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IN-VIVO ANTIPARASITIC ASSESSMENT OF *Allium sativum* (GARLIC) AGAINST *Trypanosoma evansi* IN MICE

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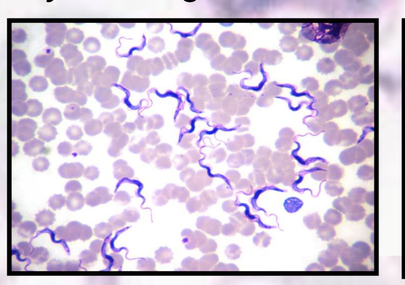
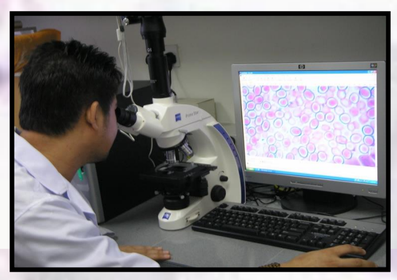
INTRODUCTION

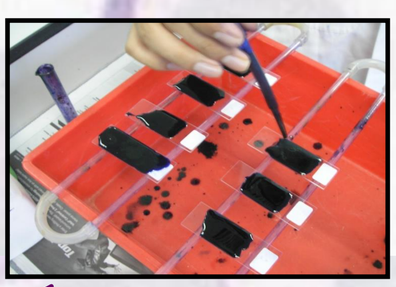
Cell morphological changes are frequently used as indirect indicators of the effect of studied materials on targeted cells. Antiparasitic effects of *Allium sativum* (garlic) aqueous extract was *in-vivo* compared with anti-trypanosomal commercial drug, Berenil, on the growth and survival of haemoflagellate *Trypanosoma evansi* in mice. Groups of male ICR strain mice were infected with 5.0 × 10^3 *T. evansi* per mouse and daily given pre-, concurrent- or post-infection treatments with 0.1 mL of 15 µg/mL *A. sativum* per mouse orally. Stained blood smear were examined for evaluation both under light and electron (SEM) observation. The results from this study suggest that *A. sativum* has a stronger anti-parasitic activity against *T. evansi* by causing the destruction of the cells.





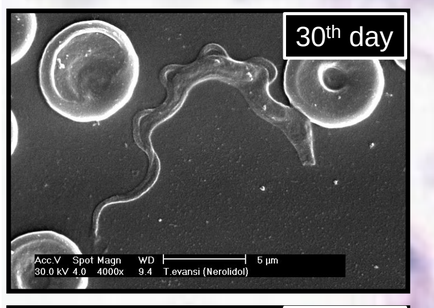
METHODOLOGY

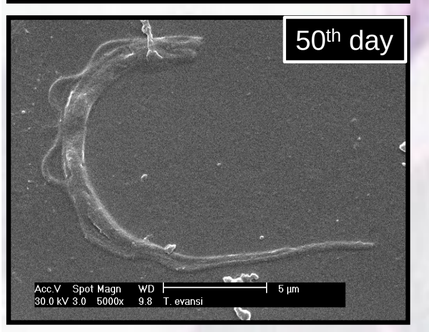
Allium sativum

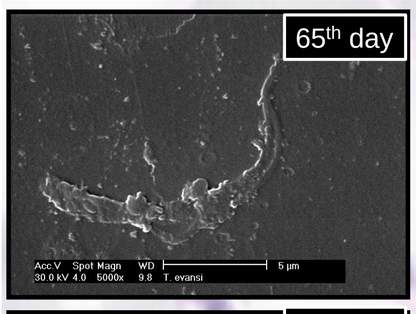


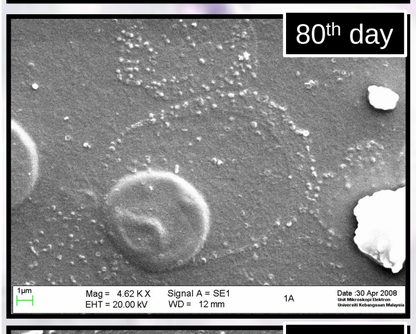
RESULTS

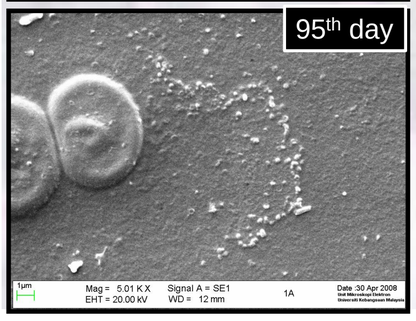
Allium sativum



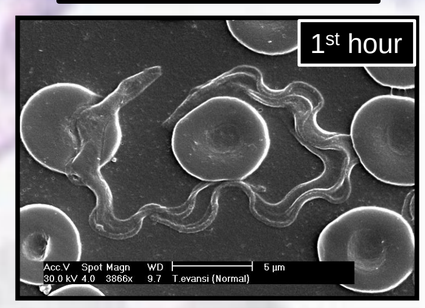


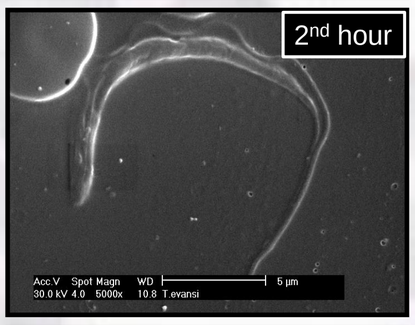


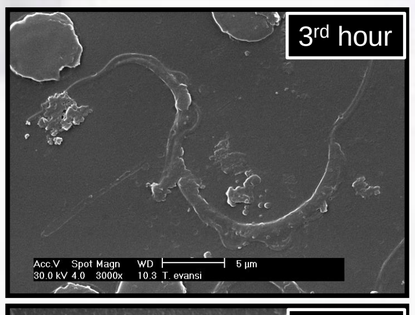


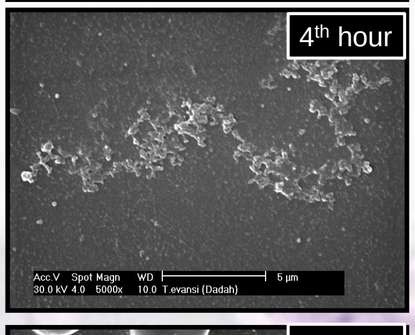


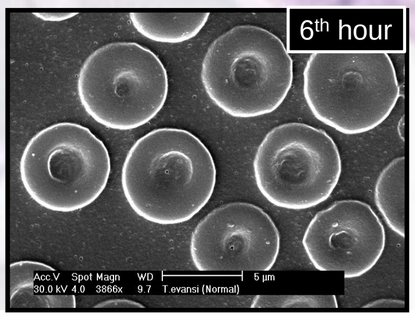
BERENIL

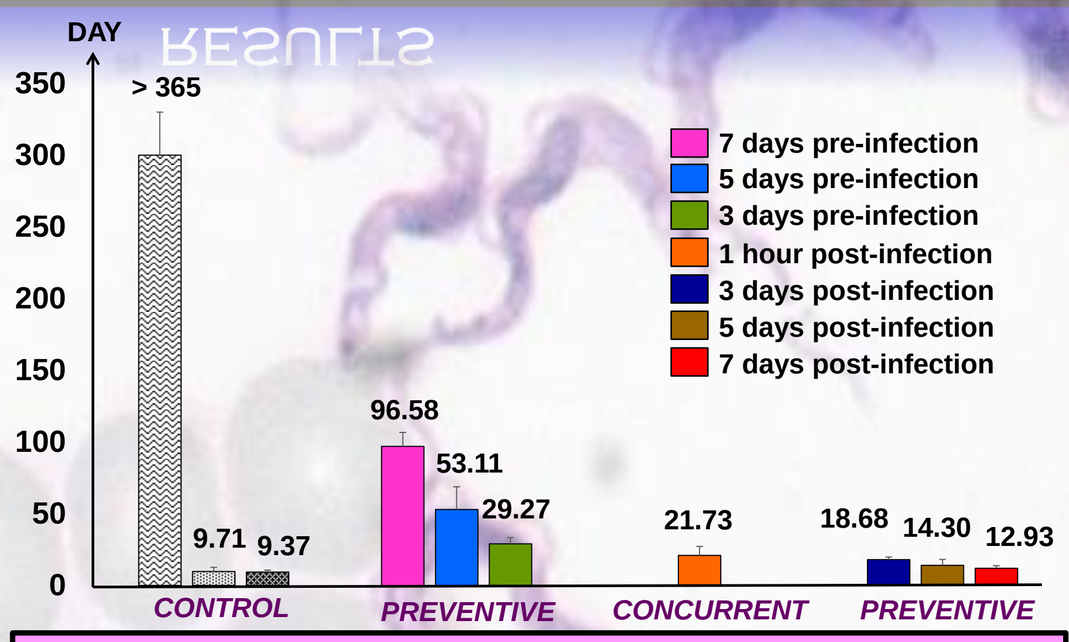




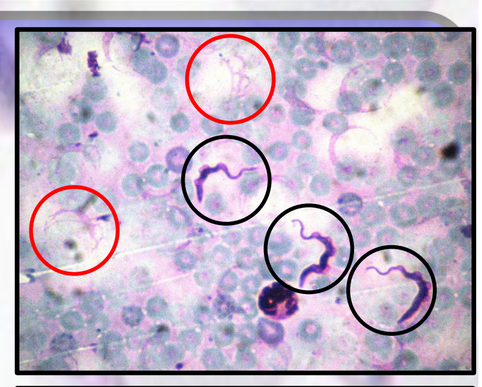


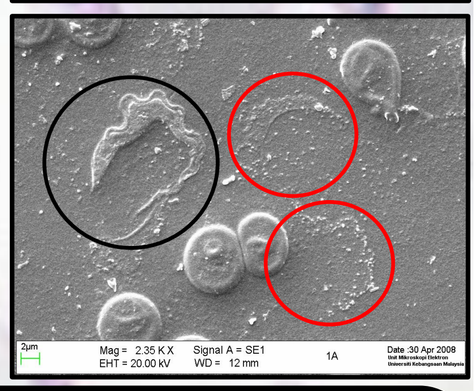






Survival time (Day) of the mice treated with *A. sativum* according to regime of control, preventive, concurrent and preventive treatment.





DISCUSSIONS

- Stochastic genetic modification of VSG is still the best weapon for trypanosome survival.
- New wave of infection lead the mice susceptible to infection.
- Daily prophylaxis treatment in preventive regime at 0.1 mL of 15 µg/mL *A. sativum* given on seven (7) days pre-infection is the best among all regimes in this study.
- Morphological changes of *T. evansi*: The undulating membrane was destroyed, the cell became crescent-shaped and both of the posterior and anterior ends were tapered before the flagellum destroyed and disintegrated in which lead to death of the cells.

CONCLUSION

A. sativum has a strong effects against *T. evansi* by causing the destruction of the cells. Further studies are required to elucidate the action mechanism of *A. sativum* on the cell.

ACKNOWLEDGEMENT

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