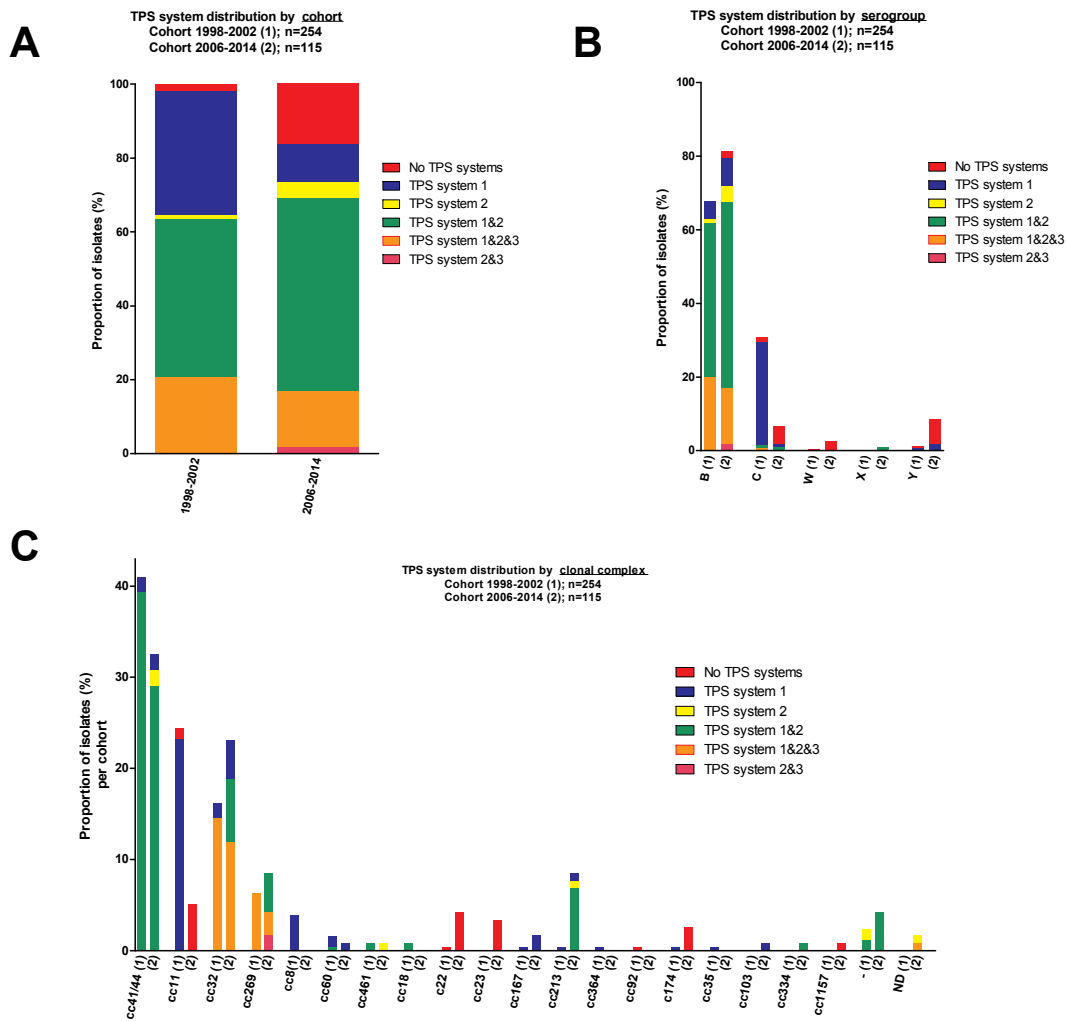
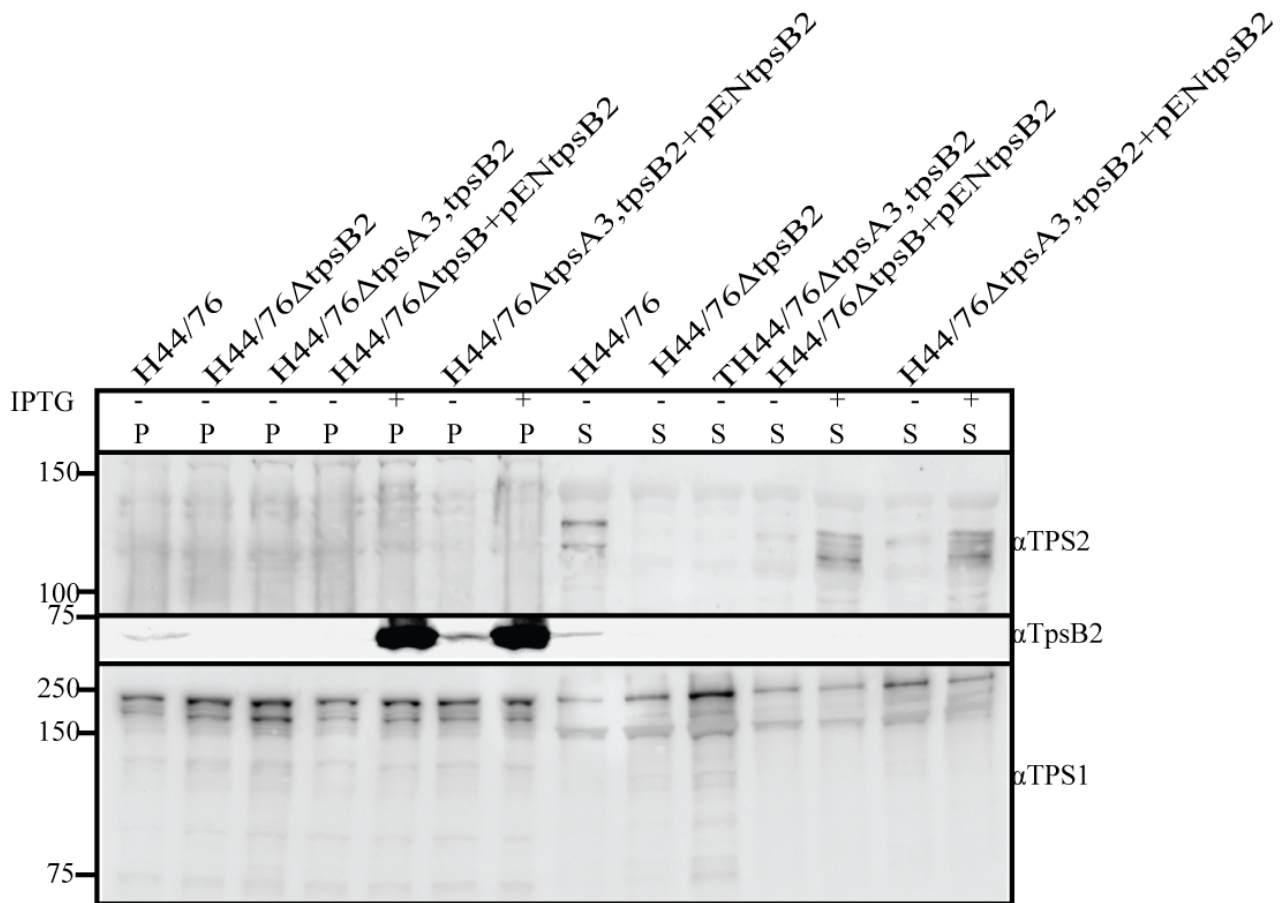


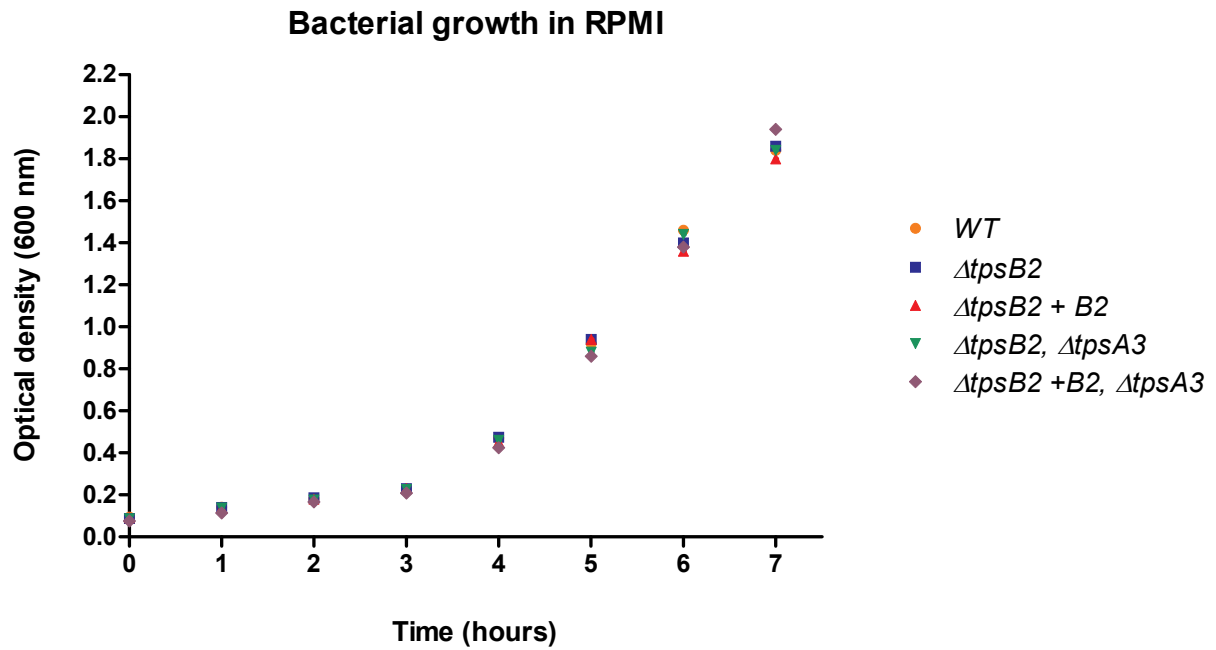
# TPS system distribution by cohort, serogroup and clonal complex



**Supplementary Figure 1. TPS system distribution by cohort, serogroup and clonal complex.** The proportion of TPS system distribution by cohort (A), serogroup (B) and clonal complex (cc; C) in both cohorts is shown. ND = not determined. Each isolate could only contribute to one of the 6 TPS distribution categories.



**Supplementary Figure 2. Western Blot analysis of TpsA proteins.** Immunoblots of whole cell lysates (P) and concentrated culture supernatants (S) of cultures of H44/76, H44/76 ΔtpsB2, H44/76 ΔtpsB2/tpsA3, H44/76 ΔtpsB2 with pEN-TpsB2 and H44/76 ΔtpsB2/tpsA3 with pEN-TpsB2, the latter grown in the presence or absence of 0.5 mM IPTG to induce expression of the tpsB2 gene, as indicated above the lanes. The blots were incubated with αTPS2 (top), αTpsB2 (middle), and αTPS1 (bottom) as indicated on the left. The blots show secretion of the TPS1 system in all strains, indicating that it was not affected by the knock-out mutations in systems 2 and 3. Furthermore, the TpsB2 is only present in the wild-type and complemented strains. When present it resulted in the secretion of ~145 and ~130 kDa TpsA protein variants of systems 2 and 3.



**Supplementary Figure 3. *N. meningitidis* growth curve in RPMI.** Growth of *N. meningitidis* H44/76 wild type (WT) and several TPS system 2&3 knock-out and complemented knock-out strains in RPMI medium.

**Supplementary table 1. TPS system primers**

Primer name	Target gene	DNA sequence
LR1	<i>tpsB1</i>	AATTTTTTTCCTGCTCCATGTCTGT
LR2		TTAGAAACTGTAATTC AAGTTGAAGCCGTAA
tps1	<i>tpsA1</i>	ATGAATAAAGGTTTACATCGCATTATCTTTAGT
tps2		AAGCATTTAATACCGTGGTAGCTGGGCGA
LR6	<i>tpsB2</i>	TCCCCCAACCCTGCCGAAATCCG
LR8		TTAAAACGTATAGCCTACCTGAAAACCGCT
tps4	<i>tpsA2a</i>	ATGGAATAAAACTCTCTATCGTGTAATTTTCAA
tps5		AGTGTTTTGAATCGACTGACTGTGAATT
tps9	<i>tpsA2b</i>	TATGAACCGCACCCCTGTACAAAGTTGT
tps10		GCCGGCAGATACCAAATCCAATGCT
tps7	<i>tpsA3</i>	ATGAACAAGCGATGCTACAAGGTTATCT
tps8		GCGTCCGGCTTCAATATCGCGT

**Supplementary table 3. Summary of TPS system distribution in all available cohorts**

	Isolates with TPS1	Isolates with TPS system 2 and/or 3
Van Ulsen et al. (invasive disease isolates)(6) <sup>a</sup>	72/88 (82%)	41/88 (47%)
Schmitt et al. (carrier isolates)(7) <sup>b</sup>	485/632 (77%)	328/822 (40%)
Current study		
1998-2002 cohort	246/254 (97%)	162/254 (64%)
2006-2014 cohort	89/115 (77%)	84/115 (73%)

<sup>a</sup>Positive isolates are redefined as stated in the material and methods section of this article.

<sup>b</sup>Positive isolates are defined as giving a positive result in the dot plot with specific probes for *tpsA1*, *tpsA2a*, *tpsA2B* or *tpsA3* genes (the corresponding information on the *tpsB* status of each strain was not reported).