

 FONDAZIONE EDMUND MACH dal 1874	RECRUITING ANNOUNCEMENT	 Page 1 of 6
	Organization and Human Resources Division Human Resources Development Office	

Announcement of available position	Selection code: 401_CRI_MAP
Type of position and number of positions vacant	Third level Researcher (PostDoc) (R3) in the field of targeted and untargeted metabolomics of medicinal and aromatic plants - Recruiting for the formation of a ranking for temporary employee contracts.
Organisational structure and manager for the position	Research and Innovation Centre – Unit Biotechnology of Natural Products – Line Manager for the Position: Stefan Martens.
Specific requirements	- Master of Science degree in Horticulture, Biology, Plant Sciences, Agricultural Science or equivalent; <i>and</i> - PhD in Horticulture, Agriculture or Pharmaceutical Sciences; <i>and</i> - Knowledge of English (minimum level B2), evaluated during the interview.
General requirements	- Italian citizenship with the benefit of full civil and political rights within the State of Italy, whether belonging to the Republic, or not; - OR - Citizens of European Union Member States or other States, provided they meet the following requirements: - benefit of full civil and political rights in the country of origin or nationality (or explanation of the reasons for non-benefit); - possession of all the same requirements as for citizens of the Republic, with the sole exception of Italian citizenship, as detailed below. - Having or not having been the subject of criminal convictions or applications of penalties at their own request (plea bargaining), which have been confirmed as enforceable convictions; - Having or not having been the subject of a conviction or any application of penalty at their own request (plea bargaining), which has not yet been confirmed as enforceable, for the offences referred to in Book 2, Title II, Chapter I of the Italian Criminal Code ("Offences committed by public officials against the public administration"); - Having or not having been dismissed or declared disqualified from employment for having obtained employment through the production of false documents or documents that are invalid and with no possibility of remedy, or for having carried out activities incompatible with employment relationships with the Public Administration, or with entities governed by private law but under public control; - Having or not having exercised authoritative or negotiating powers over the Edmund Mach Foundation (Article 53 paragraph 16 ter of Legislative decree 165/2001) during the previous three years; - Not having been dismissed for justified subjective reason nor just cause, nor having had their employment relationship terminated in application of Article 32 <i>quinques</i> of the Italian Criminal Code, because of failure to pass the probationary period for an employment relationship of indefinite duration and requiring the same qualifications as for this current recruitment; - Being in compliance with any obligations for military service; - In the event of recruitment, being available to take service at Edmund Mach Foundation premises.
Physical suitability for the specific work	Edmund Mach Foundation will assess the specific risks connected to the work, and if necessary request a preventive medical examination, pursuant to art. 41 of Legislative Decree 81/2008, in order to ascertain the physical suitability of the employee and absence



FONDAZIONE
EDMUND MACH
dal 1874

RECRUITING ANNOUNCEMENT



Organization and Human Resources Division
Human Resources Development Office

Page 2 of 6

	of contraindications to the work for which they are to be employed. In case of physical unsuitability or suitability with limitations, the Foundation reserves the right not to proceed with recruitment or to withdraw from the contract if it has already been entered into.
Exclusion from the recruitment process	The following may not participate in the recruitment process: temporary staff who have been employed for the Foundation in an equivalent role for 36 months.
Job description	We seek a highly motivated and skilled Postdoctoral Researcher to join our research team focused on the in-depth chemical characterization of Medicinal and Aromatic Plants (MAPs). The successful candidate will leverage advanced targeted and untargeted metabolomics approaches to elucidate the complex phytochemistry of selected MAPs, correlating chemical profiles with biological activity, geographical origin, and cultivation methods. The core focus of this position is to establish robust methodologies for comprehensive phytochemistry analysis. The specific research goals will include: 1. Chemical Fingerprinting: Utilizing untargeted metabolomics (metabolic profiling) to generate unique chemical signatures for selected MAP species. This work is critical for quality control, detecting adulteration, and establishing clear relationships between chemotype and phenotype. 2. Targeted Quantification of Bioactives: Developing and validating highly sensitive targeted quantitative assays (e.g., using Multiple Reaction Monitoring, MRM, or Parallel Reaction Monitoring, PRM) for key secondary metabolites, such as specific flavonoids, terpenoids, or alkaloids, known for their therapeutic properties. 3. Environmental and Genetic Correlation: Investigating the impact of environmental stress (e.g., drought, light intensity) and genetic variation on the metabolic pathways in MAPs. This involves applying chemometrics to large datasets to pinpoint metabolites whose levels significantly change in response to external factors, providing insight into optimal cultivation practices. 4. Bioactivity-Guided Profiling: Integrating metabolomics data with in vitro and ex vivo bioassays (e.g., anti-inflammatory, antioxidant, antimicrobial activity) to rapidly identify and prioritize the compounds or compound classes responsible for the observed biological effects.
Duties	Under the supervision of the PI, the selected researcher is expected to: • Method Development and Optimization: Design, implement, and optimize robust analytical methods for both targeted quantification and untargeted profiling of metabolites from complex MAP matrices. This includes exploring novel extraction techniques (e.g., pressurized liquid extraction, PLE; supercritical fluid extraction, SFE). • Sample Preparation and Analysis: Conduct comprehensive sample extraction and analysis using state-of-the-art instrumentation, primarily High-Performance Liquid Chromatography coupled with High-Resolution Mass Spectrometry (HPLC-HRMS/MS), typically Q-TOF or Orbitrap systems, and potentially Gas Chromatography-Mass Spectrometry (GC-MS). • Advanced Data Processing and Bioinformatics: Utilize specialized chemometric and bioinformatics platforms (e.g., MZmine, Compound Discoverer, MetaboAnalyst, XCMS, R/Python packages) for automated feature detection, elemental composition determination, spectral matching against databases (e.g., Metlin, KNAPSACK), and statistical modeling for biomarker discovery. • Integration and Interpretation: Correlate metabolomics data with biological and geographical parameters, applying advanced multivariate statistics (e.g., PLS-DA, OPLS-DA) for data reduction, classification, and mechanistic hypothesis generation.

 FONDAZIONE EDMUND MACH dal 1874	RECRUITING ANNOUNCEMENT	 Page 3 of 6
	Organization and Human Resources Division Human Resources Development Office	

	• Dissemination and Reporting: Prepare high-quality manuscripts for peer-reviewed publication, present research findings at national and international conferences, and actively contribute to securing future funding through proposal writing. • Mentorship and Lab Management: Provide guidance and technical training to junior researchers (graduate and undergraduate students) in metabolomics techniques, data handling, and instrument operation. Ensure compliance with laboratory safety and quality assurance protocols.
Keywords	Phytochemistry, analytical method development, data analysis, statistical analysis.
Selection process	By qualifications as expressed in Annex A (maximum 30 points) and interview (maximum 70 points). The results of the selection are based on the sum of the points awarded for the two phases of the selection process.
Assessment of qualifications	On the basis of the information provided exclusively in the application (Annex A), FEM will select and admit to the interview the best 10 candidates evaluated based on the following criteria (maximum 30 points): - Relevance of the PhD thesis to the following topics: Horticulture or Pharmaceutical Sciences (maximum 5 points attributed according to the following criteria: 0 points=no match, 1=minimal match, 3=medium match, 5=perfect match); - Post-doc work experience in the area of analytical chemistry, metabolomics, phytochemistry on medicinal and aromatic plants (0,3 points for every month of experience up to maximum 13 points); - Scientific publications in journals with impact factor in the field of Horticulture, Phytochemistry, or Pharmaceutical Sciences (0,5 points per item up to maximum 13 points. The score of the individual publications will be doubled if the candidate appears as first, last or corresponding author).
Subjects covered in the interview	During the interview, which will be conducted in English, the following knowledge will be verified (maximum 70 points): - Metabolomics Method Development & Maintenance (maximum 20 points); - Knowledge of Plant Secondary Metabolism (maximum 20 points); - Advanced Data Analysis & Chemometrics (maximum 15 points); - Experimental Design & Quality Control (maximum 10 points); - General organisation and activity of FEM, rights and duties of employees (maximum 5 points). In the interview, the candidate must achieve a minimum score of 45/70 points.
Knowledge level of languages, relative to the Common European Framework (CEFR), and method of verification	The interview will be in English. Knowledge of English will be verified (to be checked by an interview on a technical or scientific nature) at a minimum level corresponding to B2. <i>To understand the levels of knowledge required, consult the dedicated page on the EUROPASS website:</i> https://www.coe.int/en/web/common-european-framework-reference-languages Failure to possess a level of English corresponding to B2 will result in exclusion from the selection process.
Possession of requirements and recourse to clarification	The candidate must meet all the requirements and qualifications laid out, on the closing date for submitting applications as stated in the public announcement, as well as on the date of recruitment and placement. Candidates are in any case required to promptly inform the Foundation of any change in the data declared in the application for participation in the public notice. Failure to meet the specific and general requirements will result in exclusion from the selection process. The Foundation reserves the right to verify the above requirements and may at any time terminate the selection process for a candidate who does not meet

 FONDAZIONE EDMUND MACH dal 1874	RECRUITING ANNOUNCEMENT	 Page 4 of 6
	Organization and Human Resources Division Human Resources Development Office	

	them. Should the verification reveal inconsistencies, doubts or uncertainties, the Foundation also reserves the right to request further clarifications and/or documents to be produced, within the peremptory deadline indicated by the Foundation. The assessment of the possession of requirements and evaluation of qualifications is based exclusively on the information declared in the application form (Annex A).
Modality and deadlines for communication to candidates of the dates and locations of the interview	All communications to candidates will take place via email to the contact used to send the application (Annex A) and <i>curriculum vitae</i> and indicated in the appropriate space of the application. Those admitted to the tests (written test and/or practical test and/or interview) will be informed of the date and location via e-mail (<u>not by certified email, a.k.a. PEC</u>), sent to the contact address used to send the application (Annex A) and <i>curriculum vitae</i> at least 10 days before the chosen date (unless the date and place are not already indicated in the notice). The tests will be held at the Edmund Mach Foundation in San Michele all'Adige (Province of Trento, Italy) or in videoconference. Each admitted candidate must attend the interview, where they must present a valid photographic identification document, or if held in remote videoconferencing, the document must be presented in advance. Failure to present candidates at the recruiting site or to connect via remote video conference or late arrival not accepted by the Commission will result in their exclusion from the selection.
Gross annual remuneration	Provincial Collective Contract for Personnel of Research Foundations (https://trasparenza.fmach.it/Amministrazione-Trasparente/Personale/Contrattazione-collettiva/CCPL-Personale-Fondazioni-di-Ricerca), Third level Researcher (R3), current gross remuneration of Euro 44.087,26, including 13th and 14th month's pay.
Deadline for presentation of applications and recruitment process end date.	Applications must arrive by and no later than 23:59 CET (the date and time of receipt shown in the electronic mail account of the Foundation shall be valid) on November 13, 2025 The recruitment procedure will terminate at the latest by May 13, 2026
How to present applications	Applications to participate in the selection must be sent in electronic format to the email address (not certified email address, a.k.a. PEC) curricula@fmach.it, indicating the recruitment code (401_CRI_MAP – R3 temporary metabolomics) in the subject of the message and must consist of: - the application form (Annex A), as per the model available on the webpage announcement, which must be saved with the file name and extension: Surname First Name_Application.pdf. The application must be fully completed, without any reference to other attached documentation and/or information; - the candidate's curriculum vitae, saved with the file name and extension as follows: Surname First Name_CV.doc or .pdf; - a copy of a valid identity document. Any person encountering difficulty in submitting the application due to disability is invited to contact +39 0461 615542. In the application form (Annex A) the candidate must declare any marriage, cohabitation or family relationship up to the fourth degree with employees, ongoing consultants, directors, members of the supervisory bodies of the Foundation. This requirement ensures maximum transparency in the recruitment process and avoids situations of potential conflict, such as, for example, direct or indirect reporting in the same organisational structure between persons who have such relationships. In the application form (Annex A) the candidate must declare, under their own personal responsibility, the possession of the specific requirements, general requirements and any qualifications as indicated in the relative boxes of this Recruitment



FONDAZIONE
EDMUND MACH
dal 1874

RECRUITING ANNOUNCEMENT



Organization and Human Resources Division
Human Resources Development Office

Page 5 of 6

	Announcement, pursuant to Articles 46 and 47 of Presidential decree no. 445 of 28 December 2000, indicating awareness of the forfeiture of any benefits obtained and the criminal sanctions provided for respectively in Articles 75 and 76 of the aforementioned decree, in the case of untrue declarations, creation or use of false documents. By submitting an application for selection, the candidate assumes responsibility for the truthfulness of all the information provided in the application and in any attached documents, as well as for the conformity to the original of the copies of any documents produced, all this in accordance with Presidential decree 445/2000. The Edmund Mach Foundation reserves the right to carry out checks and if these reveal that the candidate's declarations contain any untrue content, the declarant will forfeit any benefits deriving from any provision issued on the basis of the untruthful declaration; moreover, such a declaration, as a "mendacious statement", will be punished in accordance with the Italian Criminal Code and the special laws on the subject. Candidates who make untruthful declarations concerning the possession of the fundamental requirements for participation in the selection process will be removed from the ranking list and the employment relationship, if already established, will be terminated. The Foundation shall not accept any responsibility for the loss of communications due to the incorrect indication of the address by the candidate or to a missed or late communication of the change of the address indicated in their application, or due to any digital, postal or telecommunications defects or in any case due to third parties, unforeseeable circumstances or force majeure.
Proof of documentation in the event of hiring and relative deadlines	Before recruitment, if requested, candidates must provide statements and certificates proving the possession of the "Specific Admission Requirements" and the "Qualifications" provided for in the call.
Results of the selection	The results of the selection will be communicated by: – publication of the suitable candidate ranking on the webpage dedicated to the present recruiting announcement, with the details of ranking order, surname and name; the publication of the candidate's name in the list of suitable candidates shall not be subject to the right of confidentiality, therefore the candidate may not request that their name be removed from the said list; – at the end of the procedure, communication to all candidates, whether included in the ranking of suitable candidates or not, by individual email (<u>not certified email, a.k.a. PEC</u>) to the contact address used to send the curriculum vitae and the application.
Hiring conditions and categories covered by Law 170/2010 or Law 68/99	The Edmund Mach Foundation operates in compliance with the legislation in force concerning fixed-term contracts. Candidates are invited to state whether they belong to the categories referred to in Law No. 170 of 8 October 2010 (people with specific learning disorders (SLD)) or in Law No. 68/99 (persons with disabilities or categories referred to in Article 18), and to indicate this in the application form.
Company welfare and benefits at current date	1. Family Audit certified company, with flexible working time and human resources management policy, for the wellbeing of the employees and their families; 2. Gender Equality Plan (GEP) that promotes gender equality through a process of structural change; 3. In-house dining hall in San Michele all'Adige, as well as a payment card for meals taken in registered non-company facilities, with the value of Euro 7.00 per meal; 4. Free car park within the San Michele all'Adige campus and at the peripheral locations; 5. Free "Education Roaming (Eduroam)" WiFi on the San Michele all'Adige campus (90% coverage) and in facilities of other entities affiliated with GARR for the Wi-Fi service;

 FONDAZIONE EDMUND MACH dal 1874	RECRUITING ANNOUNCEMENT	 Page 6 of 6
	Organization and Human Resources Division Human Resources Development Office	

	6. Employee discount for the purchase of products from the Edmund Mach Winery sales point; 7. Staff sports club, with discount for members and promotions of sport-recreational activities (on-campus gym); 8. Internal market of agri-food products prepared by the Foundation students.
Model of Organization, Management and Control (MOG) and Plan for Prevention of Corruption and Transparency (PPCT)	With resolution of the Board of Directors of FEM n. 1 dated 26/05/2015, the Model of Organization, Management and Control (MOG) was adopted on the basis of d.lgs. 231/2001 (regulation of the administrative liability of legal persons, companies and associations even without legal personality, according to Article 11 of the law 29 September 2000, n. 300) integrated with the relevance of the offences considered by Law 190/2012 (provisions for the prevention and prosecution of corruption and illegality in public administration). The Organization and Management Model (MOG) is a set of behavioural rules calibrated on the criminal risk that characterizes the entity or functions it consists of and must provide the measures to ensure the conduct of business in compliance with the law, Identifying and removing risk situations in a timely manner. The system also provides for the establishment of an internal control body at the institution with the task of monitoring the operation and compliance with the model and ensuring its updating. The Corruption Prevention and Transparency Plan (PPCT) complements the Model ex d.lgs. 231/2001 with measures aimed at preventing also the phenomena of corruption and illegality in coherence with the aims of the L. 190/2012.
Regulation FEM Code of Values and Behaviour	The Code of Values and Behaviour sets out the Foundation's reference values and defines the resulting behaviour to be followed by the recipients, directors, auditors, members of other statutory bodies of the Foundation, Employees, project staff and employees of other private entities made available to the Foundation. It also calls for a system of sanctions for behaviour in breach of the rules of the Code.
Privacy Policy	In accordance with Article 13 of the EU General Data Protection Regulation 2016/679 ("GDPR" or "Regulation"), and in general with the principle of transparency set out in the Regulation, the Edmund Mach Foundation provides information on the processing of personal data at the webpage "Privacy Policy". The candidate takes full responsibility for all the information included in their application form and curriculum vitae. The Foundation reserves the right to require that the candidate considered suitable for the post shall offer documentary proof of the qualifications they have listed.

This Recruiting Announcement is issued in compliance with equal opportunities between men and women for access to employment, pursuant to Legislative decree no. 198 of 11 April 2006 "Code of equal opportunities between men and women, pursuant to Article 6 of Law no. 246 of 28 November 2005".

For any matters not covered by this Recruitment Announcement, reference should be made to "[Procedure for the recruitment of human resources at the Fondazione Edmund Mach](#)".

Original signed by
dr. Maurizio Bottura
Acting General Director
Edmund Mach Foundation