

## GRADUATORIA PROGETTI GIOVANI RICERCATORI - Theory-Enhancing

| N  | Code             | Title   | MDC                      | Destinatario                     | Total Score | Budget Richiesto a MOH | Finanziamento |
|----|------------------|---|--------------------------|----------------------------------|-------------|------------------------|---------------|
| 1  | GR-2019-12368717 | IN MY BRAIN - Study of HIV INtegration in MYeloid BRAIN reservoir   | Malattie Infettive       | SAN RAFFAELE MILANO              | 9,5         | 450.000,00 €           | 450.000,00 €  |
| 2  | GR-2019-12370172 | DISSECTING THE ROLE OF BETA-KLOTTHO PROTEIN IN NAFLD PATHOGENESIS TO DESIGN NOVEL FUNCTION/STRUCTURE-BASED COMPOUNDS SUITABLE FOR THERAPY | Gastroenterologia        | OSPEDALE BAMBINO GESU'           | 10,5        | 448.800,00 €           | 448.800,00 €  |
| 3  | GR-2019-12368960 | Assessment and modulation of cortical gamma synchrony to predict and improve stroke recovery  | Riabilitazione           | S.CAMILLO                        | 12          | 450.000,00 €           | 450.000,00 €  |
| 4  | GR-2019-12368485 | A LIPSTIC screening system to identify tumor neoantigens  | Ematologia e Immunologia | I. O. V.                         | 12          | 450.000,00 €           | 450.000,00 €  |
| 5  | GR-2019-12370176 | Targeting the control of neuronal gene expression as a therapeutic approach to the EAE model of multiple sclerosis                        | Neurologia E Psichiatria | Ospedale Policlinico San Martino | 12,5        | 450.000,00 €           | 450.000,00 €  |
| 6  | GR-2019-12369134 | Leishmaniasis in Agrigento, Caltanissetta and Palermo provinces: human outbreaks and animal reservoirs                                    | Malattie Infettive       | IZSSI                            | 12,5        | 350.500,00 €           | 350.500,00 €  |
| 7  | GR-2019-12369100 | DISsecting Behavioral variant frontotemporal dementia AND bipolar disorder: an integrated epigenetic-neuroimaging approach (DISBAND)      | Neurologia E Psichiatria | MAGGIORE                         | 12,5        | 450.000,00 €           | 450.000,00 €  |
| 8  | GR-2019-12370949 | Exploring molecular basis and pathophysiology of Schinzel-Giedion Syndrome  | Neurologia E Psichiatria | SAN RAFFAELE MILANO              | 13          | 450.000,00 €           | 450.000,00 €  |
| 9  | GR-2019-12369047 | Exosomal-PD-L1 as determinant of treatment with immune-checkpoints inhibitors in advanced NSCLC   | Oncologia                | ISTITUTO TUMORI MILANO           | 13          | 449.990,00 €           | 449.990,00 €  |
| 10 | GR-2019-12368982 | Mechanistic Underpinnings of Adipose Tissue Dysfunction in Heart Failure with Preserved Ejection Fraction                                 | Cardiologia-Pneumologia  | Campania                         | 13          | 449.000,00 €           | 449.000,00 €  |
| 11 | GR-2019-12370244 | Dissecting the mechanisms of progressive osteolysis in Gorham-Stout disease   | Ortopedia                | OSPEDALE BAMBINO GESU'           | 13          | 212.500,00 €           | 212.500,00 €  |
| 12 | GR-2019-12369646 | NLRP3 inflammasome: a new potential therapeutic target for migraine treatment.  | Neurologia E Psichiatria | Emilia-Romagna                   | 13          | 433.000,00 €           | 433.000,00 €  |

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| 13 | GR-2019-12369523 | The clock is ticking on schizophrenia: a translational study integrating phenotypic, genomic, microbiome and biomolecular data to overcome disability.              | Neurologia E Psichiatria | SAN RAFFAELE MILANO           | <b>13,5</b> | 450.000,00 €           | 450.000,00 €  |
| 14 | GR-2019-12369878 | Investigating "premembering" in patients with refractory temporal lobe epilepsy: a multilayered top-down approach from behaviour to cells.                          | Neurologia E Psichiatria | Lombardia                     | <b>13,5</b> | 430.100,00 €           | 430.100,00 €  |
| 15 | GR-2019-12368594 | Investigation of the PD-L1 and PD-1 interactome and signaling in NSCLC stem-like and immune cells.  | Oncologia                | Istituto Superiore di Sanita' | <b>13,5</b> | 450.000,00 €           | 450.000,00 €  |
| 16 | GR-2019-12368592 | Combined genomic and proteomic characterization of follicular thyroid lesions: a project to "save thyroid".   | Diagnostica              | Lombardia                     | <b>13,5</b> | 443.300,00 €           | 443.300,00 €  |
| 17 | GR-2019-12370560 | Sex-specific mechanisms in the development of calcific aortic valve disease: from fibrosis to calcification.  | Cardiologia-Pneumologia  | MONZINO                       | <b>13,5</b> | 450.000,00 €           | 450.000,00 €  |
| 18 | GR-2019-12368930 | Enhancement of the current hematopoietic stem cell-based gene therapy to broaden its accessibility to symptomatic patients affected by Metachromatic Leukodystrophy | Pediatria                | SAN RAFFAELE MILANO           | <b>14</b>   | 450.000,00 €           | 450.000,00 €  |
| 19 | GR-2019-12368679 | INVESTIGATION OF CD8 T CELL-MEDIATED MECHANISMS OF INSULIN-RESISTANCE IN HUMAN OBESITY AND TYPE 2 DIABETES  | Endocrinologia           | SAN RAFFAELE MILANO           | <b>14</b>   | 450.000,00 €           | 450.000,00 €  |
| 20 | GR-2019-12368827 | Targeting alternative splicing neo-junctions as a novel source of neo-antigens in pediatric and adult tumors  | Oncologia                | Istituto Oncologico Candiolo  | <b>14</b>   | 450.000,00 €           | 450.000,00 €  |
| 21 | GR-2019-12368903 | Understanding Resistance in Braf Advanced coloN. The URBAN Project  | Oncologia                | I. O. V.                      | <b>14</b>   | 273.700,00 €           | 273.700,00 €  |
| 22 | GR-2019-12369573 | Genetic and environmental determinants of metabolic control in children and young adults with type 1 diabetes mellitus  | Endocrinologia           | BURLO GAROFOLO                | <b>14</b>   | 380.000,00 €           | 380.000,00 €  |
| 23 | GR-2019-12369983 | Blood-based biomarkers for Alzheimer's Disease in Down Syndrome: insights from epigenetic, glycomic and inflammatory profiles                                       | Geriatrics               | Istituto Scienze Neurologiche | <b>14,5</b> | 450.000,00 €           | 450.000,00 €  |

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| 24 | GR-2019-12370167 | AN INTEGRATIVE APPROACH FOR BUILDING PRECISION MEDICINE IN SPINAL CORD INJURY   | Neurologia E<br>Psichiatria | MARIO NEGRI            | <b>14,5</b> | 450.000,00 €           | 450.000,00 €  |
| 25 | GR-2019-12371291 | Multimodal magnetic resonance imaging in a large sample of ALS patients: identification of clinical phenotypes and prediction of disease progression  | Neurologia E<br>Psichiatria | Piemonte               | <b>14,5</b> | 440.000,00 €           | 440.000,00 €  |
| 26 | GR-2019-12371166 | Behavioral and neurobiological diagnostic and prognostic markers of post-stroke aphasia: a novel approach based on electroencephalography measures  | Neurologia E<br>Psichiatria | S.CAMILLO              | <b>14,5</b> | 450.000,00 €           | 450.000,00 €  |
| 27 | GR-2019-12370940 | Combining molecular, cellular, and metabolic data to decipher a specific sphingolipid signature in glioblastoma resistance: identification of novel targetable prognostic and predictive biomarkers (SPHINGOGLIO) | Neurologia E<br>Psichiatria | MAGGIORE               | <b>15</b>   | 450.000,00 €           | 450.000,00 €  |
| 28 | GR-2019-12369979 | Definition of the role of different genetic and non-genetic factors in the variability of the clinical and immunological phenotype in patients with 22q11.2 deletion syndrome                                     | Pediatria                   | Campania               | <b>15</b>   | 450.000,00 €           | 450.000,00 €  |
| 29 | GR-2019-12368672 | Assessing the role of mitochondrial dysfunction in primary progressive multiple sclerosis   | Neurologia E<br>Psichiatria | SAN RAFFAELE MILANO    | <b>15</b>   | 425.000,00 €           | 425.000,00 €  |
| 30 | GR-2019-12370042 | Disease modeling of tubulinopathies using human iPSCs and Drosophila melanogaster: comparative in vitro and in vivo insights into pathogenesis to provide background for therapeutic targets                      | Neurologia E<br>Psichiatria | OSPEDALE BAMBINO GESU' | <b>15</b>   | 360.000,00 €           | 360.000,00 €  |
| 31 | GR-2019-12369357 | Enhancement of expression, bioavailability and cross-correction of chimeric GALC enzyme to refine gene therapy approaches for Globoid cell leukodystrophy   | Pediatria                   | SAN RAFFAELE MILANO    | <b>15</b>   | 450.000,00 €           | 450.000,00 €  |
| 32 | GR-2019-12369050 | Innovative pre-transplant conditionings to preserve bone marrow niche and improve the immunological reconstitution in immune dysregulation disorders  | Ematologia e<br>Immunologia | SAN RAFFAELE MILANO    | <b>15</b>   | 450.000,00 €           | 450.000,00 €  |
| 33 | GR-2019-12369583 | Transferrin receptor 2: a novel therapeutic target for beta-thalassemia   | Ematologia e<br>Immunologia | SAN RAFFAELE MILANO    | <b>15,5</b> | 450.000,00 €           | 450.000,00 €  |

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| 34 | GR-2019-12369266 | Inhibiting HuR/ELAVL1 activity as a novel anti-psoriatic pharmacological strategy  | Dermatologia             | Emilia-Romagna                   | <b>15,5</b>  | 450.000,00 €           | 450.000,00 €  |
| 35 | GR-2019-12369910 | Making sense of the obesity paradox in melanoma immunotherapy: molecular mechanisms of tumor microenvironment modulation by fatty acids  | Oncologia                | I.E.O.                           | <b>15,5</b>  | 448.000,00 €           | 448.000,00 €  |
| 36 | GR-2019-12368956 | CD8+ T cell dynamics within hepatocellular carcinomas  | Ematologia e Immunologia | SAN RAFFAELE MILANO              | <b>15,5</b>  | 450.000,00 €           | 450.000,00 €  |
| 37 | GR-2019-12370030 | A novel functionalized NUTraceuticals-laden hyaluronic hydrogel for gender-based PERsonalized treatment for osteOArthritis care: a novel proof-of-concept in viscosupplementation (NUTperOA) | Ortopedia                | RIZZOLI                          | <b>15,5</b>  | 443.630,00 €           | 443.630,00 €  |
| 38 | GR-2019-12369231 | Autophagy manipulation as a novel strategy for stimulating the immune response in neuroblastoma  | Oncologia                | OSPEDALE BAMBINO GESU'           | <b>16</b>    | 449.650,00 €           | 449.650,00 €  |
| 39 | GR-2019-12368561 | Dissecting the role of HCN1 in Developmental and Epileptic Encephalopathy (DEE) by exploiting patient-specific models of cerebral cortex development in vivo and in 3D cortical organoids    | Neurologia E Psichiatria | HUMANITAS                        | <b>16</b>    | 450.000,00 €           | 450.000,00 €  |
| 40 | GR-2019-12370628 | Phenotype and cytokines of monocytes as biomarkers for monitoring disease activity in large vessel vasculitis  | Ematologia e Immunologia | AUSL RE Ist. Tecnologie Avanzate | <b>16</b>    | 450.000,00 €           | 450.000,00 €  |
| 41 | GR-2019-12370014 | Autologous ECM-composed scaffolds and zebrafish PDXs for indiViduAlized Theranostics in rARe neuroendocrine neoplasms (AVATAR)   | Oncologia                | Istituto Scientifico Romagnolo   | <b>16</b>    | 442.000,00 €           | 442.000,00 €  |
| 42 | GR-2019-12368907 | Untreatable early-onset neurodegeneration: establishment of in vitro and in vivo disease models to dissect pathogenesis and develop targeted therapies.                                      | Neurologia E Psichiatria | OSPEDALE BAMBINO GESU'           | <b>16,25</b> | 446.050,00 €           | 446.050,00 €  |
| 43 | GR-2019-12369499 | Characterization and ex vivo expansion of human circulating stem and progenitor cells  | Ematologia e Immunologia | SAN RAFFAELE MILANO              | <b>16,5</b>  | 450.000,00 €           | 450.000,00 €  |
| 44 | GR-2019-12370644 | Breast milk extracellular vesicles: maternal resilience to counterbalance life-threatening infant's conditions   | Pediatria                | MAGGIORE                         | <b>16,5</b>  | 420.000,00 €           | 420.000,00 €  |

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| 45 | GR-2019-12368567 | The role of oxidative stress and mitochondrial TERT in the progression and therapeutic resistance of papillary thyroid cancer.   | Oncologia                | AUXOLOGICO               | 16,5        | 372.221,00 €           | 372.221,00 €  |
| 46 | GR-2019-12370460 | Improving lung cancer early detection by developing a tumor specific exosome miRNA signature (Exo-miR test).   | Oncologia                | CASA SOLLIEVO SOFFERENZA | 16,5        | 438.350,00 €           | 438.350,00 €  |
| 47 | GR-2019-12370372 | PET metrics for the personalized medicine in high-grade lymphoma   | Diagnostica              | FONDAZIONE GEMELLI       | 17          | 449.850,00 €           | 449.850,00 €  |
| 48 | GR-2019-12371236 | Role of autophagy in Rett syndrome and potential therapeutic application.  | Neurologia E Psichiatria | SAN RAFFAELE MILANO      | 17          | 450.000,00 €           | 450.000,00 €  |
| 49 | GR-2019-12369998 | Involvement of CCR5+ T-cells in brain injury after aneurysmal subarachnoid hemorrhage. Clinical and experimental investigation.  | Neurologia E Psichiatria | MAGGIORE                 | 17          | 450.000,00 €           | 450.000,00 €  |
| 50 | GR-2019-12371442 | Prader-Willi syndrome: modelling, epigenetic therapies and immunological dysfunctions  | Neurologia E Psichiatria | SAN RAFFAELE MILANO      | 17          | 450.000,00 €           | 450.000,00 €  |
| 51 | GR-2019-12371203 | Pain in RASopathies: new investigative techniques and possible treatments  | Pediatria                | FONDAZIONE GEMELLI       | 17          | 450.000,00 €           | 450.000,00 €  |
| 52 | GR-2019-12370086 | REPROGRAM-BONE, REgenerative PROtein-dialoguing GRAphene: personalized Material for BONE grafting  | Trapiantologia           | FONDAZIONE GEMELLI       | 17,5        | 396.000,00 €           | 385.701,89 €  |
| 53 | GR-2019-12369862 | Prospective investigation of intersubject variability of mitochondrial Permeability Transition Pore opening and related naturally occurring mutations in patients affected by ST-segment elevation myocardial infarction and their relationship with reperfusion | Cardiologia-Pneumologia  | Emilia-Romagna           | 17,5        | 398.900,00 €           |               |
| 54 | GR-2019-12369587 | Mechanism of neurodegeneration and preclinical therapeutic strategies for Marinesco-Sjögren syndrome   | Neurologia E Psichiatria | MARIO NEGRI              | 17,5        | 450.000,00 €           |               |
| 55 | GR-2019-12369439 | Role of alphaV integrin-mediated mechanotransduction in the pathogenesis of thoracic aortic aneurysm in Marfan syndrome  | Cardiologia-Pneumologia  | MONZINO                  | 17,5        | 450.000,00 €           |               |
| 56 | GR-2019-12368530 | Colorectal tumor-microbiome interactions and their prognostic potential  | Oncologia                | I.E.O.                   | 17,5        | 450.000,00 €           |               |
| 57 | GR-2019-12369146 | Dissecting and controlling immune circuits in the pre-metastatic liver   | Oncologia                | SAN RAFFAELE MILANO      | 17,5        | 449.856,00 €           |               |

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| 58 | GR-2019-12369127 | Improving the effectiveness of CAR T cell therapy by targeting the leukemia microenvironment   | Ematologia e Immunologia | Lombardia                     | <b>17,5</b> | 450.000,00 €           |               |
| 59 | GR-2019-12370400 | IDENTIFICATION OF CLINICAL AND MOLECULAR IN VIVO MARKERS OF DISEASE PROGRESSION IN PARKINSON'S DISEASE: FOCUS ON A POPULATION BEARING GBA1 MUTATIONS   | Neurologia E Psichiatria | MONDINO                       | <b>17,5</b> | 450.000,00 €           |               |
| 60 | GR-2019-12370430 | LOGIMACS - Analysis of the system LOG files for the early diagnosis of adverse events in the setting of MechAnical Circulatory Support   | Diagnostica              | SAN RAFFAELE MILANO           | <b>17,5</b> | 444.000,00 €           |               |
| 61 | GR-2019-12369051 | Anti-angiogenic treatment with bevacizumab for glioblastoma: targeting resistance mechanisms and infiltrative shift  | Oncologia                | FONDAZIONE GEMELLI            | <b>18</b>   | 450.000,00 €           |               |
| 62 | GR-2019-12369679 | Emergence of new prion strains in European cervids: evaluation of host range and potential risk for humans   | Veterinaria              | Istituto Superiore di Sanita' | <b>18</b>   | 360.000,00 €           |               |
| 63 | GR-2019-12369131 | Coupling RT-QuIC with biophysics and proteomics for highly sensitive disease-specific biomarkers identification in olfactory mucosa, urine and blood of patients with Parkinson's disease and atypical parkinsonisms | Neurologia E Psichiatria | CARLO BESTA                   | <b>18</b>   | 450.000,00 €           |               |
| 64 | GR-2019-12370258 | Investigating the role of IL8-CXCR1/2 pathway in the regulation of pancreatic hormones secretion in human islets using in vitro and in vivo models   | Endocrinologia           | SAN RAFFAELE MILANO           | <b>18</b>   | 450.000,00 €           |               |
| 65 | GR-2019-12369458 | OMEN - Application of Organoid-based Microfluidic chip devices for Evaluating anti-viral drug function and investigating Novel anti-viral medications  | Malattie Infettive       | SAN RAFFAELE MILANO           | <b>18</b>   | 450.000,00 €           |               |
| 66 | GR-2019-12370322 | HYPERprogressive disease: MEchanisms and prediction in non-small cell lung cancer UPon immunecheckpoint blockade (HYPE ME UP)  | Oncologia                | ISTITUTO TUMORI MILANO        | <b>18</b>   | 449.905,00 €           |               |
| 67 | GR-2019-12371163 | Dissecting the role of anti-CCR5 antibodies in the human immunodeficiency virus type 1 infection of monocyte-derived macrophage.   | Malattie Infettive       | SAN RAFFAELE MILANO           | <b>18</b>   | 250.000,00 €           |               |

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| 68 | GR-2019-12369866 | The microbiota in locally advanced rectal cancer (LARC): the evaluation of its role in LARC development and in disease response in patients treated with preoperative chemoradiotherapy (CTRT) alone or in combination with immunotherapy.                      | Oncologia                | FONDAZIONE GEMELLI     | <b>18,5</b> | 450.000,00 €           |               |
| 69 | GR-2019-12369354 | Deciphering the role of cellular senescence in the pathogenesis and treatment of inflammatory myeloid neoplasms   | Ematologia e Immunologia | SAN RAFFAELE MILANO    | <b>18,5</b> | 450.000,00 €           |               |
| 70 | GR-2019-12371497 | Investigating the pathomechanism of GluA2 deficiency in genetic and acquired neurodevelopmental disorders   | Neurologia E Psichiatria | GASLINI                | <b>18,5</b> | 390.000,00 €           |               |
| 71 | GR-2019-12369689 | Plaque associated (PANK) and plaque infiltrating (PINK) Natural Killer cells in the progression of atherosclerosis.   | Ematologia e Immunologia | MULTIMEDICA            | <b>18,5</b> | 450.000,00 €           |               |
| 72 | GR-2019-12369831 | Single-cell RNA Sequencing in triple negative breast cancer patients in the neoadjuvant setting: transcriptomic analysis of paired samples in a randomized, phase II trial assessing the efficacy of the combination of standard chemotherapy and fasting-mimic | Oncologia                | ISTITUTO TUMORI MILANO | <b>18,5</b> | 449.350,00 €           |               |
| 73 | GR-2019-12370242 | Challenges of human arboviruses infections: filling the diagnostic gap understanding mechanisms of tropism, persistence and transmission.   | Malattie Infettive       | SAN MATTEO             | <b>18,5</b> | 446.200,00 €           |               |
| 74 | GR-2019-12371594 | Continuity of care in multiple sclerosis: effects of motor (tele)rehabilitation on fatigability and brain plasticity assessed with a combined MRI-fNIRS approach.   | Neurologia E Psichiatria | DON GNOCCHI            | <b>18,5</b> | 449.960,08 €           |               |
| 75 | GR-2019-12371131 | Identification of RespOnders to immunotherapy in Non-small cell lung cancer patients using Microvesicles Associated mirNas (IRON MAN)   | Oncologia                | Lazio                  | <b>18,5</b> | 363.333,33 €           |               |

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| 76 | GR-2019-12368604 | ABSTRACT (Analysis of Bioptic Synovial Tissue in Rheumatoid Arthritis focusing on T Cell Trafficking)The role of CD44 alternative splicing in T cells trafficking and homing to the synovia during Rheumatoid Arthritis: biomarker of disease and therapeutic | Ematologia e Immunologia | FONDAZIONE GEMELLI | 19          | 450.000,00 €           |               |
| 77 | GR-2019-12371331 | Identification of novel peripheral biomarkers for the diagnosis and the risk stratification of Brugada Syndrome patients  | Cardiologia-Pneumologia  | SAN DONATO         | 19          | 398.600,00 €           |               |
| 78 | GR-2019-12369541 | Innate Lymphoid Cells in acute myeloid leukemia: supporting Leukemic Stem Cell survival or clearance?   | Ematologia e Immunologia | HUMANITAS          | 19          | 450.000,00 €           |               |
| 79 | GR-2019-12370618 | Mitochondrial F1/FO ATP synthase as target for MDS and AML treatment  | Ematologia e Immunologia | Emilia-Romagna     | 19          | 450.000,00 €           |               |
| 80 | GR-2019-12369402 | Development of a 'fake niche', a new device for CTCs/DTCs capturing and characterization.   | Oncologia                | PASCALE            | 19          | 449.660,00 €           |               |
| 81 | GR-2019-12370081 | Epigenetic mechanisms in A20 deregulation associated to Multiple Sclerosis: a possible targetfor repositioned drugs   | Neurologia E Psichiatria | Piemonte           | 19          | 449.900,00 €           |               |
| 82 | GR-2019-12369067 | GLYmphatic system in DEMentia (GLYDEM): towards new mechanisms for neurodegeneration.   | Neurologia E Psichiatria | MAGGIORE           | 19          | 443.333,33 €           |               |
| 83 | GR-2019-12370684 | Combining speckle tracking echocardiography and new blood biomarkers for early diagnosis of subclinical cardiotoxicity in lymphoma patients treated with anthracyclines and/or mediastinal radiotherapy   | Cardiologia-Pneumologia  | Piemonte           | 19          | 422.600,00 €           |               |
| 84 | GR-2019-12368719 | EMMPRIN as a new target for thoracic aortic aneurysm in Marfan syndrome   | Cardiologia-Pneumologia  | MONZINO            | 19          | 449.910,00 €           |               |
| 85 | GR-2019-12369688 | CELLULAR AND MOLECULAR NETWORKS INVOLVED IN THE MAINTENANCE OF NEUROMUSCULAR JUNCTION   | Neurologia E Psichiatria | SANTA LUCIA        | 19          | 450.000,00 €           |               |
| 86 | GR-2019-12369269 | EM FOR EVAR: ElectroMagnetic guided in-situ laser fenestration FOR EndoVascular Aneurism Repair.  | Cardiologia-Pneumologia  | Toscana            | 19          | 450.000,00 €           |               |



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| 87 | GR-2019-12370533 | IL-33/ST2 and microbiota axis as potential early marker of inflammation-associated colorectal cancer: diagnostic and therapeutic implications for ulcerative colitis patients and young adults | Gastroenterologia        | FONDAZIONE GEMELLI     | 19          | 447.800,00 €           |               |
| 88 | GR-2019-12371037 | Towards tailored treatments: profiling B cells activity to unravel multiple sclerosis heterogeneity  | Neurologia E Psichiatria | Umbria                 | 19          | 424.000,00 €           |               |
| 89 | GR-2019-12370547 | Novel approaches for the treatment of metastatic uveal melanoma: exploiting target-therapy drug combinations in innovative experimental models and patient-derived cancer cells                | Oncologia                | ISTITUTO TUMORI MILANO | 19          | 449.666,67 €           |               |
| 90 | GR-2019-12369038 | Human cardiac pro-ANGIOgenic cell secretome primed with STATin for cell-free Regenerative therapy (ANGIOSTAR)  | Cardiologia-Pneumologia  | MONZINO                | 19          | 449.985,00 €           |               |
| 91 | GR-2019-12370640 | Tailoring colorectal cancer stem cell-targeted therapy by inhibiting p38a, the $\beta$ -catenin chromatin-associated kinase  | Gastroenterologia        | DE BELLIS              | 19          | 450.000,00 €           |               |
| 92 | GR-2019-12368583 | New predictive biomarkers of Oligoarticular Juvenile Idiopathic Arthritis extension  | Pediatria                | GASLINI                | 19          | 439.684,00 €           |               |
| 93 | GR-2019-12370897 | Synaptotoxic impact of T lymphocytes in neurodegenerative and neuroinflammatory diseases: the role of miRs as common molecular players   | Neurologia E Psichiatria | SAN RAFFAELE PISANA    | 19,25       | 369.050,00 €           |               |
| 94 | GR-2019-12368920 | Light therapy to improve corneal wound healing and restore vision  | Oculistica               | SAN RAFFAELE MILANO    | 19,25       | 450.000,00 €           |               |
| 95 | GR-2019-12370781 | ARousal Measure In Neurological Diseases (ARMIND)  | Riabilitazione           | S.CAMILLO              | 19,5        | 450.000,00 €           |               |
| 96 | GR-2019-12368844 | 2D and 3D ALS models as innovative tools to evaluate the efficacy of therapeutic strategies on cell autonomous and non-cell autonomous motor neuron death                                      | Neurologia E Psichiatria | MAGGIORE               | 19,5        | 449.489,00 €           |               |
| 97 | GR-2019-12370324 | Breast arterial calcifications for cardiovascular disease prevention   | Diagnostica              | SAN DONATO             | 19,5        | 344.264,00 €           |               |

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| 98  | GR-2019-12369527 | Innate immunity cells as biomarkers predictive of response to immune checkpoint inhibitors in melanoma patients                      | Oncologia                | PASCALE                          | 19,5        | 380.770,00 €           |               |
| 99  | GR-2019-12368463 | Targeting NAPRT in solid and hematological malignancies by chemical inhibition   | Oncologia                | Ospedale Policlinico San Martino | 19,5        | 450.000,00 €           |               |
| 100 | GR-2019-12369485 | Targeting AhR-dependent metabolic checkpoints as novel advanced therapeutic approach in sepsis                                       | Ematologia e Immunologia | Umbria                           | 19,5        | 448.500,00 €           |               |
| 101 | GR-2019-12370204 | Predicting the risk of post-stroke depression and apathy using multimodal imaging  | Neurologia E Psichiatria | CASA SOLLIEVO SOFFERENZA         | 19,5        | 285.000,00 €           |               |
| 102 | GR-2019-12369545 | HSV-1-specific host immune response and epigenetics in AD: a key for understanding AD?   | Neurologia E Psichiatria | DON GNOCCHI                      | 19,5        | 450.000,00 €           |               |
| 103 | GR-2019-12371547 | Role of the Gut Vascular Barrier and Microbiota in Autism Spectrum Disorders   | Neurologia E Psichiatria | HUMANITAS                        | 19,5        | 450.000,00 €           |               |
| 104 | GR-2019-12370047 | Vaccination response in children with rheumatic diseases: a prospective follow up study  | Pediatria                | MAGGIORE                         | 19,5        | 450.000,00 €           |               |
| 105 | GR-2019-12368553 | A thorough understanding of the molecular players causing rare complement-mediated glomerular diseases toward a personalized therapy | Nefrologia e Urologia    | MARIO NEGRI                      | 19,5        | 285.000,00 €           |               |
| 106 | GR-2019-12368586 | Targeting tumor microenvironment to improve anticancer effects of complex I inhibitors   | Oncologia                | Emilia-Romagna                   | 19,5        | 327.777,00 €           |               |
| 107 | GR-2019-12370129 | Development of a fertility preservation program: Criopreservation of ovarian and testicular tissue in oncological patients.          | Ostetricia e Ginecologia | Toscana                          | 19,5        | 418.000,00 €           |               |
| 108 | GR-2019-12370160 | Fine-tuning corticosteroid signalling as a novel therapeutic strategy for heart regeneration   | Cardiologia-Pneumologia  | MULTIMEDICA                      | 20          | 450.000,00 €           |               |
| 109 | GR-2019-12371180 | Investigating the consequences of Oligophrenin-1 sumoylation in X-Linked Intellectual Disability.                                    | Neurologia E Psichiatria | HUMANITAS                        | 20          | 450.000,00 €           |               |
| 110 | GR-2019-12368984 | Early SubTYPe dEtection of AD subjects (STYPE)   | Neurologia E Psichiatria | FATEBENEFRAPELLI                 | 20          | 450.000,00 €           |               |
| 111 | GR-2019-12370005 | NDP52 and Multiple Sclerosis (MS) : New genetic clue and potential therapy in MS   | Neurologia E Psichiatria | SANTA LUCIA                      | 20          | 449.350,00 €           |               |
| 112 | GR-2019-12370559 | The complement system in the atherosclerotic lesion: thromboinflammatory mechanisms contributing to plaque's vulnerability           | Neurologia E Psichiatria | MARIO NEGRI                      | 20          | 450.000,00 €           |               |

| N   | Code             | Title   | MDC                      | Destinatario                  | Total Score | Budget Richiesto a MOH | Finanziamento |
|-----|------------------|---|--------------------------|-------------------------------|-------------|------------------------|---------------|
| 113 | GR-2019-12370580 | Identification and characterization of novel molecular targets and prognostic signatures in human colorectal carcinoma: role of TRAP1 network in metabolic remodelling, stemness and drug resistance.   | Oncologia                | CROB                          | 20          | 443.500,00 €           |               |
| 114 | GR-2019-12368482 | Mechanistic analysis of the adverse metabolic effects of atypical antipsychotic drugs: translational study in vitro and in pediatric patients, to find transcriptomic/metabolic biomarkers for early clinical monitoring and druggable targets for future rescu | Pediatria                | MEDEA                         | 20          | 450.000,00 €           |               |
| 115 | GR-2019-12371143 | Primary astrocyte dysfunction in MLC leukodystrophy: exploring shared pathological mechanisms leading to myelin degeneration in astrocytopathies.   | Neurologia E Psichiatria | Istituto Superiore di Sanita' | 20          | 364.055,00 €           |               |
| 116 | GR-2019-12370199 | Identification of new strategies for targeting resistant human metastatic colorectal cancer   | Oncologia                | REGINA ELENA                  | 20          | 410.000,00 €           |               |
| 117 | GR-2019-12369235 | Gut-Liver axis in the pathogenesis of the primary sclerosing cholangitis (PSC) and inflammatory bowel disease (IBD)   | Gastroenterologia        | HUMANITAS                     | 20          | 450.000,00 €           |               |
| 118 | GR-2019-12369749 | Dissecting aspirin effect on NF-kappaB in Hepatocellular Carcinoma at single-cell level.  | Oncologia                | SAN RAFFAELE MILANO           | 20,5        | 450.000,00 €           |               |
| 119 | GR-2019-12371056 | New perspectives on the involvement of mechanical cues in the interplay between fat and bone tissues in pediatric obesity.  | Pediatria                | OSPEDALE BAMBINO GESU'        | 20,5        | 447.600,00 €           |               |
| 120 | GR-2019-12369626 | Exploiting CXCR4 receptor to induce antitumor immunity in malignant mesothelioma.   | Oncologia                | SAN RAFFAELE MILANO           | 20,5        | 450.000,00 €           |               |
| 121 | GR-2019-12369785 | Large Oncosomes: from preclinical evidences to the identification of novel prognostic markers in Prostate Cancer  | Oncologia                | PASCALE                       | 20,5        | 450.000,00 €           |               |
| 122 | GR-2019-12369715 | The case of the missing heritability: uncovering digenic and modifying mechanisms in rare neurodegenerative disorders   | Neurologia E Psichiatria | CARLO BESTA                   | 20,5        | 450.000,00 €           |               |

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|-----|------------------|---|-----------------------------|---------------------|--------------|------------------------|---------------|
| 123 | GR-2019-12369274 | An integrated and multiparametric system to identify diagnostic and prognostic parameters in muscular dystrophies and congenital myopathies towards trials readiness.                             | Neurologia E<br>Psichiatria | Toscana             | <b>20,5</b>  | 450.000,00 €           |               |
| 124 | GR-2019-12371021 | HISTONE ACETYLATION IN INFLAMMATORY BOWEL DISEASES: FROM PATHOGENESIS TOWARD NEW POSSIBLE THERAPEUTIC TARGETS   | Gastroenterologia           | Veneto              | <b>20,5</b>  | 397.500,00 €           |               |
| 125 | GR-2019-12370021 | New Biomarkers of pediatric Tuberculosis: clinical, immunological and microbiota characterization of M. tuberculosis infected children  | Malattie Infettive          | FONDAZIONE GEMELLI  | <b>20,5</b>  | 400.000,00 €           |               |
| 126 | GR-2019-12371517 | Novel insights into the role of the Hippo pathway in vascular function and regeneration   | Cardiologia-<br>Pneumologia | NEUROMED            | <b>20,5</b>  | 444.394,00 €           |               |
| 127 | GR-2019-12371249 | Decoding the neutrophil-CD8+ T cell crosstalk to develop predictors of response in metastatic Non-Small-Cell Lung Cancer treated with PD-1 blockade.  | Oncologia                   | I.E.O.              | <b>20,5</b>  | 450.000,00 €           |               |
| 128 | GR-2019-12370705 | Liposome system in colon cancer therapy   | Gastroenterologia           | DE BELLIS           | <b>20,5</b>  | 441.500,00 €           |               |
| 129 | GR-2019-12368779 | Human brain single-cell transcriptomics and hiPSC-derived brain organoids to investigate the role of neuroinflammation in premature brain aging in multiple sclerosis                             | Neurologia E<br>Psichiatria | SAN RAFFAELE MILANO | <b>20,5</b>  | 415.000,00 €           |               |
| 130 | GR-2019-12371397 | The immunomodulatory effect of cannabis on social brain in psychosis (CRASH)  | Neurologia E<br>Psichiatria | MAGGIORE            | <b>20,5</b>  | 450.000,00 €           |               |
| 131 | GR-2019-12368963 | Building evidences for a propensity-score prospective study for locally advanced rectal cancer: clinical, molecular and psychological predictors of patients' clinical and psychological outcomes | Oncologia                   | Veneto              | <b>20,75</b> | 448.500,00 €           |               |
| 132 | GR-2019-12369179 | Anelloviruses as markers of functional immune competence in solid organ transplantation. Towards viremia-driven tailor-made maintenance immunosuppression.  | Trapiantologia              | Toscana             | <b>21</b>    | 361.060,00 €           |               |

| N   | Code             | Title  | MDC                                 | Destinatario           | Total Score | Budget Richiesto a MOH | Finanziamento |
|-----|------------------|--|-------------------------------------|------------------------|-------------|------------------------|---------------|
| 133 | GR-2019-12369572 | A novel population-based approach for genes and variants prioritization in understanding polygenic and complex traits  | Diagnostica                         | BURLO GAROFOLO         | 21          | 450.000,00 €           |               |
| 134 | GR-2019-12369538 | Probing the functional connectome features of (un)consciousness: a new neuroimaging tool to improve clinical interventions in patients with disorders of consciousness       | Riabilitazione                      | S.CAMILLO              | 21          | 440.500,00 €           |               |
| 135 | GR-2019-12369303 | A step forward immunotherapy in ovarian adenocarcinoma: energetic metabolism as modulator of the immune response   | Oncologia                           | MARIO NEGRI            | 21          | 450.000,00 €           |               |
| 136 | GR-2019-12370381 | 3D head and neck carcinoma equivalents to unravel the molecular mechanisms of cancer development in vitro and in vivo and to identify actionable molecular pathways          | Otorinolaringoiatria e Odontoiatria | PASCALE                | 21          | 443.000,00 €           |               |
| 137 | GR-2019-12370377 | Pathogenic mechanisms of systemic sclerosis: the role of immune complexes as novel players   | Ematologia e Immunologia            | AUXOLOGICO             | 21          | 450.000,00 €           |               |
| 138 | GR-2019-12370756 | Effect of Trimethylamine N-Oxide (TMAO) on calcium-dependent platelet activation: implications for anti-thrombotic therapy in acute coronary syndromes.                      | Cardiologia-Pneumologia             | FONDAZIONE GEMELLI     | 21          | 433.410,00 €           |               |
| 139 | GR-2019-12370588 | Identification and characterization of Large Genomic Rearrangement in patients with high risk of Sudden Cardiac Death  | Cardiologia-Pneumologia             | FONDAZIONE GEMELLI     | 21          | 325.350,00 €           |               |
| 140 | GR-2019-12368596 | Study of Immune cells in Graves' disease and orbitopathy locally derived from target Human Tissues (SIGHT)   | Endocrinologia                      | MAGGIORE               | 21          | 450.000,00 €           |               |
| 141 | GR-2019-12370101 | Novel bacterial strategies against current and new antibiotics: identification of emerging resistance mechanisms to beta-lactams/beta-lactams inhibitors in Enterobacterales | Malattie Infettive                  | SPALLANZANI            | 21,5        | 430.000,00 €           |               |
| 142 | GR-2019-12369399 | Contribution of metabolism and autophagy alterations to ADSL-deficiency etiology   | Neurologia E Psichiatria            | OSPEDALE BAMBINO GESU' | 21,5        | 363.770,00 €           |               |

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|-----|------------------|--|--------------------------|---------------------|-------------|------------------------|---------------|
| 143 | GR-2019-12368601 | Plasticity of the extracellular matrix in the pathophysiology and treatment of the chronic pain: a traslational study of perineuronal net in mouse models of inflammatory and neuropathic pain.  | Neurologia E Psichiatria | NEUROMED            | 21,5        | 293.000,00 €           |               |
| 144 | GR-2019-12370545 | Introducing high throughput sequencing in the diagnosis of inherited bleeding and platelet disorders: a tool to revolutionize the diagnostic approach and an instrument to shed new light on the severity of bleeding diatheses                                | Diagnostica              | Umbria              | 21,5        | 324.695,00 €           |               |
| 145 | GR-2019-12369246 | Neuroimaging Epigenetics: toward a neurobiological model of psychosocial adjustment to chronic illness in patients with Amyotrophic Lateral Sclerosis and their CAREgivers (NEW-ALSCARE Study)   | Neurologia E Psichiatria | MAUGERI             | 21,5        | 425.236,00 €           |               |
| 146 | GR-2019-12369916 | A systems biology approach to kidney fibrosis and chronic kidney disease progression   | Nefrologia e Urologia    | FONDAZIONE GEMELLI  | 21,5        | 450.000,00 €           |               |
| 147 | GR-2019-12368811 | Development of CAR T cells for future treatment of NETs  | Oncologia                | Puglia              | 21,5        | 406.450,00 €           |               |
| 148 | GR-2019-12369215 | Neuregulins/ErbB receptors: peripheral biomarkers and possible therapeutic targets in autism spectrum disorders and Fragile X syndrome   | Neurologia E Psichiatria | SANTA LUCIA         | 21,5        | 449.500,00 €           |               |
| 149 | GR-2019-12371144 | Can meniscal replacement with human allogenic graft reduce knee osteoarthritis progression in Post-Menisectomy Syndrome? A randomised controlled trial to quantify the effects on cartilage and subchondral bone by using a combined biomechanical and medical | Ortopedia                | RIZZOLI             | 21,5        | 448.250,00 €           |               |
| 150 | GR-2019-12369064 | Targeting nuclear liquid-liquid phase separation in breast cancer  | Oncologia                | SAN RAFFAELE MILANO | 21,75       | 436.000,00 €           |               |
| 151 | GR-2019-12371214 | FISHING IN THE CHANNEL   | Neurologia E Psichiatria | CARLO BESTA         | 22          | 366.100,00 €           |               |

| N   | Code             | Title   | MDC                      | Destinatario                  | Total Score | Budget Richiesto a MOH | Finanziamento |
|-----|------------------|---|--------------------------|-------------------------------|-------------|------------------------|---------------|
| 152 | GR-2019-12368671 | Epidemiological, genetic and phenotypic characterization of Essential Tremor in a geographically and anthropologically isolated area of Tuscany   | Neurologia E Psichiatria | Toscana                       | 22          | 450.000,00 €           |               |
| 153 | GR-2019-12368761 | The critical role of angiogenesis and vascular barrier function in Mitochondrial NeuroGastroIntestinal Encephalomyopathy: Coupling liver transplant with vascular therapy to revert MNGIE-related tissue changes. | Gastroenterologia        | Emilia-Romagna                | 22          | 450.000,00 €           |               |
| 154 | GR-2019-12369533 | Resolve the complexity of mitochondrial medicine: a proteomics/computational combined approach  | Neurologia E Psichiatria | FONDAZIONE GEMELLI            | 22          | 450.000,00 €           |               |
| 155 | GR-2019-12371409 | Microbiome and peripheral inflammation as modulators of motor progression and cortical connectivity assessed by TMS-EEG in Parkinson's disease  | Neurologia E Psichiatria | Lombardia                     | 22          | 445.500,00 €           |               |
| 156 | GR-2019-12369554 | Cholesterol and fatty acids affect the outcome of advanced Non Small Cell Lung Cancer patients treated with Immune Checkpoint Inhibitors through myeloid cells intermediation                                     | Oncologia                | ISTITUTO TUMORI MILANO        | 22          | 444.040,00 €           |               |
| 157 | GR-2019-12369422 | Epigenetic regulation of myocardial angiogenesis: implications for human diseases   | Cardiologia-Pneumologia  | HUMANITAS                     | 22          | 450.000,00 €           |               |
| 158 | GR-2019-12370530 | Mitochondrial-dependent autoimmunity in systemic lupus erythematosus: mechanistic insights and novel implications for therapy   | Nefrologia e Urologia    | MARIO NEGRI                   | 22          | 330.000,00 €           |               |
| 159 | GR-2019-12370374 | A deeper insight on eumelanin and pheomelanin levels as new prognostic predictors formelanoma skin cancer   | Oncologia                | Istituto Superiore di Sanita' | 22          | 443.390,00 €           |               |
| 160 | GR-2019-12368862 | Toward precision medicine in stroke: ultrasensitive profiling of circulating biomarkers of brain injury and neuronal recovery from acute care to rehabilitation (TARGET)  | Neurologia E Psichiatria | MAUGERI                       | 22          | 404.666,00 €           |               |
| 161 | GR-2019-12368859 | Targeting the microbiota-immunity crosstalk in pemphigus vulgaris: topical probiotic application as a new adjuvant treatment  | Ematologia e Immunologia | Toscana                       | 22          | 449.800,00 €           |               |

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|-----|------------------|--|--------------------------|--------------------|--------------|------------------------|---------------|
| 162 | GR-2019-12368812 | It is time to challenge the motor nodes: temporal dynamics leading to paradigm (motor) shift in cerebellar brain tumors and autism spectrum disorder   | Neurologia E Psichiatria | MEDEA              | <b>22</b>    | 450.000,00 €           |               |
| 163 | GR-2019-12369756 | "Closing the circle": Full sequence and characterization of plasmid harbouring virulence and resistance genes using long read, Single-Molecule Real-Time Sequence Technology (SMRT)-Acronym-FLORES (Full_LONg_REAd_Smrt) | Veterinaria              | IZSLT              | <b>22</b>    | 295.848,64 €           |               |
| 164 | GR-2019-12368565 | Characterizing the heterogeneity of Autism Spectrum Disorder in infancy: towards an innovative biomarker approach to the study of audiovisual multisensory integration   | Pediatria                | MEDEA              | <b>22</b>    | 450.000,00 €           |               |
| 165 | GR-2019-12368588 | Integrative all around microbiota characterization and modulation in pediatric patients undergoing hematopoietic stem cell transplantation   | Ematologia e Immunologia | Emilia-Romagna     | <b>22</b>    | 450.000,00 €           |               |
| 166 | GR-2019-12371023 | Assessment of pulmonary EmphySema: the Clinical - Ultrasonographic APproach to chronic Obstructive pulmonary disease [ESCUlAPIO Trial]   | Cardiologia-Pneumologia  | FONDAZIONE GEMELLI | <b>22</b>    | 400.000,00 €           |               |
| 167 | GR-2019-12368818 | Hydrogen sulphide (H2S) as a new player in the microbiota-mitochondria cross-talk: diagnostic and prognostic implications for clinical and experimental Inflammatory Bowel Disease (IBD)                                 | Gastroenterologia        | FONDAZIONE GEMELLI | <b>22,25</b> | 450.000,00 €           |               |
| 168 | GR-2019-12370335 | Combining lysosomal and mitochondrial markers with neuroimaging, cognitive and neurophysiology features for the prediction of Parkinson's disease in patients with idiopathic REM sleep behavior disorder                | Neurologia E Psichiatria | MONDINO            | <b>22,5</b>  | 449.500,00 €           |               |



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|-----|------------------|---|--------------------------|----------------------------------|-------------|------------------------|---------------|
| 169 | GR-2019-12369830 | Investigating the effects of ultra-processed foods on gut microbiota composition and inflammation-dependent pathways in a Mediterranean population: a novel classification and a randomized, cross-over controlled dietary intervention trial | Cardiologia-Pneumologia  | NEUROMED                         | 22,5        | 443.700,00 €           |               |
| 170 | GR-2019-12368465 | A polygenic model for risk stratification of painful small fiber neuropathy (PainScore)   | Neurologia E Psichiatria | CARLO BESTA                      | 22,5        | 418.350,00 €           |               |
| 171 | GR-2019-12369220 | Single cell RNA sequencing and organotypic models to interrogate the development of melanoma immune-resistant phenotypes  | Oncologia                | Istituto Scientifico Romagnolo   | 22,5        | 445.850,00 €           |               |
| 172 | GR-2019-12368809 | Development of tumor-metabolism-optimized interferon dendritic cells for in situ vaccination in therapy resistant melanoma patients   | Oncologia                | Istituto Superiore di Sanita'    | 22,5        | 450.000,00 €           |               |
| 173 | GR-2019-12370552 | Radiomics and liquid biopsy for detection and classification of non-invasive early breast cancer  | Diagnostica              | Ospedale Policlinico San Martino | 23          | 214.444,45 €           |               |
| 174 | GR-2019-12369296 | Use of epigenetic drugs to empower NK cell therapeutic potential in Non-Small-Cell Lung Cancer (NSCLC)  | Oncologia                | AUSL RE Ist. Tecnologie Avanzate | 23          | 450.000,00 €           |               |
| 175 | GR-2019-12370941 | Are polyfluoroalkyl substances (PFASs) drivers for arterial hypertension? Impact on immune system and disruption of adrenocortical function.  | Ematologia e Immunologia | Veneto                           | 23          | 444.300,00 €           |               |
| 176 | GR-2019-12369922 | Investigating the role of miRNAs-loaded into Mesenchymal Stromal Cells (MSCs)-derived exosomes as therapeutic tool in Neuroblastoma   | Oncologia                | OSPEDALE BAMBINO GESU'           | 23          | 443.800,00 €           |               |
| 177 | GR-2019-12371208 | Spatial heterogeneity characterization in Lymphoproliferative Diseases (LD): a liquid biopsy approach   | Ematologia e Immunologia | Emilia-Romagna                   | 23          | 450.000,00 €           |               |
| 178 | GR-2019-12370277 | Dissecting dysmetabolic-dependent DNA methylation changes in BRAF mutant colorectal cancer progression  | Oncologia                | Istituto Oncologico Candiolo     | 23          | 419.995,80 €           |               |
| 179 | GR-2019-12369891 | Identification of novel therapeutic strategies in IL-1 mediated diseases by a drug repositioning approach   | Ematologia e Immunologia | GASLINI                          | 23          | 449.011,00 €           |               |

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|-----|------------------|--|--------------------------|---------------------|-------------|------------------------|---------------|
| 180 | GR-2019-12368504 | STARD3: a novel theranostic target in colorectal cancer  | Oncologia                | C.R.O. AVIANO       | <b>23</b>   | 410.400,00 €           |               |
| 181 | GR-2019-12369580 | Adoptive cell therapy with redirected Cytokine-Induced Killer cells  | Oncologia                | I. O. V.            | <b>23</b>   | 445.500,00 €           |               |
| 182 | GR-2019-12370741 | Targeting the master neuronal epigenetic regulator REST as new strategy for intervention in Amyotrophic Lateral Sclerosis.   | Neurologia E Psichiatria | SDN                 | <b>23</b>   | 450.000,00 €           |               |
| 183 | GR-2019-12370294 | Brain-derived exosome: a novel biomarker of diabetes-related cognitive decline   | Neurologia E Psichiatria | FONDAZIONE GEMELLI  | <b>23</b>   | 440.000,00 €           |               |
| 184 | GR-2019-12369488 | Evaluation of epigenetic, molecular and electrophysiologic modifications in post-stroke patients as biomarkers of spontaneous and tDCS-induced functional recovery   | Neurologia E Psichiatria | FONDAZIONE GEMELLI  | <b>23</b>   | 448.944,00 €           |               |
| 185 | GR-2019-12370225 | UNDERSTANDING THE MECHANISMS OF RESISTANCE TO BTK INHIBITORS IN PATIENTS WITH RELAPSED/REFRACTORY CHRONIC LYMPHOCYTIC LEUKEMIA: BEYOND C481S BTK MUTATION  | Ematologia e Immunologia | SAN RAFFAELE MILANO | <b>23,5</b> | 448.000,00 €           |               |
| 186 | GR-2019-12368890 | Enhancing diagnosis of central line-associated bloodstream infection (CLABSI) through Real-time PCR in order to improve prompt targeted therapy in children  | Malattie Infettive       | Toscana             | <b>23,5</b> | 445.000,00 €           |               |
| 187 | GR-2019-12371500 | Enhancing recovery of the upper limb after stroke: effects of transcranial random noise stimulation combined with Graded Repetitive Arm Supplementary Program on motor rehabilitation of ischemic stroke patients: a multidisciplinary study | Neurologia E Psichiatria | Sicilia             | <b>23,5</b> | 450.000,00 €           |               |
| 188 | GR-2019-12370507 | Evaluation of therapeutic efficacy of a novel HER-3 targeting Antibody-Drug Conjugate in epithelial ovarian carcinoma  | Oncologia                | FONDAZIONE GEMELLI  | <b>23,5</b> | 440.850,00 €           |               |
| 189 | GR-2019-12369118 | Integrated analysis of hemodynamic and metabolic alterations in the TRANSITION from arterial hypertension to Heart Failure with preserved ejection fraction: a sex-based study (TRANSITION-HF).  | Cardiologia-Pneumologia  | Toscana             | <b>23,5</b> | 405.080,00 €           |               |

| N   | Code             | Title   | MDC                      | Destinatario          | Total Score | Budget Richiesto a MOH | Finanziamento |
|-----|------------------|---|--------------------------|-----------------------|-------------|------------------------|---------------|
| 190 | GR-2019-12368822 | Easy applicability of gluten-dependent intestinal auto-antibodies in the wide clinical spectrum of celiac disease for preventing delay in diagnosis and treatment.  | Gastroenterologia        | BURLO GAROFOLO        | <b>23,5</b> | 230.000,00 €           |               |
| 191 | GR-2019-12371572 | Epigenomic strategies for methotrexate response prediction in patients with JIA   | Pediatria                | BURLO GAROFOLO        | <b>24</b>   | 291.800,00 €           |               |
| 192 | GR-2019-12371110 | Breast cancer organoids: a flexible platform for drug screening and for prediction of therapy responses   | Oncologia                | SDN                   | <b>24</b>   | 450.000,00 €           |               |
| 193 | GR-2019-12370596 | The RNA binding protein hnRNP C as a new target for regulating amyloid precursor protein levels in Alzheimer's Disease  | Neurologia E Psichiatria | HUMANITAS             | <b>24</b>   | 450.000,00 €           |               |
| 194 | GR-2019-12371015 | Characterization and targeting of calcium-dependent dysfunctions in Arrhythmogenic Cardiomyopathy pathogenesis  | Cardiologia-Pneumologia  | MONZINO               | <b>24</b>   | 450.000,00 €           |               |
| 195 | GR-2019-12369159 | Explorative study on ACE2 expression and polymorphism in pregnancy, small for gestational age babies, and children with short stature   | Endocrinologia           | Friuli-Venezia Giulia | <b>24,5</b> | 450.000,00 €           |               |
| 196 | GR-2019-12371386 | A novel host-directed approach to fight bacterial infections by targeting the STING/Transglutaminase 2-regulated Interferon response  | Malattie Infettive       | SPALLANZANI           | <b>24,5</b> | 430.000,00 €           |               |
| 197 | GR-2019-12371053 | Strengthening the transmission along the corticospinal tract for improving the upper limb impairment in multiple sclerosis. A priming therapy to boost robot-assisted exercise in rehabilitation, to be tailored according to the genetics of brain plasticity. | Riabilitazione           | DON GNOCCHI           | <b>24,5</b> | 387.200,00 €           |               |
| 198 | GR-2019-12370583 | Early-B cell Factor 1 expression and functional role during tumor angiogenesis and in central nervous system brain tumors: impact on diagnosis, prognosis and translational value   | Oncologia                | Lombardia             | <b>24,5</b> | 264.990,00 €           |               |
| 199 | GR-2019-12371304 | Use of brain 18F-FDG-PET to identify metabolic patterns in ALS (Met-ALS)  | Neurologia E Psichiatria | Piemonte              | <b>24,5</b> | 450.000,00 €           |               |

| N   | Code             | Title   | MDC                      | Destinatario             | Total Score | Budget Richiesto a MOH | Finanziamento |
|-----|------------------|---|--------------------------|--------------------------|-------------|------------------------|---------------|
| 200 | GR-2019-12369839 | Identification of Biomarkers for risk Stratification in older individuals with multimorbidity: fostering personalized medicine to address clinical complexity (ID-BioStrat) | Geriatria                | FONDAZIONE GEMELLI       | <b>24,5</b> | 450.000,00 €           |               |
| 201 | GR-2019-12369239 | Identification of new germline alterations with diagnostic and predictive value in familial breast/ovarian cancer patients by exome sequencing analysis                     | Oncologia                | Abruzzo                  | <b>25</b>   | 428.000,00 €           |               |
| 202 | GR-2019-12370658 | Overcoming melanoma drug resistance: 3D tumor explants as a model for the discovery of novel druggable targets in the microRNA/COX2/PGE2 axis for combination therapy       | Oncologia                | ISTITUTO TUMORI MILANO   | <b>25</b>   | 446.050,00 €           |               |
| 203 | GR-2019-12370664 | Whole-Genome sequencing in unsolved epileptic and developmental encephalopathies: evaluation of diagnostic yield and role of non-coding genetic variants                    | Diagnostica              | Toscana                  | <b>25</b>   | 449.425,00 €           |               |
| 204 | GR-2019-12369849 | Dissecting the potential therapeutic effect of miR34b in Cerebral Cavernous Malformations: in vitro, in vivo approaches by using Ccm3 mouse model and drug discovery.       | Neurologia E Psichiatria | CASA SOLLIEVO SOFFERENZA | <b>25</b>   | 430.109,00 €           |               |
| 205 | GR-2019-12368770 | Allogeneic Cartilage-derived Progenitor cells as Therapy for osteoarthritis: from in vivo to GMP validation towards translation into clinical practice (ACcEPT)             | Ortopedia                | GALEAZZI                 | <b>25</b>   | 449.250,00 €           |               |
| 206 | GR-2019-12369649 | Sodium-glucose co-transporter 2 inhibitors as cardioprotective agents in cardioncology  | Cardiologia-Pneumologia  | PASCALE                  | <b>25</b>   | 450.000,00 €           |               |
| 207 | GR-2019-12369748 | Therapeutic and diagnostic implications of miR-4488 and miR-4443 to fight resistance to targeted therapy in metastatic melanoma   | Oncologia                | REGINA ELENA             | <b>25</b>   | 450.000,00 €           |               |
| 208 | GR-2019-12368706 | Evaluation of relative telomere length in serum cell-free DNA from women affected by endometrial atypical hyperplasia and risk of endometrial cancer                        | Ostetricia e Ginecologia | Lombardia                | <b>25,5</b> | 241.700,00 €           |               |
| 209 | GR-2019-12370928 | miRNA-based therapy in preclinical models of inflammatory bowel disease   | Gastroenterologia        | DE BELLIS                | <b>25,5</b> | 422.000,00 €           |               |

| N   | Code             | Title  | MDC                      | Destinatario           | Total Score | Budget Richiesto a MOH | Finanziamento |
|-----|------------------|--|--------------------------|------------------------|-------------|------------------------|---------------|
| 210 | GR-2019-12369367 | A new prognostic target to identify the most aggressive primary liver tumors   | Oncologia                | I. O. V.               | <b>25,5</b> | 447.000,00 €           |               |
| 211 | GR-2019-12370013 | The Milano Osteosarcopenia and Comorbidities (MOC) Initiative  | Diagnostica              | GALEAZZI               | <b>25,5</b> | 374.500,00 €           |               |
| 212 | GR-2019-12370716 | Identification of novel risk factors for hypogammaglobulinemia development following anti-CD20 therapy   | Ematologia e Immunologia | OSPEDALE BAMBINO GESU' | <b>25,5</b> | 450.000,00 €           |               |
| 213 | GR-2019-12368924 | Natural reproduction after treatment for breast cancer in BRCA mutation carriers who wish a pregnancy  | Ostetricia e Ginecologia | Emilia-Romagna         | <b>26</b>   | 331.000,00 €           |               |
| 214 | GR-2019-12371537 | In vivo cell-type selective accumulation of alpha-synuclein to dissect the distinct cellular dysfunctions contributing to Parkinson's disease                | Neurologia E Psichiatria | SAN RAFFAELE MILANO    | <b>26</b>   | 450.000,00 €           |               |
| 215 | GR-2019-12369722 | A TRANslational, Integrated animal-human sTudy On the impact of Negr1 variants on neuronal connectivity and response to treatment in major depression-TRITON | Neurologia E Psichiatria | MAGGIORE               | <b>26</b>   | 450.000,00 €           |               |
| 216 | GR-2019-12368464 | Impact of anti-tetanus toxoid antibodies levels on Clostridioides difficile infection outcome  | Malattie Infettive       | Friuli-Venezia Giulia  | <b>26</b>   | 186.000,00 €           |               |
| 217 | GR-2019-12369521 | Preclinical study of ovarian tissue auto-transplantation for oncological patient fertility preservation  | Ostetricia e Ginecologia | BURLO GAROFOLO         | <b>26</b>   | 450.000,00 €           |               |
| 218 | GR-2019-12371457 | To fine-tune a new prognostic tool to prevent atherosclerotic cardiovascular events in familial hypercholesterolemia patients                                | Diagnostica              | Sicilia                | <b>26</b>   | 348.000,00 €           |               |
| 219 | GR-2019-12370570 | Interplay of extracellular vesicles between brain and periphery in Amyotrophic Lateral Sclerosis   | Neurologia E Psichiatria | MONDINO                | <b>26,5</b> | 315.000,00 €           |               |
| 220 | GR-2019-12371041 | Human Gastric Cancer Organoids Biobanking as a Tool to Predict Patients Drug Response and Personalize Therapy  | Oncologia                | CROB                   | <b>26,5</b> | 448.300,00 €           |               |
| 221 | GR-2019-12371390 | The role of electronic cigarettes and heated tobacco products, and their manufacturers, on tobacco control   | Cardiologia-Pneumologia  | MARIO NEGRI            | <b>26,5</b> | 445.420,00 €           |               |
| 222 | GR-2019-12369588 | Serum extracellular vesicle RNAs and phenotype as new biomarkers in acute myeloid leukemia   | Ematologia e Immunologia | CROB                   | <b>26,5</b> | 450.000,00 €           |               |

| N   | Code             | Title   | MDC                      | Destinatario          | Total Score | Budget Richiesto a MOH | Finanziamento |
|-----|------------------|---|--------------------------|-----------------------|-------------|------------------------|---------------|
| 223 | GR-2019-12369482 | Urogenital schistosomiasis: novel biomarkers for improving diagnosis and treatment outcome evaluation   | Malattie Infettive       | DON CALABRIA - NEGRAR | <b>27</b>   | 352.300,00 €           |               |
| 224 | GR-2019-12369777 | Milk M&M - The metabolome and ghost microbiome of donor human milk: targeting two unknown actors in infant immunomodulation   | Pediatria                | Emilia-Romagna        | <b>27</b>   | 450.000,00 €           |               |
| 225 | GR-2019-12370485 | Development of highly effective monoclonal antibodies for therapy of antibiotic resistant infections by Staphylococcus aureus   | Malattie Infettive       | Sicilia               | <b>27</b>   | 442.000,00 €           |               |
| 226 | GR-2019-12370787 | Tubulin modulators and IDO1 inhibitors: a dual anticancer approach in solid tumors.   | Oncologia                | CROB                  | <b>27</b>   | 397.500,00 €           |               |
| 227 | GR-2019-12369705 | RNA-sequencing for increasing diagnostic yield and improving clinical care of patients affected by mitochondrial myopathies.  | Neurologia E Psichiatria | CARLO BESTA           | <b>27</b>   | 396.000,00 €           |               |
| 228 | GR-2019-12369228 | Embryo-exported extracellular vesicles: aiding non-invasive preimplantation diagnostics and endometrial receptivity management  | Ostetricia e Ginecologia | SAN RAFFAELE MILANO   | <b>27</b>   | 380.000,00 €           |               |
| 229 | GR-2019-12369540 | Head and neck paragangliomas: clinical, histopathological, imaging and genetic correlation.   | Endocrinologia           | Toscana               | <b>27</b>   | 398.700,00 €           |               |
| 230 | GR-2019-12368940 | Who is the culprit? NGS application for a rapid pathogen identikit in meningoencephalitis   | Malattie Infettive       | MEDEA                 | <b>27</b>   | 450.000,00 €           |               |
| 231 | GR-2019-12368797 | A Population-based, Risk-adapted Biomonitoring and Bladder Cancer Screening Trial   | Oncologia                | IZSME                 | <b>27,5</b> | 185.000,00 €           |               |
| 232 | GR-2019-12370038 | Targeting neural oscillations with non-invasive brain stimulation in the rehabilitation of developmental dyslexia   | Neurologia E Psichiatria | SAN RAFFAELE MILANO   | <b>27,5</b> | 450.000,00 €           |               |
| 233 | GR-2019-12370061 | Microbio-Genetics of Liver/Gut Interaction in Fatty Liver (MicroGiGa): Integrated multi-system profiling to identify causative roles of intestinal dysbiosis in steatohepatitis | Gastroenterologia        | Toscana               | <b>27,5</b> | 450.000,00 €           |               |
| 234 | GR-2019-12368854 | EffiCacy and sAFety of Nicotinamide a san adjuvant therapY for cutaneOUS manifestatioNs of lupus erythematosus: the CANYON study  | Ematologia e Immunologia | Toscana               | <b>28</b>   | 186.500,00 €           |               |

| N   | Code             | Title   | MDC                                 | Destinatario           | Total Score | Budget Richiesto a MOH | Finanziamento |
|-----|------------------|---|-------------------------------------|------------------------|-------------|------------------------|---------------|
| 235 | GR-2019-12371210 | STaphylococcus AuReus bacteremia: investigating HOst and Pathogen to predict infective Endocarditis development and outcome. STAR-HOPE study.   | Malattie Infettive                  | SAN RAFFAELE MILANO    | <b>28</b>   | 450.000,00 €           |               |
| 236 | GR-2019-12369506 | VERTEBRAL BONE MARROW CLOT: THE BIRTH OF A NEW AUTOLOGOUS CELL THERAPY IN SPINAL SURGERY - TEAM CHALLENGE   | Ortopedia                           | RIZZOLI                | <b>28</b>   | 448.800,00 €           |               |
| 237 | GR-2019-12371288 | Combinatory approaches based on MSC sTRAIL and chemotherapeutic agents as clinical relevant strategy to target pleural mesothelioma.  | Oncologia                           | Emilia-Romagna         | <b>28,5</b> | 370.500,00 €           |               |
| 238 | GR-2019-12371167 | Inflammatory mediators in diseases related to mitochondrial DNA maintenance defects: new potential biomarkers to be used as therapeutic targets.  | Neurologia E Psichiatria            | OSPEDALE BAMBINO GESU' | <b>28,5</b> | 208.670,00 €           |               |
| 239 | GR-2019-12371453 | Nosocomial infection in acute respiratory distress syndrome (ARDS) patients undergoing extracorporeal membrane oxygenation (ECMO): a prospective observational study  | Cardiologia-Pneumologia             | MAGGIORE               | <b>28,5</b> | 448.333,34 €           |               |
| 240 | GR-2019-12371212 | Transcriptional regulation analysis at the single-cell level of the GPR101 gene in pituitary neuroendocrine tumors  | Endocrinologia                      | HUMANITAS              | <b>29</b>   | 450.000,00 €           |               |
| 241 | GR-2019-12371400 | Outcome of Fontan procedures: a multidisciplinary risk score using echocardiography, 4D flow MRI, exercise capacity, liver and renal parameters and BNP.  | Cardiologia-Pneumologia             | Emilia-Romagna         | <b>29</b>   | 390.000,00 €           |               |
| 242 | GR-2019-12371488 | Methodological innovations for the etiopathogenetic clustering of tinnitus through advanced diagnostic techniques in Functional Magnetic Resonance and Ultrasounds and a subsequent personalized therapeutic approach using a software dedicated to the develop | Otorinolaringoiatria e Odontoiatria | Sicilia                | <b>29</b>   | 450.000,00 €           |               |
| 243 | GR-2019-12370604 | Interplay between HIF 1 alpha and SIRT5. Implication in adipocyte differentiation and obesity   | Endocrinologia                      | SAN RAFFAELE PISANA    | <b>29</b>   | 400.000,00 €           |               |

| N   | Code             | Title  | MDC                      | Destinatario                     | Total Score  | Budget Richiesto a MOH | Finanziamento |
|-----|------------------|--|--------------------------|----------------------------------|--------------|------------------------|---------------|
| 244 | GR-2019-12369929 | IMPACT OF GENETIC PREDISPOSITION TO CELIAC DISEASE ON THE MICROBIOTA COMPOSITION OF NON-CELIAC WOMEN WITH PREGNANCY COMPLICATIONS. IMPLICATIONS FOR PREGNANCY AND NEONATAL DEVELOPMENT.  | Ostetricia e Ginecologia | FONDAZIONE GEMELLI               | <b>29</b>    | 444.000,00 €           |               |
| 245 | GR-2019-12370693 | Ketogenic Diet: the possible key to enhance 18F-FDG PET diagnostic performance in Bronchioloalveolar carcinoma.  | Diagnostica              | AUSL RE Ist. Tecnologie Avanzate | <b>29</b>    | 162.500,00 €           |               |
| 246 | GR-2019-12370903 | Characterization of variants of uncertain significance (VUS) by in silico analysis and a functional test to increase the number of clinically relevant data from Next-Generation Sequencing (NGS).   | Oncologia                | REGINA ELENA                     | <b>30</b>    | 450.000,00 €           |               |
| 247 | GR-2019-12368569 | Peripheral blood Mononucleated cells metabolic Ageing as a surrogate Biomarker of the systemic chemotherapy-induced Oxidative damage (METABOX).  | Diagnostica              | Ospedale Policlinico San Martino | <b>30</b>    | 330.933,33 €           |               |
| 248 | GR-2019-12370862 | New biomarker in patients undergoing transcatheter aortic valve implantation. Circulating microRNAs as new generation of biomarkers of left ventricular remodeling in patients with aortic stenosis undergoing transcatheter aortic valve intervention | Cardiologia-Pneumologia  | Calabria                         | <b>30,25</b> | 231.000,00 €           |               |
| 249 | GR-2019-12371018 | New Biomarkers for a more personalized use of Immune Check-point Inhibitors in advanced Non-Small Cell Lung Cancer   | Oncologia                | Emilia-Romagna                   | <b>31</b>    | 450.000,00 €           |               |
| 250 | GR-2019-12369819 | MATILDHE - Molecular Alterations in Lumbar Disc Herniation   | Ortopedia                | MAGGIORE                         | <b>31</b>    | 447.777,78 €           |               |
| 251 | GR-2019-12369520 | Analysis of the role of Lyso Gb3 in early detection of myocardial sphingolipid storage and in promoting advanced tissue alterations in Fabry cardiomyopathy  | Cardiologia-Pneumologia  | SAN DONATO                       | <b>31,5</b>  | 329.550,00 €           |               |



| N   | Code             | Title  | MDC                                 | Destinatario                     | Total Score  | Budget Richiesto a MOH | Finanziamento |
|-----|------------------|--|-------------------------------------|----------------------------------|--------------|------------------------|---------------|
| 252 | GR-2019-12370651 | SCRAPS: ExoSomal Cargo analysis as a predictive biomarker of patients with melanoma at high risk of relapse  | Oncologia                           | Ospedale Policlinico San Martino | <b>31,5</b>  | 390.445,00 €           |               |
| 253 | GR-2019-12369737 | Role of kynurenine pathway in neurological outcome after cardiac arrest: preclinical and clinical investigations.  | Cardiologia-Pneumologia             | MARIO NEGRI                      | <b>32</b>    | 450.000,00 €           |               |
| 254 | GR-2019-12369507 | Circulating tumor DNA in the management of non-metastatic breast cancer patients   | Oncologia                           | Emilia-Romagna                   | <b>32</b>    | 441.000,00 €           |               |
| 255 | GR-2019-12369869 | P2X7 receptor: a promising prognostic marker and a therapeutic target for advanced melanoma  | Dermatologia                        | Emilia-Romagna                   | <b>32,25</b> | 450.000,00 €           |               |
| 256 | GR-2019-12370719 | Hydroxyapatite as a carrier for bacteriophages and antibiofilm molecules against Pseudomonas spp. infections.  | Veterinaria                         | IZSME                            | <b>32,5</b>  | 400.000,00 €           |               |
| 257 | GR-2019-12370942 | Subtyping Parkinson's disease: a clinical, neurophysiological and neuroimaging characterization  | Neurologia E Psichiatria            | NEUROMED                         | <b>34</b>    | 244.000,00 €           |               |
| 258 | GR-2019-12369755 | Interleukin-37 in Multiple Sclerosis: an anti-inflammatory role to be explored   | Neurologia E Psichiatria            | NEUROLESI                        | <b>34</b>    | 412.300,00 €           |               |
| 259 | GR-2019-12369295 | Towards precision medicine: Radiogenomics in advanced hepatocellular carcinoma   | Oncologia                           | Istituto Scientifico Romagnolo   | <b>34</b>    | 442.500,00 €           |               |
| 260 | GR-2019-12370930 | Modeling Migraine: searching for mechanisms and molecular targets via an integrated animal-human approach  | Neurologia E Psichiatria            | MONDINO                          | <b>36</b>    | 437.000,00 €           |               |
| 261 | GR-2019-12371116 | From genome to functional studies of rare variants in pediatric patients affected by diabetes: improvement of diagnostics and treatment for effective patient management | Endocrinologia                      | Toscana                          | <b>39,5</b>  | 444.474,00 €           |               |
| 262 | GR-2019-12369298 | Experimental and Clinical Evaluation of New Biomaterials, Oral Health and Innovative Biomaterials applied for Tissue Regeneration in the Facial District                 | Otorinolaringoiatria e Odontoiatria | Sicilia                          | <b>42</b>    | 159.600,00 €           |               |

Progetti Giovani Ricercatori - Theory Enhancing - esclusi in fase di Triage

| CODICE           | TITOLO  | TIPOLOGIA RICERCA | DESTINATARIO                     | VOTO CV |
|------------------|---|-------------------|----------------------------------|---------|
| GR-2019-12368705 | Raman spectroscopy for the detection and profiling of circulating extracellular vesicles involved in Parkinson's disease: exploring the feasibility of Raman analysis as biomarker of recovery after robotic rehabilitation in patients with Parkinson disease. | Theory Enhancing  | DON GNOCCHI                      | 8       |
| GR-2019-12368885 | New prognostic score in the management of patients with fibrosing non-Idiopathic Pulmonary Fibrosis interstitial lung diseases  | Theory Enhancing  | Sicilia                          | 8       |
| GR-2019-12368921 | Investigating the role of brain circumventricular organs in the increased susceptibility to hypertension, observed in conditions of metabolic or psychological stress   | Theory Enhancing  | NEUROMED                         | 8       |
| GR-2019-12369009 | Perineural invasion in pancreatic cancer: how do cancer-nerve interactions impact on neural remodelling supporting disease progression?   | Theory Enhancing  | SAN RAFFAELE MILANO              | 8       |
| GR-2019-12369115 | UNRAVELLING THE Th17 GENE LANDSCAPE IN ANKYLOSING SPONDYLITIS: A TISSUE-CENTRED APPROACH  | Theory Enhancing  | Campania                         | 8       |
| GR-2019-12369166 | Microglial CB2 receptors as therapeutic target for Post-Traumatic Stress Disorder   | Theory Enhancing  | NEUROMED                         | 8       |
| GR-2019-12369187 | Clinical significance of epigenetic modulation in cutaneous melanoma  | Theory Enhancing  | PASCALE                          | 8       |
| GR-2019-12369297 | Studying the role of Vitamin D signaling in driving aggressiveness and progression of Diffuse large B-cell lymphoma (DLBCL)   | Theory Enhancing  | AUSL RE Ist. Tecnologie Avanzate | 8       |
| GR-2019-12369326 | [W]ondering the mechanism of [Res]istance to [T]yrosine Kinase Inhibitors (TKIs) in Non-Small Cell [Lung] Cancer (NSCLC) [WResTLung]  | Theory Enhancing  | Istituto Scientifico Romagnolo   | 8       |
| GR-2019-12369365 | Implementation of liquid biopsy-based tests in the management of Medullary Thyroid Carcinoma  | Theory Enhancing  | Toscana                          | 8       |
| GR-2019-12369383 | Fighting pancreatic cancer with new pH-triggered surface charge switchable polymer micelles for the delivery of novel N-biphenylanilides with antimetabolic properties  | Theory Enhancing  | ONCOLOGICO DI BARI               | 8       |
| GR-2019-12369483 | Short-and long-term efficacy of a Virtual Reality Full Body Illusion on maintenance of weight changes in individuals affected by obesity.   | Theory Enhancing  | AUXOLOGICO                       | 8       |
| GR-2019-12369633 | New insights on HIV-microbiome interactions   | Theory Enhancing  | Emilia-Romagna                   | 8       |

| CODICE           | TITOLO   | TIPOLOGIA RICERCA   | DESTINATARIO                     | VOTO CV |
|------------------|--|---------------------|----------------------------------|---------|
| GR-2019-12369767 | TRANSCRIPTOMIC AND EPIGENETIC MARKERS OF PULMONARY INFECTIONS AND ANTIBIOTIC TREATMENT IN CYSTIC FIBROSIS MODELS   | Theory<br>Enhancing | SAN RAFFAELE MILANO              | 8       |
| GR-2019-12369845 | Human monoclonal antibodies against New Delhi metallo-beta-lactamase-producing carbapenem-resistant Enterobacteriaceae for therapy and vaccine acceleration  | Theory<br>Enhancing | Toscana                          | 8       |
| GR-2019-12369980 | Potential role of gut microbiota and circulating metabolome profile on septic shock outcomes: towards new classifiers for individualized interventions   | Theory<br>Enhancing | MAGGIORE                         | 8       |
| GR-2019-12370128 | mutational profile of malignant pleural mesothelioma (MPM)   | Theory<br>Enhancing | AUSL RE Ist. Tecnologie Avanzate | 8       |
| GR-2019-12370273 | New challenge against Bronchiolitis Obliterans Syndrome: prevention, molecular study and nano-therapeutic strategy   | Theory<br>Enhancing | SAN MATTEO                       | 8       |
| GR-2019-12370476 | Sonic Hedgehog Signaling: Novel Player and Potential Therapeutic Target in Brain Arteriovenous Malformation  | Theory<br>Enhancing | FONDAZIONE GEMELLI               | 8       |
| GR-2019-12370548 | A fertility preservation program in female cancer patients employing ovarian stem cells (OSCs): recruitment from ovary cortex, in vitro differentiation to mature oocytes and cryostorage for post-cancer usage  | Theory<br>Enhancing | ONCOLOGICO DI BARI               | 8       |
| GR-2019-12370606 | A sleep intervention to reduce risk of Alzheimer's disease via improved neuro-functional and inflammatory mediators  | Theory<br>Enhancing | S.CAMILLO                        | 8       |
| GR-2019-12370729 | Third Generation Sequencing for the rapid karyotyping and the refinement of prognostic stratification of Acute Myeloid Leukemia.<br><br>'Sequenziamento genomico di terza generazione per la rapida cariotipizzazione e il miglioramento della stratificazione prognostica nelle Leucemie Acute Mieloidi.' | Theory<br>Enhancing | Toscana                          | 8       |
| GR-2019-12370752 | Characterization of the androgen receptor in liquid biopsy as predictive biomarker of treatment response in patients affected by Castration-Resistant Prostate Cancer (CRPC)   | Theory<br>Enhancing | Toscana                          | 8       |
| GR-2019-12370778 | Targeting Fibroblast Growth Factor (FGF) signaling as a potential therapeutic approach for growth disorders  | Theory<br>Enhancing | Campania                         | 8       |
| GR-2019-12371005 | Relationship between Motor Mirroring and Motor Control in Borderline Personality Disorders   | Theory<br>Enhancing | FATEBENEFRAPELLI                 | 8       |

| CODICE           | TITOLO   | TIPOLOGIA RICERCA   | DESTINATARIO                      | VOTO CV |
|------------------|--|---------------------|-----------------------------------|---------|
| GR-2019-12371010 | miR-200c as potential biomarker and target for the treatment of microbial TMAO-induced atherosclerosis plaque instability  | Theory<br>Enhancing | SAN RAFFAELE<br>PISANA            | 8       |
| GR-2019-12371047 | Impact of opioids on the immune contexture of immunotherapy treated metastatic melanoma patients   | Theory<br>Enhancing | Istituto Scientifico<br>Romagnolo | 8       |
| GR-2019-12371109 | Spatial perception enhancement in Virtual Reality environment: implementation of a customized vibrotactile feedback for stroke recovery  | Theory<br>Enhancing | S.CAMILLO                         | 8       |
| GR-2019-12371149 | Restriction site associated DNA sequencing (RAD-seq) as a tool for exploring genetic diversity and epidemiology of the nosocomial fungal pathogen Candida parapsilosis.                                    | Theory<br>Enhancing | NEUROLESI                         | 8       |
| GR-2019-12371319 | Human teaching & machine learning (HTML) project: machine learning for the differential diagnosis of interstitial lung disease combining clinical, laboratory, functional and imaging data.                | Theory<br>Enhancing | SAN MATTEO                        | 8       |
| GR-2019-12371359 | Validation of 18F-FDG PET- and HRCT-derived radiomic and radiogenomic features in a large population sample with single pulmonary nodule   | Theory<br>Enhancing | Sicilia                           | 8       |
| GR-2019-12371385 | Multimodal approach in search of parkinsonism prodromal markers of neurodegeneration in idiopathic REM sleep behavior disorder   | Theory<br>Enhancing | NEUROLESI                         | 8       |
| GR-2019-12371391 | The role of the glutamatergic circuitry in anxiety and depression: a molecular-neuroimaging approach (Tornado)   | Theory<br>Enhancing | MAGGIORE                          | 8       |
| GR-2019-12371427 | Single Cell RNA-sequencing to disclose the mechanisms driving hepatic metastatization of primary colon-rectal cancer in patients undergoing simultaneous surgical removal of primary and secondary tumors. | Theory<br>Enhancing | HUMANITAS                         | 8       |
| GR-2019-12371455 | Immune regulation of atherosclerosis development   | Theory<br>Enhancing | MAGGIORE                          | 8       |
| GR-2019-12371499 | A new eRa in the treatment of Soft Tissue SaRcoma: from the genOme sequencing to the development of a neW generation of nanodrugs (ARROW)  | Theory<br>Enhancing | Istituto Scientifico<br>Romagnolo | 8       |
| GR-2019-12371502 | Monitoring Neuroaxonal Loss in Progressive Multiple Sclerosis Through Optical Coherence Tomography and Serum Neurofilaments  | Theory<br>Enhancing | SAN RAFFAELE<br>MILANO            | 8       |
| GR-2019-12368514 | Comparison in term of cost-effectiveness of immunofluorescence and electronic microscopy in the diagnosis of primary ciliar dyskinesia   | Theory<br>Enhancing | Piemonte                          | 9       |

| CODICE           | TITOLO  | TIPOLOGIA RICERCA   | DESTINATARIO                           | VOTO CV |
|------------------|---|---------------------|--|---------|
| GR-2019-12368562 | HIV+ population: evaluation of a tailored screening program for the prevention of HPV-related carcinomas  | Theory<br>Enhancing | Toscana                                | 9       |
| GR-2019-12368584 | Hypoxia contribution to neuroblastoma cell immortalization in primary tumor and peripheral blood  | Theory<br>Enhancing | GASLINI                                | 9       |
| GR-2019-12368782 | Impact of multi-step Next Generation Sequencing for diagnosis and management of primary immunodeficiency patients - NGSforPIDs  | Theory<br>Enhancing | Veneto                                 | 9       |
| GR-2019-12368783 | Head and neck cancer: working at crossroad of immune system and microbiota focusing on tumor relapse and prognosis.   | Theory<br>Enhancing | I.E.O.                                 | 9       |
| GR-2019-12369097 | Understanding the role of Notch2 in mediating drug resistance in chronic lymphocytic leukemia   | Theory<br>Enhancing | Emilia-Romagna                         | 9       |
| GR-2019-12369291 | Role of radiomics and circulating biomarkers in the management of advanced non-small cell lung cancer treated with targeted therapy or immune checkpoint inhibitors   | Theory<br>Enhancing | Ospedale<br>Policlinico San<br>Martino | 9       |
| GR-2019-12369582 | Cognitive impairment assay to predict disease trajectory in ALS   | Theory<br>Enhancing | CARLO BESTA                            | 9       |
| GR-2019-12369699 | Impact of the dysregulation of Pentraxin 3/Thrombospondin 1 complex in neurodevelopmental diseases.   | Theory<br>Enhancing | HUMANITAS                              | 9       |
| GR-2019-12370159 | Development and comparative analysis of TCR and CAR gene-edited, antigen-specific Regulatory T cells for the cure of Rheumatoid Arthritis   | Theory<br>Enhancing | SAN RAFFAELE<br>MILANO                 | 9       |
| GR-2019-12370414 | A new approach combines in vitro tests and clinical trials on animals with naturally-occurring diseases to replace animal testing in musculoskeletal regenerative medicine: validation with extracellular vesicles secreted by mesenchymal stromal cells. | Theory<br>Enhancing | IZSLER                                 | 9       |
| GR-2019-12370677 | Bridging the gap between genotype and phenotype in families with hypertrophic cardiomyopathy: role of non-coding RNA  | Theory<br>Enhancing | SAN RAFFAELE<br>MILANO                 | 9       |
| GR-2019-12370686 | MATCH - gaMe-based Adherence on asThma Control in cHildren  | Theory<br>Enhancing | SAN MATTEO                             | 9       |
| GR-2019-12370717 | Biological Aging: development and investigation of a novel, blood-based deep learning marker of personalized health in an Italian population cohort   | Theory<br>Enhancing | NEUROMED                               | 9       |
| GR-2019-12371043 | The Piedmont and Emilia Romagna data linkage cohort study: investigating protective and predictive factors in ALS using population-based medical and administrative data (PIER-ALS)   | Theory<br>Enhancing | Piemonte                               | 9       |

| CODICE           | TITOLO   | TIPOLOGIA RICERCA   | DESTINATARIO                  | VOTO CV |
|------------------|--|---------------------|-------------------------------|---------|
| GR-2019-12371078 | smarTHEAL: A smart multi-modal approach to personalized patient treatment in fracture healing by delivering continuous biofeedback   | Theory<br>Enhancing | Puglia                        | 9       |
| GR-2019-12371100 | UNBIAS: Use of Novel Big data approaches to map health Inequalities At high Spatial resolution   | Theory<br>Enhancing | Lazio                         | 9       |
| GR-2019-12371384 | Combining genetic, socio-demographic, clinical-anamnestic, lifestyle and neuropsychological data with non-invasive biomarkers to predict progression of cognitive decline or conversion to | Theory<br>Enhancing | SANTA LUCIA                   | 9       |
| GR-2019-12371456 | ClozApine REsponse-PROfiling (CARE-PRO): predicting response to clozapine in treatment resistant schizophrenia   | Theory<br>Enhancing | Puglia                        | 9       |
| GR-2019-12368513 | A bone marrow model in humanized mice to study and block malaria parasite transmission   | Theory<br>Enhancing | Istituto Superiore di Sanita' | 10      |
| GR-2019-12368799 | Plant extracts as source of anti-inflammatory agents to treat Benign Prostatic Hyperplasia and Endometriosis   | Theory<br>Enhancing | Istituto Superiore di Sanita' | 10      |
| GR-2019-12368926 | Pre-surgical evaluation of multimodal biomarkers in difficult-to-lateralize temporal lobe epilepsy.  | Theory<br>Enhancing | CARLO BESTA                   | 10      |
| GR-2019-12368955 | A GENE EXPRESSION TEST TO IMPROVE THE MANAGEMENT OF MALIGNANT PLEURAL MESOTHELIOMA   | Theory<br>Enhancing | Toscana                       | 10      |
| GR-2019-12369217 | Inflammatory bowel disease patient-derived organoids and induced pluripotent stem cells as powerful platforms for the identification of novel diagnostic and therapeutic targets           | Theory<br>Enhancing | BURLO GAROFOLO                | 10      |
| GR-2019-12369288 | Cancers in recipients of kidney and liver transplants in Italy: The role of immunosuppressive drugs and immunological profile on incidence and mortality                                   | Theory<br>Enhancing | C.R.O. AVIANO                 | 10      |
| GR-2019-12369452 | Autophagic pathway in cardiovascular diseases: identification of new potential biomarkers in their onset and progression.  | Theory<br>Enhancing | Emilia-Romagna                | 10      |
| GR-2019-12369530 | Novel coagulation markers for thrombotic risk stratification in patients with multiple myeloma (Real MM-VTE)   | Theory<br>Enhancing | MAGGIORE                      | 10      |
| GR-2019-12369577 | Development of a secure data sharing platform and creation of openly available datasets of deidentified health data for critically ill and cancer patients                                 | Theory<br>Enhancing | MARIO NEGRI                   | 10      |
| GR-2019-12369668 | Genetic predisposition to acquired thrombotic thrombocytopenic purpura   | Theory<br>Enhancing | MAGGIORE                      | 10      |
| GR-2019-12369937 | The role of novel inflammation markers and ultrasound parameters as new approaches to the early prediction of gestational diabetes and to the evaluation of the risk of adverse perinatal  | Theory<br>Enhancing | FONDAZIONE GEMELLI            | 10      |
| GR-2019-12369953 | "Diagnomics" for Beckwith-Wiedemann and Silver-Russell imprinting syndromes  | Theory<br>Enhancing | MAGGIORE                      | 10      |

| CODICE           | TITOLO  | TIPOLOGIA RICERCA   | DESTINATARIO                  | VOTO CV |
|------------------|---|---------------------|-------------------------------|---------|
| GR-2019-12369956 | Anomalous processing of stimuli valence and hedonic value in depression: investigation on synaptic activity and plasticity at mesolimbic and prefrontal cortex circuits                 | Theory<br>Enhancing | SAN RAFFAELE MILANO           | 10      |
| GR-2019-12370069 | T- cell redirection against aFR-expressing tumors through bispecific antibody   | Theory<br>Enhancing | ISTITUTO TUMORI MILANO        | 10      |
| GR-2019-12370104 | The role of the inflammasome in epileptic and developmental encephalopathies: implications for precision therapy.   | Theory<br>Enhancing | Toscana                       | 10      |
| GR-2019-12370117 | Design and development of a clinical protocol based on technology Hunova scores to predict knee and hip arthroplasty patient outcomes, to assess the risk of knee and hip arthroplasty  | Theory<br>Enhancing | Lazio                         | 10      |
| GR-2019-12370290 | 3D ARTIST: 3D reconstruction and Augmented Reality in Tailoring and Intraoperative navigation for minimally invasive Sacrocolpopexy Technique   | Theory<br>Enhancing | Toscana                       | 10      |
| GR-2019-12370308 | Pain-biomarkers frontiers: Mu and K opioid receptors in B-Lymphocytes as pain specific biomarkers for objective and selective diagnosis in chronic pain. Validation of preliminary data | Theory<br>Enhancing | SAN RAFFAELE PISANA           | 10      |
| GR-2019-12370501 | REvealing Stroke ETiology in Cryptogenic Stroke and ESUS (RESET study)  | Theory<br>Enhancing | Friuli-Venezia Giulia         | 10      |
| GR-2019-12370690 | Characterization of potential novel genes involved in growth disorders  | Theory<br>Enhancing | OSPEDALE BAMBINO GESU'        | 10      |
| GR-2019-12370701 | Flavonoids as therapeutic agents in tubulopathies.  | Theory<br>Enhancing | OSPEDALE BAMBINO GESU'        | 10      |
| GR-2019-12370762 | Hypoxia Inducible Factors' expression and IDH status in Gliomas: a possible new prognostic profile  | Theory<br>Enhancing | Piemonte                      | 10      |
| GR-2019-12370768 | The missing link between microbiota and treatments: unveiling the role of gender, genetics, vitamin D and diet.   | Theory<br>Enhancing | Piemonte                      | 10      |
| GR-2019-12370826 | Connectivity dysfunctions and neurodegenerative biomarkers in Mild Behavioral Impairment: characterization of a new diagnostic construct  | Theory<br>Enhancing | FATEBENEFRAPELLI              | 10      |
| GR-2019-12370920 | TREROIC: Therapy Resistance Evaluation in Renal Organoid Immunosome Co-culture  | Theory<br>Enhancing | Istituto Superiore di Sanita' | 10      |
| GR-2019-12371059 | Raman spectroscopy of saliva for the monitoring of therapy adherence in chronic obstructive pulmonary disease   | Theory<br>Enhancing | DON GNOCCHI                   | 10      |
| GR-2019-12371091 | Exploring the role of Long non-coding RNAs in amyotrophic lateral sclerosis and spinal muscular atrophy: towards the identification of pathogenic mechanisms underlying motor neuron    | Theory<br>Enhancing | CARLO BESTA                   | 10      |
| GR-2019-12371125 | Metabolic Reprogramming within the Cystic Microenvironment in Polycystic kidney Disease   | Theory<br>Enhancing | SAN RAFFAELE MILANO           | 10      |

| CODICE           | TITOLO  | TIPOLOGIA RICERCA   | DESTINATARIO       | VOTO CV |
|------------------|---|---------------------|--------------------|---------|
| GR-2019-12371261 | Extracellular vesicle-based algorithm for non invasive early detection of prostate cancer                             | Theory<br>Enhancing | ONCOLOGICO DI BARI | 10      |
| GR-2019-12371310 | Building a Personalized Map of the Extracellular Vesicles to Gain New Insight into Acute Myeloid Leukemia             | Theory<br>Enhancing | Emilia-Romagna     | 10      |
| GR-2019-12371422 | Investigating the role of interferon lambdas (IFNL) in the acute and recovery phase of ulcerative colitis             | Theory<br>Enhancing | MAGGIORE           | 10      |
| GR-2019-12371516 | Prevention of Cardiac Toxicity with the SGLT-2 Inhibitor Empagliflozin: a randomized comparison against standard care | Theory<br>Enhancing | Calabria           | 10      |