# THE USE OF *HYALOMMA DROMEDARII* TICK TISSUE CULTURES FOR THE ISOLATION OF TICK-BORNE ENCEPHALITIS VIRUS FROM ITS NATURAL FOCI

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The sensitivity to small amounts of tick-borne encephalitis (TE) virus of tissue cultures from *Hyalomma dromedarii* ticks has been reported *(1)*. Based on this finding we attempted isolations of TE virus from materials (blood samples, brain suspensions from small mammals and ticks) collected by the junior author in 1965 and 1967 in TE foci in western Slovakia and eastern Moravia.

We are reporting the results of isolation experiments carried out in primary tick tissue cultures *(2)* in comparison with chick embryo cell (CEC) cultures. In either case, the materials were subsequently passed in 1—4 days old white mice of the Děčín breed.

The test materials were directly inoculated into 2—5 days old tick cell cultures, without washing or change of medium, and the cultures were then incubated for 7—9 days. In the case of CEC cultures, the materials were left to adsorb for 2 hours, after which the cultures were washed, supplied with fresh medium and incubated for 5 days. After the indicated intervals, the culture fluids from either tick cell or CEC cultures were intracerebrally inoculated into suckling mice, which were observed for 2 weeks. Brains from mice which died of suspected viral infection were used for further passages and the agents isolated identified in neutralization tests carried out in 6—8 g mice, using intracerebral inoculation and anti-TE hyperimmune goat serum (neutralization index = 10000).

We examined a total of 187 samples, from which we isolated 5 strains of TE virus, namely 1 from the blood of *Talpa europaea*, 1 from the blood of *Apodemus flavicollis* and 3 from *Ixodes ricinus* ticks. All the strains were isolated by both methods. No toxic effects of either mammalian blood or brain suspensions or tick suspensions were observed in either tick cell or CEC cultures.

The results obtained indicate that the method of isolating TE virus in tick tissue cultures is equivalent to that in CEC cultures. It can be recommended, therefore, for virus isolation experiments from nature, in addition to direct isolations in suckling mice or CEC cultures.

## References

1. Řeháček, J. *J. med. Ent.* **2** : 161, 1965.
2. Řeháček, J., and Kožuch, O., *Acta virol.* **8** : 470, 1964.