

RECTOR'S DECREE N. 6743

Selection procedures to assign no. 24 research collaboration grants at Università Cattolica del Sacro Cuore

THE RECTOR

- having regard to the Statute of Università Cattolica del Sacro Cuore, issued by Rector's Decree of October 24, 1996, and subsequent modifications and integrations;
- having regard to the general regulatory norms of Università Cattolica del Sacro Cuore, issued by Rector's Decree of October 26, 1999, and subsequent modifications and integrations;
- having regard to Law 240 of December 30, 2010, in particular Art. 22;
- having regard to Ministerial Decree 102 of March 9, 2011;
- having regard to Rector's Decree 2778 of september 13, 2016, governing <<Modifications to the “Code of Conduct of Università Cattolica del Sacro Cuore”>>;
- having regard to Rector's Decree 4553 of July 11, 2018, governing the “Norms on the conferment and discipline of research grants in accordance with Art. 22 of Law 240 of December 30, 2010”;
- having regard to the resolutions adopted by the Boards of the Faculties;
- having regard to the resolutions adopted by the University Senate and University Steering Committee;

ORDAINS

Art. 1

Opening

The opening of selection procedures for the assignment of no. 24 research grants in the following Faculties of Università Cattolica del Sacro Cuore, for the following scientific-disciplinary sectors:

A) Research grants announced in accordance with Art. 22, Subparagraph 4, Letter A, of Law 240/2010

FACULTY OF GIURISPRUDENZA

ACADEMIC DISCIPLINE: <u>IUS/15 CIVIL PROCEDURAL LAW</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Alberto Romano.

TITLE OF THE RESEARCH TOPIC: Iura novit curia.

BRIEF DESCRIPTION OF THE RESEARCH TOPIC: The research should aim to examine the Iura novit curia maxim, not only with reference to the determination of the rule that applies to the case, but also with reference to the powers of the court to assess the subject-matter of the proceedings, in order to provide a systematic frame for this classic topic of civil procedural law.

SEDE: Milano.

FACULTY OF SCIENZE LINGUISTICHE E LETTERATURE STRANIERE

ACADEMIC DISCIPLINE: <u>L-OR/21 CHINESE AND SOUTH ASIAN LANGUAGES AND LITERATURES</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Sara Cigada.

TITLE OF THE RESEARCH TOPIC: The use of linguistic categories in the teaching of chinese as a foreign language.

BRIEF DESCRIPTION OF THE RESEARCH TOPIC: The research concerns young adult learners (secondary school and university students) of standard chinese mandarin as a foreign language. In the early stages of learning chinese as a foreign language, it is frequent to use linguistic categories (phonetic, grammatical, semantic) specific to Italian and/or english, as a conceptual bridge between the structures of the mother tongue and the chinese structures (Abbiati 2005, Cheung 1994, Li - Cheng 2009). The distance between systems, however, only in a few cases allows the overlapping of structures and, consequently, of descriptions. As a result, the explanations are cumbersome and didactically unhelpful, when not erroneous. This may prove to negatively impact on the student's perception of "grammar" in general, as a tool for language knowledge. Starting from a consistent experience in the teaching of chinese language and culture to

Italian-speaking students, the research project aims to analyze the manuals used for the teaching of Chinese at the first levels, in order to evaluate their correctness and effectiveness from the point of view of linguistic descriptions. The goal is to identify the most appropriate descriptions and develop, where necessary, new ones. In the first phase we will focus in particular on the introduction to phonetics, the phenomenon of tonal sandhi (phono-tactical phenomena internal to the word and on the border between words; prosodic phenomena in the utterance); the concept of word, expressed at monosyllabic, disyllabic and polysyllabic level; the grammatical categories of “subject”, “object complement”, “degree complement”; the verbs of movement and in general the phenomena of spatial indexicality (lái/qù); the valency and order of the words/constituents; the role of topic and focus at syntactic level. At the same time, through observations on learner data, possible experimental hypotheses will be tested with regard to the teaching practices of the Chinese language as a foreign language to Italian-speaking learners.

SEDE: Milano.

FACULTY OF PSICOLOGIA

ACADEMIC DISCIPLINE: <u>M-PSI/01 GENERAL PSYCHOLOGY</u>	n. 1 position
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PHD is required for the admission.

DURATION: one year; can be renewed.

TUTOR: Prof. Giuseppe Riva.

TITLE OF THE RESEARCH TOPIC: The role of visual perspective in cognitive and sensorimotor processes with advanced virtual reality technologies.

BRIEF DESCRIPTION OF THE RESEARCH TOPIC: The project aims at understanding the role of the visual perspective in the encoding of episodic memories, and more in general in modulating cognitive processes, both at high-level and sensorimotor (for example, the peripersonal space). The candidate will carry out research activities by means of paradigms in virtual reality, both for the manipulation of the visual perspectives and for the investigation of the multisensory integration processes. Furthermore, experience in cognitive and sensorimotor assessment will be requested to develop research protocols both in healthy populations (young adults and elderly) and in pathological conditions.

SEDE: Milano.

FACULTY OF PSICOLOGIA

ACADEMIC DISCIPLINE: <u>M-PSI/04 DEVELOPMENTAL AND EDUCATIONAL PSYCHOLOGY</u>	n. 1 position
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PHD is required for the admission.

DURATION: one year; can be renewed.

TUTOR: Prof. Daniela Traficante.

TITLE OF THE RESEARCH TOPIC: Assessment of the efficacy of the application of new technologies for teaching and learning foreign languages in students with dyslexia.

BRIEF DESCRIPTION OF THE RESEARCH TOPIC: The aim of the project is to verify the efficacy of a training programme developed to support teaching and learning foreign languages in middle- and high-school students with specific learning impairments. In particular, the effects of the application of a new teaching method will be assessed. The new method is based on cooperative activities (creative atelier) and activities implemented through devices providing IVR, AR, and MR experiences. The efficacy of the new training programme will be assessed through a quasi-experimental research, according to an evidence-based methodology. The design of the investigation implies the comparison between an experimental sample, in which the training program will be implemented, and two control groups, who will be taught with usual teaching methods. Effect size will be assessed through the application of pre- and post-intervention tests. The task of the research fellow will be to coordinate, through training and supervision actions, the training implementation in the classes and the testing and retesting procedure, as well as to analyze the data and to produce the research reports.

SEDE: Milano.

FACULTY OF PSICOLOGIA

ACADEMIC DISCIPLINE: <u>M-PSI/07 DYNAMIC PSYCHOLOGY</u>	n. 1 position
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PHD is required for the admission.

DURATION: one year; can be renewed.

TUTOR: Prof. Emanuela Saita.

TITLE OF THE RESEARCH TOPIC: The study of critical family transitions within a psychodynamic perspective.

BRIEF DESCRIPTION OF THE RESEARCH TOPIC: The project concerns parental and family relationships, with a specific focus on the critical transitions related to the couple separation and on the family relations after couple separation. Clinical practices aimed to mediate the conflict and help people within these situations will be analyzed from a theoretical-conceptual as well as practical point of view, with interest in children wellbeing.

SEDE: Milano.

**B) Research grants announced in accordance with Art. 22,
Subparagraph 4, Letter B, of Law 240/2010**

FACULTY OF LETTERE E FILOSOFIA

ACADEMIC DISCIPLINE: <u>L-FIL-LET/08</u> <u>MEDIEVAL AND</u> <u>HUMANISTIC LATIN LITERATURE</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Marco Petoletti.

TITLE OF THE RESEARCH PROJECT: Petrarca online: biography, works, library.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: Petrarch's work marks the 14th century cultural landscape and paves the way to Humanism: he was acclaimed as an outstanding master by contemporary brilliant scholars. Petrarch's legacy deeply influenced Italian and European literary production from the 14th century until now: scholars and poets took his works as a model all over Europe. Editions collecting all Petrarch's vernacular and Latin writings were published during the XVI century: since then, many steps forward have been made and sound editions of individual works appeared, sponsored by the "Commissione per l'edizione nazionale delle opere di Francesco Petrarca". The study of Petrarch's personal library is a key to get a full comprehension of his literary activity. Textual problems put by a critical edition can often be solved thanks to Petrarch's own marginal notes. Besides critical editions, a full description of Petrarch's library, including codicological and palaeographical features of every manuscript and an analysis of textual transmission, is of paramount importance for a better understanding of the complex genesis of Petrarch's works. Within the project PRIN 2017 (Petrarca online: biography, works, library) the aim of the Milan team is to coordinate and make the website Petrarca online, the first one completely devoted to Petrarch and coordinated by scholars with profound research experience in this particular field. The website will display scientifically verified texts, images and articles in interconnected sections and subsections which can open the way to further research. The bilingual (Italian/English) website will be an open access platform in progress, where digital resources deriving from ecdotic, philological, codicological-palaeographical and literary-critical researches will interact. The task of the Milan team will focus on the following Petrarch's texts: Rerum memorandarum libri, De vita solitaria, De otio religiosorum, De remediis utriusque fortune, Epistole and speeches; moreover their portion includes a complete description of Petrarch's library with palaeographical and codicological entries for each manuscript. To fulfil this aim, the applicant must have an excellent knowledge of Latin, palaeographical and codicological skills and a great

competence in digital humanities, in order to create a database of Petrarch's works. A thorough knowledge of english and french is also required.

SEDE: Milano.

FINANCING: PRIN 2017

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/01 AGRICULTURAL ECONOMICS AND RURAL APPRAISAL</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Daniele Rama.

TITLE OF THE RESEARCH PROJECT: Analysis of the PDO, PGI and organic supply chain in the Lombardy agro-food system.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: The project aims to study product flows, economic actors at the different levels and vertical relations in the "institutional quality" Lombardy's agro-food supply chain, identify potential weakness points and possible elements on which efficiency and competitiveness increase can be based, in order to support sectoral policies.

SEDE: Cremona.

FINANCING: Research

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/03 ARBORICULTURE AND FRUITCULTURE</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Matteo Gatti.

TITLE OF THE RESEARCH PROJECT: RIPRESO

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: Within-field variability reduces the efficiency of traditional vineyard management. The project aims to optimize economic performance of wineries from the Colli Piacentini wine district by promoting a larger use of proxy and remotely sensed data. Accordingly, precision viticulture protocols will be set up and promoted towards increased competitiveness, resource use and vineyard

sustainability under a new climatic context. The project encompasses the following activities: i) impact assessment of winter cover crops site-specific sowing on temporal and spatial vineyard variability, vine performance and fruit composition; ii) characterization of fruit and wine composition (experimental and/or commercial) as related to vigor classes and harvest methods (selective vs. traditional).

SEDE: Piacenza.

FINANCING: PSR 2014-2020, Regione Emilia-Romagna

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/03 ARBORICULTURE AND FRUITCULTURE</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Stefano Poni.

TITLE OF THE RESEARCH PROJECT: RESIL-VIGNA

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: The project was granted within the 2014-2020 Regione Emilia-Romagna rural development plan program and its main aim is to identify and validate a series of new techniques that might be helpful to increase vineyard water resilience to water stress depending upon soil moisture and/or high evaporative demand. Main actions envisaged by the project are: i) suitability of new rootstocks to increase tolerance of cv. Barbera vines to drought; ii) effectiveness of temporary mid-row winter grassing to increase soil water retention capacity and infiltration rates as well as a tool to ameliorate soil fertility, inhibit weed growth and diminish fungal inoculum in spring (namely downy mildew); caolin spraying as a tool to prevent or mitigating effects due to overheating leading to sunburn damage in leaves and berries, iv) create a link between a resilience strategy and some ICT approaches.

SEDE: Piacenza.

FINANCING: Regione Emilia-Romagna, PSR 2014-2020

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/07 AGRICULTURAL GENETICS</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Matteo Busconi

TITLE OF THE RESEARCH PROJECT: VALORFRUIT.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: The main aim of the project is the exploitation of local apple and pear varieties, as well as of innovative apple genotypes, in an advanced selection phase, through a multidisciplinary approach to improve the economic performance of farms located in disadvantaged areas, as those in the mountains. The project aims to characterise at the genetic, agronomic, pomological, ethnobotanical and technological level the following varieties: Angelica, Limone, Nobile/Lauro and Spalér among the pears; among the apples the Rosa romana and the Abbondanza rossa.

SEDE: Piacenza.

FINANCING: Research

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/07 AGRICULTURAL GENETICS</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Adriano Marocco.

TITLE OF THE RESEARCH PROJECT: Assisted breeding for the resistance to biotic stress in maize.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: The research investigates the breeding for resistance to fungal diseases and mycotoxin accumulation in maize through genome wide association studies for the identification of molecular markers and resistance genes.

SEDE: Piacenza.

FINANCING: Research

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/12 PLANT PATHOLOGY</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Paola Battilani.

TITLE OF THE RESEARCH PROJECT: WHITESEED.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: The project focuses on innovation in the supply chain for the sustainable production of healthy Piacenza white garlic seeds. The project focus is on different processing systems and sanitizing treatments of garlic for seed production, with particular attention to biological and zero-residue interventions.

SEDE: Piacenza.

FINANCING: PSR-Regione Emilia-Romagna

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/12 PLANT PATHOLOGY</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Marco Camardo Leggieri

TITLE OF THE RESEARCH PROJECT: SERVICE - Information systems mycotoxin risk.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: The project aims to develop a GIS-based information system for predicting the risk of mycotoxin contamination in maize. In this system, a joint aflatoxin-fumonisin model will be included and validated and machine learning techniques will be applied to include crop data.

SEDE: Piacenza.

FINANCING: PSR-Regione Emilia-Romagna

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/13 AGRICULTURAL CHEMISTRY</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Lucrezia Lamastra.

TITLE OF THE RESEARCH PROJECT: Sustainability indicators in the agro-food sector.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: The project is aimed at the development, implementation and validation of indicators for assessing the sustainability of the agro-food supply chain starting from an analysis of the indicators and models most applied at national and international level. The study provides experimental test national companies of the national food supply chain and a continuous comparison with the stakeholders of the supply chain.

SEDE: Piacenza.

FINANCING: Research.

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/13 AGRICULTURAL CHEMISTRY</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Luigi Lucini.

TITLE OF THE RESEARCH PROJECT: Developing a biostimulants-based integrated approach to increase sustainability in agriculture - INBIOS.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: The project aims to investigate the multiple advantages of combining microbial (mycorrhiza and trichoderma) and non-microbial (protein hydrolysates) biostimulants in terms of agricultural sustainability, using tomato and maize as model crops. In particular, the ultimate goal is to improve the efficiency of nutrient use, stimulate the plant's natural defense and counteract water stress, thus reducing the production inputs to a minimum. The candidate, in particular, will deal with metabolomics approaches with the aim of understanding the molecular and biochemical mechanisms underlying the biostimulant activity.

SEDE: Piacenza.

FINANCING: Regione Emilia-Romagna, PSR 2014-2020

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/13 AGRICULTURAL CHEMISTRY</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Marco Trevisan.

TITLE OF THE RESEARCH PROJECT: Evaluation of dossier to pesticide registration.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: Goal of work will be the evaluation of pesticide dossier with emphasis on pesticide ecotoxicology.

SEDE: Piacenza.

FINANCING: Research.

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/15 FOOD SCIENCE AND TECHNOLOGY</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Milena Lambri.

TITLE OF THE RESEARCH PROJECT: New wine styles produced with plant-based adjuvants (vegwiners) - Work Package “Sustainable enology: research on innovative adjuvants”.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: Study and application of plant-based adjuvants, perceived as more “natural” by some groups of consumers and by various players in the wine supply chain, in order to increase the stability of the final wine, while creating an appealing product for vegan consumers. The project is part of a PSR-ER project called “Envy-Romagna, the wine sector for the territory”, where DiSTAS plays the role of research organization.

SEDE: Piacenza.

FINANCING:

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/16 AGRICULTURAL MICROBIOLOGY</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Alessandra Fontana.

TITLE OF THE RESEARCH PROJECT: Cremona agri-food technologies (CRAFT) - Work

package “dairy chain laboratory”.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: Characterization of dairy wastes for their development as prebiotic feedstock to be used in fermentative processes aimed at the production of bioenergy (biohydrogen, biomethane). The prebiotic effect of the tested feedstocks will be evaluated in lab-scale reactors by monitoring the microbial consortia composition and the yield of the gas of interest (hydrogen, methane). The development of a feedstock with prebiotic effects could allow the selection of specific microbial populations related to the production of the main target and the control of the process to avoid reactors failure due to over-acidification issues.

SEDE: Piacenza.

FINANCING: Fondazione Cariplo

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE:	<u>AGR/16</u>	<u>AGRICULTURAL</u>	n. 2 positions
<u>MICROBIOLOGY</u>			

DURATION: one year; can be renewed.

TUTOR: Prof. Edoardo PUGLISI.

SEDE: Piacenza.

Position n. 1

TITLE OF THE RESEARCH PROJECT: NOVAGRO.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: Main aim of NOVAGRO project is to promote an efficient organic agro-ecosystem management able to maintain high productive yields while rationalising the utilization of limited natural resources. Such goal can be achieved by developing agriculture systems based on a combination of sustainable agronomical practices and innovative technologies that promote biological and biochemical processes at the roots of soil fertility. Field trials will be conducted in which the above-ground (plant) and below-ground (plants, animals, microorganisms) biodiversity will be correlated with the indicators of nutrients bioavailability. The candidate will carry out in microbiological and molecular analyses, and correlate diversity measurements with enzymatic activities, in order to assess if specific microbial groups are eventually enriched through the NOVAGRO management actions. The candidate should also carry out molecular analyses targeting the presence and quantity of microbial genes involved in plant growth-promoting activities.

FINANCING: Novagro.

Position n. 2

TITLE OF THE RESEARCH PROJECT: PROBIOPOM.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: Italy is a world leading tomato producer. The aim of the project is to investigate the effects of beneficial microbes (plant growth-promoting bacteria) in inducing systemic resistance against fungal and insects attacks, with a focus on *Alternaria solani* and the brown marmorated stink bug (*Halyomorpha halys* Stål, 1855). The candidate must know the processes of microbial biostimulation and possess the know-how to isolate, identify and screen microbial biostimulant consortia able to induce systemic resistance in tomato against brown marmorated stink and mycotoxinogenic fungi.

FINANCING: PROBIOPOM

FACULTY OF SCIENZE AGRARIE, ALIMENTARI E AMBIENTALI

ACADEMIC DISCIPLINE: <u>AGR/17 LIVESTOCK SYSTEMS, ANIMAL BREEDING AND GENETICS</u>	n. 1 position
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DURATION: one year; can be renewed.

TUTOR: Prof. Licia Colli

TITLE OF THE RESEARCH PROJECT: LIFE-CLAW

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: The overall objectives of LIFE CLAW are the conservation and restocking of the crayfish *Austropotamobius pallipes* populations in north-western apennines and to counteract the dispersal of non-indigenous crayfish species. Specific conservation actions include the molecular characterization of the species to map the distribution of genetic variation on the study area and the identification of the source populations for the selection of breeding individuals for ex-situ reproduction and restocking. The specific parts of the project addressed will be mainly the molecular characterization of *A. pallipes* populations (Action A4) and the dissemination and transfer of project results (Actions E1, E2, E4).

SEDE: Piacenza.

FINANCING: European Commission

**FACULTY OF SCIENZE LINGUISTICHE E LETTERATURE
STRANIERE**

ACADEMIC DISCIPLINE: <u>L-LIN/01 HISTORICAL AND GENERAL LINGUISTIC</u>	n. 1 position
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PHD is required for the admission.

DURATION: one year; can be renewed.

TUTOR: Prof. Marco Carlo Passarotti.

TITLE OF THE RESEARCH PROJECT: Development of a linguistic resource collecting the inflected word forms of the lemmas provided by the lexical collection of the LiLa knowledge base of linguistic resources for latin. Inclusion of the linguistic resource into LiLa according to the principles of the linked data paradigm.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: The research focusses on developing, maintaining, disseminating and, specifically, connecting via web according to the linked data paradigm a linguistic resource collecting the inflected word forms (enhanced with their morphological features) of the lemmas provided by the lemma collection of the LiLa knowledge base of linguistic resources for latin. Requirements: expertise in using and developing linguistic resources, in particular related to inflectional morphology of latin; expertise in theoretical and corpus linguistics (specifically focussing on morphology); advanced knowledge of latin. Preferential conditions: knowledge of the linked data paradigm and of the most widespread ontologies for linguistic (meta) data description.

SEDE: Milano.

FINANCING: ERC-2017

FACULTY OF PSICOLOGIA

ACADEMIC DISCIPLINE: <u>BIO/10 BIOCHEMISTRY</u>	n. 1 position
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PHD is required for the admission.

DURATION: one year; can be renewed.

TUTOR: Prof. Daniela Tavian

TITLE OF THE RESEARCH PROJECT: Novel molecular players of hypoxia/inflammation impinging on lipid homeostasis in obesity and related diseases: theranostic implications.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: According to the WHO, obesity is now considered one of the major health problem. Although many hallmarks are known, no

therapeutic targets are available to control the epidemic rise of obesity and its related comorbidities. In this context, the project aims to explore how adipose tissue determines obesity progression into a chronic disease through adaptation to hypoxia, energetic intake overload and pro-inflammatory status, focusing also on adipose-derived stem cells as determinants of the disease stability. Indeed, it is still unclear whether hypoxia and inflammation lead to chronic obesity. This project will elucidate the molecular mechanisms, driven by the transcription factor FOXC2 and by adipokines, behind adaptive thermogenesis of ASCs (adipose staminal cells) energy-dissipating valve for anti-obesity intervention. The project will take advantage of several experimental models including ASC isolated from different fat depots of obese subject. The candidate must have a specific expertise in planning and conducting experimental studies employing cell cultures and all molecular biology techniques. In addition (s)he should be able to perform statistical data analyses and publish scientific results.

SEDE: Milano.

FINANCING: (PRIN),

FACULTY OF ECONOMIA E GIURISPRUDENZA

ACADEMIC DISCIPLINE: <u>IUS/13 INTERNATIONAL LAW</u>	n. 1 position
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PHD is required for the admission.

DURATION: one year; can be renewed.

TUTOR: Prof. Dino Guido RINOLDI.

TITLE OF THE RESEARCH PROJECT: Preventing internal and international corruption in public administration.

BRIEF DESCRIPTION OF THE RESEARCH PROJECT: The research project is part of the PRIN “The Politicisation of corruption and anticorruption strategies in Italy”: as part of the inter-university collaboration provided by the project, the university centre of Piacenza has the task of investigating strategies and measures to prevent corruption in the Public Administration. The research project focuses on international bodies (intergovernmental and non-intergovernmental) that deal with the prevention of corruption; on international rules produced and currently being studied and on methods of their application in Italy. Particular attention shall be given to the public procurement sector (works, services and supplies) and to the prospects for reform (for example on the integrity of the public administration in the framework of the works started within the Department of Public administration at the Presidency of the Italian Council of Ministers).

SEDE: Piacenza

FINANCING: PRIN 2017

Art. 2
Admission requirements

Application for participation in the competition is open to Italian and foreign candidates holding a four-year university degree* or a Master's degree obtained in an Italian, EU or foreign university.

A PhD or equivalent qualification obtained abroad, if not otherwise specified, are preferential qualifications for participation in the selection procedures.

Applicants subject to any of the causes of incompatibility set forth in the Code of Conduct of the University cannot participate in the public competition.

The following candidates cannot participate in the public competition either:

- those who had contracts as research grant holders, in accordance with Art. 22 of Law 240 of December 30, 2010, for a period which, added to the expected duration of the contract announced, exceeds four years on the whole, with the exclusion of the period in which the grant was enjoyed while doing a PhD without scholarship, to the maximum extent of the legal duration of the corresponding programme;
- those who had contracts as research grant holders/fixed-term researchers, in accordance with Articles 22 and 24 of Law 240 of December 30, 2010, with the University or the bodies referred to in the first line of the following paragraph, for a period that, added to the expected duration of the contract announced, exceeds twelve years on the whole, even if not on a continuing basis. For the purposes of the duration of the aforementioned relations, the periods spent on maternity leave or on health leave are not considered according to current legislation.

The following positions are incompatible with the awarding of contracts:

- permanent staff of universities, institutions and public research and experimental bodies, of the National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) and the Italian Space Agency (ASI), and of institutions whose degree of scientific specialisation is recognised as equivalent to the

* As obtained before the below-mentioned reference frames. For EU citizens the frame of reference is constituted by the Bologna process and in Italy it is regulated by Ministerial Decree 509 of November 3, 1999.

qualification of Doctor of Philosophy, in accordance with Art. 74, fourth Paragraph, of Presidential Decree 382 of July 11, 1980;

- holders of scholarships awarded for any purpose, with the exception of those awarded by national or foreign institutions with the aim of integrating research activity with stays abroad;

- students enrolled in university programmes, Master's degree programmes, Postgraduate programmes, or doctoral programmes with scholarship or medical specialisations, in Italy or abroad.

Exclusion due to lack of admission requirements shall be ruled by Rector's justified provision.

Art. 3

Submission of application

Applicants must submit documented application on unstamped paper, as indicated in **Annex A**.

A signed copy of the application form must be delivered:

- sent by registered mail, or express mail, with return receipt to the following address: Università Cattolica del Sacro Cuore, Servizio personale docente e tecnico amministrativo (Ufficio Amministrazione Concorsi) - Largo Gemelli, 1 - 20123 Milano, **by november 6, 2020**. Receipt of applications shall be validated by post office date stamp
- sent by certified mail at risorse.umane@pec.ucsc.it **by november 6, 2020**.

This public announcement is published on the official notice board of Università Cattolica del Sacro Cuore, on the MIUR website at <http://bandi.miur.it>, and on the website of Università Cattolica del Sacro Cuore at <http://progetti.unicatt.it/progetti-ateneo-milano-brescia-piacenza-e-cremona-assegni-di-ricerca-legge-240-2010-art-22#content>

Art. 4

Contents of the application

In the application form, candidates shall precisely indicate:

- 1) surname and name;
- 2) place and date of birth;
- 3) fiscal code (the University shall determine the fiscal code of foreign candidates that cannot indicate it);

- 4) place of residence;
- 5) citizenship;
- 6) for Italian citizens: registration in the electoral roll stating the municipality of registration, otherwise, the reasons for non-registration or cancellation; for non-Italian citizens: declaration of the enjoyment of civil and political rights in their country of belonging or origin;
- 7) to have no criminal record; otherwise, any convictions (specifying the details of the relative sentences) and any pending criminal proceedings;
- 8) to have been neither dismissed from employment at any Public Administration due to persistent poor performance, nor declared no longer entitled to public employment in accordance with Art. 127, Letter d) of Presidential Decree 3 of January 10, 1957, and subsequent modifications and integrations;
- 9) not to be subject to any of the causes of incompatibility referred to in Art. 2 of the public announcement;
- 10) not to be subject to any of the causes of incompatibility set forth in the Code of Conduct of the University;
- 11) the competition of application (specifying Faculty, scientific-disciplinary sector and **research project** presented relative to the topics covered by the public announcement (**only for grants referred to in Art. 1, Letter**)).

In the application form, candidates may elect a special domicile for communications from the University Administration. Any changes in the above-stated domicile must be promptly notified to Servizio personale docente e tecnico amministrativo (Ufficio Amministrazione Concorsi) of Università Cattolica del Sacro Cuore - Largo Gemelli, 1 - 20123 Milano.

Candidates with recognised disabilities must specify in their application the aid required in relation to their disability and (if any) the need for additional time for test completion in accordance with Law 104 of February 5, 1992.

The University Administration shall not be responsible for unavailability of applicants and loss of communications due to incorrect contact information provided by applicants or to absent or delayed notification of any changes in the address indicated in the application form.

The University Administration shall not be responsible for any failed or late delivery of communications concerning the selection procedure due to reasons not attributable to the Administration itself, but to postal or telegraph service errors, third parties, unforeseeable circumstances or force majeure.

Art. 5

Attachments to the application form

The application must include:

- scientific and professional *curriculum*, and list of publications if any;
- qualifications and publications (if any) that candidates wish to present for evaluation;
- **research project** relative to the topic covered by the public announcement (**only for grants referred to in Art. 1, Letter A**)
- photocopy of an identification document;
- photocopy of fiscal code.

Candidates with Italian or EU citizenship may submit qualifications in original or certified copy; otherwise, where allowed by Articles 46 and 47 of Presidential Decree 445 of December 28, 2000, by substitutive declarations of certification or substitutive declarations of affidavit attesting conformity of the copies on unstamped paper to the original.

Non-EU citizens legally residing in Italy may use the substitutive declarations referred to in the above mentioned Articles 46 and 47 as limited to personal qualities and status and to facts certifiable or attestable by Italian public bodies.

Non-EU citizens authorised to stay in Italy may use the substitutive declarations referred to in the above mentioned Articles 46 and 47 in those cases in which they are submitted under the application of international conventions between Italy and the country of origin of the registrant.

In the remaining cases, non-EU citizens shall document personal qualities and status and facts through certificates or statements issued by the competent authority of the foreign State.

Certificates and statements referred to in the preceding paragraph written in a foreign language must be accompanied by a translation into Italian certified by the Italian consular authority, stating that it conforms to the original.

The Administration reserves the right to carry out appropriate checks on the veracity of the contents of the substitutive declarations.

Documents, qualifications and publications already submitted to the University may not be referred back to.

Art. 6

Examination Panel

The Examination Panel is appointed by the Rector. It consists of three members:

- a teacher, selected by the Faculty Board of the Faculty concerned, and two (associate or full) professors selected respectively by
 - the Dean of the Faculty concerned;
 - the Director of the Department/Institute at which research activity shall be conducted

Art. 7

Evaluation of candidates

The selection procedure evaluates candidates' submitted qualifications, and includes an interview.

The Examination Panel evaluates candidates on a one-hundred-point scale; available points are to be assigned as follows:

- a) [redacted] for research grants referred to in Art. 1, Letter A)**, max. sixty points for qualifications and research project; max. forty points for the interview;
- b) [redacted] for research grants referred to in Art. 1, Letter B)**, at least forty points for qualifications; the remaining points for the interview.

In its first meeting, the Examination Panel determines the criteria for candidates' evaluation complying with the provisions of the public announcement and what follows below.

The Examination Panel may also set a minimum score for admission to the interview.

In compliance with the above indicated criteria, published at <http://milano.unicatt.it/concorsi-assegni-di-ricerca-legge-240-2010-art-22>, the Examination Panel evaluates each candidate's

- scientific and professional *curriculum*;
- qualifications and publications submitted, and their pertinence to the scientific-disciplinary area and/or scientific-disciplinary sectors covered by the public announcement;
- research project relative to the topic covered by the public announcement, only for grants referred to in Art. 1, Letter A of this public announcement.

If the date of the interview is not specified in this public announcement, candidates are summoned for interview by registered mail with return receipt not less than twenty days prior to the scheduled date for their interview on the scientific activity conducted.

Under the same terms outlined in the preceding paragraph, candidates who have not reached the minimum score required by the public announcement are given notice of

non-admission to the interview.

During the interview, knowledge of the language or languages required (if any) is also ascertained; foreign candidates' (at the least) instrumental knowledge of Italian, if required, is ascertained.

At the end of its activity, the Examination Panel compiles a ranking based on the sum of the scores obtained by each candidate in the evaluation of qualifications and the interview. In the case of a tie, the younger candidate prevails.

The Examination Panel's files consist of the minutes of each meeting.

The files of the evaluation procedure are approved by Rector's decree.

Art. 8 Conferment

For the purposes of the awarding of the research grant, the Ecclesiastical Assistant General verifies, through a dedicated interview, the adherence of the first candidate in the ranking to the guiding principles of the University.

The grant is awarded by the Rector through the stipulation of a specific contract.

In case of non-acceptance, the grant is awarded to the following candidate in the ranking.

Art. 9 Obligations

Grant holders are required to conduct a research programme or a phase thereof under the guidance of a tutor.

Grant holders are also required to comply with the guiding principles of the University Statute and the Code of Conduct of the University.

Grant holders shall not:

- have other employment contracts;
- engage in self-employed activity, project-related or freelance;
- carry out occasional work that, upon the opinion of the tutor, has not been authorised in advance and communicated to the Dean of the Faculty concerned by the Director of the Department / Institute at which the grant recipient conducts research activity.

Grant holders operate at their tutor's facility of belonging, or at the facility specified in the public announcement (if any), making use of the equipment and services available. Subject to the approval of the tutor, research activity may be conducted at other University facilities or at qualified Italian and foreign research facilities.

Art. 10

Assessment of conducted activity

Within 60 days from the end of each year of activity, the tutor shall submit the Board of the Department / Institute at which the grant holder is carrying out research activity a report containing a detailed and justified assessment of the results of activity conducted.

Upon this occasion, in the case of grant expiration, the tutor may propose its renewal.

Art. 11

Grant renewal

Within 30 days before the date of grant expiration, the Board of the Faculty concerned, on the basis of the tutor's report and the opinion of the Board of the Department / Institute, approves its renewal, if any.

Research grants shall not be renewed for less than a year.

Art. 12

Economic conditions

The annual gross amount of the grants is determined by resolution of the Board of Directors, on the basis of the minimum amount established by Ministerial Decree.

Grants are paid out monthly, and for the predetermined amount after the cost of the appropriate compulsory personal insurance policy stipulated by the University against accidents that may occur during presence at the University venues.

The grants are exempt from *IRPEF* (income tax) in accordance with applicable law, and subject, for what concerns social security, to the laws in force.

Art. 13

Contract termination

The grant is withdrawn and the related contractual relation is terminated before expiration by Rector's decree:

- in cases of non-observance of the obligations referred to in Article 9;
- in case there arises any of the reasons for inadmissibility referred to in Article 2;
- in the event of negative assessment of activity conducted.

Subject to attested notification to the person concerned, the Rector's decree is issued upon the resolution of the Board of the Faculty on proposal of the tutor or Dean, and after consultation with the Board of the Department / Institute at which the grant holder carries out research activity.

Art. 14

Patenting

Any realisation, during the activity, of an innovation, on the part of the holders of the contracts referred to in the norms, that may be patentable is governed in accordance with current legislation and regulations adopted by Università Cattolica.

Art. 15 Transitory norms

With their consent, grant holders may be assigned integrative and curricular didactic activities. These activities are assigned by the Faculty concerned, subject to the approval of the Director of the Department / Institute at which the grant holder carries out research activity. The integrative and curricular didactic activities assigned shall not exceed 30 hours per year, and are covered by the grant emoluments.

The conferment of grants does not constitute any form of employment nor awards rights of access to university positions.

To grants awarded prior to the entry into force of the Norms on the conferment and discipline of research grants in accordance with Art. 22 of Law 240 of December 30, 2010 continue to apply the laws and regulations in force at the time of their conferment.

Art. 16 Responsibility for procedure

The person in charge of the procedure of this public announcement, in accordance with Articles 4, 5 and 6 of Law 241 of August 7, 1990, is Dr. Cristian COLNAGHI - Servizio personale docente e tecnico amministrativo (Ufficio amministrazione concorsi) - Largo A. Gemelli, 1 - 20123 MILANO (phone no. 02/7234.3813 – fax no. 02/7234.2972 – email address: uff.concorsi@unicatt.it).

Art. 17 Final provisions

For any matters not covered by this public announcement, the current university legislation applies as compatible.

Milano, october, 7 2020

**IL RETTORE
(Prof. Franco Anelli)**