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Functional characterisation and cell wall interactions of peptidoglycan

Steen, Anton

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**Functional characterisation and cell wall
interactions of peptidoglycan hydrolases of
*Lactococcus lactis***

Anton Steen



The work described in this thesis was carried out in the Molecular Genetics group of the Groningen Biomolecular Sciences and Biotechnology Institute (Faculty of Mathematics and Natural Sciences, University of Groningen, the Netherlands).

RIJKSUNIVERSITEIT GRONINGEN

**Functional characterisation and cell wall interactions of
peptidoglycan hydrolases of *Lactococcus lactis***

Proefschrift

ter verkrijging van het doctoraat in de
Wiskunde en Natuurwetenschappen
aan de Rijksuniversiteit Groningen
op gezag van de
Rector Magnificus, dr. F. Zwarts,
in het openbaar te verdedigen op
vrijdag 23 december 2005
om 13:15 uur

door

Anton Steen

geboren op 11 maart 1974
te Assen

Promotores : Prof. Dr. O.P. Kuipers
Prof. Dr. J. Kok

Co-promotor : Dr. G. Buist

Beoordelingscommissie : Prof. Dr. L. Dijkhuizen
Prof. Dr. J. Hille
Prof. Dr. W.M. de Vos

ἄνδρα μοι ἔννεπε, Μουσα, πολυτροπον, ὅς μαλα πολλὰ
πλαγχθῆ, ἔπει Τροίης ἱερὸν πτολιεθρον ἔπερσε
πολλῶν δ' ἀνθρώπων ἴδεν ἄστεα καὶ νοὸν ἔγνω,
πολλὰ δ' ὃ γ' ἐν ποντῷ παθεν ἄλγεα ὄν κατα θυμόν

bezing mij, o Muze, de vindingrijke man die zeer veel
gezworven heeft, nadat hij de heilige burcht van Troje verwoest had
van veel mensen heeft hij de steden gezien en de gezindheid leren kennen
en veel smarten heeft hij geleden op zee en in zijn hart

Homeros, Odyssee Prooimion I:1-4 +/- 800 BC

Paranimfen: Marc Steen

Wietske Pool

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