



## Job offer Royal Military Academy - Patrimony



### **Research scientist/engineer (M/F/X)** for the detection, sampling and sample preparation laboratory (DLD-DSS) of the Belgian Ministry of Defence **Project “EDF-TeChBioT”** Publication: 21 DEC 23

## Job description and associated tasks

In the framework of an EDF research project focusing on the development of a universal detection technology based on ion mobility spectrometry (IMS) with optional gas chromatographic pre-separation (GC) for enabling fast detection and identification of non-volatile biological and low-volatile chemical agents, we are looking for a full-time research scientist/engineer with a degree in chemistry or a related discipline (life sciences, chemical engineering, biochemistry ...).

### Context:

The Royal Military Academy of Belgium (RMA) is a military institution responsible for the basic academic, military, and physical training of future officers and for the continuing advanced training of officers during their active career in the Belgian Defense department (<https://www.rma.ac.be>). It is fully recognized as a university, fulfilling the same criteria as civilian universities. The Royal Military Academy is also conducting scientific research at university level for projects funded by the Belgian Defense department or external sources.

The successful candidate will be integrated in the detection, sampling and sample preparation laboratory (DLD-DSS) of the Belgian Ministry of Defense. DLD (Defense laboratories) is an organization with a high level of expertise in the fields of CBRN (Chemical, Biological, Radiological, and Nuclear) defense, petroleum products and textiles. DLD's core business consists in providing technical and scientific support. In this regard, the DSS lab offers specific knowledge and expertise in different detection technologies and sampling procedures. The lab performs sampling missions in the context of prevention, CBRN, environment, ... depending on the demand. This both domestically as in operational theater.

The successful candidate will work within the DLD-DSS team under the supervision of the Head of the laboratory, and in close collaboration with various partners in Europe. This person will conduct scientific research at university level on a project entitled “Surveillance and Reconnaissance Techniques for Chemical & Biological Threats: TeChBioT”.

### Study:

The project “TeChBioT” aims to develop a customised, miniaturized, low cost and field deployable device with sophisticated Artificial Intelligence (AI) and advanced Deep Learning (DL) techniques to enable fast detection and identification of non-volatile biological warfare agents (BWA), low-volatile chemical warfare agents (CWA) and toxic industrial chemicals (TIC). Benchmarking tests of this device will take place in operational military laboratories.

More information about the project: <https://techbiot.eu/>

## Main Tasks

The successful candidate will be, in cooperation with his/her colleagues and partners, responsible for designing, undertaking and analysing laboratory-based experiments.

The successful candidate will:

- Execute research activities, device validation and benchmarking tests according to the tasks of the project.
- Select corresponding chemical warfare agent simulants to validate the device.
- Develop test protocols and perform experiments and laboratory analyses to validate the device in compliance with established procedures.
- Select proper scenarios for the validation campaign using a mobile platform.
- Monitor experiments, record, analyse and draft deliverables reports.
- Write research papers, reports, reviews, and summaries. The candidate is expected to publish the relevant results in the scientific literature while taking the industrial valorisation of these results into account.
- Prepare research proposals and funding applications.
- Monitor laboratory work to ensure compliance with set standards.
- Supervise junior staff and technicians.
- Set up, operate, calibrate, clean, and maintain laboratory instruments and equipment.
- Manage and control the equipment, specific infrastructure and consumables required to perform the tests in accordance with current standards (prepare and follow-up orders, calibrations, repairs, maintenances, technical data sheets, updates).
- Ensure the strict respect of quality and safety rules.
- Comply and respect the procedures concerning:
  - waste management
  - transport, storage, use and evacuation of chemicals
  - purchase of goods and services
- Perform the different missions and tasks in collaboration with the Technical responsible and the Head of the laboratory.

## Required skills

### Technical skills

- The applicant shall have a Master degree in chemistry or a related discipline (life sciences, biomedical sciences, (bio)engineering, ...).
- Theoretical knowledge and practical experience in analytical techniques
- Knowledge of gas chromatography, ion mobility spectrometry and/or mass-spectrometry is an added value.

### Personal skills

- You conduct scientific research in an independent and upright way within a multidisciplinary environment.
- You have a proactive attitude and perform your tasks with precision and commitment.
- You are flexible.
- You have good oral and written communication skills.

## Other skills

- The applicant shall have good knowledge of English (oral / written).
- French/Dutch bilingualism is an asset, as the project will take place in a multicultural environment.
- Microsoft Office™ (mainly Word, Excel and PowerPoint).

## Specific requirement

- The researcher may be exposed to classified information and will therefore have to obtain the required security clearance. The candidate must consent with the background check required to obtain this clearance, which will be executed by Belgian Defense.

## Application

You will be working in a military environment. That is why everyone is expected to undergo a security verification. Please add to your application the filled-out document that is attached to the job description: <http://www.rma.ac.be/nl/aanvraag-veiligheidsverificatie>

Send by email:

- a motivational letter
- a CV
- a scan of your ID card (both sides)
- the filled out security document

to Mr Benoît Augustyns ([Benoit.Augustyns@mil.be](mailto:Benoit.Augustyns@mil.be)) and to Mrs Helena BRUYNINCKX ([erm-deao-rsw@mil.be](mailto:erm-deao-rsw@mil.be)).

Please clearly mention the reference of the project: **“TeChBioT – DLD-DSS”**.

Application deadline: **25<sup>th</sup> January 2024**.

The interviews will take place in **Quarter Maj Housiau: Martelarenstraat 181, 1800 Peutie**. The date and time of the interview will be communicated to the preselected candidates.

## Miscellaneous

### Contract

- Probable date of recruitment: from **March 2024**, in consultation with the applicant.  
Status: long-term contract with the Patrimony of the Royal Military Academy (you will not be a civil servant). To be very clear: your contract will be open-ended, but the financing of the contract will be tied to the funding project: this project will last 1 year and is supposed to be extended after, once the funding is available.
- Wage scale: class A1 (holder of a Master's degree in Science or equivalent), class A2 (holder of an Ir degree or equivalent Master's in Engineering Sciences, doctor's degree in the same area of expertise). RMA-Patrimony applies a merit-based research career track, allowing researchers to advance in wage scale based upon annual evaluations.
- Holiday pay.

## Extra-legal benefits

- Possibility to benefit from a bilingualism allowance (Dutch/French) following a SELOR test;
- End-of-year bonus;
- Free DKV hospitalization insurance. Possibility of additional affiliation for one or more persons living under the same roof: partner, child(ren) (50% of the price per additional member);
- Bike allowance / Free public transport (home-work commute);
- Free access to campus sports facilities outside working hours;
- On-campus restaurant and cafeteria with democratic prices (discount on the daily menu);
- Meal vouchers (6€/day)
- Flexible working hours within the 38-hour week;
- Teleworking possible with allowance;
- Additional holiday for all staff between Christmas and New Year;
- 26 days holiday / year from the 1st year of contract (then from 45 years: +1 day holiday every 5 years) + 3 days / year dispensation from service offered by the department;
- Advantages and interesting offers thanks to the Benefits@work card (discounts, vouchers...);
- Entitlement to services offered by the 'Office Central d'Action Sociale et Culturelle de la Défense' (OCASC): among others holiday centres, discount on travel organised by the tour operator...;
- Possibility of benefiting from the nursery funded by Belgian Defence (subject to availability).

## Work place

- **Main workplace: DLD-DSS: Martenlarenstraat 181, 1800 Peutie**
- Other workplaces (collaborative network): will be communicated to the preselected candidates
- Occasional travels abroad for scientific conferences and meeting at partner's premises.

## Points of contact

- Concerning the research project: 1Lt Jennik CALLEBAUT ([jennik.callebaut@mil.be](mailto:jennik.callebaut@mil.be))
- Concerning the recruitment modalities: Mrs Helena BRUYNINCKX ([erm-deao-rswow@mil.be](mailto:erm-deao-rswow@mil.be))
- For more information about the Royal Military Academy, see <http://www.rma.ac.be>