PROGETTI INTERNAZIONALI													
FINANCYNG BODY	**CALL**	**PROJECT TITLE**	**ACRONYM**	**PROJECT REFERENCE NUMBER**	**CUP**	**PARTNERS**	**COORDINATOR PROJECT**	**ABSTRACT**	**TOTAL BUDGET PROJECT**	**BUDGET UDA**	**COFIN UDA**	**CUN AREA**	**DEPARTMENT**	**YEAR OF FINANCING**
UE FINANZIAMENTI DIRETTI - H2020	H2020-MSCA-RISE-2018	In-situ instrument for Mars and Earth dating applications	IN TIME	823934	D76C18001010006	ALMA SISTEMI SRL, Italy; UNIVERSIDAD COMPLUTENSE DE MADRID Spain; CYPRUS SPACE EXPLORATION ORGANISATION (CSEO) Cyprus; UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA Italy; UNIVERSITA DEGLI STUDI DI SASSARI Italy; THE UNIVERSITY OF TEXAS SYSTEM United States	ALMA SISTEMI SRL	As the ongoing robotic exploration to Mars has made some tantalising discoveries, the next major step should be retrieving samples from the Martian surface, so they can be investigated in detail in terrestrial laboratories. However, considering the huge costs associated to suh missions, an in-situ dating of rock samples is a more cost-effective approach. Accurate estimation of absolute ages is required in order to understand Mars surface and atmosphere evolutionary processes. Furthermore knowledge on occurrence and time frequency of such processes allow a hazard evaluation for locations/areas, essential for future deployments, missions and eventually humans on Mars. However, a chronology for recent events on Mars is problematic, as uncertainties associated with current methodology (crater counting) are comparable to the younger ages obtained (~ 1 Million years). IN-TIME project addresses the technological and economic viability of a leading-edge instrument for dating of Mars' surface: a miniaturized Luminescence dating instrument for in-situ examination. Thanks to the development of its innovative technology, and in addition to planetary exploration application, it will also address Earth's field applications as a light and portable dating instrument in geology and archaeology as well as a risk assessment tool for accident and emergency dosimetry and nuclear mass-casualty events.	€ 1.173.000,00	€ 127.050,00	€ 0,00	04 - Scienze della Terra	SCIENZE PSICOLOGICHE, DELLA SALUTE E DEL TERRITORIO	2018
UE FINANZIAMENTI DIRETTI - H2020	H2020-FETOPEN-2018-2019-2020-01	Oxide Nanoelectromechanical Systems for Ultrasensitive and Robust Sensing of Biomagnetic Fields	OXiNEMS	828784	D56C18001390006	CONSIGLIO NAZIONALE DELLE RICERCHE, Italy; CHALMERS TEKNISKA HOEGSKOLA AB Sweden; UNIVERSITAET HAMBURG Germany; QUANTIFIED AIR BV Netherlands; UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA Italy; META GROUP SRL Italy	CONSIGLIO NAZIONALE DELLE RICERCHE	In this project, we develop a new class of nanoelectromechanical systems (NEMS) based on integrated multifunctional oxides. With these devices, we will construct ultrasensitive and robust detectors for biomagnetism and apply them as transducers for applications in the field of human brain imaging. OXiNEMS will exploit advanced multifunctional materials, namely transition metal oxides (TMOs) to create new types of NEMS and MEMS devices based on crystalline heterostructures and revolutionize the field of M/NEMS across many areas of technology. As proof-ofconcept of this innovative vision, OXiNEMS targets breakthrough research for developing nanomechanical sensors for measuring weak magnetic fields, in particular those found in Magnetoencephalography (MEG) and Ultralow-Field/Very-Low-Field (ULF/VLF) Magnetic Resonance Imaging (MRI). Presently available instruments are based on Low Temperature SQUID detectors which are extremely sensitive, but are mildly robust to static and pulsed magnetic fields, such as the ones used in ULF/VLF MRI and Transcranial Magnetic Stimulation (TMS), still not integrated with MEG. SQUIDs require expensive operation and maintenance costs, as they work in a liquid helium (4K) bath. OXiNEMS will develop robust magnetic field sensors based on nanomechanical resonators with all-optical readout, working in a simplified cryogenics setup at the liquid nitrogen temperature (77K). This allows for a much smaller working distance which enables biomagnetic detection with unprecedented spatial resolution. The success of OXiNEMS will thus both revolutionize the NEMS and MEMS field by introducing a new class of multifunctional sensors/actuators, and also it will open new directions in the field of human brain imaging by facing one of the most critical current challenges of neuroscience and the clinical community: to image brain activity and connectivity with high spatial and temporal resolution combining MEG with MRI and TMS on the same system.	€ 3.176.802,50	€ 493.375,00	€ 0,00	06 - Scienze mediche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2018
UE FINANZIAMENTI DIRETTI - H2020	H2020-MSCA-IF-2017	SEISMOGENIC COMPRESSION IN SOUTHERN ITALY - REMOTE SENSING (LIDAR) AND MORPHOTECTONIC ANLYSIS TO TEST THE ACTIVE NATURE OF THE SOUTHERN APPENNINE OUTER THRUST FRONT	COLOSSEO	795396	D79F18000050005	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy; ARIZONA BOARD OF REGENTS, United States	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	Over the past decade (1999-2009), earthquakes proved to be the deadliest of all European disasters. Italy is one of the most seismically active countries in Europe and, Southern Italy, is recognized as the most seismically active sector of the peninsula. The sector is traversed by the Apennine fold-and-thrust belt which is seismogenic, alongthe Outer Front, in northern-central Italy and in Sicily. On the contrary, it is considered often inactive in southernItaly. Nevertheless, historical seismicity reports several destructive earthquakes and geological-geomorphological indications of recent deformation have been recently pointed out. The geological setting contrasts the recognition of the seismogenic sources since the Apennine Outer Front is buried under Plio-Quaternary foredeep successions. It is urgent to develop new approaches to investigate the active deformation in this sector. This research aims to detect evidence of Late Quaternary active compressional faulting along the Southern Apennine Outer Front. The peculiar geological setting of the sector necessarily requires a multidisciplinary approach. The research plan envisages the integration of HRT (high resolution topography) data analysis, morphotectonic analysis in GIS/Matlab environments, geochronologic dating and classical methodologies of analysis belonging the seismotectonics. Airborne lidar topographic data are able to capture fault offsets and landscape properties recording the complexity and sensitivity of deformation. The drainage pattern analysis and morphometric indices computed using GIS (Geographic Information System) and Matlab programming language are suitable for evaluating the effects of active tectonics on the topography or morphological features. These novel approaches are exploding worldwide. Exploiting them in order to investigate the active deformation represents an excellent chance to improve the knowledge on the southern Apennines seismotectonic setting.	€ 262.269,00	€ 262.269,00	€ 0,00	04 - Scienze della Terra	SCIENZE PSICOLOGICHE, DELLA SALUTE E DEL TERRITORIO	2018
UE FINANZIAMENTI DIRETTI - H2020	H2020-ERC-2018-SyG	CONNECTING THE NETWORKS OF THE HUMAN BRAIN	CONNECTTOBRAIN	810377	D54I18000270006	AALTO KORKEAKOULUSAATIO SR, Finland; AALTO KORKEAKOULUSAATIO SR Finland; EBERHARD KARLS UNIVERSITAET TUEBINGEN Germany; UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA Italy	AALTO UNIVERSITY	ConnectToBrain will introduce whole-brain multi-locus transcranial magnetic stimulation (mTMS), in which the brain-stimulating electric-field location, direction, magnitude and timing are controlled electronically based on realtime high-density electroencephalography (hdEEG) information of activity and connectivity in brain networks. The final mTMS apparatus will consist of 50 coils. Superpositions of electric fields produced by the different overlapping coils allow spatiotemporally millimeter- and millisecond-precise stimulus sequences to arbitrary cortical sites without physical movements of the coil set. Spatial targeting of mTMS will be further improved by measuring individual brain conductivity distributions with ultra-low-field MRI. The proposed hdEEG methodology uses a brain–computer interface (BCI) and a computer–brain interface (CBI) in a closed, algorithmically-controlled loop. BCI receives realtime information about brain activity and connectivity from hdEEG, while CBI adapts mTMS to drive brain activity and connectivity into desired directions. ConnectToBrain will allow unprecedented tracking of dynamic changes and reorganization of brain networks in real-time, and network-targeted closed-loop stimulation. This radically novel technology will cause a paradigm shift from current open-loop practice that is only moderately effective in therapy. We will apply ConnectToBrain to reach new levels of efficacy of therapeutic applications. Patients after stroke and with Alzheimer's disease will be tested and treated as models of network disorders. Our high-risk, high-gain endeavor will reach the ambitious goals only through the Synergy of the 3 PIs, world leaders in their complementary areas of expertise (instrumentation, algorithms, translation). If the project succeeds, we expect the value of societal, health and industrial benefits in Europe to exceed€1 billion annually, not to mention the immense value of alleviating human suffering from brain disorders.	€ 9.981.794,00	€ 2.986.625,00	€ 0,00	06 - Scienze mediche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2018
UE FINANZIAMENTI DIRETTI - H2020	H2020-MSCA-ITN-2018	Integrating Functional Assessment measures for Neonatal Safeguard	INFANS	813483 ETN	D56C18001270002	TECHNISCHE UNIVERSITAET ILMENAU, Germany; UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA Italy; EEMAGINE MEDICAL IMAGING SOLUTIONSGMBH Germany; HELSINGIN YLIOPISTO Finland; KATHOLIEKE UNIVERSITEIT LEUVEN Belgium; ARTINIS MEDICAL SYSTEMS BV Netherlands; UNIVERSITAIR MEDISCH CENTRUM UTRECHT Netherlands; KVIKNA EHF Iceland; HASKOLI ISLANDS Iceland; A.N.T. INTERNATIONAL BV Netherlands	TUIL - UNIVERSITA' TECNICA ILMENAU GERMANIA - JENS HAUEISEN	INFANS will train 15 ESRs with background from basic to clinical sciences in multiple aspects of neonatal brain monitoring. The need for a coordinated research training programme in neonatal brain monitoring arises from i) the severe shortage of clinically viable means to high quality monitor the brain function in infancy, crucial to prevent later life neurological, cognitive and motor impairment and ii) the lack of well-educated PhDs in this field. Through their individual research projects, encompassing technological innovation, industrial development, clinical validation, identification of neonatal healthcare needs, the INFANS ESRs will develop a novel platform for high quality, clinically-viable EEG-NIRS monitoring accessible worldwide. Excellent science, industrial leadership and societal challenge are merged in INFANS: 6 academic and 4 non-academic partner from 6 EU countries, among which leading universities, industries, clinical institutions, share complementary expertise and facilities to provide international, interdisciplinary and intersectoral research training and mobility that will complement local doctoral training. Well-targeted visits and secondments, soft skills and dynamic training activities, an Open Science strategy, extensive involvement of ESRs in the network events organization, extensive contacts with other research, training and industrial European networks, dissemination activities and the award of Double doctoral degrees are further assets of INFANS. The ESRs will learn to transform a scientific/technological challenge into a product of socio-economic relevance, as the INFANS functional neuro-monitoring system will reduce the number of children with neurological, cognitive or motor dysfunctions associated with brain injuries at birth. The INFANS ESRs will become independent researchers with career prospects in both the academic and non-academic sectors, and will advance the EU capacity for innovation in biomedical engineering.	€ 3.950.394,84	€ 784.499,04	€ 0,00	06 - Scienze mediche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2018
UE FINANZIAMENTI DIRETTI	UE DG JUSTICE JUST-2017-AG-DRUG	Analysis, knowledge, dissemination, justice impelementation and special testing of nove synthetic opioids -	JUSTSO	806996	D56C18001280002	UNIVERSITA DEGLI STUDI DI CAGLIARI, Italy; UNIVERSITA POLITECNICA DELLE MARCHE; UNIVERSITAETSKLINIKUM ESSEN; UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA; ISTITUTO SUPERIORE DI SANITA; LATVIJAS ORGANISKAS SINTEZES INSTITUTS; ARISTOTELIO PANEPISTIMIO THESSALONIKIS – EIDIKOS LOGARIASMOS KONDILION EREVNAS; CONSORCIO MAR PARC DE SALUT DE BARCELONA	UNI CAGLIARI - GAETANO DI CHIARA	Novel synthetic opioids (NSO) are a class of novel psychoactive substances (NPS) that mimic morphine and heroin but, in contrast to them, may be fully effective by the oral route and many times more potent than morphine in producing acute toxicity. Their use is likely to become the primary source of NPS-associated deaths in Europe, given its increasing prevalence, opposite to that of other NPS classes, that is decreasing. This trend calls for action and better knowledge of the profile, setting and effects of these substances in order to devise strategies of intervention from the legal, epidemiological, diagnostic, clinical, emergency treatment and public awareness viewpoints. The present project, apart from its general management and coordination, is articulated into 4 main lines, such as, collection of information from providers in several countries relating to individuals who have reported using NSO or died from their use. These data will indicate the specific classes of compounds towards which to develop new rapid and portable analytical methods of NSO present in biological specimens, to be later confirmed and extended by laboratory procedures. Selected representatives of these compounds will be studied for their potency and intrinsic activity in vitro as opiate agonists and for their behavioural and neurochemical effects in vivo. In order to develop effective interventions against NSO overdosing and lethality, known (e.g. naloxone, naltrexone) or ad hoc synthesized antagonists of μ receptors (MOR) with higher affinity and efficacy will be tested in animal models and in humans. Finally existing information and that generated by the project will be made available to the public in order to provide awareness of the toxic liability of these compounds and with tools to reduce their use and to treat their emergencies. It is hoped that this action will contribute to invert the current growing trend of NSO use and mortality.	€ 610.835,00	€ 39.389,01	€ 9.847,25	06 - Scienze mediche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2018
UE FINANZIAMENTI DIRETTI - H2020	H2020-MSCA-ITN-2018	Novel Biomaterial-based Device for the Treatment of Progressive MS- - An Integrated Pan- European Approach	PMSMaTrain	813263	D54I19001140006	NATIONAL UNIVERSITY OF IRELAND GALWAY, Ireland; UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA Italy; SYDDANSK UNIVERSITET, Denmark; UNIVERSITE GRENOBLE ALPES France; WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER Germany; UNIVERSITEIT ANTWERPEN Belgium; CONTIPRO AS Czechia; NEOS SURGERY SL Spain	NATIONAL UNIVERSITY OF IRELAND	PMSMatTrain is focusing on gaining a comprehensive understanding of the progressive (late degenerative phase) of multiple sclerosis (PMS) from basics to translation, fully supported by 8 beneficiaries (6 research institutions, 2 SMEs). Recruited ESRs will receive compulsory discipline-specific, generic and complementary transferable skills training. PMSMatTrain's Joint Research Education and Training programme (JRTP) will provide early stage researchers with high quality research and transferable skills training in intellectual property, leadership skills, innovation, regulatory affairs, entrepreneurship, gender policy, and medical device evaluation, which will ensure that they are immediately employable in industry. The consortium will develop a multi-modal hyaluronan-based medical device designed to release small molecular weight anti-inflammatory molecules (APRIL and sPIF) followed by remyelination and neuroprotective drugs (ibudilast and miconazole). PMSMatTrain will for the first time utilise these functionalised multi-modal biomimetic hyaluronan scaffolds as a tool to investigate cross-talk between signals arising due to chronic neuroinflammation and those leading to demyelination and axonal loss, while identifying molecular mechanisms that facilitate remyelination and neuroprotection in PMS. This approach could yield the first cortex-proximal and directed biomaterials-based disease-modifying therapy for PMS. These scaffolds will be tested in state of the art MS patient induced stem cell-derived oligodendrocyte cultures and organotypic cultures to investigate MS pathophysiology. In vivo responses will be characterised using field-leading MRI and mass spectrophotometry protocols. PMSMatTrain will also generate a clinically-relevant in silico model of drug elusion and dispersal within the CNS. Our industry partners will develop the end-device by providing standardised manufacturing protocols for scaled-up production and commercialisation of the cGMP product.	€ 4.120.264,80	€ 274.684,32	€ 0,00	06 - Scienze mediche	SCIENZE MEDICHE, ORALI E BIOTECNOLOGICHE	2018

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FINANCYNG BODY	**CALL**	**PROJECT TITLE**	**ACRONYM**	**PROJECT REFERENCE NUMBER**	**CUP**	**PARTNERS**	**COORDINATOR PROJECT**	**ABSTRACT**	**TOTAL BUDGET PROJECT**	**BUDGET UDA**	**COFIN UDA**	**CUN AREA**	**DEPARTMENT**	**YEAR OF FINANCING**
UE FINANZIAMENTI DIRETTI	H2020-JTI-IMI2-2017-13-two stage	Parkinson Disease with Mild cognitive Impairment treated with Nicotinic agonist Drug	PD-MIND	820880	D56C19000000006	KING'S COLLEGE LONDON, United Kingdom; STICHTING LYGATURE Netherlands; THE UNIVERSITY OF EXETER United Kingdom; HELSE STAVANGER HF Norway; UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA Italy; TECHNISCHE UNIVERSITAET DRESDEN Germany; NORGES PARKINSONFORBUND Norway; Masarykova univerzita Czechia; ASTRAZENECA AB Sweden; PARKINSON'S DISEASE SOCIETY OF THEUNITED KINGDOM LBG United Kingdom	KINGS COLLEGE LONDRA	Parkinson Disease (PD) is the second most common neurodegenerative disease after Alzheimer's disease. There is an unmet clinical need to treat Parkinson disease with mild cognitive impairment (PD-MCI). There is ample evidence from epidemiological studies as well as (pre)clinical research that Nicotinic receptors are involved in PD and cognition. Recently a clinical trial suggested that selective α7 nicotinic receptor agonist improved cognition in PD patients, as a secondary outcome measure. Hence, the main goal of PD-MIND is to show the potential of the Astrazeneca nicotinic α7 agonist AZD0328 in a randomized, placebo-controlled, international multicentre, cross-over study on cognition in people diagnosed with PD-MCI. We will assess the Attention Intensity Index composite score from the CogTrackTM system as primary outcome measure and other clinical aspects (cognition, motor symptoms) as secondary outcomes. In addition, blood, CSF and imaging biomarkers will be assessed as potential predictors of response, and as marker of target involvement. Patients (Public and Patient Involvement) and other stakeholders will be engaged from the start to allow integration of end-user perspectives in the design and execution of the project. PD-MIND will put considerably effort to disseminate and exploit clinical outcome data and biomarker results, and to sustain the partnership for subsequent phase 3 clinical studies. PD-MIND consortium consist of world-leading PDMClexperts in the area of clinical trials, clinical coordination, project management, data management and analysis, and biomarkers. As such the consortium is well positioned to execute the proposed work and complement the EFPIA members.	€ 999.698,00	€ 58.125,00	€ 0,00	06 - Scienze mediche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2018
CANCER RESEARCH UK	CANCER RESEARCH UK CALL 2017	Understanding the mechanisms and benefit risk of apsirin chemoprevention of cancer through population research	AfCPC	C569/A24991	D51I18000720007	QUEEN MARY UNIVERSITY London; University of Newcastle; University college London; Nottingham University; Leeds University; Harvard University, Boston, United States; Catholic University School of Medicine, Rome, Italy; G.d'Annunzio University di Chieti-Pescara, Italy;	QUEEN MARY UNIVERSITY LONDRA - CUZICK JACK	PURPOSE of the project: • To establish a multi-disciplinary collaboration between population researchers and basic scientists to study the role of aspirin in cancer prevention and adjuvant treatment. • To develop future leaders in population research specialised in cancer prevention using aspirin. We aim to address a gap in the requisite skill set for population research by training the next generation of molecular epidemiologists through PhD and Postdoctoral training. The project combines molecular biology and epidemiology of cancer. • To understand how aspirin works in preventing colorectal, oesophageal and other cancers by exploiting the best resources and methodology in molecular epidemiology and pharmacology. • To better identify sub-populations (through biomarkers) who would benefit most from aspirin prophylaxis. • To better understand who is at risk of aspirin's adverse effects and prevent them by identifying specify biomarkers or signatures allowing stratification of individuals before they take aspirin. • To research the psychological, sociological and related barriers to the use of aspirin in the primary prevention of cancers that are likely to be encountered amongst sections the public and the health professions, and to develop evidence based ways of overcoming them. • To set up an infrastructure to allow future development and planning of large international trials of cancer chemoprevention using aspirin with a novel efficient design and exploiting the mechanistic knowledge learnt from the collaboration. The project is organized in 6 workpackages. Patrignani's team will participate to Workpackage #4 and #5. Workpackage #4 aims to identify biomarkers related to cancer prevention. Patrignani's team will address whether low-dose aspirin targets only platelet COX-1 versus extraplatelet sources of COX-1 and COX-2. Thus, in normal and cancer biopsy samples collected from breast and colorectal cancer patients of CaPP3 and ADD-ASPIRIN trials, we will quantify the extent of acetylation at serine- 529 of COX-1 (%AceCOX-1) and serine-516 of COX-2 (%AceCOX-2) using a novel proteomic assay developed by Patrignani's Systems Pharmacology Laboratory. AceCOX-1 (%) will be also assessed in isolated platelets. Workpackage #5 aims to evaluate aspirin adverse effect in the general population and cancer patients. Patrignani's team will verify whether the proteome of platelets may identify susceptibility profiles for aspirin chemoprevention of cancer but also for bleeding side effects. Interestingly, platelets uptake proteins and genetic material, including mRNAs, from the environment, thus leading to distinct platelet signatures in patients with cancer.	4.979.338	300.000	-	06 - Scienze mediche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2018
ALZHEIMER'S ASSOCIATION USA	ALZHEIMER'S ASSOCIATION - PART THE CLOUD PROGRAM 2018	Extenzin-based theraphy for MCI subjects	–	PTC-19-602325	D59C18000110007	Università G.d'Annunzio di Chieti-Pescara; IRCCS, Centro San Giovanni di Dio, Brescia; Ospedale fatebenefratelli, Roma; Istituto clinico Humanitas IRCCS, Milano; Università di Brescia	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	Phase II Clinical Trial with zinc supplementation in a cohort of MCI subjects; assessment of structural (MRI9, cognitive, and omics) endpoints.	748.440	203.817	-	06 - Scienze mediche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2018
UE FINANZIAMENTI DIRETTI - H2020	H2020-MSCA-IF-2018	iPS-derived MIcroglia and Neuroinflammation in Dementia	iMIND	841665	D54I19003430006	UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy; THE REGENTS OF THE UNIVERSITY OF CALIFORNIA United States	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	Alzheimer's disease (AD) is an irreversible neurodegenerative condition affecting 50 million people worldwide. To date, no disease modifying therapy for AD is available. Neuroinflammation is emerging as an important component of the disease. A recent GWAS analysis identified a rare protective coding mutation (P522A) in the PLCG2 (Phospholipase C Gamma 2) gene that is associated with AD. Interestingly, the gene encodes a transmembrane signaling enzyme that is highly enriched in microglia. The major aim of the proposal revolves around the functional characterization of the P522A mutation in microglia. To that aim, using an array of biochemical, imaging, functional, and transcriptomic assays, we will investigate human microglia generated from control- and AD patient-derived induced pluripotent stem cells (iPSCs). iPSCs will be gene-edited to generate P522A mutated isogenic cell lines. The proposal aims at identifying novel therapeutic targets and, in line with the objectives of the H2020 Framework Programme, explores new grounds in the molecular underpinnings of AD. The use of cutting-edge and innovative approaches (CRISPR/Cas9 gene editing, iPSC reprogramming, RNA-Seq analysis, high-throughput screening, and subcellular calcium imaging) provides a novel experimental model that is closer to the pathological processes of the AD brain and bypasses the limitations and shortcomings of preclinical AD animal models.	€ 269.002,56	€ 269.002,56	€ 0,00	06 - Scienze mediche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2019
UE FINANZIAMENTI DIRETTI - H2020	H2020-MSCA-GF-2018	Secondary organic aerosols production in pre and post-industrial-like environments: the impact of biogenic and anthropogenic emissions on climate	SAPIENTIAM	840217	D71I18000480006	UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy; PRESIDENT AND FELLOWS OF HARVARD COLLEGE United States	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	Anthropogenic emissions (i.e. particles and trace gases) are constantly rising since the industrialization inducing wide changes on the climate of the Earth system, on local degradation of air quality and impactAnthropogenic emissions (i.e. particles and trace gases) are constantly rising since the industrialization inducing wide changes on the climate of the Earth system, on local degradation of air quality and impacting human health. The aim of the SAPIENTIAM project is to identify new mechanisms that allow to describe the preindustrial atmospheric status and its change as consequence of the human activities emission related to industrialization. Secondary organic particles are produced in the atmosphere by the reactions of biogenic volatile organic compounds in presence of nitrogen oxides (NOx) and sulfate (SO2). One of the main uncertainties of the role of particles on the changes of climate and air quality, is related to the impact of anthropogenic emissions on their concentrations and properties. In order to define new mechanisms of atmospheric particle formation in pre-industrial and post-industrial conditions,a laboratory experiment will be carried out at the Harvard Environmental Chamber (outgoing phase). In detail, the pristine pre-industrial-like environment's atmosphere will be simulated in the chamber considering first only the biogenic emissions and, then, adding the contribution of anthropogenic emissions such as NOx and SO2. Recentstudies highlighted the important role played by the ocean as potential source of atmospheric particle, but field observations to confirm this hypothesis are quite rare. Another aim of this project is to verify the results obtained by the laboratory experiments in a field campaign in marine environment representing an innovative post-industrial-like site, where the interaction between biogenic and anthropogenic emissions are poorly explored (return phase at the University of Chieti-Pescara, Ud'A).	€ 168.369,60	€ 168.369,60	€ 0,00	04 - Scienze della Terra	SCIENZE PSICOLOGICHE, DELLA SALUTE E DEL TERRITORIO	2019
UE FINANZIAMENTI DIRETTI	UE PROGRAMMA ATTRACT	MIXED REALITY FOR BRAIN FUNCTIONAL AND STRUCTURAL NAVIGATION DURING NEUROSURGERY	MRbrainS	777222	D84I19000960006	UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy; Università di Berlino, Germany; Azienda YHMAI, France;	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	Brain tumor surgery often requires a delicate compromise between the need to completely remove the neoplastic tissue and the need to preserve important functions for the quality of life of the patient. The pre-surgical mapping of these functions obtained with non-invasive techniques such as functional magnetic resonance imaging represents a formidable help for the surgeon, allowing an optimal planning of the surgery reducing the time and risks. However, these techniques have mostly remained the prerogative of centers that have disciplinary figures (physicians, physicists and engineers) and there is currently no system that allows to automatically perform the complex series of analysis of images acquired during the examination. The objective of this project is twofold: i) to realize a software that automates and integrates the analysis of functional and structural images coming from different modalities and finally sends the results to the neuronavigator; ii) to implement a neuronavigation system to be used not only during the planning phase but also during the surgery itself, based on the emerging techniques of "mixed reality" that exploiting the MR images acquired with feel the surgeon to see also the underlying tissues of his current field of action significantly improving the quality of the intervention.	€ 100.000,00	€ 100.000,00	€ 0,00	06 - Scienze mediche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2019
UE FINANZIAMENTI DIRETTI - H2020	H2020-INFRAIA-2019-1	Europlanet - Research Infrastructure 2020-2024	EPN-2024-RI	871149	D74I20001200006	UNIVERSITY OF KENT, United Kingdom; FONDATION EUROPEENNE DE LA SCIENCE France CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS France STICHTING VU NetherlandsACRI ST SAS France UNIWERSYTET IM. ADAMA MICKIEWICZA W POZNANIU Poland ARMAGH OBSERVATORY AND PLANETARIUM United Kingdom ATOMMAGKUTATO INTEZET Hungary AARHUS UNIVERSITET Denmark BOTSWANA INTERNATIONAL UNIVERSITY OF SCIENCE & TECHNOLOGY Botswana BLUE SKIES SPACE LTD United Kingdom AGENCIA ESTATAL CONSEJO SUPERIOR DEINVESTIGACIONES CIENTIFICAS, Spain; CENTRUM BADAN KOSMICZNYCH POLSKIEJ AKADEMII NAUK Poland UNIVERZITA KOMENSKEHO V BRATISLAVE SlovakiaTHE DILL FAULKES EDUCATIONAL TRUST LIMITED United Kingdom DEUTSCHES ZENTRUM FUR LUFT - UND RAUMFAHRT EV Germany; EVROPAIKO INSTITOUTO DIKAIOU EPISTIMIS KAI TECHNOLOGIAS Greece EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH Switzerland ILMATIETEEN LAITOS Finland; USTAV FYZIKY ATMOSFERY AV CR, v.v.i. CzechiaINSTITUT ROYAL D'AERONOMIE SPATIALEDE BELGIQUE Belgium; ISTITUTO NAZIONALE DI ASTROFISICA Italy INSTITUTET FOR RYMDFYSIK Sweden ISOTOPTECH NUKLEARIS TECHNOLOGIAI ES SZOLGALTATO ZARTKORUEN MUKODO RESZVENYTARSASAG Hungary	University of Kent - UK	The Europlanet 2024 Research Infrastructure (EPN-2024-RI) will provide the pan-EU infrastructure needed to address the major scientific and technological challenges facing modern planetary science and strengthen Europe's position at the forefront of space exploration. EPN-2024-RI builds on the foundations of a series of highly successful EU-funded projects that have created the leading Virtual Observatory for planetary data and the largest, most diverse collection in the world today of field and laboratory facilities capable of simulating and analysing planetary environments. EPN-2024-RI will provide Transnational Access (TA) to an enhanced set of world-leading field and laboratory facilities, Virtual Access (VA) to state-of-the-art data services and tools linked to the European Open Science Cloud (EOSC), and Networking Activities (NA) to widen the user base and draw in new partners from Under Represented States (URS), non-EU countries, industry and interdisciplinary fields, and to train the next generation of RI leaders and users. With 56 beneficiaries, from both industry and academic sectors, providing access to 31 TA facilities on 5 continents and 4 VA services linking over 100 data services and catalogues, EPN-2024-RI represents a step-change in ambition for planetary science worldwide. Innovations include the establishment of a ground based observation network to support space based missions, the launch of an interactive mapping service to provide virtual exploration of planetary surfaces, and the development of machine learning tools for data mining to fully exploit and analyse planetary data sets. EPN-2024-RI will establish global collaborations and an international userbase for the RI through inclusion of partners in Africa, Asia and South America. Ultimately, EPN-2024-RI will support the transition of this unique infrastructure to a sustainable future within the structure of the Europlanet Society.	€ 10.000.000,00	€ 81.700,00	€ 0,00	04 - Scienze della Terra	SCIENZE PSICOLOGICHE, DELLA SALUTE E DEL TERRITORIO	2019
UE FINANZIAMENTI DIRETTI - H2020	H2020-MSCA-RISE-2018	DIGITal ENcyclopedia of European Sociability	DIGITENS	823862	D69C20000100006	UNIVERSITE DE BRETAGNE OCCIDENTALE; UNIVERSITE PARIS 13 France; SORBONNE UNIVERSITE France; BIBLIOTHEQUE NATIONALE DE FRANCE France; PARIS MUSEES France; THE UNIVERSITY OF WARWICK United Kingdom; THE NATIONAL ARCHIVES United Kingdom; UNIWERSYTET KAZIMIERZA WIELKIEGO Poland; UNIVERSITAET GREIFSWALD Germany; UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA Italy; ROYAL INSTITUTION FOR THE ADVANCEMENT OF LEARNING MCGILL UNIVERSITY Canada; UNIVERSITE DU QUEBEC A MONTREAL*UQAM Canada	Università di Brest (UBO - University of Western Brittany)	The Digital Encyclopaedia of European Sociability (DIGITENS) project will produce the first open-access digital encyclopaedia and anthology of sociability in Europe throughout the long-eighteenth century. The purpose of the DIGITENS project is to build an original framework for understanding the interactions, tensions, limits and paradoxes underlying European models of sociability and to reflect on the following question: Can the emergence and formation of European models of sociability be traced throughout the long eighteenth century (1650-1850)? Drawing upon the expertise of international members from different disciplines and national traditions, the project will create a toplevel interdisciplinary network and facilitate intersectoral communication between its academic and non-academic partners. The eight international universities will work together with the Bibliothèque Nationale de France, Musée Cognacq-Jay in France, and The National Archives in Great Britain, allowing members to explore how understandings of sociability might be enhanced through dialogue, international collaboration, and digital technology, developing a broader contextualisation of the research into European sociability. As the first digital encyclopaedia of its kind, the expected impact of the resource will not only benefit researchers, but anyone interested in the history of European models of sociability. The project is not, however, of purely historical or academic interest. Through the implementation of outreach events, workshops and the production of the accessible digital platforms, the DIGITENS team will promote a wide investigation of the value of eighteenth century principles in twenty-first-century private and public lives throughout Europe. The interdisciplinary and international aspects of the DIGITENS project, and coherent methodology, are innovative, and the scope broad and ambitious.	€ 299.000,00	€ 17.136,00	€ 0,00	Area 10 - Scienze dell'antichità, filologico-letterarie e storico-artistiche	LINGUE, LETTERATURE E CULTURE MODERNE - AMMINISTRAZIONE CENTRALE	2019

PROGETTI INTERNAZIONALI

FINANCYNG BODY	CALL	PROJECT TITLE	ACRONYM	PROJECT REFERENCE NUMBER	CUP	PARTNERS	COORDINATOR PROJECT	ABSTRACT	TOTAL BUDGET PROJECT	BUDGET UDA	COFIN UDA	CUN AREA	DEPARTMENT	YEAR OF FINANCING
CYSTIC FIBROSIS FOUNDATION	CYSTIC FIBROSIS PILOT & FEASIBILITY GRANT 2018	ACTIONS OF RESOLVINS ON CYSTIC FIBROSIS LUNG INFLAMATION AND INFECTION	_	RECCHI19I0	D54I19002510007	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	This research program aims to investigate the actions of resolvine (Rv) against lung infections in cystic fibrosis (CF). This is a priority dictated by the urgency to identify new molecules and therapeutic strategies to treat pulmonary infections by bacteria (e.g. P. aeruginosa and S. aures) that cause the progressive loss of respiratory capacity in subjects affected by CF and, consequently, high morbidity and mortality. To meet this need, the project will focus on 2 specific objectives: 1. Determine whether Rvs stimulate the clearance of lung infections and the resolution of the inflammatory response associated with them in a preclinical CF murine system. 2 . Study the effectiveness of HR in human models of CF. The completion of these objectives will allow to better define the biological actions and mechanisms activated by the resolvine and promote their development as new drugs for the treatment of chronic infections and inflammation in cystic fibrosis.	108.000	108.000	-	06 - Scienze mediche	SCIENZE MEDICHE, ORALI E BIOTECNOLOGICHE	2019
FONDAZIONE BIAL PORTOGALLO	FONDAZIONE BIAL - BORSE PER LA RICERCA SCIENTIFICA 2018-2019	Research-Inspired Cognitive Empowerment: Modulating Episodic Memory thruough Egocentric Navigational Training" acronimo	MEMENT	_	D54I19002090007	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	The research proposal aims at investigating the relationship between two crucial domains of human life: spatial navigation and episodic memory. The idea primarily follows the suggestion that different mechanisms of navigation in the physical world (egocentric and allocentric) might represent the evolutionary bases for higher-level memory processes (episodic and semantic, respectively). The original idea by Buzaki and Moser appears particularly appealing because it established a novel, crucial link between the experimental findings in the hippocampal-entorhinal system of freely moving rats and the revolutionary neuropsychological finding of severe amnestic syndromes following removal of the hippocampus and associated structures. According to these two scientists, these two apparently independent findings are closely intewined and evolutionarily associated because they share an analogous spatio-temporal organization. In humans, howevwr, no attempt has been made to verify this relationship using ad-hoc tasks and paradigms that specifically tap on spatio-temporal information. We will test the relation ship using an innovative methodological approach employing information. We will test the relationship using an innovative methodological approach employing different settings/paradigms (experimental and ecological settings including immersive virtual reality). The causal nature of the relatonship will be tested by examining the effects of an intensive spatial training on memory performance. In particular, egocentric navigational ability will be traind in orderto test its effect on episodic memory performance. Following the procedures of our previous studies on perceptual learnig, besides the behavioural indices, we will measure also the effects on the brain resting-state functional connectivity through fMRI.	43.500	43.500	1.000	06 - Scienze mediche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2019
CYSTIC FIBROSIS FOUNDATION	CYSTIC FIBROSIS PILOT & FEASIBILITY GRANT 2018	CIRCULATING MICROVESCICLES AS NEW BIOMARKERS OF CYSTIC FIBROSIS DISEASE	_	Romano19IO	D54I20000220007	ROMANO MARIO	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	We recently developed a new flow cytometric technology that allows the accurate identification of MV in reshly-collected blood and the simultaneous analysis of MV from different cellular origin, Blood MV profilin can be tailored for different clinical conditions by selecting the appropriate antigens that are combined in a ingle tube, ready to use without any blood processing, by clinical laboratories. This methodology that is being patented and soon will be commercially available, has a number of advantages: it is simple and easy to setup; it is flexible, since it allows the simultaneous analysis of as many antigens as the instrument permits and it is highly informative since it gives an estimate of the activation status of a variety of cells, including epithelia cells, that we were able to detect in peripheral blood (figure 5). All these aspects are of pivotal relevance in F, where, in addition to epithelial cells, all cells involved in the immune inflammatory response are affected by the molecular defect of CFTR and are dysfunctional. The primary objectives of this proposal are: 1. To validate the integrated analysis of circulating MV as a new biomarker of CF lung inflammation/infection nd response to therapy. 2. To develop a new diagnostic/prognostic laboratory tool for CF that can be readily transferable to the clinic. As secondary objective, we will collect normal and FC platelet and leukocyte MV, which are the mos numerous in the circulation, using a cell sorter. Sorting the endothelial and epithelial MV compartment is no faceable at the moment because of the low number of these MV. This material will be stored for future studies aimed at profiling the protein and microRNA content of MV, in order to uncover novel potential molecula targets for innovative pharmacological approaches.	-	100.000	-	06 - Scienze mediche	SCIENZE MEDICHE, ORALI E BIOTECNOLOGICHE	2019
ALZHEIMER'S ASSOCIATION USA	ALZHEIMER'S ASSOCIATION - GAAIN 2019	Cerebellum, a neglected AD target	_	GEENA-Q-19-596282	D54I19000930007	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	Alzheimer's Disease (AD) is a condition associated with the development of irreversible cognitive and behavioral deficits and preceded by a prodromal stage known as Mild Cognitive Impairment (MCI). The early identification of the brain changes associated with MCI is critical to catch the disease at its initial stage, unravel the pathogenic mechanisms involved in AD, and help the design of effective therapeutic interventions. Interestingly, the cerebellum, an emerging region for the control of a wide range of cognitive functions, has been largely neglected by AD-related studies. Employing the GAAIN Interrogator tool, we are planning to use and analyze data related to MCI and AD patients made available from three Data Partners. The sets provide MRI-related data as well as information on neuropsychological/clinical features. Thus, using regression models we set to evaluate whether structural changes in the cerebellum, assessed by structural magnetic resonance imaging (MRI), are associated with: 1) morphometric variations in sites targets of AD-related pathology; 2) impairment of general and selective cognitive performances. If successful, this project will define new targets for the diagnosis and treatment of AD. The project will also contribute to unravel the physiopathological processes underlying the progressive cognitive decline linked to AD-spectrum as well as the transition from MCI to AD.	-	25.000	-	06 - Scienze mediche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2019
UE FINANZIAMENTI DIRETTI	H2020-JTI-IMI2-2019	Translational approaches to disease modifying therapy of type 1 diabetes - HARVESTing the fruits of INNODIA	INNODIA HARVEST	945268	_	KATHOLIEKE UNIVERSITEIT LEUVEN, Belgium; THE CHANCELLOR MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE United Kingdom; MEDIZINISCHE UNIVERSITAT GRAZ Austria; UNIVERSITE LIBRE DE BRUXELLES Belgium; KOBENHAVNS UNIVERSITET Denmark; REGION HOVEDSTADEN Denmark; INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE France; HELSINGIN YLIOPISTO Finland; OULUN YLIOPISTO Finland; TURUN YLIOPISTO Finland; HANNOVERSCHE KINDERHEILANSTALT Germany; HELMHOLTZ ZENTRUM MUENCHEN DEUTSCHESFORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH Germany; TECHNISCHE UNIVERSITAET DRESDEN Germany; UNIVERSITAET ULM Germany; UNIVERSITA DEGLI STUDI DI SIENA Italy; UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA Italy; UNIVERSITA DI PISA Italy; CENTRE HOSPITALIER DE LUXEMBOURG Luxembourg; THE UNIVERSITY OF EXETER United Kingdom; SLASKI UNIWERSYTET MEDYCZNY W KATOWICACH Poland; UNIVERZA V LJUBLJANI Slovenia; UNIVERSITE DE LAUSANNE Switzerland; STICHTING KATHOLIEKE UNIVERSITEIT Netherlands; ACADEMISCH ZIEKENHUIS LEIDEN Netherlands; KING'S COLLEGE LONDON United Kingdom; LUNDS UNIVERSITET Sweden; UNIVERCELL BIOSOLUTIONS SAS France; SANOFI-AVENTIS DEUTSCHLAND GMBH Germany; NOVO NORDISK A/S Denmark; GLAXOSMITHKLINE RESEARCH AND DEVELOPMENT LTD. United Kingdom; Eli Lilly and Company Limited United Kingdom; JDRF INTERNATIONAL United States; THE LEONA M. AND HARRY B. HELMSLEY CHARITABLE TRUST United States; OSLO UNIVERSITETSSYKEHUS HF Norway; THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD United Kingdom; CARDIFF UNIVERSITY United Kingdom; UNIVERSITA VITA-SALUTE SAN RAFFAELE Italy; NOVARTIS PHARMA AG Switzerland; IMCYSE SA Belgium; OSPEDALE PEDIATRICO BAMBINO GESU' Italy	KATHOLIEKE UNIVERSITEIT LEUVEN-Belgium	Building on the strong foundations of INNODIA, with its unique, Europe-wide clinical and basic research network for the study of type 1 diabetes (T1D), we propose in INNODIA HARVEST an ambitious program which aims to prevent and arrest T1D via focused objectives targeting consolidation and innovation. First, we will consolidate the INNODIA clinical network as the reference point for conducting studies to prevent or arrest T1D. We will transform our standardized clinical and bioresource platforms into a high-performance clinical trial network, running academic and industry-driven trials alongside small, mechanism-centric, biomarker-rich intervention trials to examine pathobiological pathways to T1D. INNODIA HARVEST will conduct two large studies to arrest T1D at its onset, one academia-driven, beta-cell focused (VER-A-T1D, verapamil) and one industry-driven, immune-focused (Iscalimabstudy). We will exploit our original INNODIA Master Protocol allowing novel adaptive trial design to introduce combination therapies that build on complementary mechanisms. Second, we will extend our study design strategy by introducing novel biomarkers, both clinical (continuous glucose monitoring) and experimental (microbiome analysis) to deconvolute disease heterogeneity and identify new endpoints to accelerate identification of effective therapeutics. Third, we will use 'disruptors' in small mechanistic studies to channel innovation from clinic to basic research through a reverse immunology and reverse beta-cell biology approach. Finally, we will implement new discovery pipelines for future therapeutics, exploiting tools such as iPSC-derived islet-like cells to promote next generation target identification and drug development. As in INNODIA, the voice of people living with T1D and their families will hold a central place in INNODIA HARVEST to drive implementation of new, patient-proximal outcomes, shape our clinical trials, and bring about a meaningful change in disease perspective. A major objective of INNODIA Harvest is the execution of at least two new phase 2 trials (studying Verapamil (VERA-T1D) or Iscalimab (CCFZ533X2207)). Considering the expected time to first patient-in as preparations for trial start can only be initiated after the start of the Action and possible fluctuating recruiting rates, due to the intercurrent COVID epidemic, there is a risk that INNODIA HARVEST will not be able to completely finalize the clinical trials, fully analyse the biomarkers collected and publish the results in the initially proposed 24 months duration. To ensure the finalization of the clinical trials and corresponding full execution of the given budget including eligibility of EFPIA in-kind contribution we propose to extend the duration of the Action from 24 to 36 months.	€ 5.999.055,00	€ 0,00	€ 0,00	06 - Scienze mediche	MEDICINA E SCIENZE DELL'INVECCHIAMENTO	2020
UE FINANZIAMENTI DIRETTI - H2020	H2020-MSCA-RISE-2020	tEchnology for Multimodal inter-BRain dynAmiCs invEstigation	EMBRACE	101007521	D59C20001560006	UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy; TECHNISCHE UNIVERSITAET ILMENAU Germany; UNIVERSIDAD COMPLUTENSE DE MADRID Spain; EEMAGINE MEDICAL IMAGING SOLUTIONSGMBH Germany; BTS SPA Italy; BRAINVESTIGATIONS SL Spain	UNIVERSITA' DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA, Italy	Most social interactions involve interpersonal coordinated movements in real-time and real space, but research on the complex processes determining social behavior are limited by inadequate technology and analytical tools. In EMBRACE we will merge complementary expertise and resources in biomedical engineering, material science, signal processing, neuroscience and social psychology at 3 academic and 3 industrial partners from 3 EU countries to develop: 1) a new mobile and wireless dry electrode EEG system suitable for monitoring brain activity during full body movements; 2) novel body-network sensors and a multimodal alignment system for simultaneously recording neural, physiological and kinematic signals from two interacting subjects; 3) novel analytical solutions for motion artefact removal and multi-level analysis of multimodal data; 4) a new research dyadic paradigm to exploit the technological advances. The novel technologies will address requirements of mobility, high signal quality, high temporal and spatial resolution, stable alignment of multiple signals, wearing comfort and long-term use. The novel analytical methods will permit investigating joint action at the neural, cognitive-behavioural and social levels. Both technologies and methods will be validated in real time and space face-to-face studies to produce prototypes and models optimized for broad application. To achieve these objectives, the EMBRACE consortium realizes extensive intersectoral transfer of knowledge and experience through shared research, secondments and summer schools,promoting the research capacity and competitiveness of its partners and becoming a lasting EU network promoting basic and applied biomedical research, with benefit for European industries and society. International mobility and dissemination will contribute to sharing cultures and knowledge with the scientific community and to promote communication on the importance of research in biomedical engineering to the society.	€ 818.800,00	€ 193.200,00	€ 0,00	Area 02 - Scienze fisiche	NEUROSCIENZE, IMAGING E SCIENZE CLINICHE	2020
UE FINANZIAMENTI DIRETTI - H2020	H2020-MSCA-RISE-2020	Low-frequency multi-mode (SAR and penetrating) radar onboard light-weight UAV for Earth and Planetary exploration	FlyRadar	101007973	D25F21000460006	IRSPS SRL, Italy; CENTRUM BADAN KOSMICZNYCH POLSKIEJ AKADEMII NAUK Poland; CSILLAGASZATI ES FOLDTUDOMANYI KUTATOKOZPONT Hungary; UNIVERSITE LYON 1 CLAUDE BERNARD France; HYPERION SEVEN France; CO.RI.S.T.A. (CONSORZIO DI RICERCASU SISTEMI DI TELESENSORI AVA NZATI) Italy; UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA Italy; EXPLORATION Morocco	IRSPS srl	The proposal has as its objective the production of a low frequency radar, installed on board of a Lightweight Remote Control Aircraft (UAV). The radar will operate in both synthetic aperture mode (SAR) and is in penetration mode. This new radar system that will operate in a double mode can be widely used for Earth observation (e.g. both for the geological and archaeological survey). In addition, it may have possible applications in the field of planetary exploration (for example of Mars and Titan). In a first phase of the project will be developed the instrumentation, while the second phase of the project will be dedicated to field testsof the instrumentation.	€ 1.021.200,00	€ 151.800,00	€ 0,00	04 - Scienze della Terra	INGEGNERIA E GEOLOGIA	2020