

ID code: **6955**

The integral version is available at the following link:

<https://www.unimi.it/it/ricerca/fare-ricerca-da-noi/assegni-di-ricerca/bandi-assegni-di-ricerca>

THE ENGLISH LANGUAGE TRANSLATION DOES NOT HAVE LEGAL VALUE IN ITSELF, AND THUS DOES NOT SUPERSEDE THE ITALIAN VERSION OF THE CALL ANNOUNCEMENT (BANDO).

PUBLIC COMPETITION FOR 12 MONTHS FOR 1 TYPE B FELLOWSHIP FOR COLLABORATION TO RESEARCH ACTIVITIES IN THE SCIENTIFIC AREA OF MEDICAL SCIENCES.

ART. 1 - COMPETITION NOTICE

According to art. 3 of Regulations, a public competition notice by qualifications and examinations is announced for the assignment of 1 type b FELLOWSHIP for collaboration to research activities lasting 12 months that could be renewed for the scientific area of Medical Sciences restricted to doctorate graduates or graduates.

ART. 2 - REQUIREMENTS

All graduates who have an appropriate scientific-professional curriculum to carry out research activities established by this competition notice can participate in this public selection.

PhD or equivalent qualification obtained abroad or, for the areas concerned, specialization degree completed by appropriate scientific production, unless otherwise specified, is preferential requirement for admission according to this competition notice.

Candidates must meet the following requirements:

- a. Absence of criminal record;
- b. all Master's Degree or equivalent, from an Italian or foreign university.

Moreover it is required:

- c. Expertise in research area:

The candidate must have at least 2 years, in molecular biology and epigenomics. Knowledge of RNA sequencing and 3D culture techniques will also be required.

- d. Knowledge of language: English, B2 Upper Intermediate

Qualifications must be owned on the date of expiry established for the presentation of the application form.

Applicants in possession of degrees obtained abroad, who have not the declaration of equivalence, will have to enclose in the application form a translation into Italian or into English of the foreign degree, (Degree with marks earned in each examination and PHD degree), completed by a self-certification related to the correspondence to the original of the translation itself.

The degree earned abroad can be declared admissible, by the Judging Commission, only for purposes related to the selection.

The following qualifications will be evaluated for purposes related to the competition:

- a. PhD in subjects concerning the research or equivalent qualification earned abroad;
- b. Specialization degree in subjects concerning the research;
- c. Post-graduate degrees;
- d. Attendance of post-graduate courses at Italian or foreign Universities;
- e. Scientific-professional curriculum based on proven experience for research activity already carried out at public and private bodies with contracts, fellowships or appointments, both in Italy and abroad;
- f. Publications in scientific reviews.

If PhD/specialization degree is preferential, candidates who have a degree only must show necessary documents to demonstrate a scientific-professional curriculum and appropriate research experience (*post lauream*) to carry out research activity as from this competition notice, otherwise they will be excluded from the competition.

For requisitions of admission and incompatibilities please see art. 4, 5 and 6 of Regulations at the link:

<https://www.unimi.it/it/ateneo/normative/regolamenti/regolamento-gli-assegni-di-ricerca>

ART. 3 - CANDIDATES LIST AND CURRICULA PUBLICATION

In application of obligations of transparency as from D.lgs. 14/03/2013 n. 33 this competition notice, the list of candidates with their curriculum vitae and the result of each selection will be published on the web site http://www.unimi.it/ricerca/assegni_ricerca/69536.htm.

ART. 4 - APPLICATION

Application forms in plain paper must be written according to the form at the following link: <https://www.unimi.it/it/ricerca/fare-ricerca-da-noi/assegni-di-ricerca> and include name, surname, place and date of birth, address, telephone number, competition notice information. Application forms must be submitted online, at the following email address: unimi@postecert.it, within **November 7, 2024 at 11.59 pm (Italian time)**. The application form and any other enclosures requiring the candidate's signature. The message should state in the object field:

“Domanda concorso Assegno di Ricerca Prof. Agostoni Carlo Virgilio, code ID 6955”

Application forms not signed or incomplete or sent after the deadline established will not be admitted.

The application form must enclose:



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- a. Degree with final mark;
- b. Phd degree / specialization degree;
- c. Scientific qualifications, diplomas, scholarships, attendance of post-graduate courses,
- d. Publications
- e. Curriculum of scientific activities.

Documents above mentioned can be presented as follows:

Academic and professional qualifications can be self-certificated. The other qualifications which require evaluation, publications included, can be presented in original copy or in photocopies by self-declaration in substitution of attested affidavit according to DPR 28/12/2000 n. 445.

ART. 5 - CURRICULUM PRESENTATION

Candidates, by the same time of presentation of the application form, must scan and send to the e-mail address curriculum.assegni@unimi.it a copy of the curriculum vitae in pdf with the ID code with date according to the form at the following link: <https://www.unimi.it/it/ricerca/fare-ricerca-da-noi/assegni-di-ricerca>

ART. 6 - RESEARCH ACTIVITIES

The Fellowship implies carrying out the activities briefly mentioned below at Dipartimento di Scienze Cliniche e di Comunità dell'Università degli Studi di Milano and under the supervision of Prof. Agostoni Carlo Virgilio within the research programme "*PR*ecocious *biO*markers of *Unilateral ureTero-pelvic jUnction obstRuction in childrEn. The PRO-FUTURE project. - CUP: G53D23005060006*", of the activities mentioned below:

1. Single cell profile analysis of cells isolated from kidney biopsies and urine from unilateral ureteropelvic junction obstruction patients (UPJO). Single-cell gene expression analysis approaches provide powerful tools to study changes specific to each cell type helping to delineate potential molecular stages of progressive kidney damage. The cells will be isolated from biopsies and urines from the same patients and will perform transcript analyzes at the single cell level in UPJO patients (urine and biopsy) and sex- and age-matched controls. The generated scRNAseq data will be analyzed bioinformatically. Annotation and rearrangement will be carried out based on known lineage markers. Genes differently expressed between distinct cell clusters and experimental groups will also be confirmed with alternative molecular techniques (qRT-PCR etc.);
2. Isolation of extracellular vesicles (EV) from the urine of children with UPJO. Urine-derived EV can be used as a liquid biopsy tool because they reflect the pathophysiological events occurring in the kidney through direct modification of their molecular content. Analysis will be performed on urine collected before surgery of all recruited UPJO patients and their matched controls. The concentration and size distribution of EVs will be measured using NanoSight LS300 (NanoSight Ltd);
3. Characterization of the phenotype and microRNA profile of EVs isolated from UPJO patients. EV phenotype will be analyzed using the MACSplex kit (Miltenyi Biotec) on a BD



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FACSCanto II (Becton Dickinson) and the Leprechaun Vesicle Analysis Interferometric Reflectance Imaging Platform. MicroRNA carried by EV isolated from UPJO patients will be characterized by next generation sequencing in collaboration with the BGCore structure (University of Turin). Analysis of the pathways involved in UPJO and development of progressive renal damage will be conducted using the Ingenuity Pathway Analysis (IPA) program.

ART. 7 - INCOMPATIBILITIES

For requisitions of admission and incompatibilities please see art. 6 and 8 of Regulations at the link:

<https://www.unimi.it/it/ateneo/normative/regolamenti/regolamento-gli-assegni-di-ricerca>

ART. 8 - FELLOWSHIP AND INSURANCE

The Fellowship's yearly gross amount is of Euro 22676,00. The amount is tax free according to art. 4 Legge 13 August 1984 n. 476 and subject, for what concerns welfare regulations, to regulations as from art. 2 paragraphs 26 and following Legge 8 August 1995 n. 335.

University will provide, for the period of the contract of collaboration to research, private insurance cover, with a public liability insurance and industrial accident insurance in favour of the fellow and within carrying out of research activities. The amount of the premium for insurance against industrial accidents is subtracted each year from the remuneration for the fellow.

ART. 9 - PAYMENT AND SUPERVISION

The amount is paid in postponed monthly instalments. The Fellows' duties, established by the individual contract, are performed under the supervision of the Professor coordinator who will verify the activity carried out according to art. 8 paragraph 5 of Regulations.

ART. 10 - SELECTION PROCESS

Application forms will be examined by a judging Commission, specifically appointed by the Rector (for the composition of the Commission see Regulations, art. 3 paragraph 2). The Commission, within twenty days since the deadline for presenting applications, with justified report, will form a ranking on the basis of a selection of academic and scientific qualifications presented and of an interview aiming at verifying the candidate's aptitude to research and knowledge of the language required. The commission establishes the standards of evaluation first and to evaluate the candidate it can use up to 100 points, 50 for qualifications to divide up in the following way:

- 1) PhD or Specialization in Medical Area up to **15** points
- 2) Scientific-professional Curriculum (post-graduate degrees, certified experience for research activity already carried out at public and private bodies with contracts, scholarships or appointments, both in Italy and abroad) up to **10** points
- 3) Other qualifications established by the competition notice up to **15** points

4) Scientific publications up to **10** points

and for the interview up to **50** points.

The Commission at the end of the interviews will publish the result of the total evaluation for each candidate and will form a ranking on the grounds of the points earned by each candidate, and appoints the winner or the winners when more fellowships must be awarded. In case of equality the youngest candidate will be preferred. The results of the selection are approved by Rector's decree and published on the University web site. Reports by Commission are public.

The interview is public and will take place on **November 18, 2024 at 10:00 AM** at Padiglione De Marchi - Via della Commenda 9 - Primo Piano, Milano.

Handicapped candidates, according to Legge 05/02/1992 n. 104, will do explicit request related to their handicap concerning the necessary aid in order to do the interview.

Candidates living abroad can have an interview with electronic procedures that ensure their identification, with the authorization by Examination Committee. Candidates should contact the Direzione Trattamenti Economici e Lavoro Autonomo - Ufficio Contratti di formazione e Ricerca - (assegni.ricerca@unimi.it), at least one week before the date of the interview, to verify in advance the feasibility. The dates of the telematic interviews are shown art.10 of this call.

The winner will receive communication, to the email address written in the application form, of the assignment of the fellowship. Within 10 days since receiving the communication, unless differently stated, the person concerned must send to the qualified Office the declarations of acceptance required by the Administration, otherwise he/she will lose the right, and he/she will be called to stipulate a contract of collaboration to research activities.

Candidates who earned their degree abroad and are the winners must send to this Office, together with declarations of acceptance required by the Administration, the official translation with declaration of value of the foreign degree by qualified Italian diplomatic or consular representations in the country of origin, according to laws in force on the subject. Candidates will be excluded from the selection in case documents do not arrive within such deadline.

For non-EC citizens the fellowship will start after obtaining the entrance visa for scientific research and when research activity actually begins.

Personal states, facts and qualities self-certificated by the winner of this competition will be properly checked by Università degli Studi di Milano, also by sample, concerning their truth.

Declarations and certifications sent in one envelope by registered letter with return coupon attached (stamp and date of the post-office will be considered) will be considered sent in time within the deadline mentioned; on the envelope the competition notice concerned must be shown.

If the activities imply the use of laboratories, work equipment, chemical, physical and biological agents, inclusive of equipments provided with visual display units, the Fellow, according to art. 41 Dlgs n. 81/08, will undergo prior medical examination in order to verify counterindications with reference to activities which the subject should carry out and to evaluate his/her suitability.

ART. 11 - WINNER NOT COMPLIANT WITH COMPETITION NOTICE AND REGULATIONS

Winners of fellowships who do not comply what established by this competition notice and Regulations lose the right to the fellowship upon Rector's act by previous written communication.

ART. 12 - PLACE AVAILABLE IN CASE OF LOSS OF RIGHT OR RENOUNCE BY WINNER

In case of loss of the right or lack of stipulation within the deadline established or possible renounce by the winners, fellowships are made available to the candidates usefully placed in the ranking that, according to what established by Regulations, is valid up to ninety days from the approval of acts.

ART. 13 - PERSON IN CHARGE OF THIS COMPETITION

According to Legge 7 August 1990, n. 241 Mrs Anna Tavano at Direzione Trattamenti Economici e Lavoro Autonomo - Via S. Antonio n. 12, Milano is in charge of the competition as from this competition notice.

For more information please contact the Ufficio Contratti di Formazione e Ricerca at Direzione Trattamenti Economici e Lavoro Autonomo - e-mail: assegni.ricerca@unimi.it.

For what is not established by this competition notice, please see laws in Regulations and laws in force on the subject.

According to DL 196/2003 and according to the General Data Protection Regulation (GDPR) EU 2016/679 and to Regulations on the protection of personal data of the University of Milan University will commit itself to respect all confidential information provided by the candidate: "all information provided will be handled only for aims connected to the selection and to the stipulation and management of relationship with University".

Full information is available at: <https://www.unimi.it/it/ateneo/normative/privacy> of the University website.

THE RECTOR
Marina Brambilla