

ENCONTRO SCIENTIA

May 08

12h00

Room 2.2.14, Ciências ULisboa

The great diversity of the Rare Plasmid Biosphere

Bacterial communities are known for their highly uneven distribution of abundance, with a few dominant taxa coexisting with a large number of low abundance species that perform essential ecological functions. Does this mean plasmids, ubiquitous in bacteria, follow the same pattern?

After analysing a large plasmid dataset of more than 50,000 plasmids, we found that they do indeed follow a similar pattern. However, the distribution of plasmids does not follow directly from the distribution of hosts. We found that most plasmids are organised into a large number of rare plasmid taxonomic units, which contain a much higher diversity than the common taxonomic units, including virulence genes. These results highlight the need for future studies to include these rare plasmids to fully explore their functional potential.



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