NOTICE OF AMENDMENT

PUBLIC COMPETITION, BY QUALIFICATIONS AND EXAMINATIONS, FOR ADMISSION TO PHD COURSES ACTIVATED AT THE UNIVERSITY OF MESSINA 40TH CYCLE

THE RECTOR

IN VIEW OF	Law of 3rd July 1998, No. 210, and in particular art. 4 in the matter of PhD courses, as amended by art. 19, paragraph 1, of Law of 30th December 2010, No. 240;
IN VIEW OF	the Statute of the University, issued with D.R. No. 1244 of 14th May 2012 (published on G.U. - General Series No. 116 of 19th May 2012) and amended with D.R. No. 3429 of 30th December 2014 (published on G.U. - General Series No. 8 of 12th January 2015);
IN VIEW OF	D.M. No. 226 of 14th December 2021 concerning *"Regulation laying down procedures for the accreditation of PhD centers and PhD courses and criteria for the establishment of PhD courses by accredited bodies";*
IN VIEW OF	*the Regulation of the University of Messina concerning PhD courses*, issued with D.R. No. 834 of 25th March 2022;
IN VIEW OF	Rector's Decree No. 1568 of 13th June 2024 (prot. No. 76047/2024), with which the public competition, by qualifications and examinations, for admission to the PhD Courses activated by the University of Messina - 40th CYCLE, whose notice was published on the University Register at No. 90 of 13th June 2024, was announced and in particular, **Attachments No. 2 and 15**;
IN VIEW OF	the Note of 17th June 2024 (prot. No. 77431/2024), with which, to rectify the minutes of the Academic Board of the PhD Course in **"TRANSLATIONAL MOLECULAR MEDICINE AND SURGERY"** prot. No. 72767 of 5th June 2024, has been specified that the correct research topic of the position reserved to employees of affiliated Companies and/or Institutions (Executive PhD) of the company C.O.T. Cure Ortopediche Traumatologiche S.p.a. is the following: *"Study of AI methodologies and technologies for the creation of predictive models aimed at prevention, diagnosis and therapy, including surgical and rehabilitation therapy of trauma, motor and movement deficits",* and also that *"the name of the proposing Institution-Company is C.O.T. Cure Ortopediche Traumatologiche s.p.a., and not "Centro Ortopedico Traumatologico",* as erroneously reported in **Attachment No. 15** of the Call;
IN VIEW OF	the minutes of 19th June 2024 (prot. No. 79008/2024) with which the Academic Board of the PhD Course in **"BIOENGINEERING APPLIED TO MEDICAL SCIENCES"** has acknowledged that the Company Megagen, promoter of the financing of no. 1 PhD scholarship ex D.M. No. 630/2024 referred to in **Attachment No.2** of the Call, with email dated 14th June 2024, communicated the intention to cancel the previous expression of interest (prot. No. 62790 of 20th May 2024), and, therefore, the aforementioned company will not fund the PhD scholarship in question;
NOTED THAT	with the aforementioned minutes, the Academic Board of the PhD Course in **"BIOENGINEERING APPLIED TO MEDICAL SCIENCES"** has also acknowledged that a new letter of intent (prot. No. 68347 of 30th May 2024) from Company Geistlich Biomaterials Italia Srl to finance no. 1 PhD scholarship ex D.M. No. 630/2024 has been received and therefore, proceeded to verify the consistency with the definition of *Companies* referred to in Ministerial Decree No. 630/2024 as well as the consistency of the training project proposed by the aforementioned company, within the specific topics referred to in Ministerial Decree No. 630/2024, with the

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	training project of the Course and with the eligibility criteria provided for in art. 7 of the same Ministerial Decree;
WITHOUT PREJUDICE TO	any subsequent amendments and/or additions to this Call that will be advertised on the website of the University of Messina at the following address https://www.unime.it/bandi-e-concorsi.

D E C R E E S

for the aforementioned reasons, Rector's Decree No. 1568 of 13th June 2024 (prot. No. 76047/2024) is amended as follows:

- in **Attachment No. 2,** PhD Course in **"BIOENGINEERING APPLIED TO MEDICAL SCIENCES",** the scholarship funded by **Megagen ex D.M. No. 630/2024** must be deleted from the *Positions and Scholarships available for competition;* if the candidates have chosen, together with other scholarships, also the one funded by Megagen, the PhD Examination Board will not carry out the evaluation with regard to the aforementioned scholarship; the scholarship funded by Company Geistlich Biomaterials Italia Srl **ex D.M. No. 630/2024** must be included;

- in **Attachment No. 15,** PhD Course in **"TRANSLATIONAL MOLECULAR MEDICINE AND SURGERY",** with regard to the **Position reserved to employees of affiliated Companies and/or Institutions (Executive PhD),** the name of the proposing Institution-Company is C.O.T. Cure Ortopediche Traumatologiche s.p.a., and not "Centro Ortopedico Traumatologico", and the research Topic related to the PhD scholarship funded is *"Study of AI methodologies and technologies for the creation of predictive models aimed at prevention, diagnosis and therapy, including surgical and rehabilitation therapy of trauma, motor and movement deficits",* instead of *"Identification of new predictive molecular markers of post-surgical clinical outcome and of bone integration after traditional or robotic procedure".*

The information sheets of the Call, Attachments No. 2 and 15, as amended, are attached to this Decree.

This Decree, written both in Italian and in the English language, will be published on the Register of the University at the following links https://archivio.unime.it/it/ateneo/amministrazione/albo-online and https://www.unime.it/bandi-e-concorsi.

THE RECTOR
Professor Giovanna Spatari

Person in charge of the procedure: Ms. Angelina Venezia

PUBLIC COMPETITION, BY QUALIFICATIONS AND EXAMINATIONS, FOR THE ADMISSION TO PHD COURSES - 40TH CYCLE

ATTACHMENT No. 2

Title of the PhD course

PhD course in: **BIOINGEGNERIA APPLICATA ALLE SCIENZE MEDICHE (Bioengineering Applied to Medical Sciences)**

PhD Coordinator: **Professor Michele Gaeta**
E-mail: *michele.gaeta@unime.it*

Information on the characteristics of the PhD Course can be consulted on the website:
https://bioingegneria-applicata-scienze-mediche.phd.unime.it/it

Affiliated Institutions/Companies

- **Geistlich Biomaterials Italia Srl**
- **Knowow srl**
- **Exabyte**

Positions and scholarships available for competition

AVAILABLE POSITIONS	TYPE OF POSITIONS/ PHD SCHOLARSHIP	RESEARCH TOPICS RELATED TO FUNDED SCHOLARSHIPS	PROCEDURE FOR CARRYING OUT THE TRAINING PROJECT
PHD Scholarships funded ex D.M. No 630/2024 M4C2 – Inv. 3.3. "Introduction to innovative doctorates responding to the innovation needs of companies and promoting the recruitment of researchers in companies."	**N.1 Geistlich Biomaterials Italia Srl**	**Molecular mediators in periodontal regeneration e peri implant. Role of polynucleotides** The candidate must have a degree in Dentistry and Dental Prosthetics, Biomedical Engineering, Computer Engineering and Information Technology.	The research program includes a **6-month (min 6 max 18)** research period in the company, and a **6-month (min 6 max 12, or in case of PhD thesis co-tutorship max 18 months)** research period abroad.
	N.1 Knowow srl	**Optimization and Personalization of Titanium prosthesis using technologies 3D Printing: Multidisciplinary Approaches for Innovation in the Biomedical Sector** The candidate must have a degree in Mechanical Engineering.	The research program includes a **6-month (min 6 max 18)** research period in the company, and a **6-month (min 6 max 12, or in case of PhD thesis co-tutorship max 18 months)** research period abroad.
	N.1 Exabyte	**Software optimization for management processes inside a dental office** The candidate must have a degree in Dentistry and Dental Prosthetics, Biomedical Engineering, Computer Engineering and Information Technology.	The research program includes a **6-month (min 6 max 18)** research period in the company, and a **6-month (min 6 max 12, or in case of PhD thesis co-tutorship max 18 months)** research period abroad.
PHD Scholarships funded by University/MUR	**No 3**		

Positions without scholarship	No 2		

LM-9 Biotecnologie mediche, veterinarie e farmaceutiche (Medical, veterinary and pharmaceutical Biotechnologies)
LM-17 Fisica (Physics)
LM-18 Informatica (Computer Science)
LM-21 Ingegneria biomedica (Biomedical Engineering)
LM-21 R Ingegneria biomedica
LM-25 Ingegneria dell'automazione (Automation Engineering)
LM-28 Ingegneria elettrica (Electrical Engineering)
LM-29 Ingegneria elettronica (Electronic Engineering)
LM-31 Ingegneria gestionale (Management Engineering)
LM-32 Ingegneria informatica (Computer Engineering)
LM-33 Ingegneria meccanica (Mechanical Engineering)
LM-40 Matematica (Mathematics)
LM-41 Medicina e chirurgia (Medicine and Surgery)
LM-41 R Medicina e chirurgia
LM-44 Modellistica matematico-fisica per l'ingegneria (Mathematical-physical modelling for engineering)
LM-44 R Modellistica matematico-fisica per l'ingegneria
LM-46 Odontoiatria e protesi dentaria (Dentistry and dental prosthesis)
LM-46 R Odontoiatria e protesi dentaria
LM-53 Scienza e ingegneria dei materiali (Science and Material Engineering)
LM-54 Scienze chimiche
LM-53. Ingegneria dei materiali (Materials Engineering)
26/S (specialistiche in ingegneria biomedica) (master's degrees in biomedical engineering)
34/S (specialistiche in ingegneria gestionale) (master's degrees in management engineering)
35/S (specialistiche in ingegneria informatica) (master's degrees in computer engineering)

and equivalent degrees

Scores for the selection and evaluation of candidates

1. Titles
The maximum score attributable to the qualifications will be **15/100** points.

2. Project
The maximum score attributable to the project will be **20/100** points.
It is pointed out that about PhD Scholarships funded *ex* D.M. No 630/2024, the research project must be elaborated by the candidate taking into consideration the topics aforementioned and the eligibility criteria established by art. 7 of Ministerial Decree No 630/2024.

3. Examination: oral test
The exam will take place on the date and according to the procedures hereafter referred.

Exam date and time	Procedures
22/07/2024 at 09:00	**Telematic mode**

The maximum score attributable to oral test will be **65/100** points, with a minimum score to be exceeded by **42/100** points.

During the interview, the knowledge of the **English language is verified**.

Minimum overall assessment to be considered eligible: 60/100 points.

Full details of the participation procedure can be found in the PhD Call

PUBLIC COMPETITION, BY QUALIFICATIONS AND EXAMINATIONS, FOR THE ADMISSION TO PHD COURSES - 40TH CYCLE

ATTACHMENT No. 15

Title of the PhD course

PhD course in: **TRANSLATIONAL MOLECULAR MEDICINE AND SURGERY**

PhD Coordinator: **Professor Antonio Toscano**
E-mail: _antonio.toscano@unime.it_

Information on the characteristics of the PhD Course can be consulted on the website:
https://translational-molecular-medicine-surgery.phd.unime.it/it

Affiliated Institutions/Companies

- **SCYLLA BIOTECH SRL**
- **Hospitex International**
- **C.O.T. Cure Ortopediche Traumatologiche s.p.a.**

Positions and scholarships available for competition

AVAILABLE POSITIONS	TYPE OF POSITIONS/ PHD SCHOLARSHIP	RESEARCH TOPICS RELATED TO FUNDED SCHOLARSHIPS	PROCEDURE FOR CARRYING OUT THE TRAINING PROJECT
PHD Scholarships funded ex D.M. N₀ 630/2024 M4C2 – Inv. 3.3. "Introduction to innovative doctorates responding to the innovation needs of companies and promoting the recruitment of researchers in companies."	N. 2 SCYLLA BIOTECH SRL	**Use of caspase inhibitors to treat arbovirus disease: a host directed approach to defeat persistent infections.** Arboviruses, such as Chikungunya virus, Dengue virus, West Nile virus, and Zika virus, are RNA viruses that pose a threat to global health. The mechanisms of arbovirus persistence in humans, which are critical for viral evolution, disease dynamics, and public health, are poorly defined. The aim of this study is to comprehensively investigate the molecular mechanisms of arbovirus replication and persistence and their interactions with the host to identify therapeutic targets. Recent studies have highlighted the importance of a novel innate pathway initiated by ZBP1, an RNA sensor, that leads to the induction of interferon-responsive host protective genes in the brain. The primary objective of the study is to test whether agents capable of activating the RIPK3 pathway, such as caspase-8 or cIAP1/2 inhibitors, can be used to treat persistent infections in a neonatal model of Zika virus disease.	The research program includes a 18 months research period in the company, and a 6 months research period abroad.
	N.1 Hospitex International	**Application of molecular methods to liquid-phase cytology.** Fine-needle aspiration and exfoliative cytology play an increasingly important role in pathology for both diagnostic and predictive-prognostic purposes. In fact, the low invasiveness of the method often allows, in various pathological fields, to obtain material on which to make a specific diagnosis and at the same time to have a sample available on which to perform molecular pathology analyses for prognostic and therapeutic purposes. In this sense, thin-layer cytology methods that allow to obtain better samples for pathological diagnostics could also represent a better sample on which to perform molecular analyses. The aim of this	The research program includes a 6-month research period in the company, and a 6 months research period abroad.

		collaboration/study is to test NGS methods with different types of panels for the analysis of genetic alterations on DNA and RNA extracted from samples taken by thin-layer cytology in tumor contexts such as thyroid, lung or urological. The analysis will allow to develop such analysis methodologies for this type of sample.	
Positions reserved for employees of affiliated companies and/or entities (Executive PHD Course)	N.1 **C.O.T. Cure Ortopediche Traumatologiche s.p.a.**	Study of AI methodologies and technologies for the creation of predictive models aimed at prevention, diagnosis and therapy, including surgical and rehabilitation therapy of trauma, motor and movement deficits.	
PHD Scholarships funded by University/MUR	No 6		
Positions without scholarship	No 3		

Type of qualification required

LM-6 Biologia
LM-9 Biotecnologie mediche, veterinarie e farmaceutiche
LM-13 Farmacia e farmacia industriale
LM-41 Medicina e chirurgia
LM-67 Scienze e tecniche delle attività motorie preventive e adattate

Other requirements for foreign students:
no other requirements are required

Scores for the selection and evaluation of candidates

1. Titles
The maximum score attributable to the qualifications will be **20/100** points.

2. Project
The maximum score attributable to the project will be **30/100** points.
It is pointed out that about PhD Scholarships funded *ex* D.M. No 630/2024 and Executive PhD positions, the research project must be elaborated by the candidate taking into consideration the topics aforementioned and the eligibility criteria established by art. 7 of Ministerial Decree No 630/2024.

3. Examination: oral test
The exam will take place on the date and according to the procedures hereafter referred.

Exam date and time	Procedures
24th July 2024 at 2 p.m.	**By web with microsoft teams platform**

The maximum score attributable to oral test will be **50/100** points, with a minimum score to be exceeded by **20/100** points.
During the interview, the knowledge of the **English language is verified**.

Minimum overall assessment to be considered eligible: 60/100 points.

Full details of the participation procedure can be found in the PhD Call.