-FCC for influenza and covid- 19.	Methods for the inhibition or neutralization of TNF death receptors (tumour necrosis factors), preferably used in combination with anti-inflammatory agents, to treat respiratory diseases (such as ARDS, SARS coronavirus, etc.).	Instituto de Investigación Sanitaria Aragón csebastian@iisaragon.es
EP20838029A	A non-human animal mammalian model of chronic glaucoma.	Non-human model of chronic glaucoma, as well as its preparation and use for the evaluation of the efficacy of new therapies. It allows to generate of intraocular pressure in a slow, progressive and sustained manner over time, in a less aggressive (and painless) manner, by applying less injections.	
PCT/EP2021/075288	Viricidal composition and uses thereof.	Viricidal products, and in particular, products to eliminate coronavirus from surfaces and/or to prevent surface contamination by coronavirus. Their viricidal activity remains on the surface/liquid in which they are used, even though they are less aggressive than other state-of-the-art options.	
PCT/EP2021/050872	Controlled release formulations.	Synthetic clay compounds and methods for their production, used to be injected into the human vitreous humor. They are biocompatible, require fewer applications and may include therapeutically effective active ingredients and an aqueous component that acts as a carrier.	
EP24382563.5	Synthethic gut microbiota-derived peptides and uses thereof.	Synthethic gut microbiota-derived peptides, or pharmaceutical compositions based on them, for use in the treatment and/or prevention of liver disease.	
EP24383434.8	Biofabrication of a functional vascular tree model and uses thereof.	Tissue engineering is very relevant for the development of disease models and drug development, allowing more accurate testing and reducing animal models. This innovation presents a solution for some of the main challenges related to functional vascular trees biofabrication.	
PCT/ES2021/070918	Coating agent based on a copper-nanoparticle biohybrid and use thereof as a biocidal agent.	A material that has an activity of inhibiting SARS-CoV-2 proteins, which gives it the capacity for use as a biocidal agent. It can be as well used as a coating and disinfectant agent for materials selected from metals, paper, textiles and approved surgical masks.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP24383099.9	Sitagliptin for use in retinal diseases with neovascularization.	a new paradigm based on the antiangiogenic activity of sitagliptin (a DPP-IV inhibitor). We postulated that DPP-IV inhibitors, and in particular sitagliptin, could be useful in ASDR due to its antiangiogenic activity. This strategy will permit to delay or reduce the frequency of intravitreal injections of anti-VEGF agents or corticosteroids, thus decreasing the associated cost and adverse effects.	Vall d'Hebron Institut de Recerca mariona.esquerdo@vhir.org
EP24382664.1	Hybrid ceria and gold nanoparticles for use in simultaneous medical diagnosis and radioprotection and theragnostic agent comprising them.	Theranostic nanoparticles working as potent contrast agent for CT and radioprotective by scavenging reactive oxigen species generated during CT. Focused on the use for children.	
EP23382404.4	Bispecific fusion proteins with immunosuppressive activity.	2nd Generation immunosuppressive molecule with immunomodulatory properties, based on a bi-specific fusion protein targeting two opposite key co-stimulatory cell signals.	
EP22383171.0	Secreted splicing variant of klotho for extending lifespan.	New therapy for lifespan extension based on the administration of the secreted splicing isoform of Klotho.	
EU/3/24/2948	Vector de virus adenoasociado del serotipo 8 que contiene el gen humano tymp (libre de cpgs).	AAV vector containing the gene encoding thymidine phosphorylase (TYMP) for the treatment of mitochondrial neurogastrointestinal encephalomyopathy.	
Orphan Designation EU/3/14/1326	Vector based on an adeno-associated virus serotype 2 backbone, pseudo-serotyped with a type 8 capsid, which carries the coding sequence of the human TYMP gene under the control of the human thyroxine binding globulin promoter for the treatment of mitochondrial neurogastrointestinal encephalomyopathy.	Vector based on an adeno-associated virus serotype 2 backbone, pseudo-serotyped with a type 8 capsid, which carries the coding sequence of the human TYMP gene under the control of the human thyroxine binding globulin promoter for the treatment of mitochondrial neurogastrointestinal encephalomyopathy.	
EP23383269.0	Compounds for use in the treatment of cancers that overexpressTSPAN1.	Identification of potential drugs capable of decreasing and/or blocking the expression of the TSPAN1 protein, key in its involvement during the metastasis of head and neck cancer (HNSCC).	
US18/862,451	Nucleic acid constructs and vectors for podocyte specific expression.	New podocyte-specific hybrid promoter and gene constructs comprising it for use in the prevention and treatment of kidney diseases.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP24383456.1	DNA methylation markers for determining the risk of metastatic progression of thyroid cancer.	New biomarkers for the classification and monitoring of thyroid cancer patients at risk of metastasis.	Vall d'Hebron Institut de Recerca mariona.esquerdo@vhir.org
P201930643	Use of 4,6-diphenyl-1H-pyrazolo[3,4- b] pyridin-3-amine, or a pharmaceutically acceptable salt thereof, as a selective and non-cytotoxic inhibitor of MAP kinase–interacting serine/threonine kinase 1 (MNK1) and MAP kinase–interacting serine/threonine kinase 2 (MNK2).	Pharmacological inhibition of MNKs may provide a non-toxic and effective strategy for the treatment of cancer, especially in combination with approved treatments. In this project, pyrazolo[3,4-b]pyridine systems are proposed as potential candidates for MNK inhibitors.	
EP22382421.0	Nucleic acid constructs and vectors for podocyte specific expression.	Development of treatments for the rare disease "congenital nephrotic syndrome".	
EP21382320.6	Ophthalmic topical composition with ceria nanoparticles for treating diseases of posterior segment of the eye.	Development of an eye drop enriched with antioxidant nanoparticles for the treatment of age-related macular degeneration.	
EP16168581.3	Calpain inhibitors in the prevention and/ or treatment of ventricular remodelling.	Calpain proteases as potential therapeutic targets in ventricular remodeling and post-infarction heart failure. Pharmacological inhibition of calpains could be a useful strategy in the treatment of adverse remodeling and post-infarction heart failure.	
EP20382457.8	Chimeric antigen receptors specific for p95her2 and uses thereof.	A CAR targeting p95HER2-expressing cells, including ScFv, antigen-binding domains, antibodies, and ADCs. It covers cancer diagnosis, treatment, and prevention using these components.	
EP22382294.1	Immune cells expressing chimeric antigen receptors and bispecific antibodies and uses thereof.	Immune cells co-expressing CARs that target p95HER2 and BiTEs (Bispecific T-cell Engagers) which bind HER2 and CD3, thus activating T-cells to attack cancer cells overexpressing p95HER2.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP09164710.7	Use of cilastatin to reduce the nephrotoxicity of different compounds.	Cilastatin for use in reducing nephrotoxicity in a subject, characterized in that nephrotoxicity is caused by a nephrotoxic drug which is foscarnet or iopamidol.	Instituto de Investigación Sanitaria Gregorio Marañón gestion.innovacion@iisgm.com
EP17731188	Cilastatin for use in the treatment of sepsis.	Administration of a therapeutically effective amount of cilastatin for treating sepsis and/or SA-AKI and reducing its associated mortality in a mammalian subject.	
P200501182	Endothelized artificial matrix comprising a fibrin gel, which is a superproducer of proangiogenic factors.	An endothelized artificial matrix comprising a fibrin gel, which is a superproducer of proantiogenic factors. Used in transplants, it boosts flap survival by improving vascularization at the transplant and recipient sites.	
P201030450	Carbosilane dendrimers and the use thereof as antiviral agents.	Highly branched macromolecules synthesized from a polyfunctional core, preferably silicon, or polyphenolic, with a carbosilane structure at its periphery functionalized with groups, preferably anionic, giving to the macromolecule a net negative charge.	
P201231187	Homo- and hetero-functionalised carbosilane dendritic compounds.	Highly branched macromolecules referred to as dendrimers or dendrons, which have a carbosilane structure and are functionalised on the periphery thereof with anionic or cationic groups which give the macromolecule a negative or positive net charge.	
EP19709008.7	Method for obtaining regulatory T cells derived from thymic tissue and use of said cells as cell immunotherapy in immune system disorders.	In vitro method for obtaining and purifying regulatory T cells from thymic tissue (or thyTreg cells), which makes it possible to obtain more than 10 billion cells from a single thymus.	
P201500669	Metal nanoparticles stabilised with carbosilane dendrons and the uses thereof.	Metal nanoparticles, preferably gold and silver, stabilised with dendrons, having a carbosilane structure and functionalised on the periphery thereof with anionic or cationic groups that provide the nanoparticle with a negative or positive net charge.	
P201600726	Carbonylane dendrones functionalized with fatty acids: formation of micelles and uses.	Formation of dendrons with a carbosilane structure that preferably have anionic or cationic groups at their periphery and fatty acids or derivatives thereof at their focal point. There are also dendrimers formed by two different units.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP 23382478.8	Car-thytreg cells, compositions and uses thereof in immunotherapy.	Thymus T regulation cell (ThyTreg cell) which codes for, or alternatively expresses on its surface, a chimeric antigen receptor (CAR) comprising an extracellular domain, a hinge region, a transmembrane domain and an intracellular domain.	Instituto de Investigación Sanitaria Gregorio Marañón gestion.innovacion@iisgm.com
EP18724919	Cancer-associated venous thromboembolic events (Oncology diagnostic kit).	Improved method for the diagnosis and prediction of thrombotic events in cancer patients and provides additionally respective kits.	
EP24382446.3	Internalization of ethanol in porous silica nanoparticles as an aim to improve catheter lock therapy.	Microporous silica NP capable of releasing ET to be used as an improved ET based-catheter lock solution against microbial biofilms.	
EP24382518.9	Design and validation of novel flow cytometry panels to analyze a comprehensive range of peripheral immunecells in C57BL/6J mice.	Definition of two cytometry panels, one for the myeloid line and another for the lymphoid line, through the combination of 22 commercial antibodies that allows for the study of up to 96 leukocyte subpopulations longitudinally using only 100 microlitres of blood.	
EP23383314.4	Cilastatin for use as neuroprotectant.	Use of DHP-I inhibitor for the prophylactic and/or therapeutic treatment of a neuroinflammatory disease, neurodegeneration prevention, and as a neuroprotectant. Includes methods and medicament manufacturing.	
P202030838	Car-thytreg cells, compositions and uses thereof in immunotherapy.	Thymus T regulation cell (ThyTreg cell) which codes for, or alternatively expresses on its surface, a chimeric antigen receptor (CAR) comprising an extracellular domain, a hinge region, a transmembrane domain and an intracellular domain.	
PCT/EP2024/064671	Oleuropein in the management of cancer.	Use of oleuropein in immunotherapy, particularly as adjuvant. particularly, the invention provides the use of oleuropein in combination with a checkpoint inhibitor in the treatment of cancer. oleuropein as an adjuvant in immunotherapy in cancer.	IdiSNA INSTITUTO DE INVESTIGACIÓN SANITARIA DE NAVARRA info.idisna@navarra.es
PCT/EP2025/067651	Genetically modified t cells for adoptive cell therapy in cancer.		

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
P202530733	Lipid nanoparticle, pharmaceutical composition, and use of the nanoparticle in cancer treatment.	A nanoparticle has been designed that allows the encapsulation of specific mRNA for the expression of an immunogenic antigen in tumor cells, enabling activation of the immune system and attack the tumor. This invention is effective due to the use of these antigens to which the population is immune.	Instituto de Investigación Sanitaria La Fe otc@iislafe.es innovacion@iislafe.es
P202530723	Bifunctional nanoparticle, method for obtaining said nanoparticle, and use of the nanoparticle in immunotherapy for the treatment of cancer.	In most cases of cancer, tumor cells escape the immune system by blocking synapses with immune cells. To address this problem, a nanoplatform has been developed that allows cell-to-cell communication to be restored in a personalized way for any type of tumor and patient.	
EP24383371.2	Lipid nanoparticles and their use in the treatment of ischemic heart diseases.	This invention provides lipid based nanoparticles characterized by molecules present in small extracellular vesicles (EVs) derived from genetically modified mesenchymal stem cells (MSCs). EVs and these nanoparticles have beneficial effects in the regeneration of damaged cardiac tissue.	
P202430906	Cytokine receptor inhibitors for use in the prevention and treatment of metastasis.	This technology allows to effectively prevent or treat metastasis in subjects that do not respond to chemotherapy through the combination of two cytokine receptor inhibitors. These inhibitors have been proved to block cytokine-mediated signaling, preventing the activation of tumor cell migration.	
EP23382313.7	Composition comprising oxylipins present in human milk derived small extracellular vesicles and its use in the prevention and treatment of intestinal diseases.	Human milk has been proved to reduce the incidence of serious diseases in babies such as necrotizing enterocolitis, thanks to the role of the small extracellular vesicles. Thus, authors have identified a panel of oxylipins present in these vesicles for which this therapeutic effect was observed.	
Utility Model U202232156	Biopolymer implants obtained by additive manufacturing for the treatment of tracheal stenosis.	Tracheal stenosis in children is a potentially fatal condition. Grafts are used to reconstruct the trachea, but the problem is that they can cause complications. Therefore, customized patches made of compatible and absorbable biopolymers have been developed for the treatment of tracheal stenosis.	
EP22383291.6	Small extracellular vesicles with antifibrotic properties.	There are a high number of pathologies related to the uncontrolled proliferation of fibroblasts for which there is no effective solution (pulmonary fibrosis). In this context, the present invention provides Small Extracellular Vesicles containing Oncostatin M to modulate these profibrotic diseases.	
EP20383170	Extracellular vesciles derived from mesenchymal stromal cells genetically modified to overexpress HIF-1A and HTERT.	Inventors have developed extracellular vesicles derived from genetically modified mesenchymal stromal cells with immunosuppressive capacity to reduce tissue damage caused by immune responses in certain situations as transplants and thus promote cell regeneration.	
EP18248213.3	Method for predicting cardiotoxicity risk in cancer patients receiving anthracyclines chemotherapy.	Anthracyclines are antineoplastic drugs used to treat tumours as breast cancer. However, their use has a serious side effect: cardiotoxicity. To face this problem, a predictive model has been designed based on a combination of ten miRNAs to determine the risk of cardiotoxicity in cancer patients.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP18382513	Nanostructure lipid system.	The invention provides a pharmaceutical nanostructured lipid system as vehicle for transporting enzymes or other proteins. This allows improving distribution, stability and availability of the protein at the cellular level.	
EP19382094	Thiazolidinediones for the use in the prevention or treatment of abnormal bone growth.	This new technology offers a disruptive approach to the blockade of the abonormal bone growth, through the inhibition of osteoblast differentiation and the promotion of the adipogenic one, which are opposing mechanisms.	
EP18382013.3	Nanoevers.	Use of the TAS1R3 protein as a marker for therapeutic, diagnostic, and/or prognostic purposes for tumors that express that protein.	
P201930743	Compounds and methods for the treatment of cancer.	Treatment with a molecule complementary to a target region of the PIAS2β mRNA that together with its target sequence produces the inhibition of the expression of PIAS2β mRNA.	
EP22382696.7	Composition for use in the prevention and/or treatment of diseases mediated by TLR4, IL1R, COX1/2 and/or RBP4.	A composition of three active principles from plant extracts with potential medicinal properties, for use in the prevention and/or treatment of diseases mediated by TLR4, IL1R, COX1/2 and/or RBP4.	
EP23383252	Senolytic compounds.	The compound of the invention selectively induces death of senescent cells and can be used in the treatment and/or prevention of senescence-associated diseases or disorders.	
EP23382269.1	Obestatin for use as antineoplasic agent in the treatment of pancreatic cancer.	A new treatment aimed at inhibiting tumor growth, directly or indirectly, through the remodeling of parameters associated with the tumor microenvironment.	
EP23382347	Protein-based biosensor suitable for MRI imaging.	A protein-based biosensor comprising a substrate-binding protein bound to an MRI contrast agent by means of a chelating agent.	
EP24382172	Populations of small extracellular vesicles for use in the treatment or prevention of ischemia.	Use of small extracellular vesicles for the treatment or prevention of ischemic processes.	
EP24383003	Method for the treatment of neurological disorders.	Heme-Regulated Inhibitor (HRI) Kinase agonists or activators, or pharmaceutical composition 5 comprising thereof, for use in a method for the treatment of a neurological disorder or for use as a neuroprotective agent.	
EP25382052	Diagnosis, prognosis, prevention and/or treatment of heterotopic ossification (POHCLS).	Method for the diagnosis, prognosis, prevention and/or treatment of heterotopic ossification (HO) and also to a method for promoting osteogenesis, promoting chondrogenesis and/or inhibiting adipogenesis.	

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HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP23382397	Gene Therapy for Glutaric Aciduria type I based on gene therapy.	Glutaric Aciduria type I (GA-I) is a rare genetic disorder caused by GCDH deficiency, leading to severe movement impairment and early death. This new gene therapy developed delivers the GCDH gene and has shown promising pre-clinical results in mice. Supported by EMA Orphan Drug Designation, the project seeks partners for licensing or co-development.	IDIBAPS Institut D'Investigacions Biomèdiques August Pi i Sunyer innova@recerca.clinic.cat
EP21382593	CD5 CAR.	Off-the-shelf allogeneic CD5CAR NK cells for rapid adoptive cell transfer therapy overcoming antifungal drug resistance.	
EP25382704	B-like cells for the treatment of Diabetes.	Use of skin human fibroblasts as the source to generate beta-like cells as potential treatment for diabetes, using direct reprogramming methods, avoiding transitioning through an intermediate progenitor-like or stem cellular state.	
EP24382665	Nanoparticles conjugated with nitric oxide donors and PTTG1 siRNA and their use against liver diseases.	The project develops an innovative nanotherapy for the treatment of liver diseases such as fibrosis, steatosis, and portal hypertension. It combines liver-targeted nanoparticles with siRNA against PTTG1 and NO donors, validating their efficacy in human explants to advance toward clinical applications.	
EP23383054	Elvitegravir repurposing for multidrugresistant Gram-positive bacteria.	Evitegravir shows activity against multidrugresistant Gram-positive bacteria, even those resistant to quinolone. It can be administered orally, facilitating patient follow-up and reducing unnecessary hospital admissions and costs. The repositioning strategy reduces time to market, risk of failure and investment than traditional drug discovery.	
EP22382509	Antibacterial cyclic peptide (PLP-3).	Novel cyclic peptide designed and synthesized showing antibacterial activity against the most problematic Gram-negative and Gram-positive resistant strains. It has low in vitro toxicity in human cells. Currently assessing inhaled route in an in vivo cystic fibrosis model.	
EP22383180	CAR-T CD229 Multiple Myeloma Relapse.	A monospecific and a bispecific CARs targeting CD229 in order to avoid the antigen escape due to loss or reduction of expression of BCMA on the tumor cell surface.	
EP25382366	CAR-T cells with improved anti-cancer properties.	Technology to obtain CAR-T cell therapy resistant to T cell exhaustion.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
P202530457	N-(4-ariloxi-3-hidroxibutan-2-il) alkanamides with β2-selective adrenergic antagonistic activity.	Development of SRMA compounds, a new selective antagonist of the β2-adrenergic receptor, with potential activity in the angiogenic process, such as wound healing, haemangioma, and the treatment/prevention of oncological diseases (e.g. glioblastome).	INSTITUTO RAMÓN Y CAJAL DE INVESTIGACIÓN SANITARIA IR-yCIS dvelasco@salud.madrid.org emma.gonzalez@salud.mad rid.org carmen.hevia@salud.madrid .org
EP25382181.3	Compounds of general formula (i) for the treatment of diseases of the central nervous system.	Novel synapse-modulating compounds targeting NCS1 protein as a therapeutic aproach for the treatment of neurological disorders such as Alzheimer, autism or X syndrome.	
EP24382574.2	OR2AT4 receptor agonist aptamers and uses thereof.	New aptamers agonist of the OR2AT4 receptor, with potential applications in the treatment of various disorders characterised by receptor inhibition, including: wound healing, hair growth, skin dysbiosis.	
EP24382233.5	Nucleic acid aptamer for treatment of liver cancer.	New DNA aptamers capable of blocking posttranslational modification (PTM) of proteins by inhibiting of HuR SUMOylation and reducing the hepatocellular carcinoma progression.	
PCT/EP2022/067242	Prevention and/or treatment of cardiac damage.	NIL10 conjugated nanoparticles to reduce the damage after myocardial infarction.	
PCT/EP2019/077525	Quinolylnitrones for the treatment and prevention of a cerebral stroke or ischaemia.	New compounds quinolylnitrone for the treatment os ischaemic stroke.	
EP18382888.8	Aptamers and the use thereof in the treatment of cancer.	The Q2 aptamer, which recognises the MNK1 protein, is used for the treatment of breast cancer.	
EP16382399	miR-127 agents for use in the treatment of renal fibrosis.	miRNA 127 as a new therapeutic target for the treatment of renal fibrosis, by modulating macrophage polarisation.	
P201330738	Steroidal nitrones for the treatment and prevention of a cerebral stroke or ischaemia, alzheimer and parkinson disease and amyotrophic lateral sclerosis.	New steroidal nitrones compounds with the potential to reduce the damage after a stroke.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP21843472.8	Compounds for treating hepatocellular carcinoma.	The invention relates to compounds, compositions, and combined preparations for treating hepatocellular carcinoma, as well as diagnostic methods and methods for selecting therapeutic agents useful in preventing, improving, relieving, or treating hepatocellular carcinoma.	IMIBIC INSTITUTO MAIMÓNIDES DE INVESTIGACIÓN BIOMÉDICA DE CÓRDOBA luism.fernandez@imibic.org antonio.ortega@imibic.org
EP22824361.4	Compound for the treatment of glioblastoma.	SF3B1 is identified as biomarker and therapeutic target in High-Grade Astrocytomas. Its overexpression links to poor prognosis. Pharmacological inhibition with pladienolide-B reduces tumor growth and aggressiveness, highlighting SF3B1 as a promising treatment strategy.	
EP23822386.1	Method to isolate proteins from mucinous carcinoma cancer cells and uses thereof.	A method for isolating proteins from mucinous carcinoma cells, and to the use of these proteins as biomarkers or therapeutic targets for diagnosis or treatment.	
PCT/ES2024/070299	Panel of microRNAs as biomarkers of non- segmental vitiligo.	The invention describes a 6-miRNA panel as biomarkers for prognosis/diagnosis of non-segmental vitiligo based on expression in lesional skin or plasma. It also covers methods for data acquisition and kits for such diagnosis/ prognosis.	
PCT/ES2024/070150	Use of miRNAs as biomarkers of severe alopecia areata.	Use of myARNs as biomarkers in the prognosis and/or diagnosis of severe alopecia areata based on their expression levels. Methods for obtaining useful data of severe alopecia areata are also described, as well as kits to carry out these methods.	
PCT/EP2024/069976	Beeswax as a protective agent against radiation.	Effectiveness of cream based on natural products for irritative inflammatory skin conditions and its usefulness for blocking the luminous radiation that causes them.	
P202431049	Aminoacyl-tRNA synthetases as prognostic biomarkers in hepatocellular carcinoma.	Estimation of the forecast (survival and probability of recurrence) in patients with HCC based on molecular panels measured in HCC tissue.	
EP25382473.4	Metal-organic frameworks for the removal of uremic toxins.	Innovative use of metal-organic frameworks (MOFs) for the adsorption and removal of uremic toxins that accumulate in patients with chronic kidney disease.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology			
Patent application	**Title**	**Description**	**Contact**
P202530039	In vitro method to predict the risk of cardiovascular disease, or for the diagnosis of cardiovascular disease, in patients with an infectious disease.	Identification of biomarkers that allow the development of highly accurate predictive models that, at admission, forecast adverse cardiovascular events (MACE) in patients with NAC.	IMIBIC INSTITUTO MAIMÓNIDES DE INVESTIGACIÓN BIOMÉDICA DE CÓRDOBA luism.fernandez@imibic.org antonio.ortega@imibic.org
P202530587	Method to sensitize GSNOR-deficient colorectal tumors to immunotherapy.	Combinations and/or pharmaceutical compositions for the treatment of tumors resistant to immunotherapy. Specifically, for the treatment of immunotherapy-resistant colorectal cancer characterized by low levels of S-nitrosoglutathione reductase (GSNOR).	
P202431050	Aminoacyl-tRNA synthetase inhibitors for the treatment of hepatocellular carcinoma.	Inhibitors of cytoplasmic aminoacyl tRNA synthetases and compositions comprising them, for the treatment or prevention of hepatocellular carcinoma, and a method to select therapeutic agents based on their ability to inhibit.	
EP3545110B1	Antimicrobial strain.	Novel strain, Streptococcus downii, which is useful as antimicrobial agents. the invention relates to compositions and functional food comprising the novel bacteria, which has proven to be useful in the prevention and treatment of caries and periodontal disease.	INSTITUTO DE INVESTIGACIÓN SANITARIA Galicia Sur nerea.alonso@ iisgaliciasur.es
EP3725310 B1	Use of pharmacological chaperones for the treatment of lysosomal storage diseases.	Use of a new family of pharmacological chaperones for the treatment a lisosomal storage disease, i.e., Fabry disease.	
EP4499037A1	Biocompatible antiseptic composition containing 9-hydroxycalabaxanthone and/ or related xanthones.	Biocompatible antiseptic composition with 9-hydroxycalabaxanthone and related xanthones. effective against bacteria and fungi in oral, skin, and medical contexts. offers high antimicrobial power with low toxicity and better tolerance than traditional antiseptics.	IdISBa Institut d'Investigació Sanitària Illes Balears idisba.innovacion @idisba.es

HRI Patent Portfolio: Pharmaceuticals & Biotechnology			
Patent application	**Title**	**Description**	**Contact**
ES2528331B1	Composition with an effect on bone and cardiovascular health.	An edible composition or product that exhibits a synergistic effect on osteoporosis and cardiovascular diseases. The product has demonstrated its efficacy in postmenopausal women, a high-risk group for bone demineralization and cardiovascular disease development.	INSTITUTO DE INVESTIGACIÓN SANITARIA PUERTA DE HIERRO - SEGOVIA DE ARANA Hospital Universitario Puerta de Hierro Majadahonda unidadinnovación@ idiphim.org
EP3852772B1	Pharmaceutical product for preventing or treating Alzheimer's disease.	A cell suspension comprising autologous or allogeneic bone marrow–derived MSCs expanded and suspended in peripheral blood plasma, for intrathecal (lumbar puncture) administration to treat or ameliorate Alzheimer's disease with impaired cerebral glucose metabolism.	
US11858973B2	Granulysin, method of obtaining same, and uses.	The present invention relates to granulysin, method of obtaining same, and uses, specifically to the granulysin polypeptide for the use thereof as a medicinal product via the systemic route and to a chimeric molecule comprising a recombinant antibody targeting a tumor antigen and the granulysin polypeptide.	
WO2024017510A1	Method for identifying lung cancer patients for a combination treatment of immuno- and chemotherapy.	In vitro methods for identifying a subject suitable for treatment with a combination of immunotherapy and chemotherapy by identifying a specific genetic signature in a biological sample from said subject as well as diagnostic devices for performing said method.	
US20250195695A1	Methods and Compositions for treating TMEM43 related cardiomyopathy with a viral vector.	Compositions and methods for the treatment of cardiomyopathy. Several embodiments provided for herein relate to virally-mediated transfer of a gene to host cells to induce expression of an encoded polypeptide, protein or other product in order to ameliorate one or more symptoms of the cardiomyopathy in a subject.	
EP25382006.2	Methods for improving cardiac function in arrhythmogenic right ventricular cardiomyopathy Type 5.	Arrhythmogenic right ventricular cardiomyopathy type 5 (ARVC5) is the most aggressive type of ARVC, resulting in heart failure and sudden cardiac death. The present invention offers a promising and specific therapy for ARVC5.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP20724492	Method for predicting and/or diagnosing cancer metastasis.	An in vitro method for diagnosing and/or prognosing cancer metastasis by determining methylation/expression levels of a gene from the protocadherin cluster in a patient sample. The patent also protects the use of inhibitory agents targeting the encoded protein for metastasis treatment/prevention.	ISPA Instituto de Investigación Sanitaria del Principado de Asturias innovacion@finba.es
P202030147	Method for predicting or forecasting response to cancer treatment.	A biomarker (GARP) and a method for predicting or forecasting response to cancer treatment, especially in sarcomas. High expression of GARP is associated with lower survival rates. Therefore, GARP could serve as a marker with therapeutic, prognostic and predictive value for tumours, and more specifically, bone sarcoma.	
P202130831	In vitro method for diagnosing SARS-CoV-2 infection.	Rapid and economical in vitro method for diagnosing COVID-19 and inflammatory diseases caused by SARS-CoV-2. It is based on the analysis of oxidation-reduction variables using direct spectrophotometry on a drop of blood (finger prick). Furthermore, as it is based on oxidation-reduction variables that reflect inflammation, it could also be used as a prognostic test.	
P202330581	Lipid nanoformulations of bet inhibitors for the treatment of kidney damage.	Lipid nanoformulations encapsulate BET inhibitors for safer and more selective treatment of kidney damage (LRA/ERC). The technology allows the drug to be released in the kidney, reducing toxicity and enabling diagnosis and monitoring through molecular imaging.	
P202230169	Methods and uses for quantifying lung overdistension by determining a set of mirnas.	A new micro-RNA signature associated with mechanical stress in lung tissue and biological samples. After quantification, micro-RNAs are combined in a score proportional to the amount of lung stretch, allowing the diagnosis and monitoring of lung overstretching. Therefore, repeated measurements can help to optimize ventilatory settings in patients.	
PCT/ES2025/070391	Compounds obtainable by chemical modification of glycyrrhetinic acid, pharmaceutical preparations and their uses, and method for the preparation thereof.	Patent on bioactive compounds obtained by chemical modification of glycyrrhetinic acid. The method transforms hydroxyl 3, generating arylated derivatives, spiropyrazoles and pyrazoles fused with an expanded ring A. The new compounds have pharmacological activity of therapeutic interest in the pharmaceutical sector.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP23382755	Genomic sequencing analysis.	Methods for analyzing targeted genomic sequencing data by correcting read counts in genomic bins using bias estimates, such as capture bias. A capture bias score reflects differences between observed and expected read distributions. Related methods and products are included.	 innovacion.imas12@ h12o.es gestion innovacion.i mas12@h12o.es
EP23383050	Fusion proteins for the treatment of viral infections.	Bifunctional fusion proteins comprising domains which bind to a viral envelope protein and to proteins present in the surface of dendritic cells as well as to methods for the prevention and treatment of disorders caused by viral infections.	
EP23383410	T cells expressing anti-BCMA/anti-CD3 bispecific antibodies and uses.	T cells expressing bispecific antibodies for BCMA and CD3 and uses thereof in the treatment of cancer, in particular cancers which overexpress BCMA antigen.	
P201830367	Artificial immunocomplexes and their use as calibrators in systems for detecting circulating immunocomplexes B2GP1-antiB2GP1.	An artificial immunocomplex of B2GP1 bound to an immunoglobulin fragment, used as a calibrator in detecting B2GP1-antiB2GP1 complexes. It enables calibration and risk assessment for antiphospholipid syndrome (APS) via detection of pathological markers.	
P201931035	Stem cells from the parietal decidua of the placenta for use in chronic stress urinary incontinence.	The invention relates to DMSCs from placental decidua for treating chronic stress urinary incontinence. It also covers pharmaceutical compositions, kits, and devices containing these stem cells for the same therapeutic use.	
WO2019016422A1	N-cadherin and FGFR1 and/or FGFR4 for use in predicting the response of patients to a lung cancer treatment and method and kit based on said use.	Method to predict lung cancer patient response to FGFR inhibitors by analyzing biomarkers N-cadherin, FGFR1, and FGFR4. It enables classification of patients as responsive or not, guiding treatment decisions and optimizing therapy by avoiding ineffective options.	
WO2022013300A1	Interleukin 11 receptor alpha subunit (IL11RA) neutralizing antibodies and uses thereof.	Neutralizing antibodies targeting the IL11RA extracellular domain and antibody-drug conjugates (ADCs) containing them. It also includes methods for IL-11 receptor detection, pharmaceutical compositions, and therapeutic uses in diseases with elevated IL11RA signaling.	

Medical Decives

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Instituto de Salud Carlos III
Subdirección General de Evaluación y Fomento de la Investigación

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
EP24382456.2	Cell culturing system optimized for raman spectroscopy imaging.	Biochip optimized for spectroscopic imaging comprising a reservoir and a culture chamber comprising an observation interface configured to allow spectroscopic measurement of the culture chamber through the observation interface.	
P202430394	Medical device for taking biopsies of large lungs.	Medical device for taking postmortem lung biopsies in a simpler way and obtaining larger samples. This allows for acquiring larger volume samples for the creation of lung tissue collections for research.	
P202130454	Bioprinter with sterile field.	Bioprinter in which the sterile working environment is restricted to a relatively small and portable volume. This system allows the process to be carried out in a non-sterile laboratory environment and makes it possible to scale up processes for large-scale bioprinting.	
EP23382715	Portable device for exercising bedridden patients.	Portable device than can be coupled in beds for the rehabilitation of bedridden patients, by strengthening mainly the legs muscles by working against a counterforce and with assistance in the return. This device allows personalized training, improving their autonomy after the hospitalization period.	
EP24383449.6	Organ-on-chip device for cell culture.	Cell culture device that allows cell seeding in a culture chamber with continuous feeding of the culture medium. This allows the development of a three-dimensional model that simulates the microenvironment and key functional aspects of an organ.	
WO/2023/233063	Safeprot technology.	The safeprot project develops an innovative bioelectric device designed to destroy bacterial biofilms in prosthetic infections, offering an effective solution to reduce the incidence and economic impact of these complications in knee and hip implants.	
ES1307466	Catheter guide manipulation device.	The torques currently available on the market follow a tubular design that requires inserting the guide from one end, making their use tedious, cumbersome, and impractical. The newly developed torque features a port with two crossed grooves in the shape of an “x.” One axis of the “x” runs from one end of the cylinder to the other (similar to the groove in current torques). The other axis of the “x” crosses the first at an obtuse angle and has an open top, allowing for lateral insertion of the guide.	
Utility Model U202530300	Clamping device for supporting a radiopharmaceutical syringe.	A medical device that holds a radiopharmaceutical syringe with a protector to the patient’s forearm, allowing for quick and efficient preloading and administration.	

BIOGIPUZKOA – EUSKAL OSASUN IKERKUNTZA – INVESTIGACIÓN VASCA EN SALUD – BASQUE HEALTH RESEARCH

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HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
Utility Model U202332250	Anatomic model for oncoplastic surgery.	Anatomic model for oncoplastic surgery to simulate and train different surgical techniques performed in breast surgery.	INSTITUTO DE INVESTIGACIÓN SANITARIA FUNDACIÓN JIMÉNEZ DÍAZ innovacion.invest@iis-fjd.es
PCT/ES2022/070218	System configured for the implantation of a prosthetic material in patients suffering from a surgical pathology in the abdominal wall.	A system configured for the implantation of a prosthetic material in patients suffering from a surgical pathology in the abdominal wall.	
Utility Model U202231527	Dispositivo introductor para endoprotesis vasculares.	Device for inserting an endoprosthesis in endovascular procedures, which includes a dilator with a longitudinal channel for vascular guidewire and a tubular introducer that houses it. The dilator features an additional lumen for a second guidewire or catheter.	
Utility Model U202231938	Dispositivo configurado para la implantacion de un drenaje biliar.	Device configured for drainage in the bile duct during open or laparoscopic surgical interventions, which includes a radiopaque line for visualization, flexible tubing with protrusions for secure fixation, a multiperforated distal area for effective drainage, and an external connector end to the abdomen.	
Utility Model U201831943	Rectal obturator for proctological surgery.	Rectal obturator for proctological surgery with a central body shaped like a truncated cone, featuring a smaller and larger base connected by a generatrix, a linear flange, a peripheral ring at the larger base, and at least one through channel that connects both ends of the obturator.	
Utility Model U202032664	Fenestrated endoprosthesis for artery repair, provided with a fenestration positioning guide.	Fenestrated endoprosthesis for arterial repair with a tubular endograft and a positioning guide insertable through the fenestration. The guide, shaped as a wire longer than the endograft, has a closed loop at one end to facilitate precise placement.	
Utility Model U202430172	Maleable stylet with micro-curette brush connection for anal fistula treatment.	The product is a malleable stainless-steel stylet equipped with a micro-curette brush at its tip. This design allows for effective and uniform canalization of the fistula.	ibs.GRANADA INSTITUTO DE INVESTIGACIÓN BIOSANITARIA palvarez@fibao.es
Utility Model U202530300	Holding device to support a radiopharmaceutical syringe.	Development of a device that secures a radiopharmaceutical syringe with a shield to the patient's forearm, essential for ictal SPECT/CT procedures requiring rapid infusion.	

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
Utility Model ES1273732U	Sacral protective diaper.	Diaper that is specially designed to protect the sacral region of patients with urinary incontinence who must remain in bed for prolonged periods. Simple and effective in manufacture, it represents an advance in the prevention of injuries, wounds and bedsores in the sacrum in bedridden patients.	inibic instituto de investigación biomédica de a coruña alexandre.de.la.fuente.go nzalez@sergas.es graciela.fernandez.Arrojo @sergas.es
Utility Model ES1282839U	moisture barrier.	Sanitary garment for use by people who suffer from urinary incontinence with normal, reduced or dependent mobility and users of anatomical absorbent or diaper panty type absorbent.	
PCT/KR2023/009465	Intraluminal devices coated with substance p.	A new type of cardiological stent that incorporates a substance with the ability to prevent restenosis.	
Utility Model U201731247	Catheter introduction device.	Catheter in a potential organ donor who is in asystole or who is going to be an organ donor in asystole after limiting therapeutic effort.	
ES202231035	Corrective stem of anorectal malformations.	Corrective stem for anorectal malformations, for neonatal use, inserted into the rectal cavity. It consists of an elongated corrective body with a first and a second section, the body having a circular cross-section that increases in diameter from the first end to the opposite second end.	IdISSC INSTITUTO de INVESTIGACIÓN SANITARIA Hospital Clínico San Carlos otc.hcsc@salud.madrid.org
ES202431152	Equipment for treatment of respiratory infection in intubated patients.	Equipment for treating respiratory infections in intubated patients, comprising a mechanical insufflation-exsufflation device, a nebulizer of hypertonic saline with hyaluronic acid, and a t-tube with two inlets connecting to the devices and an outlet connecting to an endotracheal tube or tracheostomy cannula.	
ES1311501	Equipment for treatment of respiratory infection in intubated patients.	It comprises: - a mechanical insufflation-exsufflation device, - a nebulizer of hypertonic saline with hyaluronic acid, and - a t-tube having a first inlet that connects to the mechanical insufflation-exsufflation device.	
ES1295240	Corrective stem of anorectal malformations.	Corrector stem for anorectal malformations, for application in neonatal patients by inserting it into the rectal cavity, which is formed by an elongated corrective body.	

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
Utility Model U202432210	Customisable 3D printed vascular simulator.	Modular system of interchangeable sections to simulate vascular anatomical models of arterial networks customisable for a patient. This invention, manufactured by 3D printing, enables the preparation in greater detail of real interventions of different pathologies such as aneurysms or stenosis.	ISABIAL INSTITUTO DE INVESTIGACIÓN SANITARIA Y BIOMÉDICA DE ALICANTE innovacion@isabial.es
P202431095	Embolising substance simulator with middle meningeal artery anatomy.	Neurovascular system to simulate, in a realistic environment, the embolisation of the middle meningeal artery, with a high correlation between the test bench and the real procedure. This allows experimentation and testing of both the approach and the use of different or new embolising substances.	
Utility Model U202330170	Rehabilitation device based on physical exercise and gamification, with remote monitoring and autonomous management- hefmob.	Therapeutic assistance device for rehabilitation based on physical exercise and virtual gamification. This prototype medical device has been designed to promote early rehabilitation in patients with hf in a safe, educational, motivating and remotely supervised way.	
Utility Model U202432239	Haemorrhage atony uterine trainer-haut.	A reusable and inexpensive uterine atony simulator which allows active flow training of up to three gynaecological techniques for the resolution of postpartum haemorrhage. Bleeding subsides after correct execution, improving the skills of professionals in a real emergency.	
P202530448	Device and method for thrombus aspiration.	Next-gen thrombus aspiration system with dual vacuum lines and intelligent real-time control. Generates powerful, targeted suction peaks for faster, safer clot removal—even in challenging cases. Optimized for ischemic stroke, adaptable to other vascular uses.	
EP23382980	Roboreto.	Robotic retractor system for endoscopic transorbital surgery (ETS) to the brain and skull base. New surgical tool to allow the optimal access and management of the eye retraction during ETS.	IDIBAPS Institut D'Investigacions Biomèdiques August Pi i Sunyer innova@recerca.clinic.cat
ES1203136U	Trousers for simulation of childbirth and obstetric pathology.	A pair of trousers for obstetric pathology and physiology training through simulation, worn by an actor or instructor to mimic childbirth. The garment includes a vaginal opening and a bib with an inner compartment for fetal and placental models, allowing the performance of multiple scenarios for situations and/or pathologies.	INSTITUTO DE INVESTIGACIÓN SANITARIA PUERTA DE HIERRO - SEGOVIA DE ARANA Hospital Universitario Puerta de Hierro Majadahonda unidadinnovación@ idiphim.org

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
PCT/EP2010/058226	Gelled prp.	A method using gelled platelet-rich plasma (PRP) for breast reconstruction.	IGTP Institut de Recerca Germans Trias i Pujol innovation@igtp.cat
EP15382341.4	Open-surgery kit.	Surgical devices and kits designed to assist in open surgeries.	
EP17717705	Penile surgical separator-fixator.	Penile surgical separator-fixator.	
EP17742446.2	Rutipatch.	A bioadhesive platform designed for bioactive medical treatments.	
EP18 783 365.2	Nimble diagnostics.	A system for monitoring the condition of medical stents in patients.	
EP2021717130	Nanoparticle material.	Development of nanoparticle materials for various therapeutic and diagnostic applications.	
EP24 383 339.9	Rutiseton.	RutiSeton is a probe that effectively treats anal fistulas minimally invasively, eliminating the need for surgery. It improves treatment precision, patient comfort, and reduces healthcare costs.	
EP24382650.0	Blebmaker.	Glaucoma, the leading cause of irreversible blindness, affects 76M people in 2022, expected to rise to 111M by 2040. The Blebmaker prevents filtration bleb collapse, reducing the need for additional surgeries.	
P202330377	Positioning and localization device for external radiotherapy in gynecological tumors.	Equipment that allows emulating gynecological brachytherapy treatment, which introduces radioactive sources inside patients, with external high-energy radiation beams from linear electron accelerators. advantages: ability to treat larger lesions, improved treatment experience.	IBiS INSTITUTODEBIOMEDICINADESEVILLA ecruces-ibis@us.es ahoyos-ibis@us.es
P201431963	Open retinoscope.	Device designed for eye fundus (retina) examination, which combines a light source (led) to volk's indirect ophthalmic lens (biconvex lens) that allows the health- care professional to assess a patient's retina more easily and with a much larger field of view than with any direct ophthalmoscope.	
P202530189	Haptic device for surgical simulation.	Low-cost surgical simulation device that transmits realistic tactile and depth sensations to the user, comparable to those encountered in real surgical practice.	

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
PCT/EP2020/084344	A device and method for respiratory monitoring in mechanically ventilated patients.	Device and method for respiratory monitoring in mechanically ventilated patients. It comprises an input unit for receiving a respiratory signal comprising an airway pressure/flow signal acquired during mechanical ventilation; and a data processing unit configured to acquire time-series data sets.	Parc Taulí R Institut d'Investigació i Innovació I3PT innovacioi3pt@tauli.cat
PCT/EP2020/081860	Device for medical training and method for medical training associated therewith.	Device for medical training, comprising a skin-simulating outer layer, a subcutaneous fat-simulating layer, a fascia-simulating layer, and a first muscle-simulating layer.	
PCT/EP2018/054087	Thoracic restraint and safety device for patients and tensioning element associated thereto.	A thoracic restraint and safety device, comprising a restraint harness, a first fastening strap extending laterally from the restraint harness, and a second fastening strap extending laterally from the restraint harness in the opposite direction to the first fastening strap.	
PCT/EP2013/066010	Fastening device for people with reduced mobility conditions.	Fastening device for people with reduced mobility conditions, of the variety employed in chairs/arm chairs, comprising fixation means, which can be adapted to the back of the chair or arm chair and containing means to contain the person to be fastened.	
PCT/EP2011/062998	Lamp and plenum for laminar air flow ceiling.	A lamp comprising a first module for being attached to a ceiling/wall element, a second module connected to the first module and being rotatable, a third module comprising one or more light-emitting elements.	
PCT/EP2009/060605	Device for use in surgical treatment of funnel chest and method of treatment.	Device for the surgical treatment of a patient suffering from funnel chest in that it comprises a plate adapted to be fitted underneath the skin. The plate can be attached to the sternum and the curvature, length and width being such that it extends of the sternum and outside the thorax.	
PCT/EP2008/052458	Method and system for managing related- patient parameters provided by a monitoring device.	System for managing related-patient parameters provided by at least one monitoring device, the system comprising means for connecting said system to the monitoring device; means for capturing, through the connection with the monitoring device, means for adapting the captured patient-related parameter to a predetermined parameter format; and means for managing the adapted patient-related parameter.	
US201213660778A	Surgical instrument for endoscopic surgery.	Surgical instrument for endoscopic surgery that permits the simulation of the articulation movements of a surgeon finger, comprising a rigid tubes and phalanx articulated.	
Utility Model ES202230457U	Protector for subcutaneous venous reservoirs.	Protector for subcutaneous venous reservoirs, comprising: an adhesive dressing configured to adhere to the skin of a patient around a subcutaneous venous reservoir; and protection means for the subcutaneous venous reservoir.	

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
EP18382974.6	Methods of controlling a system for continuous irrigation of the bladder of a patient.	Post-operative treatment system for bladder cleansing patients. Based on a serum bag elevator up to a height x, providing the pressure necessary for bladder washing by gravity.	Vall d'Hebron Institut de Recerca mariona.esquerdo@ vhir.org
2310260065830	Ecocarsim: programa de simulación en ecocardiografía.	COCO is an adhesive, non-invasive and wireless device applied on the patient's forehead to provide direct feedback on cerebral oximetry and monitor the quality of cardiopulmonary resuscitation.	
PCT/EP2019/058831	Dispositivo postural para mujeres embarazadas.	La posición de Sims modificada se propone como una técnica para facilitar la rotación de la cabeza fetal de una posición occipitoposterior persistente a occipitoanterior durante el parto, mejorando los resultados obstétricos. Un estudio en curso sugiere que esta postura aumenta la tasa de rotación (55% vs. 30% en el grupo control), reduce cesáreas (10% vs. 26.08%) y favorece partos eutócicos (55% vs. 39.13%).	
EP24383254.0	Retrieval device.	New microcatheter that enables "catheter retrieval" of thrombi located in medium and distal arterial segments (less accessible arteries) that can cause acute ischemic stroke.	
EP21383034.2	Syringe driving systems.	New mecanism to do aspirations and injections, during ultrasound guided procedures.	
Utility Model ES202330809U	Surgical retractor plate and surgical retractor.	Spanish utility model for a surgical retractor plate, configured for the separation of tissues and anatomical structures, comprising a flat main piece and two holding elements. It offers functional improvements over those existing in the state of the art, because of its materials and design.	iisa Instituto de Investigación Sanitaria Aragón csebastian@iisaragon.es
Utility Model U202231411	Cover for the protection and identification of surgical needles and an associated kit.	Utility model cover for the protection and identification of surgical needles and and associated kit, for the field of surgery, traumatology, physiotherapy and medicine in general, and more specifically in the field of surgical techniques assistance devices.	

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
P202230080	Double conical spiral embolic protection device during endovascular procedures.	When endovascular procedures are performed, particles larger than 100 microns are often generated, which can cause damage to the brain. For this reason, the inventors have developed a device for capturing this embolic material using a preformed filament with a double conical spiral structure.	Instituto de Investigación Sanitaria La Fe otc@iislafe.es innovacion@iislafe.es
EP22382100	Fistula sealing.	A fistula is a medical condition in which an abnormal cavity forms, often as a result of complications from gastrointestinal surgery. To address this problem, a device has been developed that seals the fistula cavity using a filling element and a closure device that closes the fistula opening.	
EP20771838.8	A modular system for monitoring and controlling the homeostasis in cavities, and a method for generating a volume of fluid in a cavity.	In endoscopic surgery, gas insufflation is necessary to safely manipulate surgical instruments inside the body. Hovewer, this insufflation can cause alterations in intracavitary homeostasis. Therefore, a modular system has been designed that allows homeostasis to be kept during the insufflation	
EP22382866	Method for assessing the activity of nicotinamide n-methyltransferase.	Nicotinamide n-methyltransferase (NNMT) has been proved to promote tumor progression, leading to a high aggressiveness and short overall survival in cancer patients. As a solution, a method is proposed for studying the effect of NNMT inhibitors in cancer patients.	
EP21704553.3	A medical device for transluminal access.	This invention relates to a medical device that allows transluminal access to a body conduit, which can be operated by a single professional, is easy and quick to use, and at the same time is less likely to injure the patient, reducing the number of potentially dangerous steps during the procedure.	
EP22383086	A device for assisting translational movement of an endoscope through the digestive tract.	Endoscopy is a technique of visual exploration on a body cavity that allows to reach easily the proximal structures of the digestive tract. In order to improve this endoscopic surgery, inventors have designed a device for assisting translational movement of an endoscope through the digestive tract.	
P202130115	Device for palpating the prostate.	Prostate cancer is the most common disease in men, and the problem is that there is no palpation system that provides reliable information for its diagnosis. Therefore, a device has been designed for prostate palpation that identifies areas of high rigidity so as to diagnose this type of cancer.	
Utility Model U202132029	Device for evaluating a psychomotor response.	The psychomotor response assessment device allows the evaluation of patient's psychomotor abilities to diagnose possible pathologies. Unlike its competitors, this invention facilitates the participation of patients with reduced mobility and eliminates distortion in response time measurement.	

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
Utility Model U202132499	Instrument for surgical stapling between a vascular prosthesis and the aorta.	This invention consists of an instrument for surgical stapling between a vascular prosthesis and the aorta using an eversion and overlap technique. Unlike its competitors, this device allows for easier and safer aortic connection thanks to its combination of stapling elements.	Instituto de Investigación Sanitaria La Fe otc@iislafe.es innovacion@iislafe.es
P202131224	Sensor-equipped dynamic compression otthotic device and method for adjusting it.	A compression orthotic device has been designed that allows to take continuous measurements of the load throughout the treatment. Its main advantage is that it will enable the effect of the device on the patient to be accurately assessed and provide objective criteria for improving their treatment.	
Utility Model U202130263	Antibacterial and viricidal interface for non- invasive mechanical ventilation.	An antibacterial mask has been designed for use in non-invasive mechanical ventilation (NIMV) of patients with acute respiratory failure. Its main advantage is that it increases the safety of healthcare users by minimizing the spread of respiratory diseases and improves patient tolerance to NIMV.	
P201931102	Assembly for treating pectus excavatum.	PECTUS is a deformity of the rib cage characterized by a sinking of the chest in the sternum and ribs. For the surgical treatment of PECTUS, a set (guide, needle, and protective bar) has been developed that is placed on the chest, causing minimal skin damage and producing good aesthetic results.	
P201830301	Endotracheal dilation and ventilation device.	Inventors have designed an endotracheal dilation and ventilation device that is really benefitious in treating tracheal obstruction in patients, through the oral route or an artificial route as tracheotomy. Unlike its competitors, this device provides highly effective dilation in patients.	
EP24382399	Adjustable stretcher and system for spinal treatment and method for optimally configuring said system.	Medical device that enables non-invasive neurostimulation of the spinal cord to promote neurorepair in patients with spinal cord diseases (spinal cord injury, multiple sclerosis, als, stroke, tumor, or others)..	Hospital del Mar Research Institute Barcelona iavila@researchmar.net
EP24382236.8	Use of mirnas for the prognosis of stroke patients and as targets for the treatment of stroke.	Use of miRNAs for the prognosis of stroke patients and as targets for the treatment of stroke.	

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
P201431597	Device for identifying the site of cardiac arrhythmias.	A device for guidance during cardiac ablation by global reconstruction of cardiac activity from combined non-invasive and intracavitary recordings (cardiac arrhythmia localisation device, corify).	Instituto de Investigación Sanitaria Gregorio Marañón gestion.innovacion@iisgm.com
P201531508	Mouth protector device with tongue depressor.	A mouth protector device which incorporates a tongue depressor, designed to be inserted in the patient's mouth and hold it open to perform diagnostic tests or surgical operations that require instruments to be inserted through the oral cavity.	
P201730568	Hybrid clinical simulation system for hemorrhage control (hybrids) - dummys.	Haemorrhage control simulation equipment comprising at least one wearable device which, when placed on a person's arm, allows them to simulate a patient on whom invasive and non-invasive procedures can be performed. The purpose is to provide training in healthcare in a realistic environment.	
P202530042	Laryngoscope with vacuum system.	A laryngoscope for tracheal intubation whose blade has an inner hollow channel and two openings at its tip: one at the end, for secretion aspiration, and another at the top, for suction of the epiglottis.	
P201731161	System and method for automatic detection of circular cardiac activations.	System and method for automatic real-time detection of abnormal electrophysiological patterns, such as circular and rotational activation patterns, commonly referred to as rotors. The signals are recorded by a first set of electrodes such as a multi-electrode catheter.	
US17/926,278	Control method for a neuroprosthetic device for the reduction of pathological tremors.	A control method for a neuroprosthetic device, allowing to monitor and reduce pathological tremors in users via the stimulation of the peripheral muscles and modulation of the afferent pathways.	
P202230220	Customised implants with antimicrobial activity to prevent and treat bone infections.	3d-printed implants made from biocompatible and biodegradable polymers that contain drugs with immediate and sustained release and a reduced haemolytic profile, easily attachable to prostheses.	
EP22382591.0	Anti-reflux ostomy device.	Anti-reflux ostomy plug for ileostomy, colostomy, or urostomy patients: connects to stoma, blocks fecal/urine outflow until bag attachment or syringe aspiration applies positive pressure to drain contents, and keeps material inside intestine/ureter meantime.	
EP24383410	System and computer-implemented method for detecting atrial fibrillation drivers.	Method for characterising atrial electrogram sequences recorded with an intracavitary catheter in patients with atrial fibrillation. It consists of hardware comprising a signal amplifier and connections, and a detection software that allows for the in situ analysis of atrial electrogram sequences.	
P202430809	Mandibular advancement device.	A medical device for determining the mandibular advancement necessary to treat obstructive sleep apnoea-hypopnoea and a method thereof.	

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
P202430809	Portable desinfection system for implanted prostheses using induction heating.	This invention proposes a portable, sealed induction heating system that will enable the elimination of biofilm and microorganisms adhering to implants through localised hyperthermia of the metallic elements of the prosthesis. This invention is also applicable to other fields of application of magnetic hyperthermia in the biomedical area, such as tumour ablation using magnetic elements or nanoparticles.	IdiPAZ Instituto de Investigación Hospital Universitario La Paz innovacion.legal@idipaz.es
P202230651	Device for collecting biological samples with a closed system without exposure to formaldehyde.	Polypropylene container with folds in the centre, in which all types of samples can be collected and their respective solvents and/or reagents can be added in a closed manner, so that the worker is not exposed to splashes and/or inhalation of toxic agents, nor is he or she exposed for subsequent analysis/carving.	
P201830718	Device and application for cutting ostomy discs used to improve stomach management and the complications that commonly occur in patients.	OstoCutter is an automatic ostomy bag cutter that scans and recognises the contour of a patient's stoma and cuts the adhesive disc, reproducing the exact shape of the stoma for a proper fit of the bag.	
P201730569	New endoscopic cap design.	Innovative endoscopic device that, in addition to performing the functions of the accessory commonly known as a 'cap,' features an original design that allows the use of the auxiliary washing channel to perform the function of submucosal injection.	
P201630551	High-precision rectoscope.	A rectoscope that uses rectal transillumination and incorporates a radial light source allows surgeons to measure the distal section margin—a key aspect for successful cancer surgery —with a degree of precision that has not been achieved by any other rectoscope currently available on the market.	
P201331453	Surgical mesh for repair of hernia defects.	Mesh designed to correct hernia defects, with an architecture that promotes symmetrical biomechanical behaviour at the periphery of the mesh, thereby reducing the recurrence rate.	
P201330532	Single-port instrument for laparoscopic surgery adaptable to each patient.	Single-port instrument for laparoscopic surgery designed to be inflated with different air pressures in different areas, thus facilitating access to the surgical site and allowing, at the same time, better adaptation to the patient by providing a better fit and seal.	
P201231638	Aortic endoprosthesis for aneurysm treatment.	Aortic endoprosthesis that uses a tissue engineering solution to biologically treat abdominal aortic aneurysms by regressing the aneurysm and healing the wall of the diseased artery.	
P201230950	Instrument for removing tumors and pathogenic organs.	Laparoscopic surgical instrument particularly suitable for the removal of tumours or diseased organs, such as in the practice of hysterectomy, without ruling out other endogenous surgical operations.	
P201131222	Dual-port injector for dmek corneal transplantation.	Innovative injector designed to reduce endothelial damage during the implantation of corneal endothelial grafts in the anterior chamber of the eye.	

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
P201031519	Animal isolation device for experimental radiotherapy treatment.	Device for isolating and immobilising experimental animals, preferably rats and mice, although also extendable to canines, pigs, primates, etc., Which allows them to be properly positioned to receive radiation, while also complying with the necessary hygiene and non-contamination conditions, since the facilities for the application of radiotherapy are primarily for human use.	IdiPAZ Instituto de Investigación Hospital Universitario La Paz innovacion.legal@idipaz.es
P201031491	Surgical device for discontinuous suture.	Surgical device comprising a loading and firing mechanism that allows quick, easy and safe discontinuous sutures to be performed in minimally invasive surgical procedures.	
P201031490	Device for extracting surgical samples by insufflation and suction.	Surgical sample extraction system assisted by insufflation and suction that allows for quick, easy and safe procedures for removing samples from an internal part of the body during surgery.	
P200702128	Anesthesia machine simulator.	Circular circuit anaesthesia simulator that reproduces each and every part of an anaesthesia machine.This simulator allows the reproduction of different clinical situations that may arise during the ventilation process of patients so that anaesthetists are able to handle them in the most appropriate way for the patient.	
EP05750159.5	Shut-off valve designed for the analysis of respiratory mechanics.	Valve specially designed for sudden interruption of respiratory flow in the interruption technique, a technique that allows fundamental parameters of respiratory mechanics to be measured. The valve design allows a very short closing time and ensures that the closure is airtight.	
P201531826	Fixing device in ostomy for the prevention of hernias.	Ostomy fixation device for the prevention of hernias comprising an ostomy base and a fixation band.	i+12 Instituto de Investigación Hospital 12 de Octubre innovacion.imas12 @h12o.es gestion innovacion .imas12@h12o.es
P201931127	Applicator for catheter and method of use.	A catheter applicator with capture and clamping parts, a support surface angled at 70–110°, and a grip flap. The method includes opening the capture parts, placing and securing the catheter, and releasing it by reopening the capture parts.	
P202030426	Umbilical anchoring system.	A system for anchoring an umbilical catheter using a vascular element inserted into a vessel and a clip that secures both the catheter and cord. The clip includes a groove for positioning and a releasable closure for controlled opening and closing.	
P202530448	Thrombus aspiration device and method.		
Utility Model U202430542	Device for limiting grip movement.		

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
Utility Model U201932095	simulation device for laparoscopic surgery.	A set (frame + custom pelvic model) has been designed as an accessory for endotrainer-based surgical training systems. This solution allows an accessory to be inserted into the endotrainer to create a more realistic training environment, thus eliminating negative slopes in the learning curve.	Valdecilla Instituto de Investigación Sanitaria IDIVAL otri@idival.org
Utility Model U202031383 U202031384	Optical device for identifying tumour regions.	An optical device for identifying tumour regions in different organs, such as the brain. A plurality of chips analyse tissue samples spectral response. The spectral response depends on whether the tissue is necrotic, tumoural or peritumoural.	
UUtility Model U202030765	Protective mask for nasal handling.	Protective mask for nasal manipulation, to reduce the exposure of healthcare personnel to aerosols during manipulations in the nasal passages, such as nasal endoscopies, bronchoscopies, nasosinusal and anterior skull base surgeries or placement of nasogastric tubes.	
Utility Model U201830919	Reference navigation equipment in robotic surgery assisted by stereotaxic navigation of the organs and soft parts of a patient's pelvic area.	Equipment for navigation reference in assisted robotic surgery by means of stereotactic navigation of the organs and soft portions of the pelvic area of a patient, which enables coordinates fixed with respect to a reference frame to be associated to any point of the patient's anatomy in the pelvic area.	
PCT/ES2021/070302	Protective dressing for abdominal viscera in negative pressure therapy.	Protective dressing for abdominal viscera for application of negative pressure therapy in open abdomen, made up of an upper layer, an intermediate layer and a lower layer, each of which consists of a laminar body.	
Utility Model ES1305503U	Colpotomizer.	Colpotomizer that allows insertion into the vagina for visualization and manipulation, provided with a fixation system to the cervix so that it can be extracted without the need for manipulations or contact of the cervix, avoiding therefore the spread of tumor cells.	
PCT/ES2022/070433	intragastric device.	Intragastric device intended to be inserted into a gastric cavity to restrict its capacity. To contribute to optimal adaptation, its design is based on the principle of neutral buoyancy.	
Utility Model ES1313152U	Head restraint device.	Surgical head restraint and positioning device for use in ophthalmic surgery. Its purpose is to stabilize a patient's head during eye surgery, ensuring it remains perfectly still.	
PCT/ES2023/070464	dynamic abdominal wall traction device for open abdomen.	A surgical device for closing or suturing wounds, in particular to a dynamic abdominal wall traction device for progressively closing an open abdomen.	
Utility Model ES1317816U	Exoskeleton to improve surgeon ergonomics.	A set (frame + custom pelvic model) has been designed as an accessory for endotrainer-based surgical training systems. This solution allows an accessory to be inserted into the endotrainer to create a more realistic training environment, thus eliminating negative slopes in the learning curve.	

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
P201830256	Multifunction board for teaching intraoral surgical techniques.	An instrument designed to test surgical techniques safely, replicating oral cavity conditions to develop basic skills before real procedures. It provides notable advantages over similar tools and forms part of a new five-product dental package from research to clinical use.	 INSTITUTO DE INVESTIGACIÓN SANITARIA SANTIAGO DE COMPOSTELA innotransfer.fidis.santiago @sergas.es
P201830057	Oral surgical retractor with protective attachment for particle projection techniques.	The invention improves visualization, access, and patient comfort, with applications that extend beyond surgery.	
Utility Model U201930116	Mold for making bite rims and patterson guides.	A mold for making both bite rims and patterson guides, using one single template. Its goal is the simplification of procedures to reduce time and costs with equal or superior results.	
Utility Model U202331106	Device for cerclage of a long bone fracture.	A device to introduce and guide the cable, wire or tape around to encircle and secure the bone in shorter surgical time and everything that comes with it (less intraoperative bleeding, less time under anesthesia, less manipulation of soft tissues, lower risk of infection).	
Utility Model U202332116	Device to improve the operation of suction systems designed to avoid asphyxiation due to choking.	A device that can be attached to any suction system of foreign objects when asphyxiation due to choking occurs, to make sure that the intervention is being properly performed. It can be used both to improve existing devices and to incorporate in future designs.	
Utility Model U202332117	Synchronized positive pressure and directional flow sensor with light and acoustic indicators for bag-valve-masks.	A synchronized positive pressure and directional flow sensor with light and acoustic indicators that can be attached to any manual ventilation device (bag-valve-mask). The indicators show whether the pressure and the airflow provided to the patient are being properly delivered.	
EP22875244.0	Anti-bedsore device.	An anti-bedsore device to prevent skin and tissue injuries in people with reduced mobility due to pressure, friction, or abrasion, which can be adapted in shape to any part of a patient's body.	 IMIBIC INSTITUTO MAIMÓNIDES DE INVESTIGACIÓN BIOMÉDICA DE CÓRDOBA luism.fernandez@imibic.org antonio.ortega@imibic.org
Utility Model U202432355	Adjustable areolotome.	A device for marking the outline of the areola to be used within a breast surgery procedure.	

HRI Patent Portfolio: Medical devices

Patent application	Title	Description	Contact
PCT/ES2024/010088	Device for diagnosing and rehabilitating balance when standing and walking, and operating method of an installation formed by two of said devices.	A novel kinematic mechanism supporting a platform for a new device, which diagnoses and rehabilitates balance in standing and walking via diverse, easily controlled rotational, translational, and combined movements.	BIOBIZKAIA – EUSKAL OSASUN IKERKUNTZA – INVESTIGACIÓN VASCA EN SALUD – BASQUE HEALTH RESEARCH innovacion@bio-bizkaia.eus
EP20828993	Surgical guiding device for bone perforation in osteosynthesis processes especially for coronoid fractures.	A device for ulnar and coronoid bone perforation using varied drill/needle thicknesses for stitches or osteosynthesis screws, usable by one surgeon to maintain reduction and perforate diverse proximal ulna fragments, ensuring precise osteosynthesis for any coronoid fracture.	
Utility Model U201931641	Medical gas tank holder for a wheelchair.	A medical gas cylinder holder for a wheelchair, designed to house a medical gas cylinder, preferably oxygen, on a wheelchair that has a frame to which the holder is fixed by means of an anchoring body.	
PCT/ES2024/070626	Intracorporeal extruder device for the application of bioinks, hydrogels, or fluids in laparoscopic surgery.	An intracorporeal extruder device for in situ laparoscopic surgery, uniquely combining tissue engineering with robotic assistance, leveraging the advantages of internal actuation and intracorporeal application to enhance surgical precision and patient outcomes.	
PCT/ES2024/070281	Device for maintaining jaw opening.	A reusable, MRI-compatible device that allows a user to keep the jaw open in any calibrated position, from closed to maximum opening, which is essential for diagnosing intrinsic temporomandibular joint dysfunctions via MRI.	
EP22835856.0	System for diagnosing balance and sensor-equipped platform of said system.	A system for diagnosing and rehabilitating balance deficiencies that uses a platform with pre-programmed movements to record data like center of pressure, safety handle usage, and grip force, assessing patient balance status.	
EP24383449	Organ-on-chip device for cell culture.	Cell culture device that allows cell seeding in a culture chamber with continuous feeding of the culture medium. This allows the development of a three-dimensional model that simulates the microenvironment and key functional aspects of an organ.	
Utility Model U202432381	Simulator for surgical intervention of the larynx.	It is designed to provide training sessions with maximum realism in relation to actual situations, whether in the operating theatre or the consulting room, thereby enabling trainees to develop and acquire skills without compromising patient safety, achieving more accurate and efficient results in patient procedures, without the need to use cadaver models, whether animal or human.	
PCT/EP2025/071364	Device for detecting the posture of a person on the bed.	Devices and systems for detecting the position of a person on a bed. Generating alerts on the risk of falling.	
Utility Model U202131575	Device for image calibration in digital planning of hip prostheses.	A device that allows the radiologist to properly perform the calibration necessary for the correct digital planning of a total hip prosthesis.	

HRI Patent Portfolio: Medical devices			
Patent application	**Title**	**Description**	**Contact**
PCT/ES2023/070325	Biodegradable, self-retentive and anti-reflux intra-ureteral stent.	New biodegradable, self-retentive and anti-reflux intra-ureteral stent for the treatment of upper urothelial carcinoma with drug release.	INSTITUTO RAMÓN Y CAJAL DE INVESTIGACIÓN SANITARIA IRYCIS dvelasco@salud.madrid.org emma.gonzalez@salud.ma drid.org carmen.hevia@salud.madri d.org
Utility Model U202230357	Facial mask for the inhalation of nebulised substances, including an aspiration system.	New facial mask designed with an innovative system to aspire all expired air from the patient and reduce the possibility of infection of the people in the same room if the patient suffer from an infectious disease.	
Utility Model U201831728	Abdominal immobiliser device for diagnosis and medical treatments.	New device designed to reduce the movement of the abdominal organs during radiotherapy.	
P201530553	Harness for moving patients with reduced mobility.	New harness to assit with the mobilisation of patients from one seat to another by two professionals.	
Utility Model U202131581	Tracheostoma fitting device.	Spirometric lung function monitoring in laryngectomized patients is challenging due to the lack of a proper connection between the spirometer and the tracheostoma. This innovation addresses the issue with a specialized adapter, ensuring accurate and efficient respiratory assessment.	IMIB Instituto Murciano de Investigación Biosanitaria Pascual Parrilla innovacion@imib.es
PCT/IB2021/000591	Device suitable for exchanging a liquid medium and selecting particles in a mixture.	A microfluidic device for exchanging a liquid medium in a mixture of liquid and particles. the device being responsible for the exchange of fluids by replacing a first fluid by a second fluid.	IdiSNA INSTITUTO DE INVESTIGACIÓN SANITARIA DE NAVARRA info.idisna@navarra.es

HRI Patent Portfolio: Medical devices			
Patent application	**Title**	**Description**	**Contact**
Utility Model ES1277989U	Hemodynamic and cardiocirculatory behavior simulator device of a patient under ECMO therapy and complications derived from such therapy.	Apparatus that simulates a patient under ECMO therapy (extracorporeal membrane oxygenation) and the complications that may arise in said therapy.	INSTITUTO DE INVESTIGACIÓN SANITARIA Galicia Sur nerea.alonso@iisgaliciasur.es
PCT/IB2025/052500	Methods of diagnosing and treating mood and psychotic disorders using lymphocyte biomarkers.	A method of treating a mood or psychotic disorder, including obtaining membrane protein cluster count and/or membrane protein cluster size from a subject using a lymphocyte sample.	
Utility Model U202432353	Dressing for the care of hidradenitis suppurativa lesions.	Dressing for concave anatomical regions corresponding to skin folds.	
EP19383016.3	Device for the manufacturing of a scoliosis treatment brace.	It is a device for the efficient and personalized manufacturing of braces to treat scoliosis. it allows a rapid evaluation and a design based on quantitative data, reducing reliance on medical expertise. the goal is to prevent curve progression and surgery.	ISPA Instituto de Investigación Sanitaria del Principado de Asturias innovacion@finba.es
Utility Model U202100380	Protective device for intravenous access.	A protective device for intravenous access and its connections, applicable to persons requiring intravenous therapy.it is useful to avoid the current problems that arise when some patients, especially those of advanced age or those who present episodes of disorientation or agitation tear off venous lines.	
Utility Model U202430527	Device for calculating the optimal length of a catheter when placing a subcutaneous port.	Device that allows, in a simple manner and using only anatomical references, the calculation of the optimal length of a catheter when placing a subcutaneous port, without the use of fluoroscopic control. this device facilitates the calculation of the length that a silicone catheter should have inside a patient's vena cava.	

Diagnostics & Imaging

GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES
Instituto de Salud Carlos III
Subdirección General de Evaluación y Fomento de la Investigación

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
EP24382407.5	Biomarkers for predicting the response of a patient suffering from soft tissue sarcoma to treatment with a combined therapy comprising a PD-1/PD-L1 inhibitor and a tyrosine kinase inhibitor.	Methods for predicting the response of a patient suffering from soft tissue sarcoma to treatment with a combined therapy comprising a PD-1/PD-L1 inhibitor and a tyrosine kinase inhibitor.	INSTITUTO DE INVESTIGACIÓN SANITARIA FUNDACIÓN JIMÉNEZ DÍAZ innovacion.invest@iis-fjd.es
EP24382299.6	In vitro methods for the diagnosis of allergic asthma or nonallergic asthma in a subject suffering from asthma, or for the prognosis of asthma.	In vitro method for the diagnosis, for the differential diagnosis or for the prognosis of allergic asthma or nonallergic asthma in a subject suffering from asthma, which comprises assessing the expression level of the LGALS3 gene.	
PCT/EP2024/083191	Method for the diagnosis of aneurysm, and inhibitors for use in the prevention or treatment of aneurysm.	In vitro method for the diagnosis of aneurysm which comprises assessing the level of a nucleotide sugar of the hexosamine biosynthetic pathway. It also refers to an inhibitor of an enzyme involved in the hexosamine biosynthetic pathway.	
EP23382143.8	Method for estimating the ventricular stroke volume from the pulmonary artery pressure.	Method for estimating ventricular stroke volume from the pulmonary artery pressure, a method for estimating stroke volume variation over the respiratory cycle from the pulmonary artery pressure, an apparatus of the same and a computer program product of the same.	
EP22383213.0	Method for the diagnosis of joubert syndrome.	The present invention refers to the medical field. Particularly, the present invention refers to an in vitro method for the diagnosis of Joubert syndrome (JS) by assessing the presence of a biallelic intragenic duplication of exons 20- 46 of gene CPLANE1.	
PCT/EP2025/050574	Method for determining a refractive correction for an optical system.	Specifically, the present invention relates to computer-assisted methods for analysing and determining refractive errors in optical systems. More precisely, this invention is a computer-implemented method for determining a refractive correction for an optical system such as the human eye.	
P201730947	Differential biomarkers of asthma.	The invention proposes the use of 8 proteins (5 in serum and 3 by western blot) as differential biomarkers of asthma phenotypes (ANA, AA, A) and their severity. These biomarkers allow discrimination between clinical forms of asthma and allergy based on their expression profiles.	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
EP24382078	Bacterial biomarkers for the early detection of colorectal cancer in stool samples.	Kit of bacterial biomarkers in intestinal or fecal samples that, on the one hand, help in the diagnosis of colorectal cancer and, on the other hand, predict the progression of colorectal cancer, as well as the response to treatment of a subject suffering from this disease.	inibic instituto de investigación biomédica de a coruña alexandre.de.la.fuente.gonz alez@sergas.es graciela.fernandez.Arrojo@ sergas.es
15847971	Method for diagnosing arthrosis.	Characteristic peptide pattern of subjects suffering from osteoarthritis and the use of said pattern in the diagnosis of said disease. Therefore, it is related to an in vitro diagnostic method and a kit for the implementation of said method for diagnosing rheumatic diseases.	
EP24382521	Methods to classify, determine therapy and prognosis of gastric adenocarcinoma and kit for its use.	Use of a genetic signature as a method to identify and distinguish gastric adenocarcinoma tumors (inflamed vs. non-inflamed) and determine therapy recommendations, prognosis, and a kit for these methods' use.	IRB Lleida Institut de Recerca Biomèdica innovacio@irblleida.cat
P202030487	Non-invasive method for the diagnosis and prevention of colorectal cancer (CRC).	An accurate, simple, sensitive and efficient method of extraction and analysis of volatile organic compounds has been developed for application as a non-invasive screening test for colorectal cancer (CRC) by stool analysis. it can be used for eliminate/reduce the number of false positives/negatives.	ISABIAL Instituto de Investigación Sanitaria y Biomédica de Alicante innovacion@isabial.es
EP25382212	Method for minimal residual disease detection in cancer patients.	Tumor diagnostic method for the highly sensitive detection of minimal residual disease (MRD) in cancer patients by analyzing circulating tumor DNA (CTDNA), with high sensitivity, especially in postoperative patients, allowing a significant improvement in clinical decision-making and avoiding patient exposure to unnecessary treatments.	INCLIVA | VLC Instituto de Investigación Sanitaria innovacion@incliva.es

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
ES201030258	Method for prognosticating stroke.	A method for predicting functional outcome in a stroke patient comprising determining the Arg72Pro polymorphism of the Tp53 gene in a biological sample of said patient, wherein the presence of the Arg/Arg genotype is associated with poor functional prognosis of stroke.	IBSAL Instituto de Investigación Biomédica de Salamanca itsal@ibsal.es
ES201531891	Biomarker for the diagnosis, prognosis, and monitoring of early-onset colorectal cancer.	Novel biomarker, NOMO-1, for diagnosing, prognosing, and monitoring colorectal cancer, especially early-onset cases. It also includes an in vitro method requiring biomarker quantification in tumor cell samples for accurate assessment.	
EP18726508	MMP-8 as a marker for identifying infectious disease.	The invention relates to the use of matrix metalloproteinase-8 (MMP-8) as a biomarker for identifying infectious diseases. Elevated MMP-8 levels in biological samples indicate the presence of an infection, aiding in early diagnosis and treatment.	
ES202032679	Diagnostic device for neglected tropical diseases.	Portable device capable of real-time detection of nucleic acid amplification via colorimetric change, using LAMP methodology. It enables rapid, sensitive, and specific diagnosis of neglected tropical diseases, facilitating field use in resource-limited endemic areas.	
EP2020052317	Aortic stenosis echocardiographic follow-up expert system.	An imaging-based analysis method for chronic conditions like aortic stenosis. Patient data is analyzed using a trained classifier to predict disease severity at future intervals. It recommends follow-up imaging dates and detects inconsistencies in measurements over time.	
EP19749736	proADM for prognosing the risk of a medical condition requiring hospitalization in patients with symptoms of infectous.	A method to guide therapy in infectious disease patients by assessing disease progression risk. It measures proADM or its fragments, where ≤1.2 nmol/l ±20% means low risk (no hospitalization) and >1.2 nmol/l ±20% means high risk. A test kit for this method is also included.	
EP23162838	proADM as marker indicating an adverse event.	Use of pro-adrenomedullin (ProADM) as a biomarker for diagnosing, prognosing, risk assessment, and stratification of adverse events, particularly mortality, in patients. Elevated ProADM levels indicate higher risk, aiding in early intervention and management.	
EP2022082262	In vitro method for the identification of mesenchymal stem/stromal cells.	In vitro method for identifying mesenchymal stem/stromal cells in a subject's cell population and differentiating them from fibroblasts. And it further pertains to isolating a substantially pure mesenchymal stem/stromal cell population using this innovative method.	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
EP2021070131	In vitro method for predicting mortality in covid-19 patients.	In vitro use of a coronavirus antigen in plasma, serum, or blood samples to predict prognosis and mortality risk in infected patients. it also evaluates patient response to antiviral therapy and selects patients for treatment, optimizing strategies for better outcomes.	IBSAL Instituto de Investigación Biomédica de Salamanca itsal@ibsal.es
EP2022057048	Method for the diagnosis of a coronavirus infection.	An in vitro method for the diagnosis of a coronavirus infection which is preferably carried out by using minimally-invasive biological samples obtained from the subject, most preferably plasma samples.	
EP2023063336	In vitro method for screening and/or diagnosis of colorectal cancer.	Method for colorectal cancer screening, diagnosis, and prognosis, considering sex disparities. A preferred embodiment focuses on early-onset colorectal cancer (EOCRC) in individuals under 50, improving detection and personalized assessments for better treatment strategies.	
WO2021110927	Immunomark.	Immunomark seeks to improve cancer treatment by developing a fast and simple test that detects molecules in blood, optimizing therapeutic decisions, increasing treatment efficiency and reducing toxicity and pharmaceutical costs (validated on real patient samples).	ibima Plataforma BIONAND maria.mengual@ibima.eu
WO2025/027224	Mody-tag.	Rapid and accurate diagnosis of MODY diabetes, based on functional (microRNA expression) rather than genomic analysis, facilitating better disease management and family screening (cohort >100 patients).	
WO2024/236212	Diabet1: biomarkers for early diagnosis of diabetes 1.	Method for early diagnosis (prior to disease debut) of DT1, based on the mRNA expression level of two new markers. The analysis is performed on a blood sample in which circulating lymphocytes are isolated.	
P202530753	In vitro method for the diagnosis and stratification of MS patients.	The invention proposes in vitro an in vitro method and a diagnostic kit based on the quantification of protein biomarkers in biological samples (preferably serum) to differentiate between clinical forms of MS and establish severity prognoses by correlating them with clinical scales.	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
PCT/EP2024/063842	Method for the early detection of vomit behaviour in patients with eating disorders.	In-vitro kit for ealry detection of vomit behaviour in patients with eating disorders. We have developed a tool that allows the diagnostic and monitoring of purging behaviour as well as its severity in patients with eating disorders, using saliva amples through the analys of selected bacteria genes.	IDIBELL Institut d'Investigació Biomèdica de Bellvitge innovacio@idibell.cat ltraveset@idibell.cat
PCT/EP2024/078537	New methods for the detection of neuronal antibodies.	Neurantigen aie diagnose: kit that consisits on human ipsc-derived neuronsready to be shipped to diagnostic laboratories for autoimmune encephalitis (AE). This kit is able to detect all known aie-related antibodies using patients serum or CSF for its use as a diagnostic tool.	
ES 2983107 T3	In vitro methods for the prognosis of amyotrophic lateral sclerosis.	The present invention relates to an in vitro method and kits for the prognosis of amyotrophic lateral sclerosis (ALS), based on the expression or activity of ELOVL6 (Elongation of Very Long Chain Fatty Acids Protein 6).	
US2023/0348988	DNA Damage Repair Deficit in Cancer Cells	This patent outlines novel gene-expression signature methods to identify cancers with defective DNA damage repair, predicting sensitivity to genotoxic therapies, PARP1 inhibitors, or immunotherapy. It also describes techniques to induce this repair deficiency in tumors to enhance treatment efficacy.	
US12/937568	Planning system form intraoperative radiation therapy and methods for carrying out said planning (Surgical Navigator RIO).	A simulation and planning system for intraoperative radiotherapy and the procedure to allow the study, simulation, planning, training and registration of the treatment (the radiation procedure), as well as to perform the appropriate dosimetric estimation that will be used in the radiotherapy.	IIS G-M Instituto de Investigación Sanitaria Gregorio Marañón gestion.innovacion@iisgm.com
P200502612	Multi-modality tomography apparatus.	Multi-modality tomography device with two tomographs or imaging systems using different techniques (e.g., X-ray CT & PET/SPECT, or optical imaging) on same face of rotatable support. The support rotates bidirectionally around axial shaft; patient on fixed support stays immobile during exams with either tomograph.	
EP18728916.0	Apparatus and method for generating tomographies.	An apparatus and a method that enable a 3D image from a limited number of projections and/or limited angular range by using X-ray imaging systems with low mechanical precision requirements.	
EP24382503.1	Tissue clarifying system and method thereof.	Automated system for large biological tissue clarifying, bleaching and/or labelling and a method thereof. It comprises a sample subsystem equipped with containers for holding samples, alongside a reagent subsystem containing one or more containers for various specialized reagents.	

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Patent application	Title	Description	Contact
P201600158	Method for determining the degree of activation of the trigeminovascular system.	A real-time method to determine the activation level of the trigemino-vascular system, applicable to medical devices using haemodynamic biomedical signals.	 innovacioniisp.hlpr@salud. madrid.org
P202130777	Method for early detection of liver damage using bone morphogenetic protein 2 (BMP2) in liquid biopsy.	Method for the early detection of liver damage by detecting the BMP2 expression product in a liquid biopsy, selected from: saliva, tears, urine and blood (plasma or serum).	
P202130233	Method for prognosis of an atrial arrhythmia based on an electrocardiogram of sinus rhythm.	Method for the determination by analysis of variables derived from sinus rhythm electrocardiograms (ECG) of pathologies in an individual. electrocardiograms (ECGs) in sinus rhythm of pathologies in an individual. Integration of these variables into a predictive model.	
PCT/ES2021/070944	Method for prognosis of an atrial arrhythmia based on an electrocardiogram of sinus rhythm.	Method for the determination by analysis of variables derived from sinus rhythm electrocardiograms (ECG) of pathologies in an individual. electrocardiograms (ECGs) in sinus rhythm of pathologies in an individual. Integration of these variables into a predictive model.	
P201730943	Non-invasive method for determining intracranial pressure using the bioelectrical activity of the brain.	Non-invasive method for determining intracranial pressure changes from EEG data, namely determining the value of EEG spectral and network analysis variables; and determining the endogenous variable X of a transfer function based on the above results.	
P202331078	Implant device for treatment of pathologies using electric fields.	Implant device for treatment of pathologies by means of electric fields comprising at least one electrode for applying electric fields to a body tissue and configured to be implanted in the body of a body tissue, and which is configured to be implanted in 5 the body of a person.	
P202031194	Method for determining the evolution of acute brain damage and pharmaceutical composition for its treatment.	Method for determining the progression of acute brain damage in individuals: determining the expression product of at least two of the biomarkers and the use of a device for determining the expression product of said biomarkers and a pharmaceutical composition for use in the treatment.	
EP4277620A1	Tetrahydro-spiroindoline-pyrrolopyrrole-triones inhibitors of the NRF2-beta-TrCP interaction for use in the treatment of NRF2.	The present invention relates to NRF2- BTrCP interaction inhibitors with general formula I and its derivate salst for use in treatment of NRF2 - related diseases caused by chronic inflammation and oxidative stress, such as liver disease.	

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Patent application	**Title**	**Description**	**Contact**
EP16722143.1	Lewy-dx.	Lewy-dx measures specific miRNA levels in the blood platelets of DLB patients. Using a blood sample, standard lab techniques, and specialized software, the test accurately differentiates DLB from AD, enhancing diagnosis and optimizing patient management.	IGTP Institut de Recerca Germans Trias i Pujol innovation@igtp.cat
EP15700343	Double stranded DNA libraries.	A method for DNA sequencing and identifying methylated cytosines in DNA.	
EP19745 075.2	In vitro method for the diagnosis of synucleinopathies.	Diagnostic method for detecting synucleinopathies using in vitro techniques.	
EP18704 566.1	PROMISE.	Predicting outcomes of endovascular treatment for ischemic stroke patients.	
EP19 728 095.1	Tuberculosis mycobacteria.	A diagnostic method for identifying non-tuberculous mycobacteria.	
EP19730 382.9	Metaboloma.	Conventional TB diagnostics are slow and have low sensitivity. Our project introduces a non-invasive urine test that uses metabolic biomarkers to accurately diagnose TB, classify patients, and monitor treatment efficacy, providing a faster and more reliable method for clinical management.	
EP20704 923.0	Cardiogenic shock.	Currently, patients are diagnosed based on clinical presentation, making it difficult to decide if pharmacological therapy is enough. Our project aims to develop an In Vitro Diagnostic using a panel of 4 proteins (CS4P) with CLIA to predict outcomes in CS patients, aiding cardiologists in making quick, informed treatment decisions.	
EP19808716.5	Kit for inflammatory prognosis.	A diagnostic and prognostic kit for detecting and assessing inflammatory conditions.	
EP24383 456.1	Thyromet.	Thyroid cancer is increasing, with 550k new cases yearly. Thyromet, an IVD test using DNA methylation biomarkers, predicts metastasis risk, enabling personalized treatment and reduced overtreatment, leading to better outcomes, improved quality of life, and lower healthcare costs.	
EP25161234.7	Mosaic variants.	Method of analyzing a sample of biological material using a pipetting station to detect mosaic genetic variants of ultra-low frequency in genes	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
PCT/ES2024/070036	Capture of extracellular vesicles by T cell receptor recognition.	The invention can find application in any situation that requires the identification, immobilization and/or capture of EVs from a sample of a subject, based on the specific binding between a peptide or a pool of peptides of an antigenic protein on the solid support and the receptors. T of the EVs membrane.	ibs.GRANADA INSTITUTO DE INVESTIGACIÓN BIOSANITARIA palvarez@fibao.es
P202430017	Novel biomarkers for early diagnosis of malignant melanoma.	This patent covers novel metabolic biomarkers discovered by LC-HRMS for the early and accurate diagnosis of malignant melanoma. It protects their composition and diagnostic use, supporting development of non-invasive clinical tests.	
PCT/ES2024/070036	Capture of extracellular vesicles by T cell receptor recognition.	A simple method to assess the cellular immune status against an antigen by using solid surfaces functionalized with antigen fragments in contact with EVs from a subject's sample.	
P202530172	Method for the Diagnosis of Hypophosphatasia by Flow Cytometry.	Quantitative diagnostic model for acute ischemic stroke that assesses the mismatch between the actual NIHSS score at admission and a theoretical score estimated from clinical and radiological parameters.	
P202530477	Method for the diagnosis of hypophosphatasia through microbiota alterations and probiotic product for the treatment of hypophosphatasia.	Hypophosphatasia shows a distinct microbiome pattern that can serve as a diagnostic biomarker and basis for probiotic development to restore microbiota and improve comorbidities, providing an innovative approach complementary to conventional methods.	
EP21382680.3	Biomarkers for endometrial cancer.	Identification of proteins as biomarkers for the early and effective diagnosis of endometrial cancer through non-invasive procedures.	Vall d'Hebron Institut de Recerca mariona.esquerdo@vhir.org
EP13382278.3	Primers and methods for detecting human hepatitis c virus (HCV) variants in an isolated sample.	Combinations of new Direct-Action Antivirals (DAAs) against hepatitis C virus (HCV) allow achieving sustained virological response rates (SVR is defined as no detectable HCV RNA in serum 12-24 weeks after the end of treatment) of over 90%. The list of new DAAs approved will increase in the coming months. These highly efficient antivirals against HCV are directed against the three main targets of the virus.	
EP23382807.8	Method for determining the state of homologous recombination deficiency in a tumor and for predicting the response of a cancer to therapy.	A method for determining the HRD status of cancer either from a tumor sample or a liquid biopsy. The inventive method has been developed based on the hypothesis that CNAs in certain genomic regions (regardless of being gained or lost) recurrently in HRD positive tumors.	

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Patent application	Title	Description	Contact
P202530064	Method for determining the secretory state of human milk by infrared spectroscopy.	The method allows in situ the determination of the phenotype of the maternal secretory state by direct measurement of human milk by IR spectroscopy. Thanks to this invention, health conditions associated with the phenotype of the maternal secretory state can be prevented or diagnosed.	Instituto de Investigación Sanitaria La Fe otc@iislafe.es innovacion@iislafe.es
P202530039	In vitro method for predicting the risk of cardiovascular disease, or for the diagnosis of cardiovascular disease, in patients with an infectious disease.	Based on the inventors' findings, high levels of FGF-23 are a clear biomarker of adverse cardiovascular event in patients with pneumonia. Thus, this invention involves the in vitro use of FGF-23 protein to diagnose and/ or predict the risk of suffering cardiovascular disease in patients.	
P202530028	Complex and its use as a sensor for the detection of scopolamine.	This technology consists of a specific molecular complex for use as a nanosensor for the rapid, selective and in situ detection of scopolamine (a drug). Thanks to this invention, scopolamine can be detected without the need for complex devices in a simple, fast, efficient and in situ manner.	
EP24382866.2	System for the classification of an urological patient.	The present invention consists of a method of training a machine to classify urological male patients into two classes. Through this classification, it is possible to identify the cause for which the patient shows a deficiency in infection without the need to apply intrusive techniques or imaging.	
P202430694	Biosensor, procedure for obtaining said biosensor, method for detection of Pseudomonas aeruginosa and detection kit employing said sensor for rapid detection of P. aeruginosa.	According to the state of the art, there is no reliable technique to detect Pseudomonas aeruginosa, responsible for some of the most important infections. Therefore, a new specific biosensor has been designed to detect and quantify this bacteria, including the application in test strips.	
P202430366	Molecular signature to detect cardiac rejection.	Endomyocardial biopsy is the standard procedure for detecting cardiac rejection (the cause of death after heart transplantation), but it presents several risks (arrhythmias...). A non-invasive molecular signature has been developed with excellent results for the detection of cardiac rejection.	
P202230663	Method for diagnosing and staging bladder cancer based on miRNAs.	Bladder cancer (BC) accounts for 3% of all malignant tumors in adults worldwide and is the most lethal urological malignancy. Therefore, the inventors of the present invention have identified and validated a urine profile of 25 seven miRNAs for the purpose of diagnosing and stratifying BC.	
P202231096	miRNA panel for the diagnosis of chronic thromboembolic pulmonary hypertension.	Chronic post-thrombotic pulmonary hypertension (CPTH) is a rare complication of acute pulmonary embolism whose prevalence in the population is difficult to assess. As a solution, a panel of miRNAs has been identified so as to diagnose CPTH in a simple, non-invasive, and reliable manner.	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
EP21383223.1	Circulating miRNAS as predictive biomarkers of the risk of cardiac ischemia in patients with chest pain.	Cardiac ischemia is the leading cause of mortality in the world. Faced with this problem, inventors have designed a novel predictive model based on the combination of 40 selected circulating miRNAs that can be used to stratify cardiovascular disease patients at risk of myocardial ischemia.	Instituto de Investigación Sanitaria La Fe otc@iislafe.es innovacion@iislafe.es
P202030357	Method for the rapid detection of Candida auris and diagnosis of infection caused by this pathogen.	Candida auris is one of the species most resistant to antifungal drugs and can cause highly fatal infections. This species is difficult to identify with current biochemical techniques. Therefore, a biosensor has been designed that allows the detection of C. auris quickly, easily, and selectively.	
P201931051	Examination and treatment table for patients with benign paroxysmal positional vertigo .	The present invention consists of a stretcher for the examination of patients with benign paroxysmal positional vertigo that allows the patient to perform all the movements necessary for diagnosis as it facilitates the execution of these movements unlike standard stretchers.	
P201939355	System for obtaining useful data for analysis of body morphometry and associated method.	Body deformities are usually assessed using methodologies that have limitations such as the lack of information. For this reason, a system has been designed to obtain useful data that allows body morphometry to be determined automatically, non-invasively, and with great accuracy and speed.	
P202330641	Biomarkers of response to bariatric surgery.	A panel of molecular biomarkers that define the state of subcutaneous adipose tissue, which is associated with a better response to bariatric surgery. These biomarkers predict whether the response to bariatric surgery is effective for weight loss and improvement of associated comorbidities.	IBiS INSTITUTODEBIOMEDICINADESEVILLA ecruces-ibis@us.es ahoyos-ibis@us.es
P202430688	Immunophenotyping panel and method for generating an immunophenotypic and functional profile of a subject.	A method that allows the evaluation of the differentiation and plasticity of immune subpopulations in response to antigens, through the detection of specific markers of regulatory cells and effector cells by means of spectral flow cytometry and in the identification of the cytokines produced.	
P202431108	MicroRNA-based detection of fecal occult blood as a new noninvasive screening strategy for colorectal cancer.	Non-invasive colorectal cancer screening alternative that allows the detection of occult blood in feces using stable biomarkers in human samples including feces, resistant to ambient temperatures and amplifiable (microRNAs) that allow a diagnostic performance even higher than the current test.	
Other	Functional Cognitive Disorder Questionnaire (FCD-Q8).	The FCD-Q8 questionnaire is the first validated cognitive test for Functional Cognitive Disorder (FCD) versus early Alzheimer's disease, in closed diagnostic groups with positivity or negativity of biomarkers.	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
P201531891	Biomarker for the diagnosis, prognosis, and monitoring of early-onset colorectal cancer a prognostic method and kit for identifying the risk of.	The invention identifies the nomo-1 gene or its expression products as a biomarker for early-onset colorectal cancer. It includes an in vitro method for diagnosis, prognosis, and monitoring by quantifying this biomarker in biological samples containing tumor cells.	i+12 Instituto de Investigación Hospital 12 de Octubre innovacion.imas12@ h12o.es gestion innovacion.i mas12@h12o.es
P201630559	A prognostic method and kit for identifying the risk of developing albuminuria, the risk of kidney damage and cardiovascular risk in a hypertensive human subject.	A prognostic method and kit to assess albuminuria, kidney damage, and cardiovascular risk in hypertensive patients by measuring urine levels of specific metabolites and comparing them to healthy standards to identify elevated or reduced markers and determine associated risks.	
P201800272	Procedure for the preparation of lipid nanoparticles, and lipid nanoparticles with brain macrophages as target cells.	Method to produce lipid nanoparticles targeting brain macrophages by adding a mannose derivative to the lipid layer. Functionalization occurs without toxic agents. The dense core carries therapeutic nucleic acids for neurological or psychiatric diseases.	
P202031194	Method for determining the evolution of acute brain damage and pharmaceutical composition for its treatment.	Method to monitor acute brain damage progression by measuring expression of at least two biomarkers (SAA1, S100β, TLR4) in a sample. It also includes a device for detection and a pharmaceutical composition for treating acute brain injury.	
P202131016	Pronostic signature of micrornas in neuroendocrine neoplasms (NNES) of gastroenteropancreatic and pulmonary origin.	A prognostic miRNA signature for survival in patients with gastroenteropancreatic or pulmonary neuroendocrine tumors (excluding SCNEC). It includes a method and kit for detecting miR-17-5p, miR-18a-5p, miR-19a-3p, miR-20a/b-5p, miR-92a-3p, miR-203a-3p, and miR-210-3p.	
P202330321	In vitro method for the prognosis and/or diagnosis of diabetes mellitus in patients with aortic stenosis and/or for the prognosis and/or diagnosis of aortic stenosis in patients with diabetes mellitus.	In vitro method for diagnosing or predicting diabetes in patients with aortic stenosis and vice versa, by analyzing biomarkers. It also includes applications for prognosis and diagnosis of both conditions when they coexist.	
P202430165	Predictive signature of response to antiangiogenics in neuroendocrine tumors of gastroenteropancreatic and pulmonary origin.	Gene expression signature (SPP1, ATXN7, REXO1L2P) to predict response to antiangiogenic drugs like Axitinib in neuroendocrine tumors. A bioinformatics tool converts gene data into a score indicating likelihood of treatment benefit.	
WO2021191485A1	Biomarkers for predicting a subject's response to bcg therapy, methods and uses based thereon.	In vitro method to predict bladder cancer patient response to BCG therapy by analyzing miRNA expression levels or ratios in a sample. It includes kits and the use of miRNAs or their combinations to assess therapy response and associated risks.	

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Patent application	**Title**	**Description**	**Contact**
EP23382663	IFN signature in HSE and related complications.	New blood interferon (IFN) signature can rule out or confirm Herpes Simplex Encephalitis in under one hour and predicts autoimmune complications. This non-invasive tool could become the first diagnostic step for patients with encephalopathy, reducing unnecessary procedures. Seeking partners for licensing or co-development.	IDIBAPS Institut D'Investigacions Biomèdiques August Pi i Sunyer innova@recerca.clinic.cat
EP20383140	In vitro prognosis test for COVID-19.	In vitro method for the prognosis and/or for predicting mortality risk in patients suffering from Coronavirus infection.	
EP23383041	NeurAntigen – AiE.	Novel platform for the detection of antibodies based on neurons derived from human induced pluripotent stem cells (iPSCs). This innovative tool allows a rapid and accurate diagnosis of patients with Autoimmune encephalitis (AiE), impacting on clinical decisions, treatment and prognosis.	
EP21382731	PH-Care.	Portal Hypertenision (PH) non-invasive method for identifying patients suffering from PH and stratifying those that have clinically significant PH. It does not require skilled professionals and could be done in primary heathcare centres.	
EP25382685	Method and biomarkers to detect chronic liver DIsease development.	A 17-gene signature biomaker tool for personalized clinicla decision making, assesment in drug response for patients with chronic liver cirrhosis.	
PCT/EP2022/058503	Genomic predictor of outcome in cancer.	New transcriptional signature characteristic of fetal intestinal stem cells that will allow to accurately predict the prognosis of colorectal cancer patients at difficult prognostic stages, enabling the selection of patients who may require more continuous monitoring or more aggressive treatments.	Hospital del Mar Research Institute Barcelona iavila@researchmar.net
PCT/EP2023/056335	Method for diagnosing cancer.	An in vitro method for diagnosing cancer in a subject based in a biomarker combination.	

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Patent application	Title	Description	Contact
EP21382416.2	Method for the prognosis of patients suffering from atrial fibrillation.	New noninvasive and personalized strategy for predicting the response of patients suffering from AF to catheter ablation treatment.	idis INSTITUTO DE INVESTIGACIÓN SANITARIA SANTIAGO DE COMPOSTELA innotransfer.fidis.santiago @sergas.es
EP23382220.4	Diagnosis, monitoring or prognosis of diabetes or prediabetes.	The invention proposes using the percentage of certain proteins bound to glucosminoglycans (GAGs) in a fasting serum sample as an alternative to an oral glucose overload for the diagnosis of diabetes and prediabetes.	
EP22383026.6	pRediCCtIO: Precision Medicine for Optimizing Immunotherapy in Renal Carcinoma.	Novel gene expression model consisting of three genes, which has demonstrated significant prognostic value for overall survival in a cohort of patients treated with nivolumab.	
EP23382063	DTNHO: Diagnosis and Treatment of Neurogenic Heterotopic Ossification.	The present invention offers an innovative technology to predict and prevent NHO through the development of a kit to assess the expression levels of "osteoinductive" biomarkers in peripheral blood samples from patients at risk of developing NHO.	
EP23382969	MIGRATX: In vitro method for the diagnosis, prognosis and treatment response of migraine.	This invention can be used to determine between patients suffering from chronic migraine and patients suffering from episodic migraine.	
EP23382377.2	MAPRI: In vitro method for predicting cancer patient response to Pd-1 and/or Pd-l1 inhibitors.	Proteomic signature that allows discrimination between responders and non-responders and their combination allows differentiation between the two groups with an area under the curve (AUC) of 1.	
P202330579	In vitro method to identify whether a subject treated with bone-modifying agents may develop osteonecrosis of the jaw.	The team has identified a series of proteins that, determined in saliva using non-invasive techniques, allow with high efficiency to identify patients at risk of developing medication-related osteonecrosis of the jaws (MRONJ). Currently there are no clinically accepted methods for this objective.	
EP24382243	PREANTIF: Method for predicting the response of a patient suffering from ulcerative colitis to a treatment with anti-TNF antibodies.	Novel biomarker that will allow for better-targeted therapy for patients with ulcerative colitis. It can predict a patient's response to anti-TNF therapies before treatment begins, offering a significant advancement over the current approach.	
EP24382223	Epi-smart-PRO: Method for Predicting Cancer Patients' Risk of Radiotherapy Side Effects.	It represents a groundbreaking advancement in personalized oncology, combining cutting-edge machine learning technology with epigenetic biomarkers to predict the likelihood of moderate to severe gastrointestinal and genitourinary toxicities in prostate cancer patients undergoing radiotherapy.	

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Patent application	Title	Description	Contact
EP24382315	In vitro method for predicting the response of patients suffering from rheumatoid arthritis to a treatment with tumor necrosis factor (TNF) inhibitors.	Use of the identified biomarkers or biomarker signatures for classifying patients suffering from rheumatoid arthritis into responder or non-responder patients to a treatment with TNF inhibitors.	 INSTITUTO DE INVESTIGACIÓN SANITARIA SANTIAGO DE COMPOSTELA innotransfer.fidis.santiago @sergas.es
EP24382240	BACMO: Advanced Method for Differentiating Viral from Bacterial Pneumonia.	Transcriptomic signature for distinguishing bacterial from viral pneumonia in pediatric patients, aiming to enhance diagnostic accuracy and guide appropriate treatment.	
EP24382675	Mycotest: Multi-transcript signatures to differentiate pneumonia caused by Mycoplasma pneumoniae from other types of viral and bacterial pneumonia.	In vitro method for the diagnosis of a Mycoplasma pneumoniae infection and/or for the differential diagnosis between a Mycoplasma pneumoniae pneumonia and other pneumonias and/or for selecting the antibiotic treatment for a patient suffering from pneumonia.	
EP24383255	Method predicting the risk of suffering from type 2 diabetes.	Method for predicting the risk of suffering from type 2 diabetes which comprises assessing the abundance of N-glycome peak 37 and N-glycome peak 24 in a biological sample obtained from the subject.	
EP24383156	Method for predicting mortality risk.	The aim of this invention is to identify predictive biomarkers of all-cause, cancer, and cardiovascular mortality in a general adult population and explore its usefulness in the general adult population as a prognostic tool alone and in combination with age, sex, and other common risk variables.	
EP24382534	Prognosis of a respiratory syncitial virus.	Biomarkers related to respiratory syncitial virus infection and severity and shed further light on the local mechanisms that might be contributing to the severe phenotype, representing a good proof of principle for non- invasive saliva samples.	
EP25382404.9	In vitro method for assessing oxidative stress.	In vitro method for assessing oxidative stress and/or for the diagnosis of hypertension and/or cardiovascular disease (CVD) in a urine sample obtained from the subject.	
EP25382641	In vitro method for the non-invasive early detection of advanced colorectal neoplasia.	A novel, highly accurate, and clinically applicable method for detecting colorectal cancer and advanced neoplasia based on epigenetic signatures. Particularly, this invention offers a significant advancement in non-invasive CRC screening and has the potential to reduce cancer-related mortality through earlier detection and intervention.	
EP25382153	In vitro method for the diagnosis or monitoring of pancreatic cancer.	This invention aims to identify and validate epigenetic biomarkers based on methylation as a useful tool for non-invasive early detection and for monitoring therapeutic response and disease progression of metastatic pancreatic adenocarcinoma patients.	

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Patent application	Title	Description	Contact
EP24382850	In vitro method for the diagnosis and/or prognosis of obesity.	In vitro method for the diagnosis and/or prognosis of obesity, the method comprising assessing the level of expression of the gene PTK2B in a biological sample obtained from the subject.	INSTITUTO DE INVESTIGACIÓN SANITARIA SANTIAGO DE COMPOSTELA innotransfer.fidis.santiago @sergas.es
EP24383160	Method for predicting the response of patients suffering from lung cancer to a treatment with immunotherapy.	DNA biomarkers derived from liquid biopsy samples in predicting immunotherapy response in advanced NSCLC patients.	
EP25382016	A CTC-derived four-gene signature for the prediction of metastatic recurrence in breast cancer.	This invention offers an innovative strategy for the prognosis of patients suffering from breast cancer and/or for predicting metastasis in patients suffering from breast cancer is herein provided.	
EP25382579	MRI-19F.	Fluor-based sensor containing nanoparticles for use in an in vivo method for imaging thrombi in a subject, wherein the nanoparticles serve as contrast agents.	
Spanish Trademark nºM4022981 Industrial Design nº202230128	A software program for the treatment of facial paralysis based on mirror therapy.	Technology with application in the treatment of facial paralysis consisting of an image management computer programme that duplicates, in real time, the 'healthy side (or half)' of the face, projecting it onto the 'unhealthy' side so that the patient can see an image as close as possible to the 'normality' of their own face.	IdiPAZ Instituto de Investigación Hospital Universitario La Paz innovacion.legal@idipaz.es
P201231918	Test to determine the prognosis of a patient with colorectal cancer.	The cololipid test allows the prognosis of a patient suffering from colorectal cancer to be determined and an appropriate treatment to be selected. the test is based on the detection of the expression levels of a biomarker, cololipidgene, consisting of four genes.	
P201130863	Clinical response prediction kit for colorectal cancer therapy.	Kit for predicting the clinical response of a patient with colorectal cancer to neoadjuvant antitumour therapy, comprising the detection of the expression levels of a genomic fingerprint formed by six specific genes.	
P201030927	Tool for obtaining data on a patient's respiratory cycle.	A non-invasive system that processes a video sequence recorded with a thermal imaging camera to obtain reliable and reproducible information about a patient's respiratory cycle.	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
ES2598878	Method and device for analysis of biological material, method of obtaining and using the same.	Method of manufacturing a detection device for biological material is described in this document, a device that presents a series of micromotors that can be selectively functionalized and guided inside a microfluidic device.	IdISSC INSTITUTO de INVESTIGACIÓN SANITARIA Hospital Clínico San Carlos otc.hcsc@salud.madrid.org
EP19783542	Method for the identification of cardiac fibrillation drivers and/or the footprint of rotational activations using single optical or electrical signals without requiring panoramic simultaneous acquisition.	Ex vivo use of the instantaneous frequency modulation (iFM) signal of cardiac activations and to an ex vivo use of the instantaneous amplitude modulation (iAM) signal obtained from the sequence of amplitude excursions of said activations for detecting 'driver' or 'high-hierarchy' regions and/or the cardiac spots that display the footprint of rotational activations in the heart of a subject with cardiac fibrillation without requiring panoramic simultaneous acquisition.	
EP23382324	Genetic signature for predicting the response to immunotherapies in a subject.	Methods relating to the prediction of the response of a subject to immunotherapies, preferably immune checkpoint inhibitors, wherein said methods are based on the determination of the expression levels of a set of genes, and subsequent comparison with control values. furthermore, the invention also relates to a kit comprising means for determining the expression levels of said genes.	
EP23383226	Method for obtaining an electrocardiogram in pronated subjects.	Method for obtaining an electrocardiogram of a subject in a prone position, which comprises the steps of obtaining two leads from four electrodes positioned on the left arm, the right arm, the left leg, and the right leg of the subject selected from I, II, III, aVR, aVL, and aVF.	
PCT/EP2024/082962	An in vitro method for detecting cancer.	In vitro method for detecting cancer in a subject, for predicting the clinical outcome of a subject suffering from cancer, or for monitoring the treatment of a subject suffering from cancer.	
EP4038206A1	A method for detecting pseudomonas aeruginosa st175.	Diagnostic method for detecting Pseudomonas aeruginosa ST175, a high-risk, antibiotic-resistant strain. Uses PCR to identify a unique genetic marker, enabling fast, accurate detection from clinical samples to support timely medical intervention.	IdISBa Institut d'Investigació Sanitària Illes Balears idisba.innovacion@idisba.es
WO2020174109A1	Method for detecting duplications and/or deletions in chromosomal region 22q11.2.	Diagnostic method for detecting duplications and/or deletions in chromosome region 22q11.2. It identifies copy number changes associated with syndromes like DiGeorge or 22q11.2 duplication using molecular techniques (e.g., FISH, MLPA or PCR) for early, accurate diagnosis of genetic disorders.	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
US63/753,092	Algorithm for the spatial localization of cell lipotypes	Method for determining a cell's lipid profile by acquiring a subcellular resolution mass spectrum from an immobilized cell and then quantifying lipid content through the assignment of m/z peaks to specific lipids.	BIOBIZKAIA – EUSKAL OSASUN IKERKUNTZA – INVESTIGACIÓN VASCA EN SALUD – BASQUE HEALTH RESEARCH innovacion@bio-bizkaia.eus
EP14796149	Method for the diagnosis and pregnosis of skin melanoma	In vitro method for diagnosing cutaneous melanoma by determining PIR expression levels in a subject's sample, also relating to in vitro methods for determining metastasis probability in diagnosed subjects and differentiating benign nevus from melanoma in cutaneous lesions.	
EP21383049.0	miRNA signature for identification of the receptive endometrium	Methods and kits for determining endometrial receptivity in a female subject and methods for selecting a female subject as a candidate to receive a therapy to increase or restore endometrial receptivity based on miRNA analysis of samples from a female subject.	
EP3908841B1	In vitro method for the diagnosis or prognosis of neurodegenerative disorders.	In vitro method for the diagnosis or prognosis of neurodegenerative disorders that measures the expression level or concentration level of at least one lipoprotein receptor-related protein (LRP) or a fragment thereof.	INSTITUTO DE INVESTIGACIÓN SANITARIA Galicia Sur nerea.alonso@iisgaliciasur.es
EP24383160	Method for predicting the response of patients suffering from lung cancer to a treatment with anti-PD1 or anti-PDL1 immunotherapy.	In vitro method for predicting the response of patients suffering from lung cancer to a treatment with anti-PD1 or anti-PDL1 immunotherapy.	
EP25382114	Diagnosis, prognosis, monitoring and/or treatment of comorbidities in people living with human immunodeficiency virus.	In vitro method for the prognosis and/or for monitoring the clinical progression of people living with human Immunodeficiency virus (HIV) (PLWH.	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
EP25382675.4	Intracellular Biomarker Test for HSIL Detection.	Early and non-invasive detection of malignant precancerous lesions in patients suspected of cervical cancer using two metabolites produced by the local microbiome.	INSTITUTO RAMÓN Y CAJAL DE INVESTIGACIÓN SANITARIA IRYCIS dvelasco@salud.madrid.org emma.gonzalez@salud.ma drid.org carmen.hevia@salud.madri d.org
EP25382105.2	Diagnosis and/or prognosis of polycystic ovarysyndrome.	In vitro method for the diagnosis and/or prognosis of polycystic ovary syndrome (PCOS) based on the determination of circulating biomarkers such us miRNAs and low-molecular weight metabolites.	
EP24383092.4	HIV aptamers and uses thereof.	New biomarkers based on aptamer technology that can detect conserved regions of HIV proteins (protease, integrase) enabling early diagnosis of infection and detection of uncommon variants of the virus.	
EP23383037.1	sNfL and sGFAP levels as predictive biomarkers for treatment response in relapsing MS patients treated with ocrelizumab.	New biomarkers based on determiningf the levels of NfL and GFAP during the treatment with ocrelizumab, with the aim of identifying good responders before they have completed a year of treatment.	
EP22383112.4	Microbiota-associated markers of high-grade squamous intraepithelial lesions (HSIL).	Non-invasive detection of malignant precancerous lesions (HSIL) in HIV patients using two metabolites produced by the anal microbiome.	
PCT/ES2024/070478	Biomarkers of response to bariatric surgery.	Development of a molecular panel from subcutaneous adipose tissue to predict metabolic response improvement in patients with obesity and metabolic disease undergoing bariatric surgery.	IMIBIC INSTITUTO MAIMÓNIDES DE INVESTIGACIÓN BIOMÉDICA DE CÓRDOBA luism.fernandez@imibic.org antonio.ortega@imibic.org
ES2933047A1	Composite material of polyacrylonitrile and graphene nanoplatelets, obtainment method and use as a substrate for in vitro cultures of cancer cells.	A composite material in the form of a membrane which consists of a biocompatible polyacrylonitrile polymer and a plurality of graphene nanoplatelets randomly distributed over the polyacrylonitrile forming clusters. Furthermore, the method of obtaining said composite material and to the use thereof as a substrate or scaffold for in vitro cultures of cancer cells.	Valdecilla Instituto de Investigación Sanitaria IDIVAL otri@idival.org

The Technology Portfolio of Spanish Accredited Health Research Institutes

Digital health & IT

GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES
Instituto de Salud Carlos III
Subdirección General de Evaluación y Fomento de la Investigación

HRI Patent Portfolio: Digital health & IT			
Patent application	**Title**	**Description**	**Contact**
Other	Intelligent Management System of Waitlist (GELIDES).	An intelligent system for surgical priority of patients based on the timeout and clinical severity following the standards recommended by the Spanish Society of Cardiovascular Surgery and Cardiology.	ibs.GRANADA INSTITUTO DE INVESTIGACIÓN BIOSANITARIA palvarez@fibao.es
Other	Nutrisen. Calculation of parenteral and enteral nutrition for Services / Neonatology Units.	This application allows managing the anthropometric parameters of the newborn and incorporates the control of enteral and parenteral feeding that is provided during the stay in the hospital.	
Other	Etiological and Sensitivity Register for the Treatment of Urinary Tract Infections (RESITU).	The tool developed allows modeling and representing information about urinary tract infections in real time. This tool is accessible from any location and offers a simple interface, facilitating its use.	
Other	IPR-745 VIVEMBARAZO.	An intervention program in pregnancy through emotional education, prenatal stimulation and control of parental stress. Pre- and postnatal psychological attention to the health of the baby small for gestational age.	
Other	BENECA: Computer applicatin for the control of energy balance in survivors of Cancer.	BENECA is an application that gives support to patients after cancer and is designed to serve as a tool that facilitates the interaction between patients and health professional scanner and a system of simple, automatic and instantaneous feedback regarding the energy balance.	
Other	Multiplataform cloyd system for clinical care of hematologic patients.	A cloud-based system with dual functionality has been developed: it helps physicians select the best treatment based on patient features and ensures traceability of patients, monitoring progressions or relapses across successive treatment lines.	
Other	Diet recommendation algorithm.	An algorithm for creating personalized diets, supervised by nutrition professionals. It predicts optimal diets for children based on factors like age, gender, BMI, physical activity, and more.	
Other	Logistic Methods and Classification Trees for Arrhythmia Detection, Care and Clinical Guidance in the reading of electrocardiograms.	This entails a practical application and makes us aware of the possible treatment and, on this, the prognosis of the patient's life depends, as well as the quality of care that we provide to them.	
Other	Web Application for the Management of Bacteremia Diagnosis and Treatment.	The technology provides an integrated representation of data from antibiograms, cultures, clinical practice guidelines, and advancements in scientific literature, aiding decision-making by medical personnel.	
Other	"Safe Hands" mobile application.	Safe Hands 3.0 is a comprehensive solution designed to promote proper hand hygiene and glove use in healthcare. It combines information, training, and practical resources for both healthcare professionals and the general public to prevent the transmission of microorganisms.	

HRI Patent Portfolio: Digital health & IT			
Patent application	**Title**	**Description**	**Contact**
Other	LAXER: Mobile application for assessment and follow-up of head and neck cancer survivors.	The aim of this application is to monitor subjects who have suffered from these types of cancer by assessing their quality of life. It also provides information about oral health in order to provide optimal rehabilitation.	ibs.GRANADA INSTITUTO DE INVESTIGACIÓN BIOSANITARIA palvarez@fibao.es
Other	GenHUSC: A Web tool/App for the interpretation of pharmacogenetic test and the generation of clinical reports.	The application uses pharmacogenetics to personalize treatments, translating genetic test results into tailored therapeutic recommendations. It generates clinical reports with these recommendations and serves as a consultation tool for pharmacological tests within the National Health System	
Other	EPIMETRIC: Epigenetic methylation-based algorithm for the classification of respiratory diseases (COPD).	COPD is a common yet underdiagnosed respiratory disease; this invention proposes an epigenetic methylation– based algorithm that enhances sensitivity, specificity, and disease stratification compared to spirometry, providing a more accurate and predictive diagnostic approach.	
Other	Pleura app.	Application for the classification of lymphocytic exudative pleural effusions. Application for the classification of lymphocytic exudative pleural effusions into three categories: “tuberculosis”, “tumour” or “others”. The application is able to classify the lymphocytic exudative pleural effusions even in situations of low incidence.	bio EUSKAL OSASUN IKERKUNTZA INVESTIGACIÓN VASCA EN SALUD BASQUE HEALTH RESEARCH BIOGIPUZKOA olatz.arrizabalagagarde @bio-gipuzkoa.eus
Other	T-amylo score.	Clinical prediction rule for the diagnosis of transthyretin cardiac amyloidosis using artificial intelligence in the electrocardiogram and in the echocardiogram.	
Other	MIDENF: Nursing workload measurement scale, based on NIC interventions, for adult inpatient units.	A web-based solution seamlessly integrating with nursing workforce management software for adult hospital wards, optimizing staffing allocation while ensuring high-quality patient care.	IMIB Instituto Murciano de Investigación Biosanitaria Pascual Parrilla innovacion@imib.es
Other	Web-based tool to estimate the diagnosis and prognosis of patients with EPID pathology using bronchoalveolar lavage leukocyte counts measured by flow cytometry and patient age.	Web-based tool to estimate the diagnosis and prognosis of patients with EPID pathology using bronchoalveolar lavage leukocyte counts measured by flow cytometry and patient age.	

HRI Patent Portfolio: Digital health & IT

Patent application	Title	Description	Contact
Other	Machine Learning models in the prediction of medium-long term clinical remission in patients with Crohn's disease and ulcerative colitis treated with adalimumab, infliximab, vedolizumab and ustekinumab.	Development of a clinical decision support system based on prediction models of response to treatment with infliximab, vedolizumab, ustekinumab and adalimumab in the medium and long term with the patient's clinical information.	IBiS INSTITUTODEBIOMEDICINADESEVILLA ecruces-ibis@us.es ahoyos-ibis@us.es
Other	UROCare: mHealth platform for monitoring treatments and promoting health and quality of life in patients with advanced urological cancer.	Digital platform that integrates artificial intelligence (AI) for health promotion and monitoring of patients with advanced urological tumors undergoing active treatment. This platform will allow patients to record 3 items from any smartphone: adverse events, quality of life and vital signs.	
Other	Educational web application to reduce the number of visits to emergency services by pregnant women in the latent phase of labor.	An accessible, professionally validated tool, showed potential to reduce unnecessary reattendance and promote informed, woman-centred care.	
EP23382001.8	Digitalization of pathology characterization.	A computer-based system and method for characterizing medical pathologies.	IGTP Institut de Recerca Germans Trias i Pujol innovation@igtp.cat
PCT/EP2024/084832	System and computer implemented method for improving a psychological and/or physical state in a subject by providing music therapy.	System for improving a psychological and/or physical state in a subject by providing music therapy, and to a computer implemented method configured to select pieces of music according to the psychological and/or physical state of a subject.	iis FJD INSTITUTO DE INVESTIGACIÓN SANITARIA FUNDACIÓN JIMÉNEZ DÍAZ innovacion.invest@iis-fjd.es
GB202303652	A computer implemented method and a device for determining risk of a subject developing overt hepatic encephalopathy over time and a computer implemented method of training a mathematical model.	The ammon-ohe model is a non-invasive diagnostic tool that accurately predicts overt hepatic encephalopathy (OHE) in cirrhosis patients based on sex, diabetes status, albumin, creatinine, and normalized ammonia to upper limit of normal. It uses machine learning with available clinical data.	INCLIVA | VLC Instituto de Investigación Sanitaria innovacion@incliva.es

HRI Patent Portfolio: Digital health & IT			
Patent application	**Title**	**Description**	**Contact**
Other	Nou model integrador capaç de predir el risc de desenvolupar la infecció per citomegalovirus (CMV) en pacients sotmesos a transplantament d'òrgan sòlid.	Algorithm that predicts the risk of CMV (cytomegalovirus) infection by combining immune risk stratification data from a new immunological assay (T-SPOT.CMV) with a number of key factors that also influence susceptibility to developing the infection.	Vall d'Hebron Institut de Recerca mariona.esquerdo@vhir.org
Other	KOMPARTE.	Database for recording donation and transplantation information of the VH Campus. It reproduces the donation and transplantation process and communicates with state agencies and the hospital to report the information.	
EP25382064.1	Método y sistema para la detección de metástasis de cáncer de páncreas.	The project applies deep learning to CE-CT images to improve the detection and diagnosis of metastasis in primary tumors.	
EP24383190.6	Prediction of cardiovascular event.	Method for predicting cardiovascular risk in diabetic patients through retinal image analysis based on artificial intelligence.	
P221330340	Haemofiltration simulator (HEFISIM-1).	Simulation devices for training healthcare professionals in the care of critically ill patients whose treatment requires continuous venovenous extrarenal hemofiltration techniques.	IIS G-M Instituto de Investigación Sanitaria Gregorio Marañón gestion.innovacion@iisgm.com
EP16869290	A clinical method for mapping and quantifying blood stasis and thrombus risk in the heart.	Method for in-vivo assessment of identifies blood flow stasis in cardiac chambers/vessels: Obtain flow-velocity images, calculate residence time, kinetic energy, distortion rate for metrics; generate maps; detect regions exceeding residence time threshold, and methods for assessing the need for optimization of cardiac resynchronization therapy.	
PCT/ES2005/000426	Digital stereotaxic biopsy system.	A digital system for performing stereotaxic biopsies with a biopsy needle. It comprises a series of devices which are used to: emit X-rays, detect and transform X-ray photons into electric signals, position a tissue sample between the X-ray source and the detector, process the electric signals, and generate images.	Parc Taulí Institut d'Investigació i Innovació I3PT innovacioi3pt@tauli.cat

HRI Patent Portfolio: Digital health & IT

Patent application	Title	Description	Contact
European Trademark nº018981670	EXPERTASMA Platform: expert patient in severe asthma and its treatment.	The summary of the invention focuses on the development of an educational platform aimed at patients with severe asthma (SA) for training with patient experts (PEs). Through this platform, they acquire in-depth knowledge about the disease, skills in managing it and its treatment. All this with the ultimate aim of improving their clinical situation, their quality of life and adherence to treatments.	IdiPAZ Instituto de Investigación Hospital Universitario La Paz innovacion.legal@idipaz.es
Other	AGORA-ESALUD digital platform (Digital Care Ecosystem).	Ágora eSalud would help patients, carers and professionals to overcome communication barriers in the continuum of remote social and healthcare and to enhance their social interaction, empowerment and self-care through a multi-platform digital solution designed to resolve doubts.	
Spanish Trademark nºM4205420	Kids and Pets web app. Study of the microbiome, shared colonizations, and zoonoses in immunosuppressed children living with pets.	A web application that allows for the monitoring and specialised medical care of immunocompromised children, used as an example for the protection of paediatric patients with low immunity, so that they can have a natural relationship with other family members and pets.	
European Trademark nº019079682	PEDIDOSIS: a computer application for safe medication use in pediatrics.	PEDIDOSIS is a mobile application for the administration of medicines, designed to be used by healthcare professionals and healthcare providers. It is a tool for the safe administration of medicines, which allows the user to record the administration of medicines, including the time, date, dose, and type of medicine, as well as the patient's name, address, and contact details.	
Other	MAM APP: Digital rheumatology platform for telemonitoring in immune-mediated inflammatory diseases.	Digital solution. The main objective of this study is to evaluate the implementation in clinical practice of a conceptual model of mixed care (MAM) in patients with spondyloarthritis and rheumatoid arthritis, in a broader hospital setting, including three tertiary hospitals specialising in complex therapies.	
European Trademark nº18876162	ENDOPAZ: Platform for monitoring and supporting people with endometriosis.	It is an app that allows you to monitor patients with endometriosis to track the progress and development of patients with this disease.	
Other	Digital tool to improve communication for patients with aphasia.	It is an app that allows you to monitor patients with endometriosis to track the progress and development of patients with this disease.	
Other	Mobile application for ongoing care for patients with chronic arterial ischemia (CReTe).	Mobile app that collects real-time data on patients with chronic arterial ischaemia (CAI) —specifically those in the second stage, intermittent claudication— as well as their exercise sessions and stores it in an anonymous database that can be consulted by medical staff.	

HRI Patent Portfolio: Digital health & IT

Patent application	Title	Description	Contact
Other	Smart-CytoFlow.	Smart-CytoFlow consists of automated systems for improved diagnosis of hematologic neoplasms using flow cytometry.	 INSTITUTO DE INVESTIGACIÓN SANITARIA SANTIAGO DE COMPOSTELA innotransfer.fidis.santiago @sergas.es
Other	ODHDO.	Determinist algorithm for optimizing patient circuits at the Oncology Day Hospital.	
Other	OEHDO.	Stochastic algorithm for optimizing patient circuits at the Oncology Day Hospital.	
Other	PROCARDIA.	Procardia is a software platform based on the service-oriented paradigm for managing the cardiac rehabilitation process.	
Other	GUANIN.	Guanin is an all-in-one GUI-driven analyzer for nanostring data through interactive normalization.	
Other	Perfusion Nobel.	Program for calculating cerebral perfusion parameters in preclinical magnetic resonance imaging studies.	
Other	SoftLancaster.	This software provides a test to detect ocular motility disorders using Lancaster screen simulation.	
Other	PK-Pdrugs pharmacokinetics software	The Pk-PDrugs software uses pharmacokinetic and pharmacodynamic models to determine the optimal dose of each medication for each patient, taking into account individual patient characteristics and interactions with other medications.	
Other	Nobel_MRI.	Software for processing preclinical magnetic resonance images from files obtained directly from MRI equipment. The program allows for standardisation of processes, region segmentation, and acquisition of different imaging modalities.	
Other	FLT3-Like Differential Expression Analysis.	FLT3-like is a software that focuses on the analysis of the FLT3-like gene expression signature as a biomarker to predict response to quizartinib treatment in patients with FLT3 wild-type acute myeloid leukemia (AML). This signature allows the identification of subgroups of patients who may benefit from personalized treatments.	
Other	NEMECUM.	Software with a web page interface to assist in prescribing enteral nutrition and artificial lactation formulas.	

HRI Patent Portfolio: Digital health & IT			
Patent application	**Title**	**Description**	**Contact**
PCT/EP2019/077610	Identification of cardiac fibrillation drivers using single optical or electrical signals.	An ex vivo use of the instantaneous frequency modulation (iFM) signal of cardiac activations and to an ex vivo use of the instantaneous amplitude modulation (iAM) signal obtained from the sequence of amplitude excursions of said activations for detecting 'driver' or 'high-hierarchy' regions.	IdISSC INSTITUTO de INVESTIGACIÓN SANITARIA Hospital Clínico San Carlos otc.hcsc@salud.madrid.org
EP24382757	Ostheochondral tissue on a chip system and method for culturing ostheochondral tissue.	The present disclosure relates to the field of tissue on a chip, in particular it relates to a system comprising an osteochondral tissue on a chip and to a method for culturing osteochondral tissue on a chip, using such a system.	
Other	In-silico clinical validation platform for artificial intelligence models in the CHAIMELEON project.	The in-silico Clinical Validation Platform is a web-based solution developed as part of the European CHAIMELEON project, designed to facilitate the controlled evaluation of artificial intelligence (AI) models in oncology, applied to five types of cancer: prostate, breast, lung, colon, and rectal.	Instituto de Investigación Sanitaria La Fe otc@iislafe.es innovacion@iislafe.es
Other	DICOM STUDIES QA - Reorganization of DICOM studies with quality and integrity detection.	DICOM File Integrity Checker is a tool developed in Python for the curation, reorganization and quality control of medical imaging studies. Its main objective is to ensure the integrity, completeness, and usefulness of anonymized medical data before analysis using artificial intelligence algorithms.	
P202400088	Device and support system for clinical decision making.	Clinical decision support system integrated into a medical device that aids diagnosis, physiological recognition, and/or surgery through real-time image analysis.	INSTITUTO DE INVESTIGACIÓN SANITARIA Galicia Sur nerea.alonso@iisgaliciasur.es
PCT/EP2025/058798	System and computer-implemented method of determining a calcium threshold for detecting calcified plaques in computed tomography scans.	A system and method of determining a calcium threshold used for detecting and/or quantifying calcium plaques in cardiovascular vessels, such as the aorta or coronary vessels, in computed tomography (CT) scans.	

HRI Patent Portfolio: Digital health & IT

Patent application	Title	Description	Contact
Other	IA2EPD – Artificial intelligence to empower the patient with diabetes.	The dashboard aids technical staff in system management and lets healthcare personnel customize settings per patient, while generating reports to track compliance with therapeutic agreements.	IMIBIC INSTITUTO MAIMÓNIDES DE INVESTIGACIÓN BIOMÉDICA DE CÓRDOBA luism.fernandez@imibic.org antonio ortega@imibic.org
Other	GEMER-Salud (clinical management, drug evaluation, and health outcomes).	GEMer Salud is an innovative digital solution that transforms medication management in hospitals. The platform integrates advanced tools for monitoring and evaluation, ensuring precise control of medication requests and administration.F3F2:F9F3F4:F9F1:F9F2:F9F3:F9F4:F9F5:F9	
Other	Website and mobile app for monitoring postoperative mobility (Rehapp).	Website and mobile app for monitoring postoperative mobility. The system enables personalized monitoring of rehabilitation processes after surgery or injury and can be adapted to any type of rehabilitation through exercises prescribed by the specialist.	
Other	Algorithm to calculate the risk of type 2 diabetes in cardiovascular patients based on gut microbiota profile, according to diet.	Algorithm that calculates the 5-year risk of type 2 diabetes in patients with coronary heart disease based on gut microbiota. It outperforms clinical-variable models and estimates risk for low-fat and Mediterranean diets, guiding dietary recommendations.	
Other	Algorithm to calculate the probability of remission of type 2 diabetes in cardiovascular patients based on gut microbiota profile, through healthy diets.	Algorithm that estimates, in coronary heart disease patients, the probability of type 2 diabetes remission through healthy diets. It calculates risk for low-fat and Mediterranean diets, providing clinical guidance to reduce new cardiovascular events.	
Other	Algorithm to calculate the risk of major cardiovascular events based on gut microbiota profile, according to diet.	The algorithm calculates the 7-year risk of a major adverse cardiovascular event in patients with coronary heart disease, as well as the risk percentage if a low-fat diet or a Mediterranean diet is followed.	
Other	E2-Ducass digital tool intervention.	This web application aims to monitor and provide health education to vulnerable populations at risk of food insecurity in European (Spain, Portugal) and non-European (Taiwan) countries, promoting healthier lifestyles and improving cardiovascular health.	
EP4557299A1	Prediction of gene amplification.	The invention provides a computer-implemented method to predict tumor gene amplification by analyzing copy number profiles and chromosomal instability signatures. A trained model outputs a score indicating amplification risk. related methods for prognosis and treatment response are included.	i+12 Instituto de Investigación Hospital 12 de Octubre innovacion.imas12@h12o.es gestion innovacion.imas12@h12 o.es

HRI Patent Portfolio: Digital health & IT			
Patent application	**Title**	**Description**	**Contact**
EP25382712.5	Method and system for synchronized ECG reconstruction from asynchronous recordings.	Computer-implemented methods for producing standard synchronized electrocardiograms (ECGs) from sequential and asynchronous ECG recordings from smatwatches that provide similar informationto 12-lead ECGs.	INSTITUTO RAMÓN Y CAJAL DE INVESTIGACIÓN SANITARIA IRYCIS dvelasco@salud.madrid.org emma gonzalez@salud.mad rid.org carmen hevia@salud.madri d.org
EP24383157.5	Method and system for obtaining ECG data and to detect and filter left ventricular assist device interferences.	New method to improve the signal of an EGC in patients with LVAD, device that generates noise artefacts during the recording.	
EP23382390.5	Method for monitoring the spatial deviation with respect to a planned surgical procedure.	New computer programme that can be used in the operating theatre to evaluate whether a surgical procedure is being performed according to the planned surgical procedure with the same precision and the least possible impact on the patient and resources, as planned.	
Other	PrevANS.	prevANS is a training programme that you can access via a website or mobile app. It provides you with information and tools to prevent anxiety problems, improve your mental health and strengthen your well-being, with the aim of helping you feel better.	ibima Plataforma BIONAND maria.mengual@ibima.eu
EP25382326	Method and apparatus for simulating abdominal hemodynamic behaviour.	Novella develops a non-invasive solution to predict and quantify changes in arterial blood flow in patients undergoing abdominal surgery. Using advanced computational fluid dynamics (CFD) models, the project aims to improve surgical planning and clinical decision-making, contributing to safer and more personalized surgery.	IDIBAPS Institut D'Investigacions Biomèdiques August Pi i Sunyer innova@recerca.clinic.cat
Other	Preoperative triage system (with chatbot technology).	Ai-powered pre-anesthesia web app screens patients, identifying low-risk cases to proceed without face-to-face consultation. High-risk patients are referred for detailed evaluation, improving care quality, reducing surgery cancellations, and easing anesthesiologists' workload.	IDIBELL Institut d'Investigació Biomèdica de Bellvitge innovacio@idibell.cat ltraveset@idibell.cat

Others

HRI Patent Portfolio: Others

Patent application	Title	Description	Contact
EP24382581.7	In vitro method for transducing a target cell.	Peptides that act as transduction enhancers (TE), favoring transduction with retroviral or lentiviral vectors in ex vivo gene therapy protocols. For hereditary blood diseases, as well as the generation of CAR-T cells, one of the most emerging in oncology.	Vall d'Hebron Institut de Recerca mariona.esquerdo@vhir.org
2208021713284	%cLDL y extrapol basal: herramiento para cálculo porcentaje de reducción cLDL necesario para obtener objetivo, permitiendo extrapolar valor basal en paciente ya en tratamiento.	Informatic tool for the calculation of cLDL concentration objective and extrapolation of the patient basal values of cLDL.	
EP19382496.8	Synthrocyte: erythrocyte-mimicking reagent and fast methods for pathogen characterization and serology testing.	Design of an agglutination inhibition technique using synthetic erythrocytes for the surveillance of influenza viruses. "Synthrocytes" are presented, synthetic erythrocytes for HIA that are cheaper, more stable and provide a faster response than animal erythrocytes. The product consists of silica particles modified with antibodies.	
EP23383204.7	Modelos de roedores obtenidos por knock- in del gen humano her2.	A knockin mouse for the expression of the human protein HER2 under the promoter of the homologous murine protein Erbb2.This allows for the expression of HER2 under controlled, physiological levels in the normal tissues where Erbb2 would be expressed.	
Other	Neuropsychological scales to assess Parkinson Disease.	The PD-CRS and PD-CFRS are valid and reliable instruments to screen and diagnose Mild Cognitive Impairment in PD or to monitor potential outcomes in clinical trials. Even so, they are also used to assess the effect of treatment medications on the patient's cognitive impairment.	Institut de Recerca Sant Pau innovacio@santpau.cat
Utility Model U202431418	Simulator for Holmium Laser Enucleation of the Prostate (HoLEP) Training.	Anatomical simulator for training in complex Holmium laser prostate surgery (HOLEP). It allows urologists to practise movements and the tactile response of artificial tissues. Its aim is to improve surgeon confidence during the learning curve and in the treatment of BPH.	ISPA Instituto de Investigación Sanitaria del Principado de Asturias innovacion@finba.es

HRI Patent Portfolio: Others

Patent application	Title	Description	Contact
Spanish Utility Model U202232155	device for transferring test tubes from a rack.	Device to enhance the transfer of test tubes/cryotubes from a rack/storage holder to another. It facilitates the manipulation and selective processing of a large number of samples, preserving samples location within the racks and reducing manipulation time.	Valdecilla Instituto de Investigación Sanitaria IDIVAL otri@idival.org
Utility Model ES1312494U	Respiratory endoscopy techniques simulation device.	Respiratory endoscopy technique simulation device that allows simulation of any respiratory endoscopy technique, from the most basic to the most advanced, using an expanded animal cardiopulmonary block located inside the device.	
Spanish Trademark M4146196	Racksys animal management tool.	Platform for animal management in the animal house and experimental operating room platform.	bio BIOGIPUZKOA EUSKAL OSASUN IKERKUNTZA INVESTIGACIÓN VASCA EN SALUD BASQUE HEALTH RESEARCH olatz.arrizabalagagarde @bio-gipuzkoa.eus
Spanish Trademark M4253476	Smp360: scientific monitoring plan.	Tool for evaluating scientific and strategic impact in terms of open science, evaluating research, researchers and research organisations, following diverse outcomes, practices and activities that maximise the quality and impact of research.	
WO/2024/023382	Mesoporous silica nanoparticles for immunoglobulin purification.	A protein g-bonded mesoporous silica particles that significantly enhance igg binding capacity (460-800 µg igg/mg), outperforming commercial resins by at least 4 times. Yhe system ensures highly homogeneous particle and pore size, optimizing purification efficiency.	ibima Plataforma BIONAND maria.mengual@ibima.eu

HRI Patent Portfolio: Others

Patent application	Title	Description	Contact
Utility Model U201831235	Dental burs for peri-implantitis.	The invention consists of a set of dental burs for the treatment of peri-implant disease.	idis INSTITUTO DE INVESTIGACIÓN SANITARIA SANTIAGO DE COMPOSTELA innotransfer.fidis.santiago @sergas.es
Utility Model U202131247	Biopsy clip.	The invention consists of a device for teaching surgical techniques in the oral cavity.	
Spanish Trademark 14428445	proctOCare.	Trademark, clasess 9.41, 44. Proctology tech solutions.	IdISSC INSTITUTO de INVESTIGACIÓN SANITARIA Hospital Clínico San Carlos otc.hcsc@salud.madrid.org
Spanish Trademark 14279244	pelviPCare.	Trademark, clasess 9.41, 44. Pelvic floor tech solutions.	
EP2022070938	In-vitro method for the prognosis of patients suffering from sepsis.	The invention refers to an in vitro method for the prognosis of patients suffering from sepsis, preferably COVID-19 patients. In a preferred embodiment, a bad prognosis means that the patient has an increased risk of developing Acute respiratory distress syndrome (ARDS).	IBSAL Instituto de Investigación Biomédica de Salamanca itsal@ibsal.es

HRI Patent Portfolio: Others			
Patent application	**Title**	**Description**	**Contact**
Industrial Design nºD0536515-001	Low-cost left inguinal region model (INGUIZ).	The invention is a two-sheet A4 model which, after printing on the short edge, folding along the dark blue lines and cutting out the light blue dotted lines, is folded to form a three-dimensional model of the left inguinal region. The objective of this invention is to support the study and understanding of the inguinal region with a low-fidelity, low-cost model.	IdiPAZ Instituto de Investigación Hospital Universitario La Paz innovacion.legal@idipaz.es
EP16382413.9	Improved allergen detection for clinical use in the food industry.	The patented method produces improved food allergen extracts — through folding into an amyloid state — with a significantly higher affinity for IgE ((103 times higher than that of allergen monomers), enabling more sensitive detection of allergens and, consequently, a more reliable diagnosis of food allergies.	
P201530683	Biodegradable Moldable Implant Material.	This technology focuses on the development of hybrid materials for implants based on mouldable, biodegradable, biocompatible, and bioresorbable polymers formed by a polymeric matrix that includes reinforcing metal particles, such as magnesium. The aim is to create implants that are not only biocompatible but also biodegradable and bioresorbable, thus reducing the need for surgical removal.	
EP14382456.3	Method for predicting or prognosticating neurological performance and survival.	Highly sensitive method with high specificity and statistical values for early prediction—based on a validated and reliable risk score (RS)—of neurological outcome and survival in patients undergoing therapeutic hypothermia after cardiac arrest due to ventricular fibrillation (VF) and in a comatose state upon admission.	
Utility Model U201330102	Positioner for newborns in prone position.	Positioning device specifically designed to keep newborns in the prone position. This positioner adapts to the size and shape of the newborn's body, promoting their neurodevelopment and specific respiratory characteristics.	
P201430081	New therapeutic agent for the treatment of chronic kidney disease.	Therapeutic agent that prevents apoptosis-induced death of renal tubular cells caused by albuminuria toxicity and is therefore useful for the prevention and/or treatment of chronic kidney disease.	
P201331143 P201430411	New therapeutic agents for the treatment of inflammatory disorders.	New generation of inhibitors of tumour necrosis factor alpha (TNF-α) production and, therefore, useful for the prevention and/or treatment of inflammatory diseases.	

HRI Patent Portfolio: Others			
Patent application	**Title**	**Description**	**Contact**
P201330768	Kit to predict the risk of infection after a heart attack or major surgery.	Kit that, through a test based on the detection and quantification of a biomarker in a biological sample, is capable of predicting the risk of developing an infectious disease in a patient who has suffered a heart attack or undergone major surgery.	IdiPAZ Instituto de Investigación Hospital Universitario La Paz innovacion.legal@idipaz.es
P201330894	Fibrin hydrogel with plasmonic nanoparticles for biomedical applications.	Plasmonic fibrin hydrogel matrix useful for biomedical applications that is capable of generating hyperthermia controllable externally with high reliability and spatial-temporal precision in deep body tissues.	
P201330040	Dynamic cell culture chamber for biomaterials analysis.	Experimental system for cell culture on biomaterials in a controlled environment. The system consists of a device that allows perfusion incubation of adherent cells on 2D or 3D material samples.	
P201030950	Biomaterial composed of polymer and magnesium particles for biomedical applications.	Biocompatible and resorbable material composed of a polymer matrix and magnesium particles, useful for the manufacture of an implant or biomedical device intended for the repair and/or regeneration of bone tissue.	
P201030949	Metal-coated biomaterial for biomedical applications.	Biomaterial with a metallic coating useful for the manufacture of implants or biomedical devices, and the method of obtaining it by immersing a titanium-based metallic substrate in a molten alloy of aluminium and silicon.	
P200930438	Tool for predicting pathological response to cancer treatment.	Tool for predicting pathological response to ovarian cancer treatment based on a platinum derivative and a taxane, through analysis of the expression profile of five specific genes.	
P200930400	Clinical response prediction tool for cancer treatment.	Tool for predicting the clinical response of a patient with ovarian cancer to treatment with a platinum derivative and a taxane, by analysing the expression profile of eight specific genes.	
P200401758	Pajamas or nightgown for nurses based on a slot system.	Garment for patients that includes a set of openings, slits or eyelets strategically distributed to suit clinical use. This system of slits facilitates the clinical use of the garment, as the openings allow access for catheters and probes, facilitate local wound treatment, and prevent discomfort for patients.	