

Article

Sorangicin A Is Active Against *Chlamydia* in Cell Culture and Vaginal Topical Antibiotic Treatment in Mice

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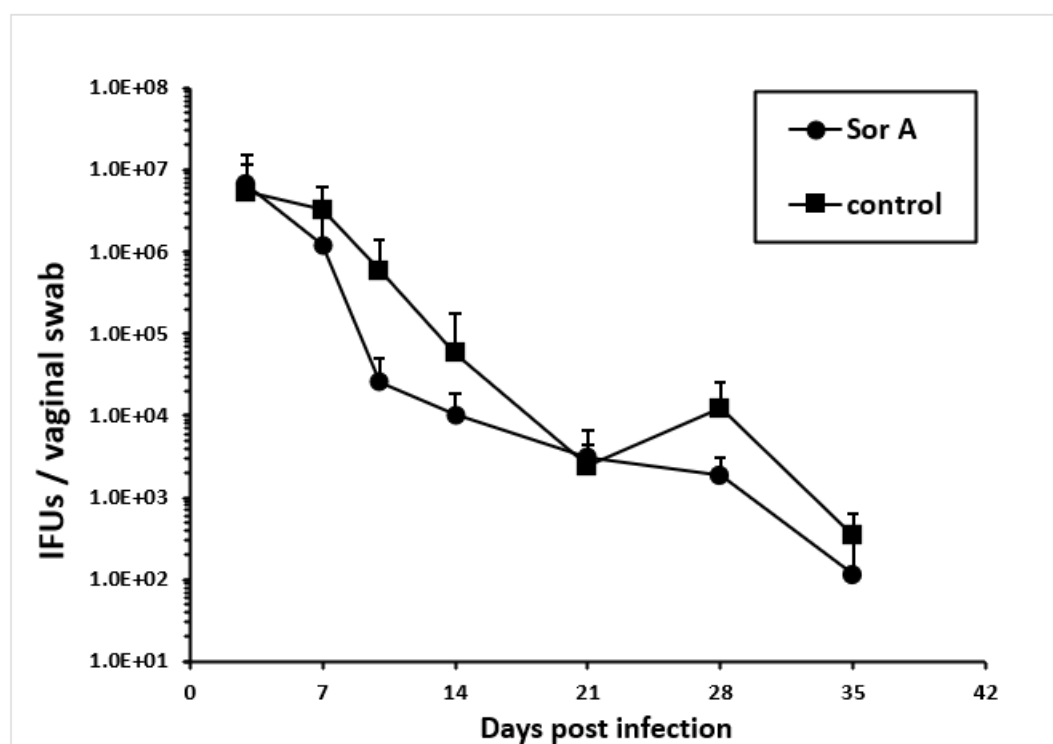
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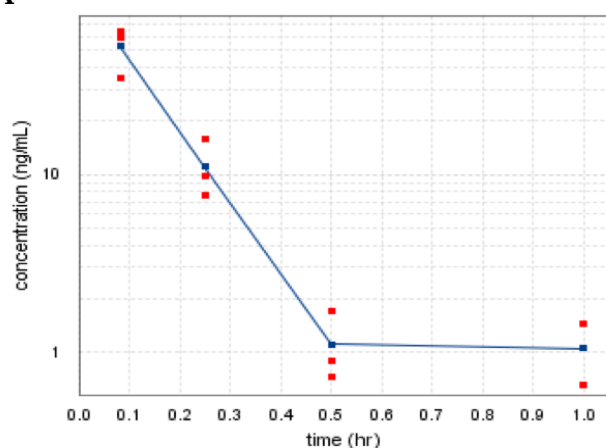
Supplementary material content:

Supplementary Figure S1, Supplementary Figure S2, Supplementary Table S1, Supplementary Table S2

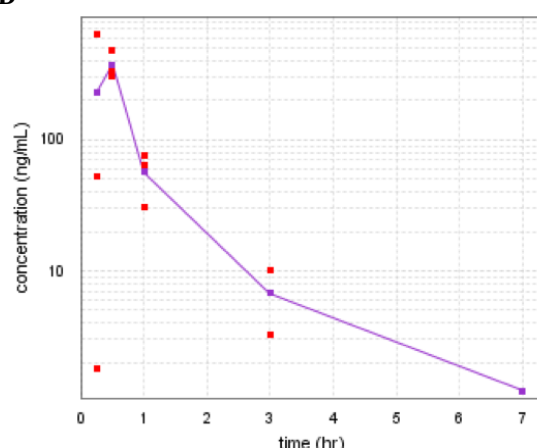


Supplementary Figure S1. Topical SorA treatment only slightly decreases the *C. muridarum* burden during the course of an established infection in a mouse model. Chlamydial shedding from the vagina established a peak at day 3 post infection but was reduced when SorA was applied topically from day 4 – 11. Application of SorA was performed twice daily using 5 mg/kg body weight was intravaginally applied in a volume of 21,4 μ l. (n=5 two-way ANOVA multiple comparisons and significances vs vehicle control, *p<0.05). Red line indicating start of treatment.

A



B



Supplementary Figure S2. Plasma levels after intravenous and intraperitoneal SorA application. In (A) 9.51 mg/kg Sor A was applied intravenously. One hour after intravenous application of Sor A, the average plasma concentration of the substance successively decreased from circa 14 ng/ml to around 1 ng/ml after half an hour and then to not detectable concentrations after another 30 minutes. (B) 46.3 mg/kg Sor A was injected intraperitoneally. After an initial increase of the plasma concentration, it decreased from a maximum plasma concentration of 120 ng/ml to below detection limit by 7 hours after application. hr: hours (n=3), red dots: individual measurements, blue dots/lines: mean values.

Supplementary Table S1. Q1 and Q3 masses for caffeine and SorA

ID	Q1 Mass [Da]	Q3 Mass [Da]	time [msec]	DP [volts]	CE [volts]	CXP [volts]
SorA	824.441	789.3	50	51	19	20
SorA	824.441	771.3	50	51	21	20
SorA	824.441	753.3	50	51	25	20
SorA	824.441	807.3	50	51	13	20
caffeine	195.024	138.0	50	60	25	14
caffeine	195.024	11.0	50	60	31	18

Supplementary Table S2: Contribution of the different models to developing sorangicin A as a new therapeutic option for the treatment of chlamydial infections.

Item	Cell culture (human)	Ex vivo fallopian tube model (human)	Systemic application (mouse)	Topical application (mouse)
Eradication of <i>C. trachomatis</i>	Achieved	Achieved	Not achieved	Partially achieved
Protection of vaginal microbiota	NA	NA	Achieved	Achieved
Protection of gut microbiota	NA	NA	Not achieved	Achieved