Unidade Militar Laboratorial
de Defesa Biológica e Química

CINAMIL
MILITARY ACADEMY RESEARCH CENTER

Research & Development by Military Laboratory Unit of Biological and Chemical Defense

(Military Health Service)

61th meeting of the Implementation Group for the

European Initiative for the exchange of young officers inspired by Erasmus

LoD-14 Research & Development.

MAJ Pharmacist Pedro Neto
February 13, 2024

EXÉRCITO PORTUGAL

Ao serviço dos Portugueses

Unidade Militar Laboratorial
de Defesa Biológica e Química

Military Laboratory Unit of Biological and Chemical Defense (Portuguese Army)

Biological Defense Bromatology	Chemical Defense Toxicology

Staff:
Veterinaries
Veterinary nurses
Biologists

+

Staff:
Pharmacists
Chemical Engineers
Chemists

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Military Laboratory Unit of Biological and Chemical Defense (Portuguese Army)

Fixed Lab Component

Operational Component

R&D

Lab

Op

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Unidade Militar Laboratorial
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Priorities of Research and Development

Decontamination

Robotics

Protective Equipment

Occupational Health

Sensors

Information Systems

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Biofriendly Decontamination of Chemical Warfare Agents (EnzIL)

Decontamination

FACULDADE DE FARMÁCIA
Universidade de Lisboa

NATO OTAN
Science for Peace and Security (SPS) Programme

UNIVERSITY OF HELSINKI

Mongi Ben Hamida National Institute of neurology - Tunis

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Unidade Militar Laboratorial
de Defesa Biológica e Química

Biofriendly Decontamination of Chemical Warfare Agents (EnzIL)

Decontamination

OBJECTIVE: Create a new, efficient, competitive, feasible technology for the decontamination of chemical warfare agents from the atmosphere and porous surfaces

Ionic Liquid based decontaminant with enzymatic oxidation

Vs

RESULTS: Ionic Liquid based decontaminants are more efficient and less toxic

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UAV for Indoor Reconnaissance and Detection of Radiation (Indoor-RAD)

Robotics & Sensors

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apa
agência portuguesa do ambiente

OPTIMAL DEFENCE

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de Defesa Biológica e Química

UAV for Indoor Reconnaissance and Detection of Radiation (Indoor-RAD)

Robotics & Sensors

OBJECTIVE: Develop UAVs for reconnaissance and radiation detection inside buildings and avoid exposing operators to high levels of radiation

EXPECTED RESULTS: Information obtained from UAV reconnaissance makes it possible to spot the locations of radiation sources as well as the level of radiation being released

Essential for planning the action of teams entering the contaminated area

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Unidade Militar Laboratorial
de Defesa Biológica e Química

Multilayer Solutions for Active Protection against CBRN Threats (PluriProtech)

Protective Equipment

Fibrenamics

TINTEX
NATURALLY ADVANCED

PORTUGAL 2020

Latinz group

CENTRE OF BIOLOGICAL ENGINEERING

SCIENCENTRIS
From Knowledge to Market

Unidade Militar Laboratorial
de Defesa Biológica e Química

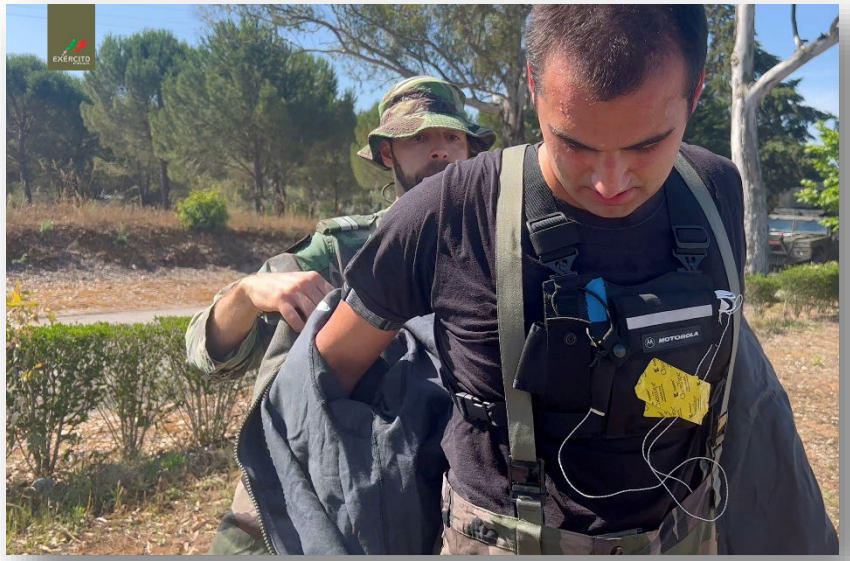
Multilayer Solutions for Active Protection against CBRN Threats (PluriProtech)

Protective Equipment

OBJECTIVE: Develop a CBRN protective suit of higher quality than that currently used by the armed forces of NATO countries

Fabrics impregnated with active nanoparticles capable of destroying chemical agents

RESULTS: Protective suit produced according to NATO standard AEP-38 and subjected to extensive field tests



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Theater of Operations Toxicology (ToxiTOp)

Occupational Health

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FACULDADE DE FARMÁCIA
Universidade de Lisboa

Unidade Militar Laboratorial
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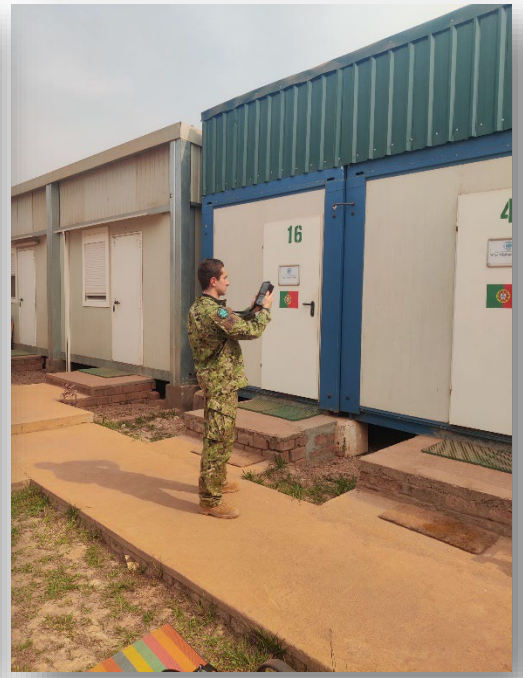
Theater of Operations Toxicology (ToxiTOp)

Occupational Health

OBJECTIVE: Study exposure to environmental and occupational contaminants of military personnel deployed in a Theater of Operations with chemical risks

EXPECTED RESULTS: Surveillance and procedures implementation program that promote the health and operational capacity of deployed military personnel, ensuring the fulfillment of the mission



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Unified Platform for CBRN Accident Scenario Management (UPCAST)

Information Systems

TEKEVER

TÉCNICO LISBOA

PORTUGAL 2020

Instituto_Nacional de Saúde
Doutor Ricardo Jorge

IPMA

INEM

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de Defesa Biológica e Química

Unified Platform for CBRN Accident Scenario Management (UPCAST)

Information Systems

OBJECTIVE: Create a digital platform for CBRN scenario information management

RESULTS: Digital application, with electronic chain of custody, tested in CBRN training exercises

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Ao serviço dos Portugueses

Financing Sources

EUROPEAN DEFENCE AGENCY

NATO OTAN

EUROPEAN UNION
EUROPEAN DEFENCE FUND

SEVENTH FRAMEWORK PROGRAMME

HORIZON EUROPE

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PORTUGAL 2030

fct Fundação para a Ciência e a Tecnologia

Strategic Partnerships

CapTech
CBRN and Human Factors

EUROPEAN DEFENCE AGENCY

R&D Projects

SGM for Investigation of Alleged Use of CB Weapons

Training and Exercises

International Committee of Military Medicine

icmm cimm

R&D Projects

CPLP Military Health Forum

R&D Projects and Exercises

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QUESTIONS

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