



# Testing for *Chlamydia trachomatis* is important

Prof.dr. Servaas A. Morré, IV

- \* Institute of Public Health Genomics, Dept. Genetics and Cell Biology, Research school GROW, FHML, UM, Maastricht, NL
- \* Reference Laboratory *Chlamydia trachomatis*, RIVM, NL
- \* Visiting Professor SHUATS, Allahabad, UP, India
- \* Founder & Advisor of several SMEs (NL)



Speakers Disclosures
(Contract) Research is funded by different Industrial and pharmaceutical companies and national and international grants
Organisation on Chlamydia meetings (30th June 2023 15th Annual Amsterdam Chlamydia Meeting (AACM)) is funded by different Industrial and pharmaceutical companies and national grants
Several national (spin-off) companies have been founded which in part perform chlamydia or chlamydia related molecular and immunological diagnostics and research & microbiome research (Main focus is Infectious Disease and Host Genetics)

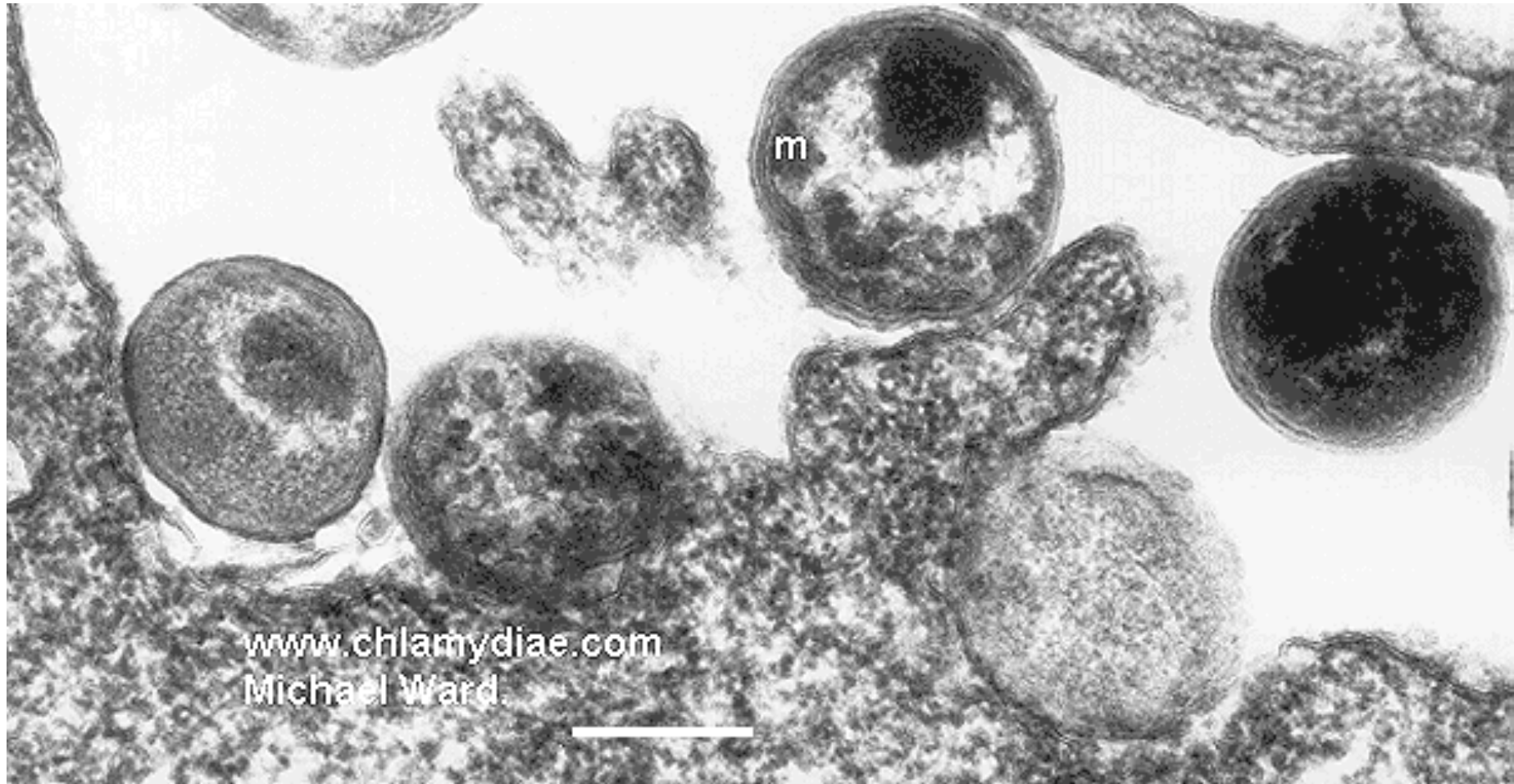




HPV  
Chlamydia  
Syphilis  
Neisseria  
Herpes

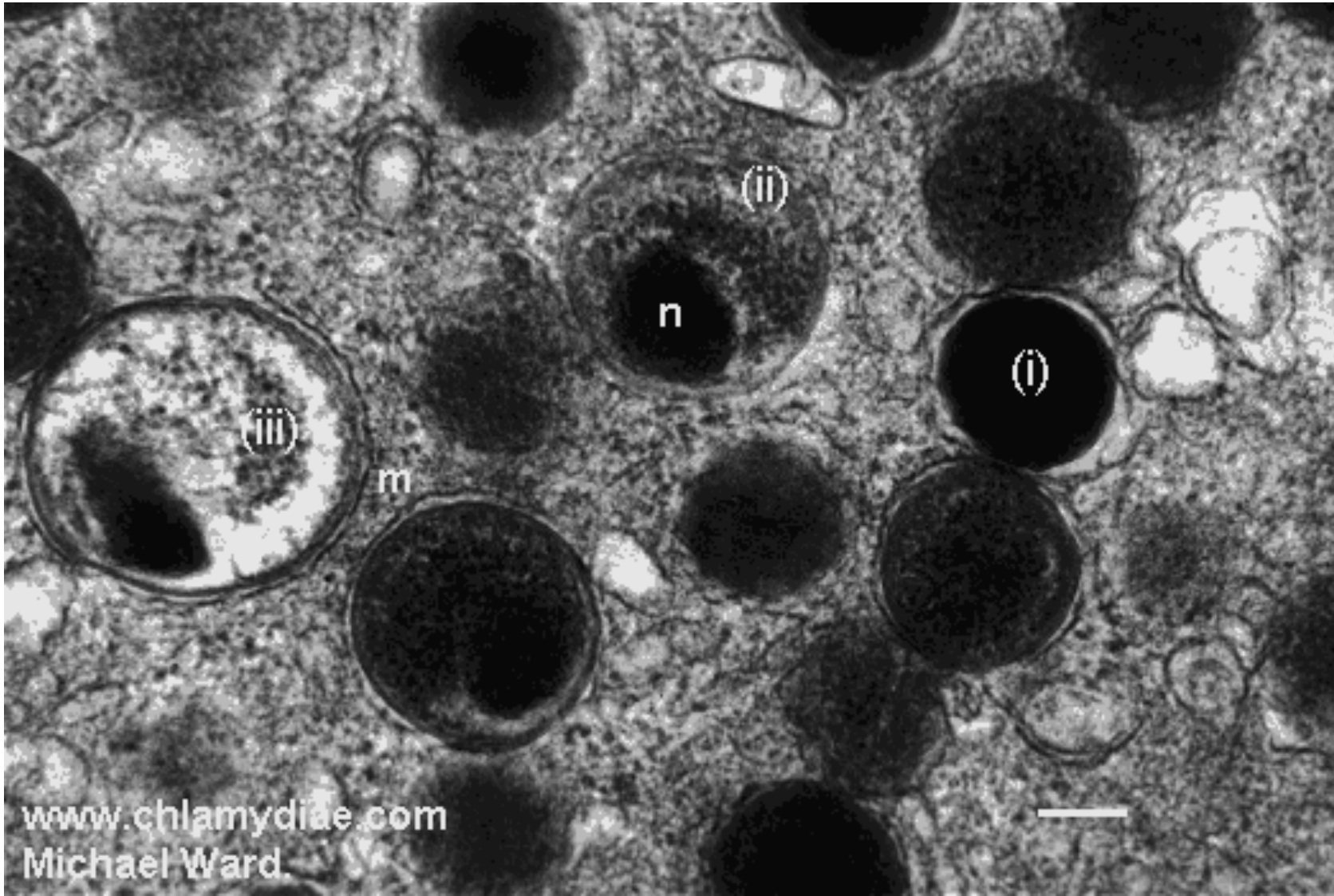


# ●●● Attachment

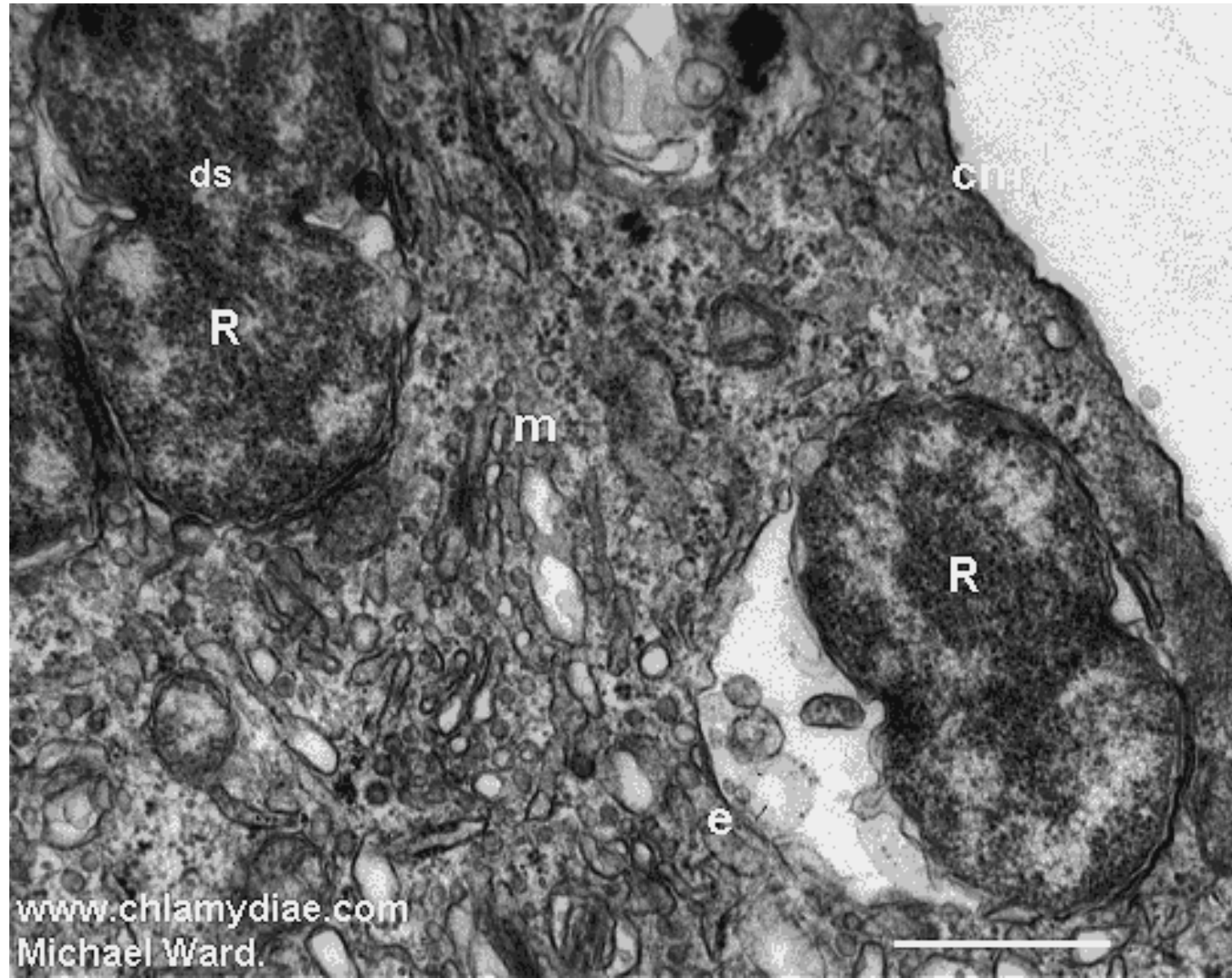




●●● Differentiation: EB to RB (3hrs)



●●● RB: Binary fission (9 hrs)





●●● RB Inclusion (15 hrs)

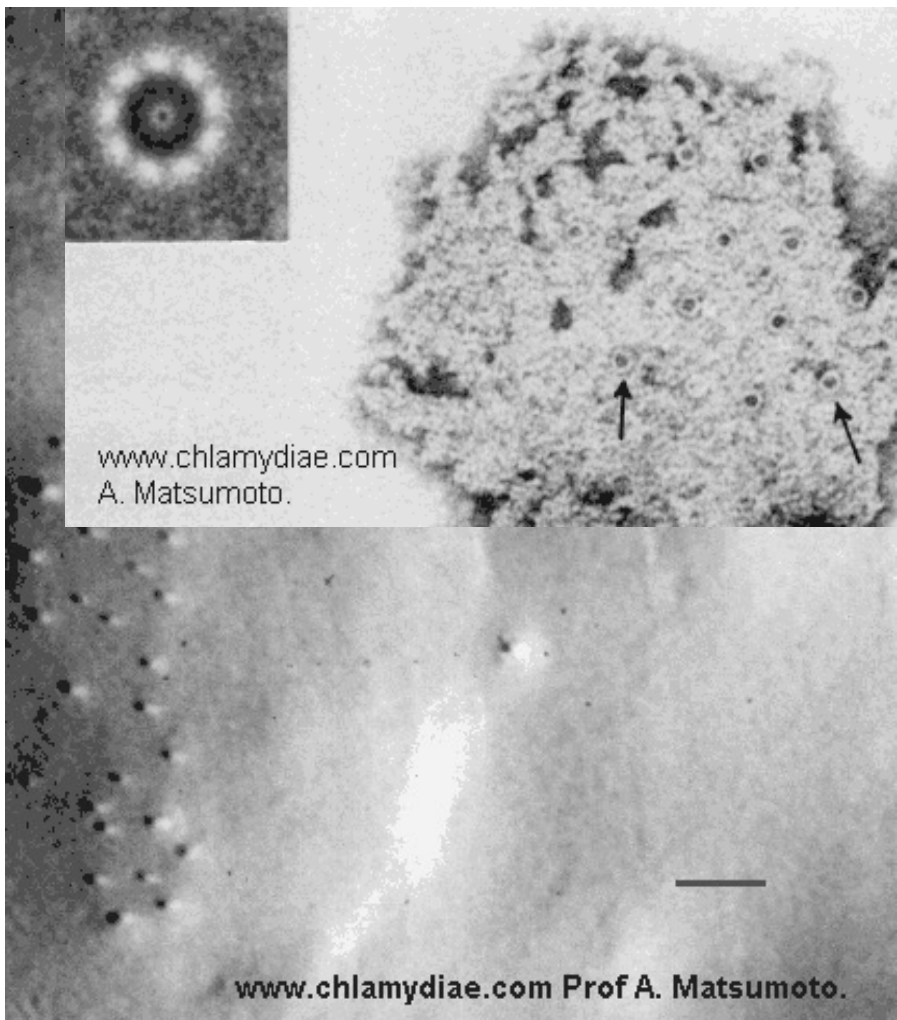
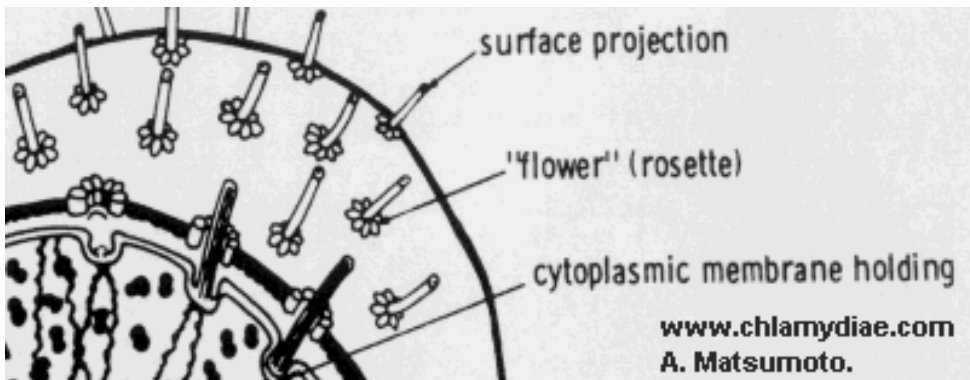
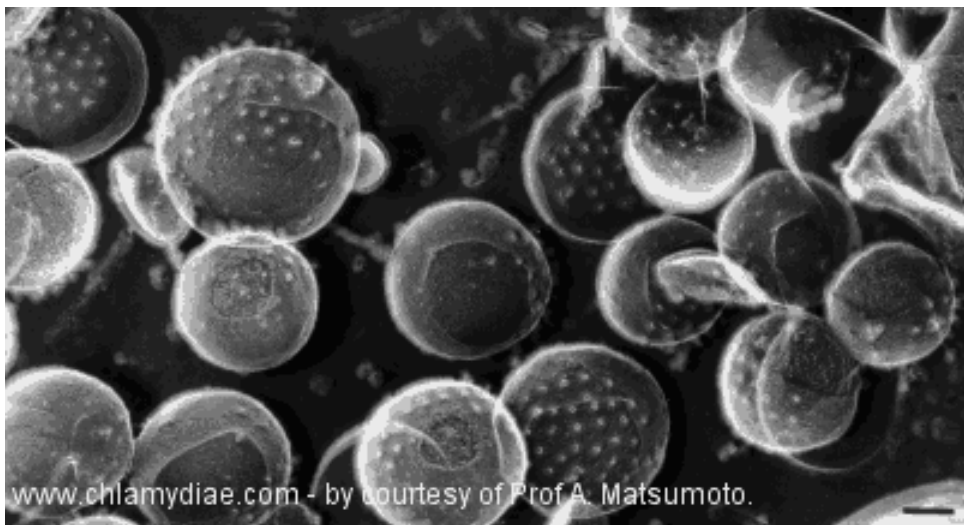


●●● Mature chlamydial inclusion (40 hrs)





# EB and RB Projections

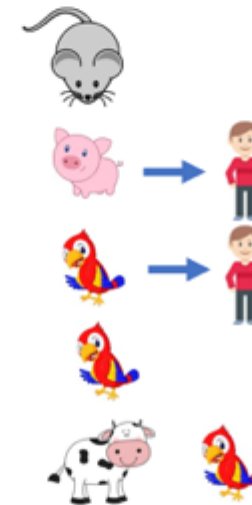




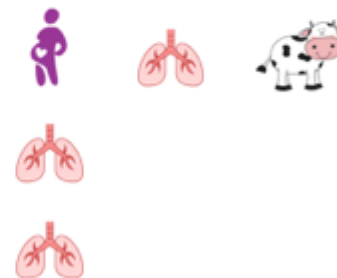
- *Chlamydia trachomatis*
- *Chlamydia pneumonia*



- *Chlamydia muridarum*
- *Chlamydia suis*
- *Chlamydia psittaci*
- *Chlamydia gallinacea*
- *Chlamydia abortus*

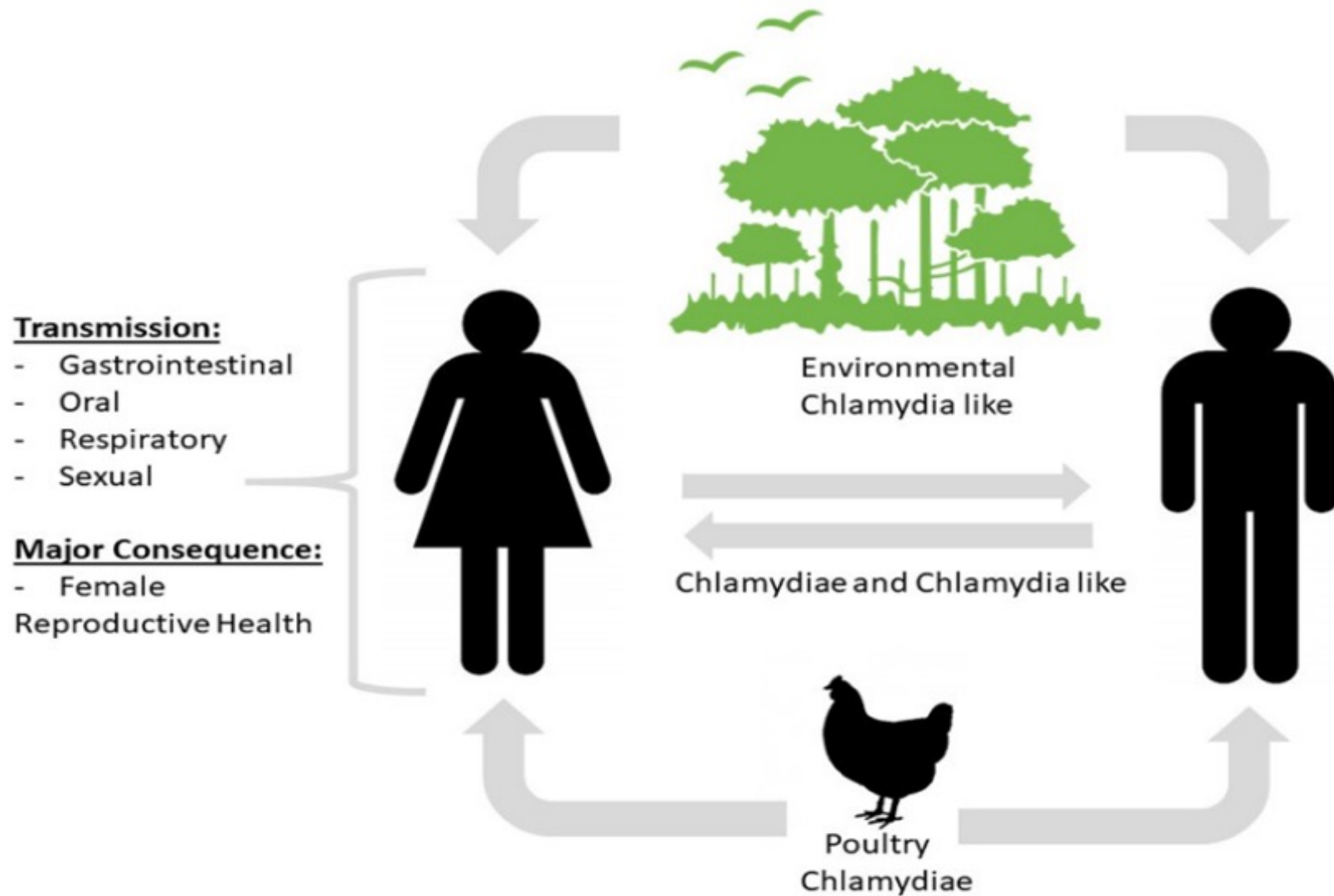


- *Waddlia chondrophila*
- *Parachlamydia acanthamoeba*
- *Simkania negevensis*





# ●●● InPoChlam: One Health concept



**Spectrum of *C. trachomatis* urogenital infections in adults and maternally related neonatal infections.**

	Men	Women	Neonates and infants
<b><u>Disease:</u></b>	urethritis epididymitis proctitis prostatitis LGV <sup>2</sup>	urethritis cervicitis endometritis salpingitis and PID <sup>1</sup> periappendicitis perihepatitis or FHC <sup>3</sup> periplenitis LGV <sup>2</sup>	conjunctivitis pneumoniae pharyngitis
<b><u>Sequelae:</u></b>	urethral stricture infertility Reiter's syndrome	ectopic pregnancy infertility Reiter's syndrome	Obstructive long disease

1. PID: pelvic inflammatory disease  
2. LGV: lymphogranuloma venereum  
3. FHC: Fitz-Hugh-Curtis syndrome





**Table. >15 year Follow-up of 1844 women with laparoscopically verified PID<sup>1</sup>**

PID		Number per year
75%	mild	0.6%
	moderate	6.2%
25%	severe	21,4%
2 PID Periods		19.5%
3 PID Periods		40.0%

**1. Weström L. et al. Sex Trans Dis 1992;19:185-192**







**Table.** Number of symptomatic *C. trachomatis* infections in the Netherlands in men and women and the sequelae

Chlamydial infections and sequelae		Number per year	Symptoms
<b>Men:</b>	Chlamydial infections	27.000	50%
	Epididymitis/proctitis	1.000	
<b>Women:</b>	Chlamydial infections	33.000	20-30%
	Endometritis	14.000	
	Salpingitis/PID	7.000	
	Tubal infertility	1.000	
	Ectopic pregnancy	300	



# ●●● Chlamydia Trachomatis and IUDs

- Women with a STI who get an IUD might get an upper genital infection
- Diagnostics for STIs is thus important
- Treatment for Chlamydia trachomatis is easy and effective
- Not all women who get an IUD have a STI risk
- Intake of your client is thus very important



## ●●● Chlamydia trachomatis and pregnancy

- At birth an infected mother can infect her newborn
- Eye and long infection most common
- Screening at pregnancy important





# ●●● Chlamydia trachomatis and pregnancy

> Reprod Health. 2021 Jun 26;18(1):132. doi: 10.1186/s12978-021-01179-8.

## **Chlamydia trachomatis, Neisseria gonorrhoea, and Trichomonas vaginalis infections among pregnant women and male partners in Dutch midwifery practices: prevalence, risk factors, and perinatal outcomes**

Eline L M Op de Coul <sup>1</sup>, Demi Peek <sup>2</sup>, Yolanda W M van Weert <sup>2</sup>, Servaas A Morré <sup>3 4</sup>, Ingrid Rours <sup>5</sup>, Chantal Hukkelhoven <sup>6</sup>, Ank de Jonge <sup>7</sup>, Birgit van Benthem <sup>2</sup>, Monique Pereboom <sup>7</sup>

Affiliations + expand

PMID: 34174905 PMCID: PMC8236142 DOI: 10.1186/s12978-021-01179-8

[Free PMC article](#)

## **Results:**

- STI were present in 2.4% of pregnant women
- Of young women ( $\leq 20$  years), 12.5% had a CT infection
- Prevalent STI during pregnancy was associated with:
  - female young age ( $\leq 20$  years vs  $\geq 21$  years)
  - female low education
  - complications with previous newborn
  - short duration of relationship
  - both parents smoking during pregnancy



## ●●● Conclusions

- Chlamydia trachomatis is the most prevalent STI
- Clinical complications for the mother and new born
- It can be transmitted if an IUD is placed
- Screening for STIs especially for CT is important

