Spotlight News

Biotechnological Innovation for 21st-Century Defense

Sandra Gusi Martínez: Disruptive Science in the Service of Global Security

08'oct.'25.- Sandra Gusi Martínez, a researcher at the **National Institute for Aerospace Technology** (**INTA**), has made a strong entrance into the field of biotechnology applied to defense.

Her work integrates disciplines such as molecular biology, immunology, and environmental engineering in highly specialized projects aimed at detecting and neutralizing **CBRN** (chemical, biological, radiological, and nuclear) threats. In 2024, her project proposal "**E-BEAD**" —based on the use of electrogenic bacteria to detect chemical pollutants and biological agents— was awarded by NATO's Science and Technology Organization. This recognition is reserved for initiatives with clear transformative potential.

Sandra has developed her training in environments of scientific excellence such as the laboratories at the **"La Marañosa" Campus**, and internationally at the University of Oxford. She represents a new generation of scientists committed to

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responsible innovation, sustainability, and global security.

Recently, she was honored with the “Women, Engineering and Defense” award at the 2025 edition of FEINDEF, consolidating her role as a leading figure in the scientific and technological field.

That is why, through the interview conducted by the Scientific Culture, Communication and Public Relations Area, we delve with her into the key aspects of her research, the strategic impact of her findings, and her vision of the role of science in 21st-century defense.

MORE INFORMATION

The full interview can be viewed and downloaded at the following link:

https://youtu.be/AY4GfiqidrA

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