

Trichomonas vaginalis and Mycoplasma genitalium: age-specific prevalence and disease burden in men attending a Sexually Transmitted Infections clinic in Amsterdam, The Netherlands

Charlotte van der Veer¹, Martijn S. van Rooijen^{1,2}, Henry J. C. de Vries^{1,2,3}, Michelle Himschoot¹, Sylvia M. Bruisten¹

1. Public Health Service Amsterdam, Amsterdam, the Netherlands;
2. STI clinic, GGD, Amsterdam;
3. Department of dermatology, Amsterdam Medical Centre, University of Amsterdam.

✉ cvdveer@ggd.amsterdam.nl

Background

- Men are not routinely tested for *Trichomonas vaginalis* (Tv) and *Mycoplasma genitalium* (Mg) in the Netherlands.
- Therefore, very little is known about the prevalence and/or role of Tv and Mg in urogenital complaints in the Dutch male population.

Objectives

- To describe the age-specific prevalence of Tv and Mg in heterosexual (MSW) and homosexual (MSM) men since an association with older age for Tv has been described (1).
- To look for a possible association of Tv and/or Mg with urogenital complaints in men attending a Sexually Transmitted Infection (STI) clinic in Amsterdam.
- To identify risk factors for being infected with Tv or Mg, such as: ethnicity, high-risk sexual behaviour and/or co-infections with *Chlamydia trachomatis* (Ct).

Methods

- We collected urine samples MSW and MSM who attended the STI clinic in Amsterdam from March to October 2014.
- To ensure an equal age distribution, we included approximately 300 men from each of the following age categories: <30 years old; 30 – 39 years old; 40 – 49 years old; and, >50 years old and aimed to include an equal number of MSW and MSM.
- Clinical symptom reports, HIV status and positivity for Ct were also collected.
- Urine samples were tested for Tv and Mg using molecular tests.

Results

- We included 1204 men in our study: 526 MSW and 678 MSM.
- We found an overall positivity rate of 0.5% for Tv and 3.1% for Mg.
- Age trends were observed, but they were not significant. [Table 1.](#)
- Urogenital symptoms did not associate with Tv infection. The association with Mg infection was of borderline significance. [Table 2.](#)
- Tv infection was associated with low-risk sexual behaviour and non-Dutch ethnicity. No significant associations were observed for Mg infection. [Figure 1&2.](#)
- Only one Tv/Ct and one Mg/Ct co-infections were observed.

Table 1. Age-specific prevalence of Tv and Mg in MSW and MSM.

		Overall (%)	<30 (%)	30-39 (%)	40-49 (%)	≥ 50 (%)	P-value ²
Tv	MSM	0/678 (0)	0/157 (0)	0/157 (0)	0/180 (0)	0/184 (0)	-
	MSW	6/526 (1.1)	1/144 (0.7)	1/145 (0.7)	1/122 (0.8)	3/115 (2.6)	0.235
	Total	6/1204 (0.5)					
Mg	MSM	17/678 (2.5)	2/157 (1.3)	3/157 (1.9)	4/180 (2.2)	8/184 (4.3)	0.132
	MSW	20/526 (3.8)	4/144 (2.8)	7/145 (4.8)	4/122 (3.3)	5/115 (3.2)	0.596
	Total	37/1204 (3.1)					

Conclusions & Discussion

- Tv infection was rare in MSW (1.1%) and non-existent in MSM at risk for STI in Amsterdam, whereas Mg infection was common (3.1%) and equally prevalent among MSW and MSM.
- The overall prevalence for Mg and Tv infections reported here are similar to the findings of Dutch colleagues (2).
- Tv infection remains mostly asymptomatic in men.
- Mg infection could explain up to 6% of male urogenital symptomatic cases.
- Co-infections of Tv or Mg with Ct were rare.
- Men infected with Tv tend to be older (>50 years old), are of non-Dutch ethnicity and also display low-risk sexual behaviour.
- Mg infection does not associate with age, ethnicity or sexual risk taking in men.

Table 2. Association of Tv, Mg and Ct with urogenital symptoms.

	Symptomatic (%)	Asymptomatic (%)	Odds Ratio (CI)
Tv	1/135 (0.7)*	5/1069 (0.5)	1.6 (0.2 – 13.7)
Mg	8/135 (5.9)*	29/1069 (2.7)	2.3 (1.0 – 5.1)
Ct	24/135 (17.8)	48/1069 (4.5)	4.6 (2.7 – 7.8)

* Includes a Tv/Mg co-infection.

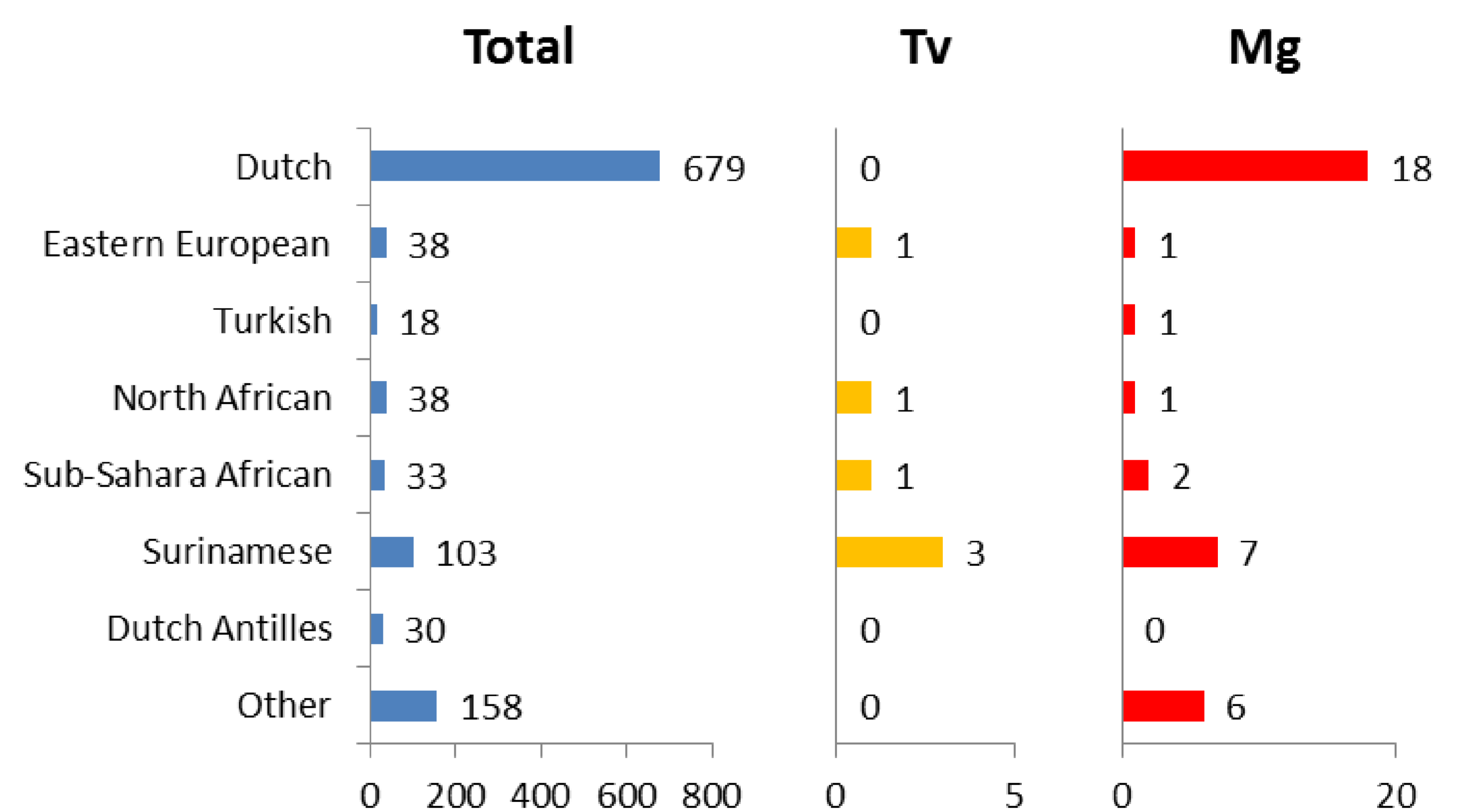


Figure 1. Ethnicities of Tv, Mg and Ct positive cases.

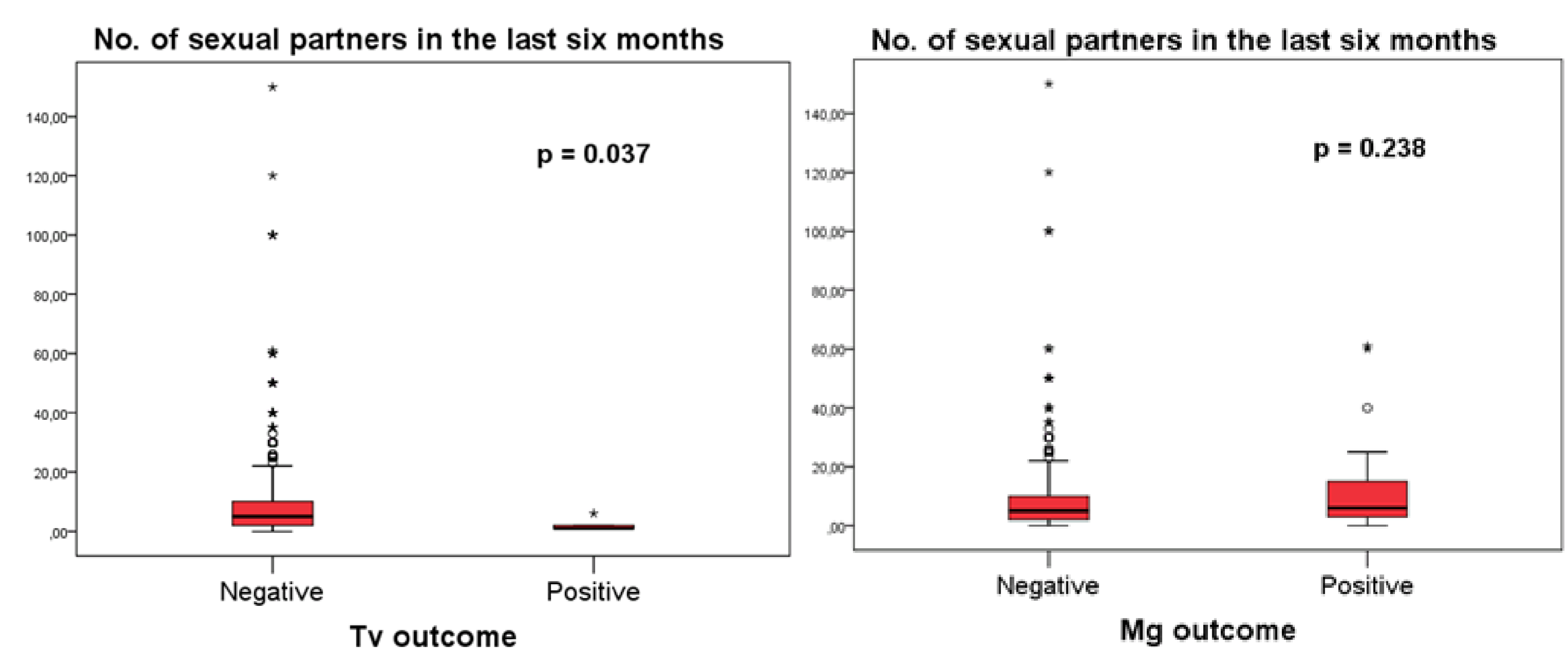


Figure 2. Number of sexual partners in the last six months reported by men who are (un)infected with Tv and Mg. Box plots represent the mean number of positive or negative cases per number of reported sexual partners in the last six months.

References

- Poole, D. N. and R. S. McClelland. 2013. Global epidemiology of *Trichomonas vaginalis*. *Sex Transm Infect* 89:418-422.
- van Alphen *et al.* unpublished data, Veldhoven, PAMM