1. The heat-shock chaperone system DnaK-DnaJ-GrpE may have a still unknown function for cyclic lipopeptide biosynthesis at low temperatures, which merits further investigation.

   This Thesis

2. The location and the nature of the Integration Host Factor regulatory elements in the promoter region of the cyclic lipopeptide biosynthetic gene suggest transcriptional competition with different $\sigma^{70}$ promoters under different growth conditions.

   This Thesis

3. It can be hypothesized that putisolvins, through their ability to reduce the surface tension at interfaces be involved in the survival and spreading of the producing bacterial cells in the rhizosphere.

   This Thesis

4. Cyclic lipopeptides have various natural roles that may be unique to the physiology and ecology of the producing micro-organism, and which are illustrated by the diversity of their structure and of the mechanisms of their biosynthesis.


5. Our perception of bacteria as unicellular life forms is deeply rooted in the pure-culture paradigm.

6. Prophage-mediated cell death benefits a subpopulation of surviving cells and has an important role in subsequent biofilm differentiation and dispersal.

7. Quorum sensing depends on the development of diffusible chemical signal molecules which are used not only to attract mates but also to distinguish friend from foe, to build biofilm “cities”, recruit armies, organize division of labour, protect or infect higher organisms and even to commit mass suicide for the good of the bacterial community.

8. L’ignorance vaut mieux qu’un savoir affecté.
   Ignorance is better than an influenced knowledge.
   Nicolas Boileau, (1669) *Art poétique*

9. A large part of the biology of the 20th century has consisted of an attempt to reduce the biological phenomena to the behaviour of molecules, for instance the regulation of one gene by one protein and the linear disposition of genes on a chromosome. Although this approach has yielded considerable successes, a given biological function cannot be attributed to a unique molecule. On the contrary, most of the biological functions occur due to complex interactions between many components and networks.


11. Solitude can be beautiful ... when we have close to us someone to express it.

12. Dans le champs de l’observation, le hasard ne favorise que des esprits préparés.
   In the field of observation, chance favors only the prepared mind.
   Louis Pasteur, (1854) *Discours à la nouvelle Faculté des Sciences de Lille.*

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