Allegato 1: Macroaree e aree scientifiche ERC

Macroarea PE: Physical Sciences and Engineering	**Macroarea LS: Life Sciences**	**Macroarea SH: Social Sciences and Humanities**
PE1 Mathematics: All areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics and statistics. **PE2 Fundamental Constituents of Matter**: Particle, nuclear, plasma, atomic, molecular, gas, and optical physics. **PE3 Condensed Matter Physics**: Structure, electronic properties, fluids, nanosciences, biological physics. **PE4 Physical and Analytical Chemical Sciences**: Analytical chemistry, chemical theory, physical chemistry/chemical physics. **PE5 Synthetic Chemistry and Materials**: New materials and new synthetic approaches, structure-properties relations, solid state chemistry, molecular architecture, organic chemistry. **PE6 Computer Science and Informatics**: Informatics and information systems, computer science, scientific computing, intelligent systems. **PE7 Systems and Communication Engineering**: Electrical, electronic, communication, optical and systems engineering. **PE8 Products and Processes Engineering**: Product and process design, chemical, civil, environmental, mechanical, vehicle engineering, energy processes and relevant computational methods. **PE9 Universe Sciences**: Astro physics/-chemistry/-biology; solar system; planetary systems; stellar, galactic and extragalactic	**LS1 Molecules of Life: Biological Mechanisms, Structure and Functions**: *For all organisms*: Molecular biology, biochemistry, structural biology, molecular biophysics, synthetic and chemical biology, drug design, innovative methods and modelling. **LS2 Integrative Biology: From Genes and Genomes to Systems**: *For all organisms*: Genetics, epigenetics, genomics and other 'omics studies, bioinformatics, systems biology, genetic diseases, gene editing, innovative methods and modelling, 'omics for personalised medicine. **LS3 Cellular, Developmental and Regenerative Biology**: *For all organisms*: Structure and function of the cell, cell-cell communication, embryogenesis, tissue differentiation, organogenesis, growth, development, evolution of development, organoids, stem cells, regeneration, therapeutic approaches. **LS4 Physiology in Health, Disease and Ageing**: Organ and tissue physiology, comparative physiology, physiology of ageing, pathophysiology, inter-organ and tissue communication, endocrinology, nutrition, metabolism, interaction with the microbiome, non-communicable diseases including cancer (and except disorders of the nervous system and immunity-related diseases). **LS5 Neurosciences and Disorders of the Nervous System**: Nervous system development, homeostasis	**SH1 Individuals, Markets and Organisations**: Economics, finance and management **SH2 Institutions, Governance and Legal Systems**: Political science, international relations, law. **SH3 The Social World and its Diversity**: Sociology, social psychology, social anthropology, education sciences, communication studies. **SH4 The Human Mind and Its Complexity**: Cognitive science, psychology, linguistics, theoretical philosophy. **SH5 Cultures and Cultural Production**: Literary studies, cultural studies, study of the arts, philosophy. **SH6 The Study of the Human Past**: Archaeology and history. **SH7 Human Mobility, Environment, and Space**: Human geography, demography, health, sustainability science, territorial planning, spatial analysis.

astronomy; cosmology; space sciences; astronomical instrumentation and data. **PE10 Earth System Science**: Physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, cryology, ecology, global environmental change, biogeochemical cycles, natural resources management. **PE11 Materials Engineering**: Advanced materials development: performance enhancement, modelling, large-scale preparation, modification, tailoring, optimisation, novel and combined use of materials, etc.	and ageing, nervous system function and dysfunction, systems neuroscience and modelling, biological basis of cognitive processes and of behaviour, neurological and mental disorders. **LS6 Immunity, Infection and Immunotherapy**: The immune system, related disorders and their mechanisms, biology of infectious agents and infection, biological basis of prevention and treatment of infectious diseases, innovative immunological tools and approaches, including therapies. **LS7 Prevention, Diagnosis and Treatment of Human Diseases**: Medical technologies and tools for prevention, diagnosis and treatment of human diseases, therapeutic approaches and interventions, pharmacology, preventative medicine, epidemiology and public health, digital medicine. **LS8 Environmental Biology, Ecology and Evolution**: *For all organisms*: Ecology, biodiversity, environmental change, evolutionary biology, behavioural ecology, microbial ecology, marine biology, ecophysiology, theoretical developments and modelling. **LS9 Biotechnology and Biosystems Engineering**: Biotechnology using all organisms, biotechnology for environment and food applications, applied plant and animal sciences, bioengineering and synthetic biology, biomass and biofuels, biohazards.	