# Genetic regulation of phenazine-1-carboxamide synthesis by Pseudomonas chlororaphis strain PCL1391

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# Stellingen

behorend bij het proefschrift

## Genetic regulation of phenazine-1-carboxamide synthesis by *Pseudomonas chlororaphis* strain PCL1391

Increasingly complex technology can result in producing huge amounts of unusable data.

*Chapter 3*

Pip is a key in the switch between primary and secondary metabolism of *Pseudomonas chlororaphis* PCL1391.

*Chapter 5*

PsrA/RpoS/Pip represent an important regulatory cascade of quorum-sensing and phenazine synthesis under nutrient limitation and other stress conditions.

*Chapters 2 and 5*

Members of the TetR/AcrR family are key players in secondary metabolism and particularly in stress resistance in *Pseudomonas* species.

*Chapters 1, 4 and 5*

Mutations in *rpoS* or *hfq* affect the functioning of *Pseudomonas* species less than that of *Escherichia coli*. This could be explained by the differences between the two species concerning the regulation of *rpoS*.

*Chapter 2; Sonnleitner* et al. *(2003)* Microb. Pathog. ***35*** *(5) :217-228; Venturi (2003)* Mol. Microbiol. ***49*** *(1): 1-9.*

The factors determining whether sRNAs and Hfq induce the blocking of the ribosome or induce mRNA degradation could involve structural elements of the sRNA/mRNA complex, as could be the case for siRNA and stRNA in eukaryotes.

The complexity of alternative splicing, post-transcriptional modifications of mRNA and the existence of distant regulatory regions in the genome raise the need for a new definition of the gene.

*Fox Keller, The century of the gene (2000), Harvard University Press, Cambridge, Mass, USA.*

Recent genomics results have brought new insights on the divisions between different classes of microbes, such as viruses and bacteria, which brings new uncertainties to the main issue in biology, i.e. the definition of life.

*Ward and Fraser (2005)* Curr. Opin. Microbiol. ***8*** *(5): 564-571*

Genomics have not answered as many scientific questions as was promised by scientists.

There are two important limits to estimating the intelligence of animals: defining intelligence and incorrect observation of animals.

If global warming can be seen as a war between mankind and nature, it is likely to only represent one more battle for nature, which will survive in spite of its wounds.

With complexity of science increasing every day, specialized and competent experts are required more and more frequently to guide society, from editorial boards to courts of justice.

Science should focus on choosing the best approaches, not the easy ones.