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**Subject: Notice for the collection of expressions of interest for the direct award of no. 1 Research assignments, pursuant to art. 10 of the current Regulations for the award of Research assignments under art. 22-ter of Law no. 240 of 30 December 2010 - DiSC 2026\_IR\_03 - Funded by the project GREEN BEAN - Contributo partner esterno per Bando Uni- Impresa 2024 - CARBON PA SRL - CUP C93C25007070007; e project GREEN BEAN - Bando Uni-Impresa: Contributo interno CUP C93C26000440005 entitled "GRaphEne ENcapsulated Biostimulants for Efficient Agriculture Nanodelivery" - Scientific Supervisor and/or Tutor: Prof. Stefano Agnoli**

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*In this notice, all positions, professions and titles relating to the functions performed and specified with regard to gender are to be understood as referring to all genders.*

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**The Director of the Department of Chemical Sciences**

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HAVING REGARD TO Law no. 168 of 9 May 1989;

HAVING REGARD TO the Statute of the University of Padua, published in the Official Gazette no. 300 of 27 December 2011, as subsequently amended and supplemented;

HAVING REGARD TO Law 240/2010 and subsequent amendments and additions, and in particular Art. 22-ter of the Law as amended by Law no. 79/2022 converting, with amendments, Decree-Law no. 45 of 7 April 2025, which introduced the Research Assignment;

HAVING REGARD TO Ministerial Decree no. 592 of 6 August 2025 defining the minimum economic treatment for post-doc assignments and research assignments - Arts. 22-bis and 22-ter, Law no. 240 of 30 December 2010;

HAVING RECALLED the current Regulations for the awarding of Research Assignments pursuant to Art. 22-ter of Law 240/2010, issued by Rector's Decree No. 4508/2025 of 31 October 2025;

HAVING REGARD TO Legislative Decree no. 17 of 9 January 2008 concerning the admission of third-country nationals for scientific research purposes, as subsequently amended and supplemented;

HAVING REGARD TO the Code of Ethics of the University of Padua;

HAVING REGARD TO Presidential Decree no. 62 of 16 April 2013 "*Regulations containing the code of conduct for public employees, pursuant to Art. 54 of Legislative Decree no. 165 of 30 March 2001*", which extended, where compatible, the behavioural obligations of the code to all collaborators or consultants, regardless of the type of contract or assignment;

HAVING REGARD TO the decision of the Urgency Decree of the Director of the Department of Chemical Sciences *Repertorio n. 65/2026 Prot n. 917 del 06/02/2026* which approved the activation of no. 1 Research Assignments aimed at introducing young scholars to research and innovation, under the supervision of a Tutor to be carried out remotely and/or at the Department of Chemical Science under the supervision of *Prof. Stefano Agnoli*, acting as Tutor;

ASCERTAINED that the research assignment is funded by external resources, obtained at national, international or European level, which allow the activation of direct award procedures on the project **"GRaphEne ENcapsulated Biostimulants for Efficient Agriculture Nanodelivery"** within the framework of the financing project GREEN BEAN - Contributo partner esterno per Bando Uni- Impresa 2024 - CARBON PA SRL - CUP C93C25007070007; e project GREEN BEAN - Bando Uni-Impresa: Contributo interno CUP C93C26000440005 - Scientific Supervisor Prof. Stefano Agnoli

DEEMED APPROPRIATE to activate a procedure for the direct award of no. 1 Research assignments aimed at introducing young scholars to research and innovation, under the supervision of the Tutor Prof. Stefano Agnoli;

#### decrees

##### Art. 1 – Subject

A procedure is hereby announced for the direct award of no.1 Research assignments, aimed at introducing young scholars to research and innovation, within the framework of the research project entitled **"GRaphEne ENcapsulated Biostimulants for Efficient Agriculture Nanodelivery"** to be carried out at the Department of Chemical Science and/or remotely under the supervision of Prof. Stefano Agnoli, acting as Tutor.

The Research assignment, with a duration of 12 *months* and an annual gross amount, for the recipient, of Euro [minimum 22,500.00] is awarded pursuant to art. 10 of the current Regulations for the awarding of Research

assignments in accordance with art. 22-ter of Law 240/2010 within the framework of the aforementioned research project, Scientific Disciplinary Group [GSD], Scientific-Disciplinary Sector [SSD].

The Research assignment, funded by project GREEN BEAN - Contributo partner esterno per Bando Uni-Impresa 2024 - CARBON PA SRL - CUP C93C25007070007; e project GREEN BEAN - Bando Uni-Impresa: Contributo interno CUP C93C26000440005, concerns the performance of the research activity specified as follows:

*The project aims to develop nanocarriers based on Graphene-Based Nanomaterials (GBNs) to enhance the efficacy of biostimulants (BS) in agriculture. The integration of BS, such as terpenoids or melatonin, into GBNs enables controlled and targeted delivery, improving release stability, selectivity, and efficiency while simultaneously reducing environmental impact.*

*The main objectives of the project are:*

- 1. Synthesis and characterization of GBNs with various functionalizations to optimize their application in agriculture.*
- 2. Optimization of release kinetics to ensure a prolonged, efficient, and precise action of the active ingredients.*
- 3. Contribution to the toxicity assessment of the synthesized materials on plant cell cultures and whole plants.*

## **Art. 2 – Admission requirements**

Young scholars who hold a master's degree - Second cycle degree in Industrial chemistry - or a single-cycle master's degree no more than six years ago and have a curriculum suitable for assisting in research activities may submit an expression of interest for the assignment.

The qualifications must be held on the announcement deadline date.

If the degree diploma was obtained abroad, it must be declared equivalent, for selection purposes only, to the master's degree or single-cycle master's degree by the Selection Committee.

Research Assignments, pursuant to Art. 22-ter of Law no. 240 of 30 December 2010, may not be awarded to those who are in one or more of the following situations:

- those who have held contracts referred to in Article 24 of Law 240/2010;

- permanent staff, employed on a permanent basis, of universities, public research bodies and institutions whose scientific specialization diploma has been recognized as equivalent to the PhD pursuant to Article 74, fourth paragraph, of Presidential Decree no. 382 of 11 July 1980;
- those who have a degree of kinship or affinity, up to and including the fourth degree, with a professor or researcher belonging to the Department proposing the selection or with the Rector, the Director General or a member of the University's Board of Directors;
- have already benefited from Research Assignments referred to in Art. 22-ter of Law 240/2010 as amended by Law no. 79/2022 for a period which, added to the duration of the assignment provided for in the announcement, exceeds a total of 3 years, even if not continuous. For the purposes of the duration of the aforementioned relationships, periods spent on maternity or paternity leave or for health reasons according to current legislation are not relevant.

The total duration of relationships established with holders of positions referred to in Articles 22 - (Research Contracts), 22-bis (Post-doc Assignments), 22-ter (Research Assignments) and contracts referred to in Article 24 (RTT) of Law 240/2010, even with different universities, state, non-state or online, with institutions of higher artistic, musical and dance education, with institutions whose scientific specialization diploma has been recognized as equivalent to the PhD pursuant to Article 74, fourth paragraph, of Presidential Decree no. 382 of 11 July 1980, and with public research bodies may not in any case exceed 11 years, even if not continuous. For the purposes of the duration of the aforementioned relationships, periods spent on maternity or paternity leave or for health reasons according to current legislation are not relevant.

Candidates are admitted to the selection with reserve.

The Structure that issued the announcement may order at any time, by reasoned decree of the Director, the exclusion from the selection for lack of the required requisites.

### **Art. 3 – Submission of expressions of interest**

The expression of interest, as well as the qualifications held, documents, publications and all attachments deemed useful, must be submitted, under penalty of exclusion, electronically, using the dedicated application, on the Pica platform page: <https://pica.cineca.it/unipd/>.

**The expression of interest form can be completed starting from 1:00 PM (Italian time) on 13/02/2026 and must be submitted by 1:00 PM (Italian time) on 23/02/2026**

For registration, completion, signature and submission of the application, candidates must comply with the provisions of the **Guidelines for completing applications - Research Assignments** (Annex 1 - Guidelines), which form an integral and substantial part of this announcement.

The lack of signature and/or identity document is grounds for exclusion from the selection process.

The candidate may also access the procedure for completing the expression of interest through identification via the SPID system (Public Digital Identity System). In this case, it will not be necessary to sign the application form.

The submission of the expression of interest to the Department of Chemical Science takes place automatically with the final closure of the online procedure. Therefore, no delivery or shipment of paper material should be carried out.

Candidates whose expressions of interest have not been submitted within the deadline or have been submitted in a manner other than that indicated above are not admitted to the selection.

The expression of interest must be accompanied by:

1. copy of a valid identity document in .pdf format;
2. scientific-professional curriculum vitae in .pdf format;
3. qualifications and publications relevant to the selection;

The expression of interest form is to be considered, for all legal purposes, as a self-certification pursuant to Articles 46 and 47 of Presidential Decree 445/2000 and subsequent amendments and additions, with regard to the data contained therein and the attached documents.

Those coming from non-EU countries in possession of a valid residence permit may use substitute declarations according to the procedures provided for EU citizens, if it is a matter of declaring states, facts and personal qualities that can be certified or attested by Italian public entities or if the production of substitute declarations is made in accordance with international agreements between Italy and the declarant's country of origin.

Those coming from non-EU countries not in possession of a regular residence permit may use the online procedure for uploading qualifications in .pdf format and certificates, issued by the competent authorities of the of their Country of citizenship, accompanied by a translation into Italian authenticated by the Italian consular authority which certifies their conformity to the original. The originals of these documents must be exhibited to the Committee during the interview, where applicable, and in any case, produced to the Structure upon any conferral of the assignment.

Any information or clarification regarding the procedures for submitting expressions of interest may be requested from the Structure (telephone number +39 0498275164; email [scientifica.chimica@unipd.it](mailto:scientifica.chimica@unipd.it)).

For technical issues only, please contact the support service via the link at the bottom of the page: <https://pica.cineca.it/unipd>.

The candidate undertakes to notify any changes to the contact details provided in the expression of interest form.

#### **Art. 4 – Assessment procedure**

The assignment will be awarded based on the evaluation of expressions of interest received by the Research Supervisor Prof. Stefano Agnoli according to the criteria indicated below:

##### **1. Synthetic & Materials Chemistry**

- Nanomaterials Synthesis: Proficiency in producing and handling Graphene-Based Nanomaterials (GBNs), including Graphene Oxide (GO) and reduced Graphene Oxide (rGO).
- Advanced Organic Functionalization: Expertise in executing specific chemical reactions like Fischer esterification, diazonium salt grafting, and amide coupling (utilizing activating agents like EDC/NHS).

##### **2. Physical & Structural Characterization**

- Surface Analysis: Ability to interpret XPS (X-ray Photoelectron Spectroscopy) for elemental composition and chemical bonding states.
- Spectroscopic Profiling: Mastery of Raman (to assess lattice defects/functionalization) and FT-IR (to identify functional groups).

##### **3. Analytical & Kinetic Studies**

- Quantitative Analysis: Competence in UV-VIS, NMR, and Chromatography (HPLC/GC) to measure concentrations of active ingredients.
- Mathematical Modeling: Skills in calculating release kinetics (e.g., zero-order, first-order, or Higuchi models) to predict how biostimulants are delivered over time.

#### **Art. 5 – Safeguard rules**

For matters not specified in this announcement, reference is made to the provisions contained in Law no. 240/2010 as subsequently amended and implemented, in the current Regulations for the awarding of Research Assignments pursuant to Art. 22-ter of Law 240/2010 of the University of Padua, and to current legislation.

The Structure reserves the right to verify the accuracy of substitute declarations of certifications or notarial deeds made by candidates pursuant to D.P.R. 445/2000, at any stage of the procedure. If the above-mentioned check reveals the untruthfulness of the content of the declarations, the declarant shall forfeit any benefits resulting from the provision issued on the basis of the untruthful declaration, without prejudice to the provisions of Art. 76 of D.P.R. 445/2000, concerning the penalties provided for by the Criminal code and special laws on the matter.

The person responsible for the procedure is the Administrative Secretary of the Department of Chemical Science, *Dr. Serena Ferrigo*

#### **Art. 6 - Processing of personal data**

The processing of personal data provided by candidates takes place in compliance with the provisions EU Regulation No. 679 of 27 April 2016 (General Data Protection Regulation - GDPR).

The complete privacy policy is available at the following link: <http://www.unipd.it/privacy>

Pursuant to art. 22-ter, paragraph 4, of Law 240/2010, this notice will be published on the Structure's website and all other websites required by the funding body.

This announcement is also translated into English for informational purposes only; for all legal purposes, only the Italian version is valid.

Padua,

The Director of the Department of Chemical Sciences

Prof. Stefano Mammi

*firmato digitalmente ai sensi del d.lgs. 82/2005*