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Fundación MEDINA, Spain

Exploiting bacterial diversity for the discovery of novel natural products

MEDINA is a non-profit research center focused on the discovery of novel drug candidates from microbial natural products and one of the richest and most diverse microbial collections currently in expansion. This microbial collection harbors more than 116.000 strains from a wide diversity of environments and is at the origin of our collaborative discovery research programs. One of our objectives is to enrich these collections with new and diverse strains from untapped environments, and to continue to exploit the existing microbial collection through culture-based approaches in order to succeed in maximizing the chemical diversity of our libraries. Our research in microbial natural products is focused on the isolation and identification of novel microbial species with the potential to produce novel compounds with biological activity to be developed as potential new leads to respond to unmet medical needs. Despite the efforts to diversify the microbial sources, it is well known that only a small fraction of microbial species have been investigated, and that a large diversity of microbial sources remains largely underexplored, opening new avenues for the isolation of new strains previously not cultivated. MEDINA is also exploring novel approaches to mine the so-called microbial dark matter and is isolating and domesticating in laboratory culture conditions new taxa previously reported only from metagenomic libraries. A selection of success cases that support the approaches developed in our center will be discussed.

Biography

Olga Genilloud holds a PhD in Chemistry, Biochemistry and Molecular Genetics from the Universidad Complutense de Madrid and has extended research experience in microbial natural products in the academic, clinical and big pharma R&D environments. Currently, she is the Scientific Director of the non-profit research organization Fundación MEDINA established from the former MSD-Spain R&D programs, she leads the discovery programs and the international collaborations with academic centers, large pharma and biotechnology companies. As recognized leader in her field, she has an extended list of more than 100 publications in international peer-review journals and book chapters, and 17 international patents.

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