Notice of Open Competition for Admission to PhD Programs Related to the 34th Cycle - Academic Year 2018/2019

The three-year PhD programs listed below are activated, for the academic year 2018/2019, in the context of the 34th Cycle, with administrative offices at the University of Teramo. A public exam on the qualifications and tests are called for admission to mentioned PhD Programs.

PhD in **"History of Europe from the Middle Ages to the Contemporary Age"**

Degree title required	All master's degrees with a degree thesis on a historical discipline or a historical subject.
Positions available	5
Positions available with a grant	4
Positions available with a grant reserved for graduates from foreign Universities	1 to promote applications, UniTe ensures, in addition to the scholarship, a mobility fee of 400 euros gross per month.
Positions available without a grant	0
Coordinator	Prof. Massimo Carlo Giannini

PhD in **"Cellular and Molecular Biotechnologies"**

Degree title required	All master's degrees
Positions available	8
Positions available with a grant	6
Positions available with a grant reserved for graduates from foreign Universities	1 to promote applications, UniTe ensures, in addition to the scholarship, a mobility fee of 400 euros gross per month.
Positions available without a grant	1
Research projects covered by a grant	Candidates interested in study grants must submit, together with the application, a specific research project indicated below
Coordinator	Prof.ssa Barbara Barboni

PhD in **"Food Science"**

Degree title required	The objectives of the ERC doctorate fall within the area of Life Sciences, and specifically in the field LS9 Applied life sciences and non-medical biotechnology,

	with particular reference to the LS9_6 Food Sciences. The doctorate will be directed to the training of experts with in-depth knowledge of the quantitative and qualitative aspects of food production, obtained either under conventional and organic. As indicated in the EC document "Horizon 2020 - The Framework Programme for Research and Innovation (2014-2020) ', will be given particular emphasis to lines of research that fall within the priority" Industrial leadership "and" Societal challenges ". We propose, therefore, to get professionals to be able to plan and manage production processes through a rationalization of traditional technologies and / or through product innovations and process, to influence and to assess the quality (that varies with its multiple components) , the safety and wholesomeness of food, to make available all the skills for the characterization, development and traceability of food and traditional dishes. The internationalization, the close connection between the purpose and research centers and industry, are elements which render the training of Ph.D. in line with the consequent process of repositioning the food industry in international markets.
Positions available	7
Positions available with a grant	4
Positions available without a grant for graduates from foreign Universities	2 to promote applications, UniTe ensures, in addition to the scholarship, a mobility fee of 400 euros gross per month.
Research projects covered by a grant	Candidates interested in study grants must submit, together with the application, a specific research project indicated below
Coordinator	Prof. Dario Compagnone

PhD in **"Veterinary Medical Sciences, Public Health and animal welfare "**

Degree title required	Possession of one of the following degrees: LM-6 Biology; LM-42 Veterinary medicine; LM-54 Chemical Sciences; LM-70 Food science and technology 6 / S (specialist in biology); 47 / S (specialist in veterinary medicine); 62 / S (specialists in chemical sciences); 78 / S (specialists in agricultural sciences and technologies)
Positions available	9
Positions available with a grant	5
Positions available with a grant reserved for graduates from foreign Universities	2 to promote applications, UniTe ensures, in addition to the scholarship, a mobility fee of 400 euros gross per month.
Positions available without a grant	2
Coordinator	Prof. Fulvio Marsilio

PhD in **"Processes law harmonization between history and system"**

Degree title required	All master's degrees
Positions available	6
Positions available with a grant	4
Positions available with a grant reserved for graduates from foreign Universities	1 – candidates with a degree from a foreign university will not take the written exam. to promote applications, UniTe ensures, in addition to the scholarship, a mobility fee of 400 euros gross per month.
Positions available without a grant	1
Coordinator	Prof.ssa Paola Bellocchi

PhD in **"International Perspectives in Corporate Governance and Public Administration"**

Degree title required	All master's degrees
Positions available	7
Positions available with a grant	2
Positions available with a grant reserved for graduates from foreign Universities	1 to promote applications, UniTe ensures, in addition to the scholarship, a mobility fee of 400 euros gross per month.
Positions available without a grant	0
Positions available without a grant reserved for graduates from foreign Universities	1 to promote applications, UniTe ensures, in addition to the scholarship, a mobility fee of 400 euros gross per month.
Number of seats reserved for CNR employees - Institute of Crystallography	3
Coordinator	Prof. Romano Orrù

The number of grant may be increased as a result of additional funding made available after the publication of this announcement. Any increase in the number of scholarships may determine the increase in the total number of positions available. This increase will be communicated exclusively on the University website (http://www.unite.it).

Admission Requirements

The application for the call may be submitted without any limitations of age and citizenship, by those who hold the above mentioned qualifications or appropriate foreign qualifications at the date of expiry of the call or by those who will obtain the required qualifications for admission by October 31, 2018. The equivalence of the foreign qualification is ascertained by the PhD Committee on the basis of the documentation presented by the candidate together with the application for admission to the admission competition (*).

The lack of the above mentioned requirements will lead to the exclusion from the procedure at any time, with a written notice of the person in charge of the procedure.

Research projects funded with a grant for a PhD course in "Cellular and Molecular Biotechnologies"

1. The research projects covered by grants funded by UnivAq are the following:

- Project 1 UNIVAQ: Structural studies of therapeutically relevant proteins for the cure of human diseases.
Short description of the topic: By means of X-ray crystallography, we aimed at characterizing at the structural level the interactions between therapeutically relevant proteins and their substrates in order to optimize their recognition. In particular, we will interested in studying the interactions between (i) drug-targets belonging to the redox pathway of human parasites and inhibitors selected from a high throughput screening campaign in order to find better drugs against neglected diseases and (ii) humanized antibodies and epitopes in order both to improve their affinity and to use the former in future anticancer therapies. Moreover, the PhD student will be also involved in the structural characterization of the self-assembly mechanism of some ring-like proteins in order to stabilize their nanotubular architectures to be employed as scaffolds in regenerative medicine.

- **Project 2 UNIVAQ:** study for the development of new nutraceutical combined formulations of bioactive molecules extracted by herbs and spices: evaluation of bioavailability and efficacy in prevenction diseases.
Short description of the topic: for nutraceuticals, term for the first time used by the Foundation for Innovation in Medicine, we mean those products for oral use containing high concentrations of active ingredients derived from functional foods, and which provide physiological health benefits also in a preventive and therapeutic sense of some disease . Because these substances are not currently considered drugs, the controlled studies that evaluate their effectiveness are scarce. Often combinations of these active ingredients allow for the same efficacy to decrease the doses or to increase the pharmacological effects without significant side effects. In addition, the oral bioavailability of a nutraceutical, defined as the fraction of the ingested nutraceutical that can reach the systemic circulation in an active form and which depends mainly on the food composition and structure, is extremely important. Only nutraceuticals which reach and distribute to the tissues and organs where they can exert their beneficial health effects are effective. The studies on nutraceuticals as single or combined phytocomplexes are therefore extremely necessary, as is the need to evaluate their mechanism of action. At the same time, there is a need for clinical data to support any health request. This aspect is becoming a major problem as well as the assessment of their safety and the total absence of unwanted side effects other than the presence of possible interactions with prescription drugs or with food usually included in the daily diet. Moreover, considering the low cost of initial foodstuffs, often waste products of other agricultural production, nutraceuticals represent a tool to broaden a proactive approach to medicine to prevent the onset of diseases and a tool to save money for National Health Systems who face conditions of chronic diseases that require long-term drug therapy.

- **Project 3 UNIVAQ**: Sirtuin-dependent signaling pathways in the modulation of high glucose-related stress.
Short description of the topic: the health impact of diabetes mellitus is expected to increase in the future, mainly due to sedentary life habits and extended life expectancy observed in developed countries. The mammalian target of rapamycin (mTOR) signaling has become an important focus of interest in the control of glucose metabolism, being a key molecular controller of mitochondrial oxidative function, whose activation is important in preventing hyperglycaemia-dependent cellular damage. The mammalian ortholog of yeast Sir2 (SIRT1), a NAD+-dependent class III histone deacetylase, has been shown to link nutrient availability and energy status to increased resistance to oxidative stress, a common phenomenon induced by high glucose conditions. Despite the increasing interest of biomedical research, whether the activation of SIRT1 may protect mammalian cells from deleterious effects of high glucose through mTOR-dependent pathways is still to be established. We aim to reveal whether natural or synthetic SIRT1 activators can be able to minimize or prevent the molecular damages in human cells treated with high glucose.

1. The research project covered by a grant funded by the IZSAM:

- Project 1 IZSAM: realization of innovative approaches in compuatational modelization of complex biological events.
Short description of the topic: In last years, we are seeing the diffusion of analytical methods able to provide an amazing amount of data in virtually all the fields of biology. It is, for instance, the case of high-througput technologies applied to the study of genomics, proteomics, lipidomics and, more in general of all the –*omics*. This had great positive consequences, as the rapid increase in the number of molecules and molecular event studied and the great amount of functional data obtained.
On the other side, unfortunately, we still lack of the ability to take inference from the data, in part due to the unavailability of models designed to take into account the biological complexity of these events. Indeed, the data *per se* are useless without the possibility to aggregate and interpreter them (big data challenge). The proof is that in a large number of biological phenomena, from bacteria to somatic cells, form gametes to stem cells our knowledge is still insufficient in terms of diagnostic and therapeutic approaches.
To overcome this limitation, we proposed this Doctoral Project, with the aim to realize the implementation of bio-informatics tools suitable for modellization of biological events of relevant interest. More in detail, the Doctoral Program will be focused on the design and realization of computational models based on network theory, representing complex phenomena and on the statistical study of their proprieties (i.e. their topology), combining a top-down and a bottom-up approach.

2. The research projects covered by scholarships financed by UniTe are the following:

- **Project 1 UNITE**: Study on chromatin remodeling and epigenetic reprogramming during swine postnatal oogenesis and in *in vitro* grown oocytes.
Short description of the topic: Oocyte developmental competence requires specific epigenetic adaptations, which occur mostly during oocyte growth and maturation. In particular, the modifications in large-scale chromatin configuration and the global DNA methylation are crucial events of oocyte nuclear maturity. The large chromatin remodeling in terms of DNA methylation occurs during specific phases of oogenesis, involving a specific cascade of epigenetic enzymes that work in a stepwise process; this crucial events define the quality of the female gamete.
This PhD project has been designed to study the major events of nuclear remodeling that characterize swine oocytes, a high translation reproductive model, during folliculogenesis and in *in vitro* growth gamete techniques. This will allow determining at which follicular stage or oocyte diameter the germ cell acquires a mature chromatin organization and a stable high level of methylation in order to define for the first time this process during pig oogenesis. The kinetic definition of the nuclear events during swine

oogenesis opens the possibility to adopt new chromatin marks to evaluate germ cells used or obtained by using different *in vitro* assisted technologies as *in vitro* folliculogenesis.

- **Project 2 UNITE**: Realization and validation of a mixed artificial-biological system for in vitro assessment of reproductive effects of endocrine disruptors.
Short description of the topic: In recent years, it has been demonstrated a continuously growing reduction in human fertility that is thought to be due to the life style typical of modern society. Among the myriad of factors indicated as possible causes of this phenomenon (from tobacco smoke to alcohol drinking, from obesity to diet), one of the most important seems to be the exposure to molecules able to interact with normal endocrine function, the so called "endocrine disruptors" (ED). They could be found in food, water and environment, and belong to a wide variety of chemical classes, including drugs, pesticides, compounds used in the plastics industry and in consumer products, industrial by-products and pollutants. Some of them are pervasive and widely dispersed in the environment and could be prone to bioaccumulation and biomagnification. Given their ability to interfere with endocrine system, they could be able to negatively affect reproductive system, leading to the reduction/destruction of fertility.
Then, this Doctoral Course will be aimed to design, realize, and validate an in vitro system useful to assess the potential negative effects of EDs. In this context, the development of a sensitive, specific and multi residue analytical method is necessary. The concentration level of bioactive molecules and their metabolites will be performed using advanced analytical techniques, such as LC-MS/MS, GC/MS, NMR and HRMS. Furthermore, extraction methods should be studied to improve the detection of ED and will allow an analytical methods support for the identification of unknown compounds such as their metabolites. Then, the reproductive effects of the identified molecules will be assessed in a very innovative in vitro system. In brief, an organoid-like device will be realized by culturing oviductal epithelial cells on a 3D printed substrate in which the in vitro fertilization (IVF). By this way, it will be possible to find up any relevant biological effect exerted by ED.

- **Project 3 UNITE**: Evaluation of mixture effects of Endocrine-disrupting Chemicals (EDCs) using a multilevel experimental approach.
Short description of the topic: Endocrine-disrupting chemicals (EDCs) are a group of heterogeneous substances, in most synthetic cases, which cause adverse health effects in an undamaged organism, and/or on its progeny, consequent to interference with the normal function of the endocrine system. The human population is ubiquitously exposed to different mixtures of these compounds in daily life, such as parabens, phtalathes, UV filters, polycyclic musks, antimicrobials (triclocarban and triclosan), with unpredictable and negligible consequences, although at very low exposure levels. EDCs effects have been studied mainly on hypothalamic-pituitary-gonadal axis (female and male reproductive disorders associated with the risk of infertility and congenital abnormalities of reproductive tract), while their role in development of other important diseases such as neurodevelopmental behavioral and cognitive disorders, diabetes mellitus type II, obesity, neoplasms (skin, breast, prostate, testis and ovary cancers), is still not well established.
This project aims to acquire new knowledge about the effects of EDCs mixtures on human health using *in vitro* and *in vivo* experimental models.
Moreover, this study would implement the development of scientific basis of substitution principle with similar safe chemicals to EDCs. Indeed phthalates, bisphenols and parabens are classified as EDCs of "equivalent concern" as substances of very high concern (SVHC), according to REACH Regulation (Registration, Evaluation Authorization and Restriction of Chemicals, Regulation EC n° 1907/2006).

Candidates interested in scholarships will have to present, together with the application, a specific research project on one of them.

Research projects funded with a grant for a PhD course in "Food Science"

The research projects covered by scholarships funded by UniTe are the following:

- **Project 1 UNITE**: Development of electrochemical and optical nanomaterial based sensors for the quality and safety control of functional foods.
Tutor: Prof. Dario Compagnone.
Breve descrizione della topic: The project will develop innovative, rapid sustainable sensors potentially usable in situ in a food company or in the field for the quality and safety of food. The conditions for the realization of optical and electrochemical sensing systems for bioactive compounds and contaminants in food will be studied. The optical sensing systemes will be realized using metal nanoparticles assembled onto polymeric supports able to retain the nanoparticles. Electrochemical sensors will take advantage of new "graphene-like" materials for the realization on improved nanostructured surfaces . The sensors will be evaluated on foods and during process control; the conditions for the optimization of a rapid pre-treatment of the sample, when necessary, will be studied.

- **Project 2 UNITE**: Evaluation of possible application for honeybees monitoring stations as reventive alert system for assessing the human impact on the environment.
Tutor: Prof. Michele Amorena.
Short description of the topic: This research project is focused on the development and optimization of sampling and analytical methods for researching: heavy metals, polycyclic aromatic hydrocarbons, anions, dioxins, furans, drugs and pesticides as well as related metabolites in the "hive tissues", with the aim to assess effective bio-monitoring programs adequate to specific needs of investigation. The perspective of this research project is to develop an useful service for private companies and public functions with the purpose to identify and monitor possible toxicological risks related to the consumption of bee products coming from areas appropriately identified by specific evaluation parameters.
The present PhD project is aimed to:
· developing specific analytical methods for the identification and quantification of pollutants and their metabolites in the "hive tissues";
· elaborating indices and reference tables useful for the assessment of risks of human exposure and the organization of adequate containment measures;
· defining the parameters (number of inhabitants, productive activities, etc.) that, characterizing urban and extra-urban area, define the anthropogenic impact on the environment, with the purpose to develop specific bio-monitoring programs for different needs, as well as a concrete and effective service;
· identifying possible unwanted substances in the bee products coming from "dangerous area" with the aim to ward consumer health.

- **Project 3 UNITE**: Innovative tools and methodologies to evaluate rheological properties of food matrices.
Tutors: Prof.ssa Paola Pittia, Dr.ssa Carla Di Mattia.
Short description of the topic: The PhD project aims to apply and develop new methods of evaluation of rheological properties of liquid and solid food systems through dedicated measurement rheological techniques and tools able to determine tribological properties (in liquid and semi-liquid systems) and fluidization behaviour of powders. Results will be correlated with sensory evaluations and / or physical properties evaluated using conventional techniques.
A period of research dedicated to research topics is foreseen at an institution (research laboratory or company) of a foreign, no Italian country, of at least 6 months.

- **Project 4 UNITE**: Ancient grains from Abruzzo: characterization and use for the production of high quality traditional products.
Tutor: Prof. Giampiero Sacchetti.
Short description of the topic: 'Ancient grains', which are wheat varieties cultivated in small geographical areas since ancient times and did not undergo to massive genetic selection or modification, are of great interest

since their cultivation has a low environmental impact and could be performed in marginal areas. In Abruzzo ancient wheat varieties such as Solina, Senatore Cappelli and 'Saragolla nera' or Barbone were historically cultivated but these varieties are characterized by low attitude to processing.
This project implies the qualitative and functional characterization of grains and their milling products, whose processing in food products (bread and pasta) by using traditional technologies should be eventually studied and optimized in order to have high quality foods with enhanced sensory and functional properties.

- **Project 5 UNITE**: Improvement of Cheese Shelf-life extension.
Tutor: Prof.ssa Clemencia Chavez Lopez.
Short description of the topic: The development of moulds on the surface of short-ripening cheeses may lead to a risk for the quality of the product, due to alterations in sensorial quality, and for the consumers health, due to the possible formation of mycotoxins. In short-medium maturation cheeses, fungal growth is unavoidable because of the environmental conditions of the process; therefore the moulds are removed by a cleaning process, which is generally carried out only immediately before the shipment of the product. This operation can eliminate only superficial hyphae, leaving part of the mycelium and spores on the cheese's crust. In addition, there could be a possible risk of cross-contamination by pathogenic microorganisms such as *Listeria monocytogenes*. Therefore, during the refrigerated storage phase of this type of cheeses, the development of psychotrophic species is unavoidable. The main objective of the project is to extend the shelf-life and to improve the safety of short-ripening "pasta filata" cheeses, especially in relation to surface fungal development, as well as to improve the sustainability of the cheese production chain. Strategies are aimed at reducing the presence of both spoilage and mycotoxigenic moulds in cheeses at company level, using biocompetition and bioconservation techniques.

- **Project 6 UNITE**: Antioxidant and anti-inflammatory effect in vitro and in cellular model of edible insects and development of a functional food from insect- based food matrix.
Tutor: Prof. Mauro Serafini.
Short description of the topic: In the last years there has been a renewed interest for the nutritional properties of edible insects suggested to be a valid substitute of protein from animal sources at low environmental impact. However no evidences is available about the role of insects as a source of bioactive ingredients able to display a functional effect in human.
Aim: Assessing the antioxidant and anti-inflammatory effect in vitro and in cellular model of edible insects and development of a functional food from insect- based food matrix.
Development: Insects, selected on the basis of the diverse taxonomy, will be analyzed, utilizing different procedures of extraction, in order to characterize their antioxidant properties and to identify bioactive molecules. The most promising extracts will be tested in cellular model of intestinal cells (Caco-2) and immune cells (PBMn) to assess toxicity levels and the anti-inflammatory properties following different physiological stimulus. On the bases of the results will be developed a "functional" food from insect-based food matrix. The developed food as well as the insects will go through sensorial analyses in order to assess the predilection and willingness of the consumers.

Candidates interested in scholarships will have to present, together with the application, a specific research project on one of them.

Additional grants "PON Innovative Doctorates with Industrial characterization"

The University of Teramo participates in the call for competition *"PON Dottorati Innovativi con caratterizzazione industriale" with proposals for the assignment of additional grants within the scope of all doctorate courses.*

Some topics related to these proposals are the following:

PhD course in "History of Europe from the Middle Ages to the Contemporary Age"

Il Dottorato in Storia dell'Europa incoraggia domande di laureati nell'ambito del "Cultural Heritage" in vista di possibili borse PON che saranno richieste in relazione a progetti che coniugano lo studio del passato, il patrimonio storico-culturale e le tecnologie digitali.

PhD course in "Cellular and Molecular Biotechnologies"

PON 1) study of the cross-talk between endocannabinoids and sphingosine 1-posphate signaling pathways in neuroinflammation.

Short description of the topic: Neuroinflammation is a pathophysiological process of great interest for many types of neuronal damage and pathologies that affect neurons and immune cells (microglia) in the central nervous system. In this context, it can be highlighted that sphingosine 1-phosphate (S1P) and endocannabinoids (eCBs), both bioactive lipids able to bind to G proteins coupled receptors, are engaged in the signaling of vital biological processes such as growth, proliferation and cell migration. Furthermore, both lipid classes play a key role in the resolution of inflammation at central nervous system level, modulating the production of proinflammatory cytokines or influencing microglial activity. Therefore, the goal of this project is:

- to identify and characterize in the biological details the mechanisms through which elements of the eCBs and S1P signaling can regulate the neuroinflammation process in the microglial cell model BV2;
- to verify a possible cross talk between the two signaling systems in the model in exam.

Therefore, understanding the cross-talk between S-1P and eCBs signaling pathways in neuroinflammation aims at identifying new molecular targets useful for the development of new therapeutic approaches to cure or slow down neuroinflammatory and neurodegenerative diseases.

PON 2) formulation and validation of olive leaf extracts for tissue repair.

Short description of the topic: Natural remedies have been used for long time by several populations for prevention as well as treatment of minor diseases. One of the use of olive oil and olive leaf extract is for the treatment of skin diseases and wounds. The main component of olive leaf extract is Oleuropein which is rich in polyphenols, an anti-inflammatory agent. As life expectancy is increasing and people live to their late 70 and 80 years, prevention and treatment of the diseases in aged people may be more challenging as they are more vulnerable to diseases. In aging process, cellular senescence, altered biosynthetic activity, as well as accumulation of oxygen species as a result of oxidative metabolism will increase in all organs of the body. All tissues in an aged body are more prone to adverse inflammatory reactions. Aging process in skin tissue involves changes in epidermis and dermis. The epidermis becomes thinner and atrophic. Also, the number of fibroblasts as well as their synthetic capacity will decrease significantly that indicates a reduction in matrix and collagen fibers of the dermis. These events ultimately lead to impaired wound healing process in aged skin and more important in age-related disease such as diabetes and bedsore In the same manner, in the Central Nervous System the oxidative stress scavenger systems are impaired leading to neuronal death with consequent dementia or neurodegenerative diseases. The research proposal is focused on the effects of olive leaf extracts in expediting the wound healing process in aged or damaged skin as well as in neurodegeneration models.

PON 3) Hybrid nanocarrier library based biomaterials for therapeutic applications.

Short description of the topic: Natural vesicles are endogenous nanoparticles that play important roles in intercellular communication. Various natural vesicles show nanometric sizes and are classified as nanocarriers. Hybrid nanocarriers are obtained by combining natural and synthetic biomaterials, and can be utilized for therapeutic purposes, thus avoiding some side effects such as the stability and the non-specific interaction with cellular systems of the body. These hybrid nanocarriers, loading bioactive

compounds, will be synthesize using both natural membrane budding, generated from tumor cells, either components of hemopoietic cells, that are hybridized with synthetic biomaterials. Versatile and selectivity of the resulting hybrid nanocarriers will allow developing therapeutic protocols utilized to treat various pathologies such as neoplasia or tissue regeneration.

Candidates who present a research project related to one of the above mentioned topics will in any case be included in a single merit ranking for each PhD program.

Admission procedure

Admission to the PhD courses is based on the evaluation of qualifications and interview and is divided into two phases.

In the first phase the Selection Committee proceeds to evaluate the following qualifications, giving each candidate a maximum score of 20 points according to the following division:

1) PhD in "History of Europe from the Middle Ages to the Contemporary age"

   a. abstract of the old or master's degree thesis (minimum length of the abstract 2,000 - maximum 8,000 characters including spaces): maximum 4 points;
   b. quality of the research project, consistent with the course topics, developed by the candidate (minimum length 8,000 - maximum 10,000 characters including spaces): maximum 8 points;
   c. scientific curriculum vitae (university career including examinations with the specific indication of individual grades and relative average - 1 letter of reference from a university professor or qualified scholars, any professional experience, training and / or research of foreign languages and other qualifications held): maximum 4 points;
   d. possible publications: maximum points 4 - it is specified that only scientific publications with ISBN or ISSN will be evaluated.

2) PhD in "Cellular and Molecular Biotechnologies"

   a. abstract of the thesis: maximum points 4;
   b. research project developed by the candidate, consistent with the topics of the course: maximum points 7;
   c. scientific curriculum vitae (university career including examinations with the specific indication of individual grades and the relative average - letter \ and reference of university professors or qualified scholars and any professional training and / or research experience, degree of knowledge of foreign languages and other titles held): maximum points 4;
   d. eventual publications: maximum points 5.

3) PhD in "Food Science"
   a. curriculum vitae scientific and university career including exams with the specific indication of individual votes and the related average: maximum points 8;
   b. letter \ and reference of university professors or qualified scholars and any professional experience: maximum points 1;
   c. possible publications: maximum points 1.
   d. quality of the research project proposal developed by the candidate, consistent with the course topics: maximum 10 points.

4) PhD in "Veterinary Medical Sciences, Public Health and animal welfare "

a. abstract of the thesis: maximum points 8;
b. research project developed by the candidate, consistent with the course topics: maximum 6 points;
c. scientific curriculum vitae (university career including examinations with the specific indication of individual grades and the relative average - letter \ and reference of university professors or qualified scholars and any professional, training and / or research experience, degree of knowledge of foreign languages and other titles held): maximum points 4;
d. possible publications: maximum points 2.

5) PhD in "Processes law harmonization between history and system"

a. scientific curriculum vitae (university career including exams and graduation marks): maximum 5 points;
b. b. research project developed by the candidate, coherent with the topics of the course, indicating the relevant disciplinary scientific sector and degree of knowledge of languages: maximum points 10;
c. c. possible professional experiences, training and / or research, possible publications, abstract degree thesis: maximum points 5.

6) PhD in "International Perspectives in Corporate Governance and Public Administration"

a. abstract of the thesis (minimum 2,000 characters - max 8,000 characters, spaces included): maximum points 2;
b. research project developed by the candidate, consistent with the course topics: maximum 10 points;
c. scientific curriculum vitae (university career including examinations with the specific indication of individual grades and the relative average - letter \ and reference of university professors or qualified scholars and any professional, training and / or research experience, degree of knowledge of foreign languages and other titles held): maximum points 5;
d. possible publications: maximum points 3.

The second phase is the interview which is only for candidates who have achieved a minimum score of 12 points. The list will be published on the university website after the assessment of all the qualifications.

The oral test will consist of an interview of the candidate with the Academic Board designed to test the knowledge on the topic of a relevant doctoral course and to discuss the proposed research project. The knowledge of the English language is also always verified during the interview. The interview may be conducted entirely in English if requested by the applicant. The interview may be conducted via computer (via Skype) if required in the process of submission of the application by the candidate residing abroad or by the candidate with a disability. The maximum score for each candidate for the oral exam is 40 points. At the end of the interview the Selection Committee will proceed to identify the suitable candidates who will be placed in the general ranking, expressed in sixty, based on the sum of the scores obtained by the candidates according to the evaluation of the qualifications and the interview.

The information about the oral test, indicating the date, time and place in which it takes place, will be published on the university website at least 7 days before taking the oral test. For the interview candidates must bring a valid ID.

Application and submission deadline

To participate in the competition the candidate must complete and submit the application form – together with all attachments - using only the form available in the online procedure on the University website (www.unite.it).

The application must be submitted, under penalty of exclusion, no later than midnight on the thirtieth day following the publication of this announcement on the University website. If the expiry date indicated falls on an holiday day, the deadline is extended to the first following working day.
The candidate can submit only one application for each PhD course.

Reserved places for graduates from foreign universities

For each PhD program there is a reserve of positions intended for graduates who have obtained all the qualification to enter the PhD program at a foreign University.
To promote the candidacies, the University of Teramo assures, for the entire legal duration of the PhD program, a mobility fee of 400 euros gross per month. The mobility fee will be recognized only to PhD students graduated from foreign Universities not residing in Italy at the time of application.

Contributions for the access and the attendance of the courses

All PhD students are required to pay € 140 per year, regional tax together with the amount of the stamps, € 32 for the first year, € 16 for the second and third year and € 32 for the title degree certificate.

Study grants

The financial support is awarded to the candidates according to the ranking.

The amount of the grant, to be paid in monthly installments, is EUR 15,343.28, gross of fees to be paid by the PhD student, according to current law.

The PhD grant is subject to the payment of INPS social security contributions.

This amount is increased to a maximum of 20 percent, for a maximum period of 18 months and a minimum of 30 days, if the doctoral student is authorized to carry out the research abroad.

Starting from the second year, a budget for research activities in Italy and abroad within the existing financial resources is guaranteed for each student.

The recipient of the study grant must have a gross annual total personal income not exceeding € 15,000.00 in the years of prevalent use of the grant.

The determination of this income, which is that related to the year of awarding the grant, includes all the patrimonial income, well as emoluments of any other nature, with the exception of those with an occasional nature or deriving from military service.

The grant cannot be cumulated with any other grants, except with those awarded by national or foreign institutions aimed at integrating, with the periods abroad, the training or research activity of the PhD students; in this case the right to the expected increase of the grant is lost.

(*) Academic title awarded abroad: university degree obtained abroad must be comparable to the title of Master of Science in duration, level and subject area. In accordance with this principle, acting on their eligibility with the Academic Board. Applicants who have a foreign qualification that has not already been declared equivalent (1) to an Italian degree will make implicit request for equivalence in their application for admission, must attach the following documents: certified the degree with exams and the corresponding vote (EU citizens may submit a self-certification according to Presidential Decree no. 445 of 28.12.2000, as amended, English translation, if the document is not already in that language, the certificate the degree earned, with exams taken and grades obtained, signed under their own responsibility, in order to allow the teacher to assess their suitability, solely for purposes of participation in the contest; any other documentation deemed useful to assess the eligibility of the title held for participation in the competition (Diploma Supplement (2), or declaration of local value (3), etc..). Candidates holding a degree not achieved in Italy winners of the contest must submit to the Service PhDs by February 28, 2017: Declaration of Value-site together with the degree certificate with exams and grades, translated and authenticated by Italian diplomatic authorities in the country where the institution that issued it. The Value Statement must certify that the qualification obtained is valid in the country of graduation for enrollment in an academic course similar to the Ph.D.; or, if the Value Statement above is not yet ready for the

date indicated, a document showing that the release request has been submitted to the diplomatic mission of competence; In this case, the student must then deliver the Declaration of Value in the original as soon as available; or, as an alternative to Value Statement, the Diploma Supplement in English, according to the model developed by the European Commission, the Council of Europe and UNESCO / CEPES. In the absence of such documents will not be achieved the title of Doctor of Philosophy.

(1) For more information visit the web page http://www.cimea.it/default.aspx?IDC=113.
(2) With Diploma Supplement is a document attached to a diploma of higher education with the aim of improving the 'transparency' international and facilitate academic and professional recognition of the qualifications (diplomas, degrees, certificates, etc..). The Diploma Supplement should be issued by the same institution that issued the license. More details on the website: http://ec.europa.eu/education/lifelong-learning-policy/doc1239_en.htm.
(3) The Value Statement is issued by the Italian diplomatic missions abroad (embassies / consulates) competent. For more information, visit http://www.cimea.it/default.aspx?IDC=118.