Health Research Institutes' Patent Portfolio

GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

Instituto de Salud Carlos III

Programa de Evaluación, Acreditación y Seguimiento de IIS

MARCH 2025

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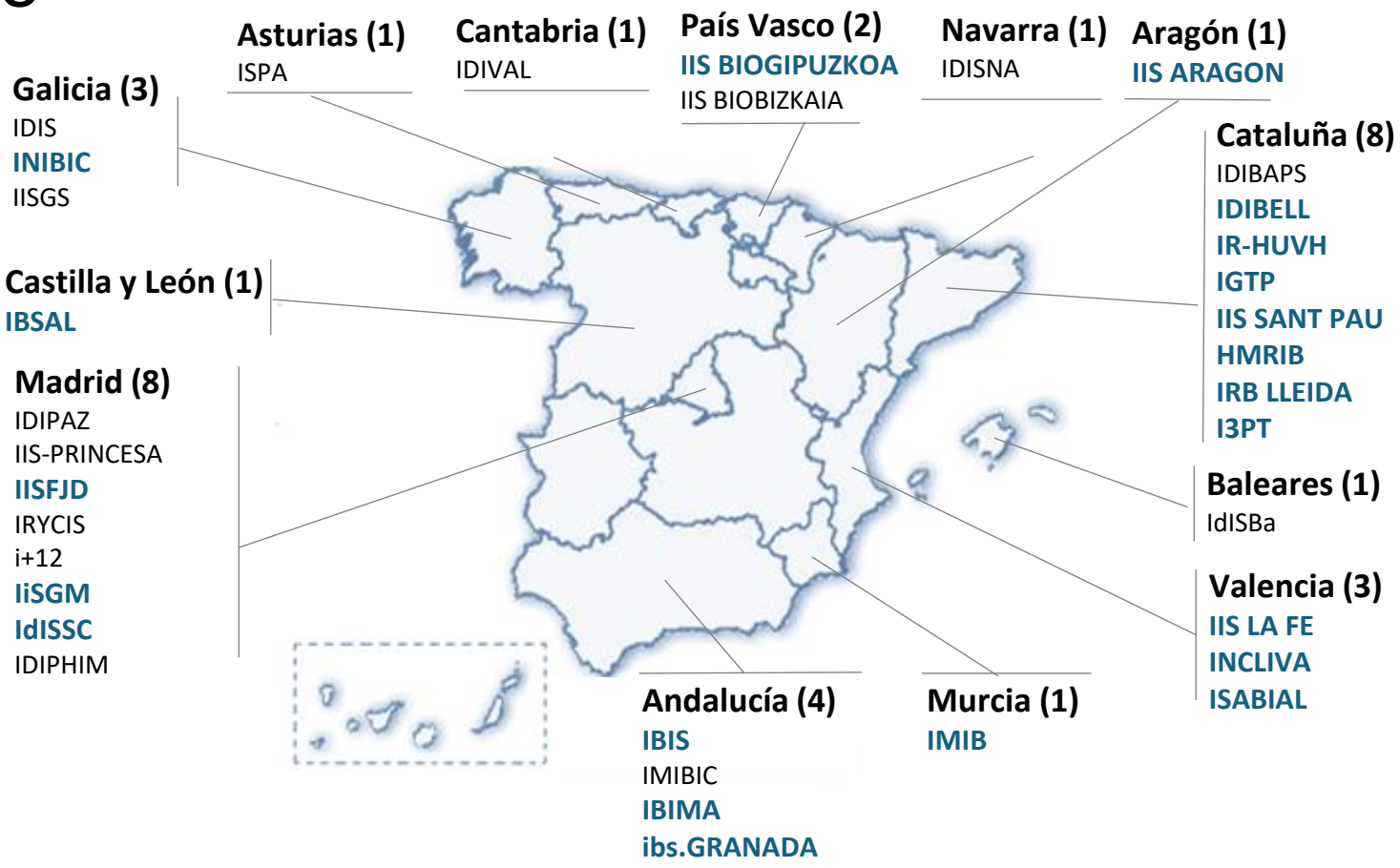
Health Research Institutes' Patent Portfolio

Total Patent Applications from **21 accredited HRI**: **305**

- Pharmaceuticals & Biotechnology: 114
- Medical Devices: 84
- Diagnostics & Imaging: 70
- Digital Health & IT: 25
- Other: 12



Health Research Institutes' Patent Portfolio

Pharmaceuticals & Biotechnology

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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.	This invention deals with 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.	The invention involves the 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.	The invention involves the 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.	The invention is a 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.	
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 (X-ALD), allowing the discrimination between ccald and AMN based on lipid biomarkers.	
EP24382337.4	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.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
ES201230474	System for conveying antigenic molecules in recombinant polymers similar to elastin.	This invention relates to 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.	The invention relates to a 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.	The invention is an 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.	This invention provides 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.	Sistema para evaluación de la excreción renal de calcio para la identificación y pronóstico de enfermedades genitourinarias cáncer, así como para monitorizar la respuesta de un sujeto que padece cáncer genitourinario a un tratamiento contra el cáncer genitourinario.	inibic instituto de investigación biomédica de a coruña alexandre.de.la.fuente.gonzalez@sergas.es graciela.fernandez.Arrojo@sergas.es
2021800494974	Ubiquitin-ligase inhibitors for the treatment of cancer.	Nueva clase de compuestos y a composiciones que comprenden los mismos así como su uso como medicamentos en el tratamiento del cáncer.	
EP19805945.3	Compounds that selectively and effectively inhibit hakai-mediated ubiquitination, as anti-cancer drugsdrugs.	Nueva clase de compuestos que se pueden utilizar como medicamentos en el tratamiento del cáncer.	
EP22382101.8	Microspheres for extended release of fenofibrate.	Sistema de liberación prolongada de fenofibrato, para el tratamiento de enfermedades que afectan a las articulaciones, como la artrosis.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
P202231032	Polyelectrophilic metallated heterocycles derived from 2-(pyridin-2-il)imidazo[1,2-a]pyridine and their use as chemotherapy agents.	New 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.	 amaia.delvillaralvarez@bio-gipuzkoa.eus
EP3733684 B1	Combined therapeutic strategy for polycystic liver diseases using novel udca-derived hdac6i inhibitors.	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.	
EP3599286	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.	
EP21758610.6	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.	
EP23382070.3	Diagnostic test in saliva for eosinophilic esophagitis.	Rapid, non-invasive diagnostic and monitoring test for eosinophilic esophagitis in saliva samples.	
EP4158356	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.	
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.	
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.	
GB 2116499.1	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.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
ES201431855	Byohibrid for use in the regeneration of neural tracts.	Biohybrid for use in the regeneration of neural tracts. The present invention describes a biohybrid for use in the regeneration of neural tracts, comprising a degradable and biocompatible implantable tubular hybrid scaffold characterized in that it comprises three layers of different porosity: an internal layer a), an intermediate layer b) and an outer layer c), with continuity between them, and all three composed by the same porous hydrogel based on cross-linked hyaluronic acid, to a biohybrid comprising the hybrid tubular scaffold described which may contain inside it a fibrous material, preferably poly-l acid -lactic, to a procedure for obtaining said hybrid tubular scaffolding and said biohybrid, and to the use of them to regenerate neural tracts in diseases affecting the central nervous system, preferably Parkinson's disease. (Machine-translation by google translate, not legally binding).	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.	The invention relates to a 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.	
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.	
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, to the use of GAG for the diagnosis of anaphylaxis.	

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.	IIS FJD INSTITUTO DE INVESTIGACIÓN SANITARIA FUNDACIÓN JIMÉNEZ DÍAZ innovacion.invest@quironsalud.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.	
EP23382223.8	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.	
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.	 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	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.	
EP21710 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.	

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

innovacion@imib.es

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.	
EP23382997	NAD: A new therapy to treat and prevent thrombosis.	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.	A 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	RNA plasma biomarker signature for Huntington's disease.	A 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.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
PCT/ES2020/070315	Gene therapy with hokD and ldrB genes for cancer treatment	The disclosed invention is related to the 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	
EP22382327.9	Generation of pathological models of human skin by tissue engineering	This model offers the possibility of evaluating new drugs and products for the treatment of skin cancer and other pathologies using a 100% human model without the need to use experimental animals	
EP 24 382 031.3	Allogeneic adult mesenchymal stem cells from adipose tissue expanded in a biological matrix of fibrin-hyaluronic acid.	The finished product (BAMS) is a biomaterial matrix composed of fibrin and hyaluronic acid, containing expanded allogenic adipose tissue-derived mesenchymal stem cells (AT-MSCs). Its purpose is the treatment of venous ulcers.	
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	
P202430410	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		
EP24382364.8	Novel fibrinogen-based bioinkd for wound healing and tissue regeneration		
EP24382365.5	System for providing a bioink in the form of a spray and method thereof		
EP24382441.4	Compounds capable of acting on S1R as well as on sEH and uses thereof		
P202430145	Compound to stimulate mitochondrial metabolism in gametes and embryos		
P202430192	Inhibitors of SWI/SNF enzymatic activity for the treatment of carcinoma		
P202430364	Sigma-1 receptor inhibitors for the treatment of rheumatoid arthritis		

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.	The invention refers to 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
EP20382457.8	Chimeric antigen receptors specific for p95her2 and uses thereof.	Invention relates to a CAR targeting p95her2-expressing cells, including scfv, antigen-binding domains, antibodies, and adcs. It covers cancer diagnosis, treatment, and prevention using these components.	 mariona.esquerdo@vhir.org
EP22382294.1	Células inmunes que expresan receptores antígenos quiméricos y anticuerpos biespecíficos y usos de las mismas.	The invention involves 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.	
P201930643	Uso de la 4,6-difenil-1h-pyrazolo[3,4-b]piridin-3-amina, o de una sal farmacéuticamente aceptable de la misma, como un inhibidor de serina/treonina quinasa 1 de interacción con map quinasa (mnk1) y serina/treonina quinasa 2 de interacción con map quinasa (mnk2) selectivo y no citotóxico.	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.	
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.	
EP23383269.0	Compounds for use in the treatment of cancers that overexpress tspan1.	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).	
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.	
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.	
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.	

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP09164710.7	Uso de la cilastatina para reducir la nefrotoxicidad de distintos compuestos.		 Instituto de Investigación Sanitaria Gregorio Marañón gestion.innovacion@iisgm.com
EP17731188	Cilastatina para su uso en el tratamiento de sepsis.		
P200501182	Matriz artificial de gel de fibrina endotelizada superproductora de factores proangiogénicos.		
P201030450	Dendrímeros carbosilanos con un núcleo polifenólico y su uso como antivirales.		
P201231187	Dendríticos carbosilanos homo y hetero funcionalizados.		
EP19709008.7	Kit de tratamiento de niños trasplantados de corazón con células T reguladoras para suprimir el rechazo del órgano (para regular el sistema. inmunitario)		
P201500669	Nanopartículas metálicas estabilizadas con dendrones carbosilanos y sus usos.		
P201600726	Dendrones carbosilano funcionalizados con ácidos grasos: formación de micelas y usos.		
P202030838	Trazadores de colágeno para detección no invasiva de focos infecciosos		
EP 23382478.8	Generación de células T reguladoras provenientes de timo (thytreg) modificadas genéticamente para expresar el receptor de antígeno quimérico (CAR, del inglés "chimeric antigen receptor").		
EP18724919	Kit de diagnóstico oncológico		
EP24382446.3	La nanobiotecnología como herramienta para la optimización de la terapia de sellado con etanol en el tratamiento de la bacteriemia relacionada con el catéter.		
EP24382518.9	Paneles inmunitarios de ratón por citometría de flujo.		
EP23383314.4	Cilastatina, nuevo fármaco protector frente a patologías neuroinflamatorias / neurodegenerativas como el glaucoma.		

HRI Patent Portfolio: Pharmaceuticals & Biotechnology

Patent application	Title	Description	Contact
EP24383371.2	Genetically Engineered Extracellular Vesicle-Based Therapeutic Platform for Targeted Fibrosis Reversal and Tissue Regeneration	Extracellular vesicles derived from mesenchymal stem cells, engineered to carry Oncostatin M (OSM), an antifibrotic protein that inhibits fibroblasts. This technology offers a novel, less invasive treatment to reverse fibrosis, promoting tissue regeneration.	IIS La Fe Instituto de Investigación Sanitaria innovacion@iislafe.es
P202530064	Infrared Spectroscopic Analysis Platform for Real-Time Determination of Human Milk Secretory Status in Neonatal Nutrition Management	IIS La Fe's infrared spectroscopy method quickly and accurately determines the secretor status of human milk, enabling personalized neonatal nutrition. This low-cost, non-invasive technique improves infant care and optimizes milk bank management for premature babies.	
P202430906	Multi-Target Cytokine Inhibition Therapy for Prevention of Metastasis in Treatment-Resistant Triple-Negative Breast Cancer	Therapeutic combination of Maraviroc, Navarixin, and Anakinra to inhibit cytokines involved in the metastasis of triple-negative breast cancer (TNBC). This strategy reduces tumor migration and enhances chemotherapy response, offering hope for treatment-resistant TNBC.	
EP23382313	Lipid-Mediated Vesicular Supplementation System for Enhancement of Anti-Inflammatory Properties in Human Milk for Preterm Infant Nutrition	Enriched breast milk vesicles with anti-inflammatory lipid mediators improve digestive health in premature infants, reducing the risk of necrotizing enterocolitis and promoting gastrointestinal maturation.	

Health Research Institutes' Patent Portfolio

Medical Devices

GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

Instituto de Salud Carlos III

Programa de Evaluación, Acreditación y Seguimiento de IIS

HRI Patent Portfolio: Medical Devices

Patent application	Title	Description	Contact
ES201830730	Injectable material for articular cartilage regeneration.	The invention is a new strategy for the regeneration of articular cartilage based on an injectable material. This material can be implanted at the site of the cartilage defect and combined with a subchondral bone stimulation technique provides better biomechanical properties to the new tissue.	INCLIVA | VLC Instituto de Investigación Sanitaria innovacion@incliva.es
U202230442	Optimization device for intraurethral lubrication in pediatric patients.	There are only a few transurethral instruments designed for children with optimal lubrication. Thus, children suffer from unsuccessful catheterisation or endoscopy attempts. This technology allows for proper insertion into the urethral meatus and optimal lubrication due to its innovative design.	
P202330882	Device for channeling blood for hemodialysis.	The invention is an implantable haemodialysis device that facilitates blood channelling avoiding repetitive punctures, reducing maturation times and minimising risks of infection and thrombosis.	
ES201630202	Method for predicting response to continuous positive air pressure treatment.	The instrument includes a pair of articulated arms, anchoring elements at each arm's end to attach to opposite tissue edges near the incision, a measurement device for dynamic measurements of forces or distances over time, and a locking mechanism to prevent movement during the measurements.	IRBLleida Institut de Recerca Biomèdica innovacio@irblleida.cat
ES1284006	Improved control and safety in therapeutic thoracentesis.	Current systems for therapeutic thoracentesis or discontinuous pleural drainage are performed manually, consisting of a syringe and a collecting bag that can be connected to catheters. The present utility model makes it possible to perform this in aspiration with a vacuum bottle	
ES201231640	Intramedullary nailing system for the treatment of bone lesions.	This invention relates to an endomedullary locking system for the treatment of bone lesions especially in limb roots, caused by tumors like metastases or hematologic conditions such as myeloma. It includes an intramedullary nail and a cementation subsystem to enhance treatment effectiveness.	IBSAL Instituto de Investigación Biomédica de Salamanca itsal@ibsal.es
ES201930772	Attachable dispenser receiver for an implantable spacer device for temporary replacement of a permanent joint prosthesis.	The invention relates to a dispenser receiver attachable to an implantable temporary spacer device to assist in treating infected hip prostheses. It enables controlled therapeutic agent release, aiding infection prevention, pain treatment, and faster recovery after surgery.	
ES201700209	Slider for assisting ambulation in subjects with distal lower limb injuries.	The invention relates to a slider device designed to aid ambulation in individuals with distal lower limb injuries. It provides support and stability during movement, facilitating rehabilitation and improving mobility for patients recovering from such injuries.	
ES202031029	Load monitoring device, attachable to crutches and/or walking sticks, for the rehabilitation of walking in patients.	The invention relates to a load control device attachable to crutches or canes for gait rehabilitation. It monitors and limits weight applied, ensuring safe mobility. The system enhances recovery by providing real-time feedback, preventing overload, improving stability, and optimizing outcomes.	

HRI Patent Portfolio: Medical Devices

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.	BIOGIPUZKOA – EUSKAL OSASUN IKERKUNTZA / INVESTIGACIÓN VASCA EN SALUD / BASQUE HEALTH RESEARCH amaia.delvillaralvarez@bio-gipuzkoa.eus
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.	
EP4491241A1	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.	
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.	
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.	
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.	
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	
EP23383245	A cephalic restraining device for medical procedures.	Medical device to immobilize the head and prevent spasmodic movements (vertical and lateral). It is adjustable to the size of head and attachable to any type of bed. Facilitates the execution of medical procedures while providing a fast-release system for emergencies and greater safety for patients.	Institut de Recerca Sant Pau innovacio@santpau.cat
EP24382650	Blebmaker: Implantable ocular device for draining intraocular fluid.	Blebmaker is a new ocular medical device that prevents filtration bleb collapse by forming a dome-like structure between the conjunctiva and sclera, and delivers anti-inflammatory drugs to enhance long-term therapeutic effectiveness.	

HRI Patent Portfolio: Medical Devices

Patent application	Title	Description	Contact
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.	ibima Plataforma BIONAND maria.mengual@ibima.eu
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.	
ES202231035	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 (1) comprising: - a first corrective section (2) provided with a first end (3), and - a second correcting section (4) that starts from the first correcting section (2) and that is provided with a second end (5), opposite the first end (3); where the correcting body (1) has a circular cross section that increases diametrically along said correcting body (1), from the first end (3) of the first correcting section (2) to the second end (5) of the second corrective section (4).	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 the treatment of respiratory infection in intubated patients, characterized in that it comprises: - a mechanical insufflation-exsufflation device (1), - a nebulizer (2) of hypertonic saline with hyaluronic acid, and - a t-tube (3) having a first inlet (4) that connects to the mechanical insufflation-exsufflation device (1), a second inlet (5) that connects to the nebulizer (2) and an outlet (6) that connects to an endotracheal tube (7) or a tracheostomy cannula attachable to the patient.	
U202332250	Anatomic model for oncoplastic surgery.	Anatomic model for oncoplastic surgery to simulate and train different surgical techniques performed in breast surgery.	IIS FJD Instituto de Investigación Sanitaria Fundación Jiménez Díaz innovacion.invest@quironsalud.es
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
P202131025	Gelled microspheres for medical use or as a vehicle for drugs.	Their formulation constitutes a new product that can be used as a medication vehicle or a medication per se ready for administration in different uses (buccal, nasal, bladder, rectal or vaginal, among others).	

HRI Patent Portfolio: Medical Devices

Patent application	Title	Description	Contact
ES-1273732_U	Pañal protector de sacro.	Pañal que está especialmente diseñado para proteger la región sacra de pacientes con incontinencia urinaria que deben permanecer en cama de forma prolongada. De fabricación sencilla y eficaz supone un avance en la prevención de lesiones, heridas y escaras en el sacro en pacientes encamados.	inibic instituto de investigación biomédica de a coruña alexandre.de.la.fuente.gonzalez@sergas.es graciela.fernandez.Arrojo@sergas.es
ES-1282839_U	Barrera de humedad.	Prenda sanitaria para el uso por personas que padecen incontinencia urinaria con movilidad normal, reducida o dependientes y usuarias de absorbente anatómico o absorbente tipo braga pañal.	
PCT/KR2023/009465	Intraluminal devices coated with substance P.	Un nuevo tipo de stent cardiológico que incorpora una substancia con capacidad para evitar la restenosis.	
U201731247	Dispositivo de introducción de catéter.	Catéter en un potencial donante de órganos que se encuentra en asistolia o que vaya a ser donante de órganos en asistolia tras la limitación del esfuerzo terapéutico.	
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.	
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.	
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.	

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 Instituto de Investigación 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.	
EP24382379.6	Rutigloves.	High-security and resistant gloves for surgical use.	
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.	
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

HRI Patent Portfolio: Medical Devices

Patent application	Title	Description	Contact
PCT/EP2020/084344	A device and method for respiratory monitoring in mechanically ventilated patients.	A 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 Institut d'Investigació i Innovació I3PT innovacioi3pt@tauli.cat
PCT/EP2020/081860	Device for medical training and method for medical training associated therewith.	A 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.	
ES13161928T	Laminar air flow ceiling for an operating room.	A laminar air flow ceiling for an operating room comprising a plenum defined by an upper wall, a lower wall, and four side walls, and a plurality of lamps arranged substantially within said plenum. The lamps comprise a first module, a second module connected to the first module and being rotatable, a third module comprising one or more light-emitting elements.	
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.	

HRI Patent Portfolio: Medical Devices

Patent application	Title	Description	Contact
ES202330809U	Surgical retractor plate and surgical retractor.	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.	Instituto de Investigación Sanitaria Aragón csebastian@iisaragon.es
U202231411	Cover for the protection and identification of surgical needles and an associated kit.	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.	
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%).	Vall d'Hebron Institut de Recerca mariona.esquerdo@vhir.org
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.	
EP21383034.2	Syringe driving systems.	New mecanism to do aspirations and injections, during ultrasound guided procedures.	

HRI Patent Portfolio: Medical Devices

Patent application	Title	Description	Contact
P202130115	Computer-Assisted Prostate Tissue Characterization Device for Objective Early Detection of Malignant Lesions	Innovative tool for precise prostate evaluation through firmness mapping, enabling early cancer detection. It offers objective, accurate data, minimizes diagnostic errors, and improves patient comfort, reducing unnecessary invasive procedures.	IIS La Fe Instituto de Investigación Sanitaria innovacion@iislafe.es
EP22383086	Smart Pneumatic Navigation System for Enhanced Endoscopic Visualization and Maneuverability in Small Bowel Examination Procedures	Advanced system with inflatable rings, enhancing small intestine exploration by easing endoscope movement and improving visibility. It reduces procedure time, boosts diagnostic accuracy, and enhances patient comfort.	
P202131224	Wireless Sensor-Integrated Dynamic Orthotic System for Real-Time Biomechanical Monitoring and Adjustment in Skeletal Deformity Correction	Innovative orthotic corset with real-time pressure sensors, offering continuous monitoring and personalized adjustments via a mobile app. Enhances treatment precision, patient comfort, and accelerates therapy.	
U202132029	Quantitative Neuromotor Function Assessment Keyboard for Remote Monitoring of Neurodegenerative Disease Progression	Designed for neurodegenerative diseases, this intelligent keyboard analyzes keystroke dynamics (pressure, reaction time) to remotely track disease progression in Parkinson's and MS patients. The validated prototype offers clinicians quantitative mobility data for personalized treatment adjustments.	
EP22382100	Endoscopically Deployable Bioabsorbable Drug-Eluting Implant System for Minimally Invasive Repair of Post-Surgical Fistulas	This innovative solution combines biodegradable balloons with therapeutic gels to seal postsurgical fistulas endoscopically. The device delivers targeted medication while eliminating need for additional surgeries, significantly improving recovery	
P202131165	Patient-Specific Three-Dimensionally Printed Bioengineered Tracheal Scaffold for Functional Reconstruction of Airway Stenosis	Personalized 3D-printed biopolymer patches promote natural tissue regeneration in tracheal stenosis, reducing the need for invasive surgery and cartilage removal, ensuring patient-specific fit and minimizing complications.	
EP19382791	Integrated Multi-Parameter Regulatory System for Optimal Homeostasis Maintenance During Laparoscopic Gas Insufflation Procedures	This smart modular system continuously monitors and adjusts CO_2 insufflation parameters (temperature, pressure, humidity) during laparoscopy to prevent peritoneal damage. The device has shown success in animal trials	
U202132499	Automated Precision Vascular Anastomosis Device for Leak-Proof Prosthetic Graft Attachment in Aortic Reconstruction Surgery	Revolutionizing vascular surgery, this automated stapler performs precise, leak-proof anastomoses of aortic prostheses. Its ergonomic design and specialized clip geometry ensure secure, uniform tissue joining while significantly reducing operation time.	

HRI Patent Portfolio: Medical Devices

Patent application	Title	Description	Contact
P202230080	Dual-Spiral Conical Nitinol Embolic Filter for Minimally Invasive Endovascular Procedures	Innovative self-expanding nitinol filter with dual conical spirals (300-500µm wires) dynamically adapts to vessels (2-10mm). Captures sub-100µm particles during angioplasty via unique reversible distal cone mechanism, enabling safer retrieval. Low-profile design fits microcatheters (<2Fr) while maintaining flow.	IIS La Fe Instituto de Investigación Sanitaria innovacion@iislafe.es
EP24382866.2	System for Classifying a Urological Patient	AI-based system for classifying male urological patients into bladder outlet obstruction (BOO) or detrusor underactivity (DU) using non-invasive uroflowmetry data. It processes urine flow signals through machine learning with advanced dimensional reduction and filtering techniques to distinguish between these conditions without invasive tests, improving diagnostic accuracy through smart signal normalization and projection methods.	
EP20382289.5	A Medical Device for Transluminal Access	This innovative pneumatic steerable guide with an integrated expandable tube enhances current intubation support devices. It solves common challenges by allowing the endotracheal tube to remain in place without displacement, increasing success rates and minimizing airway trauma.	
P201931051	Stretcher for the Examination and Treatment of Patients with Benign Paroxysmal Positional Vertigo	Benign Paroxysmal Positional Vertigo (BPPV) is the most common cause of vertigo. Diagnosing and treating BPPV requires specific movements to assess and reposition the otoliths, which are difficult to perform with standard stretchers. This patented invention is a simple, cost-effective stretcher designed to facilitate the necessary movements for both diagnosis and treatment of BPPV without complex procedures.	
P201630427	Development of a Device for Fixation and Protection of the Insertion Site of External Ventricular Drains	A new safety and protection device for external ventricular drainage, Drenaven, based on a structure capable of holding inside the DVE that insulates the scalp and, in turn fixed so it prevents unintentional removal. Likewise, its bactericidal coating or composition prevents bacterial nesting and biofilm formation on the EVD associated with the possible occurrence of ventriculitis episodes.	
P201930355	System for obtaining useful data for analysis of body morphometry and associated method	The present invention consists of a coded capeline that, used together with a mobile application, a web viewer and 3D processing software, allows the analysis of cranial deformation in infants in a non-invasive way. That is, it allows obtaining 3D models of children's heads, which allows the analysis of cranial deformation.	
U201630976	Converter device for Laryngoscopy. (Cleverscope)	The device is a small, lightweight piece made of plastic material, designed to be attached to the distal end of the blade of any laryngoscope. Its characteristics allow the device to have high portability. It has been constructed using plastic materials with specific elastic properties that enable it to adapt to any model and size of a Macintosh-type laryngoscope blade (the most commonly used blades in hospital settings).	
P201830301	Endotracheal dilation and ventilation device	The device is a tube used in medical procedures for both dilation and ventilation of the airway. The tube consists of two sections: one with a constant diameter and another with a progressively narrower diameter. This design aims to optimize ventilation and access in specific clinical situations.	

HRI Patent Portfolio: Medical Devices

Patent application	Title	Description	Contact
P201431597	Método y aparato para el guiado durante la ablación cardiaca mediante la reconstrucción global de la actividad cardiaca a partir de registros noinvasivos e intracavitarios combinados (Dispositivo de localización de arritmias cardiacas, CORIFY).		 Instituto de Investigación Sanitaria Gregorio Marañón gestion.innovacion@iisgm.com
P201531508	Depresor lingual con protector labial y lingual.		
P201730568	Sistema de simulación clínica híbrida (HYBRIDS) – DUMMYS.		
P202530042	Laringoscopio con sistema de vacío.		
P201731161	System and Method for Automatic Detection of Circular Cardiac Activations.		
17/926,278	Método de control para un dispositivo neuroprotésico para la reducción de temblores.		
P202230220	Implantes personalizados con actividad antimicrobiana para prevenir y tratar infecciones óseas.		
EP22382591.0	Tapón antireflujo.		
EP24383410	Método para la detección de mecanismos de arritmias cardiacas complejas.		

Health Research Institutes' Patent Portfolio

Diagnostics & Imaging

GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

Instituto de Salud Carlos III

Programa de Evaluación, Acreditación y Seguimiento de IIS

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.	IIS FJD INSTITUTO DE INVESTIGACIÓN SANITARIA FUNDACIÓN JIMÉNEZ DÍAZ innovacion.invest@quironsalud.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.	
EP23383195.7	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.	
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.	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
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.	This invention relates to 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 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.	IdISSC INSTITUTO de INVESTIGACIÓN SANITARIA Hospital Clínico San Carlos otc.hcsc@salud.madrid.org
EP23382324	Genetic signature for predicting the response to immunotherapies in a subject.	The present invention relates to 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.	
EP24382078	Biomarcadores bacterianos para la detección temprana de cáncer colorrectal en muestras de heces.	Kit de biomarcadores bacterianos en muestras intestinales o fecales que, por un lado, ayudan al diagnóstico de cáncer colorrectal y, por otro lado, predicen la progresión del cáncer colorrectal, así como la respuesta al tratamiento de un sujeto que padece esta enfermedad.	inibic instituto de investigación biomédica de a coruña alexandre.de.la.fuente.gonzalez@sergas.es graciela.fernandez.Arrojo@sergas.es
15847971	Method for diagnosing arthrosis.	Patrón de péptidos característico de sujetos que padecen artrosis y el uso de dicho patrón en el diagnóstico de dicha enfermedad. Por lo tanto, se relaciona con un método in vitro de diagnóstico y un kit para la puesta en práctica de dicho método de diagnóstico de enfermedades reumáticas.	
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
EP2022067556	Molecular tools for the diagnosis and prognosis of melanocytic spitzoid tumors.	The present invention is a molecular signature based on epigenetic markers that diagnoses spitz skin tumours with incertain malignant potential, clasifying the associated risk of metastasis and their evolution.	INCLIVA | VLC Instituto de Investigación Sanitaria innovacion@incliva.es

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
ES201030258	Method for prognosticating stroke.	This invention relates to 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.	 itsal@ibsal.es
ES201531891	Biomarker for the diagnosis, prognosis, and monitoring of early-onset colorectal cancer.	The invention provides a 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.	The invention relates to a 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.	The invention relates to 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	PRO-ADM for prognosing the risk of a medical condition requiring hospitalization in patients with symptoms of infectious.	The invention describes 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.	The invention relates to the 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.	The invention describes an 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.	
EP2021070131	In vitro method for predicting mortality in covid-19 patients.	The invention concerns the 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.	
EP2022057048	Method for the diagnosis of a coronavirus infection.	The invention refers to 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.	The invention describes a 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.	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
P201600158	Method for determining the degree of activation of the trigeminovascular system.	The invention presents 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.	This invention relates to a 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.	The present invention relates to a 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.	
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.	 innovacio@idibell.cat ltraveset@idibell.cat
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.	

HRI Patent Portfolio: Diagnostics & Imaging

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.	 innovation@igtp.cat
EP15700343	Double stranded DNA libraries.	A method for DNA sequencing and identifying methylated cytosines in DNA.	
EP19 745 075.2	In vitro method for the diagnosis of synucleinopathies.	Diagnostic method for detecting synucleinopathies using in vitro techniques.	
EP18 704 566.1	PROMISE.	Predicting outcomes of endovascular treatment for ischemic stroke patients.	
EP19 728 095.1	Tuberculosis mycobacteria.	A diagnostic method for identifying non-tuberculous mycobacteria.	
EP19 730 382.9	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.	
EP20 704 923.0	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.	
EP24 383 456.1	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.	
US12/937568	Sistema de planificación para radioterapia intraoperatorio (Navegador quirúrgico RIO).		 gestion.innovacion@iisgm.com
P200502612	Aparato de Tomografía Multimodalidad.		
EP18728916.0	Sistema de Diagnostics & imaging 3D para proyecciones limitadas.		
EP 24382503.1	Protocolo blanqueamiento.		
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.	 palvarez@fibao.es
P202430017	Novel biomarkers for early diagnosis of malignant melanoma.		

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
P202231096	Chronic pulmonary thrombepigen (CPT): Diagnostic panel of miRNAs between pulmonary embolism and hypertension.	An alternative miRNA panel to existing ones that allows not only the diagnosis of chronic thromboembolic pulmonary hypertension, but also the discrimination of pulmonary embolism patients from chronic thromboembolic pulmonary hypertension, patients and/or the prognosis of pulmonary embolism.	 ecruces-ibis@us.es ahoyos-ibis@us.es
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.	
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
EP23382807.8	Método para determinar el estado de deficiencia en la recombinación homóloga de un tumor y para predecir la respuesto de un cáncer a una terapia.	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	Vall d'Hebron Institut de Recerca mariona.esquerdo@vhir.org
EP21382680.3	Biomarkers for endometrial cancer.	Identification of proteins as biomarkers for the early and effective diagnosis of endometrial cancer through non-invasive procedures.	
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	
EP21382322.2	Markers for the diagnosis of large vessel occlusion.	Blood biomarkers (proteins) whose determination in blood is associated with the presence of an occlusion in the cerebral artery responsible for ischemic stroke. These biomarkers would therefore be useful for the diagnosis of large vessel occlusion (LVO) whose treatment consists of performing mechanical thrombectomy. The application of these markers will allow to differentiate patients with LVO from those without LVO and refer them to a stroke reference center where thrombectomy can be performed.	

HRI Patent Portfolio: Diagnostics & Imaging

Patent application	Title	Description	Contact
P202430694	Advanced Molecular Biosensor System for Ultra-Rapid, Culture-Free Detection of Pseudomonas aeruginosa with High Microbiological Specificity and Clinical Integration Capability	The biosensor has been designed with the highest standards of operational simplicity, rapid response, high microbiological specificity, and adaptability to clinical settings. It employs an advanced molecular detection system that, without the need for prior culturing or sophisticated equipment, provides reliable results within minutes, enabling immediate, accurate, and evidence-based medical decision-making	 innovacion@iislafe.es
P202530028	High-Sensitivity Portable Molecular Detection System for Rapid Identification of Scopolamine in Forensic and Clinical Settings	The molecular sensor developed enables rapid, portable detection of scopolamine (burundanga) in under five minutes. Highly sensitive and cost-effective, it provides a crucial tool for law enforcement, hospitals, and security, offering immediate, reliable results with minimal equipment.	
P202430366	Non-Invasive Circulating Long Non-Coding RNA Signature for Early Detection and Monitoring of Cardiac Allograft Rejection	Non-invasive diagnostic method using long non-coding RNA (lncRNA) signatures to detect cardiac rejection in transplant patients. This blood test provides early, precise diagnosis, enabling better monitoring and adjustment of immunosuppressive treatments.	
EP18248213	Circulating MicroRNA-Based Predictive Diagnostic Assay for Anthracycline-Induced Cardiotoxicity Risk Stratification in Oncology Patients	MIRCATOX predicts cardiotoxicity risk in patients treated with anthracyclines through circulating miRNA biomarkers, allowing early intervention and personalized cancer treatment.	
EP223828666	Metabolomic Evaluation of Lung Cancer Treatment Response	Analyzes blood biomarkers to diagnose and monitor non-small cell lung cancer. It offers a clear view of disease presence and evaluates patient response to treatments, facilitating precise, personalized medical decisions.	
P202030357	Device for the Detection of DNA of Candida auris	The system is based on the synergy of hybrid porous materials, both organic and inorganic, and molecular gate technology using specific oligonucleotide sequences. By introducing a chromo/fluoro genetic indicator into the porous support for signaling, which will only be released in the presence of C. auris DNA due to the hybridization of the target DNA with the oligonucleotide that blocks the pore entry.	
P202231096	miRNA Panel for the Diagnosis of Chronic Pulmonary Thromboembolic Hypertension	A diagnostic panel based on miRNAs has been developed to differentiate between pulmonary embolism and chronic post-thrombotic pulmonary hypertension (CPTPH), improving early detection of the latter. The panel, validated through regression and patient testing, shows high diagnostic accuracy.	
EP21704553.3	Method for the diagnosis of Systemic Lupus Erythematosus (SLE)	A new method has been developed to rapidly detect and measure the level of activity of autoimmune diseases associated with the presence of specific antibodies called complete Ro/SSA antibodies. Some of these diseases include systemic lupus erythematosus (SLE), discoid lupus, Sjögren's syndrome, and rheumatoid arthritis.	
P201731069	Porous material for the detection of Candida albicans, diagnostic method using same and preparation method thereof	A new method has been developed for the rapid and highly sensitive diagnosis of infection caused by Candida albicans through the use of mesoporous materials.	

Health Research Institutes' Patent Portfolio

Digital health & IT

GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

Instituto de Salud Carlos III

Programa de Evaluación, Acreditación y Seguimiento de IIS

HRI Patent Portfolio: Digital health & IT

Title	Description	Contact
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
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.	
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.	
IPR-745 VIVEMBARAZO.	The purpose of this invention is the development of 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.	
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.	
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.	
Diet recommendation algorithm.	We present 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.	
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.	
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.	
“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.	
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.	
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	

HRI Patent Portfolio: Digital health & IT

Title	Description	Contact
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
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 amaia.delvillaralvarez@bio-gipuzkoa.eus
T-amylo score.	Clinical prediction rule for the diagnosis of transthyretin cardiac amyloidosis using artificial intelligence in the electrocardiogram and in the echocardiogram.	
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@quironsalud.es
Digitalization of pathology characterization.	A computer-based system and method for characterizing medical pathologies.	IGTP innovation@igtp.cat
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
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

Title	Description	Contact
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
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.	
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
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
Simulador de hemofiltración (HEFISIM-1).		IIS G-M Instituto de Investigación Sanitaria Gregorio Marañón gestion.innovacion@iisgm.com
Cuantificación del riesgo embólico a partir del análisis del flujo intracardíaco: "A CLINICAL METHOD FOR MAPPING AND QUANTIFYING BLOOD STASIS AND THROMBUS RISK IN THE HEART".	Nuevo método clínico para la cuantificación del estasis sanguíneo en el interior del ventrículo izquierdo.	

Health Research Institutes' Patent Portfolio

Others

GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

Instituto de Salud Carlos III

Programa de Evaluación, Acreditación y Seguimiento de IIS

HRI Patent Portfolio: Others

Patent application	Title	Description	Contact
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
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. The system ensures highly homogeneous particle and pore size, optimizing purification efficiency.	ibima Plataforma BIONAND maria.mengual@ibima.eu
Other	Racksys animal management tool.	Platform for animal management in the animal house and experimental operating room platform.	bio EUSKAL OSASUN IKERKUNTZA INVESTIGACIÓN VASCA EN SALUD BASQUE HEALTH RESEARCH BIOGIPUZKOA amaia.delvillaralvarez@bio-gipuzkoa.eus
Other	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.	
P202330486	Biomatrices with controlled structure and biomechanical properties for use in tissue engineering.	The present invention refers to the generation of acellular biological matrices with improved biomechanical properties, generated by induction of extracellular matrix synthesis processes, followed by a decellularization process and improvement of its properties by chemical crosslinking by genipin.	ibs.GRANADA INSTITUTO DE INVESTIGACIÓN BIOSANITARIA palvarez@fibao.es
Other	AGUEDA (active gains in brain using exercise during aging) trial.	A protocol consisting of five blocks has been carried out to evaluate the physical, mental and physiological conditions of a group of people between 65 and 80 years old subjected to a trial lasting 24 weeks in comparison with a group control.	
EP24382670.8	Optical fiber device.	Optical fiber device for the direct fluorescent quantification of total and volatile acidity in beverage.	
P202430060	Measuring device for railway track.		

HRI Patent Portfolio: Others

Patent application	Title	Description	Contact
EP23383204.7	Modelos de roedores obtenidos por knock-in del gen humano her2.	We have generated 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.	Vall d'Hebron Institut de Recerca mariona.esquerdo@vhir.org
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.	
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.	
Other	Neuropsychological scales to assess Parkinson Disease.	The PD-CRS and PD-CFRS are valid and reliable instruments to screen and 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