

# Characterization of FarR as a highly specialized, growth phase-dependent transcriptional regulator in *Neisseria meningitidis*.

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## Abstract

Transcriptional regulators play an important role for the survival of *Neisseria meningitidis* within its human host. We have recently shown that FarR acts as transcriptional repressor of the adhesin *nadA* in *N. meningitidis*. Here, we examined the FarR regulon by microarray analyses, qRT-PCR, and electrophoretic mobility shift assays, revealing that FarR is a highly specific repressor of *nadA*. We demonstrate by reporter gene fusion assays that alterations of the FarR binding site within the *nadA* promoter are sufficient to induce transcription of *nadA*. Furthermore, *farR* expression is growth phase-dependent. The highest transcription rate was observed in the late-exponential growth phase of meningococci. Upon contact with active components of the complement system in normal human serum, expression of *farR* is slightly downregulated. Concluding, we present FarR as an exquisitely specialized, growth phase-dependent, possibly complement-responsive transcriptional regulator in *N. meningitidis*.

## Involved units

[Fungal Septomics Oliver Kurzai](#) [Read more](#)

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