

Characterization and ecology of tabanid spiroplasmas in France.  
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During summer months of 1989 and 1990, deer flies and horse flies were collected from two different areas in Western France and assayed for Spiroplasmas. From Central Brittany ("Forêt de Paimpont") 62 flies of 9 different species yielded 20 spiroplasma isolates belonging to 6 different serogroups : XIV, HYOS, TABS 1, TAAS, VIII, XXIII. Only two species were found negative : Haematopota pluvialis and Hybomitra distenguenda. From Atlantic biotopes ("Parc de la Brière") 81 flies of three different species yielded 58 isolates belonging mainly to serogroup IV, but also serogroups TABS 1, HYOS and XIV. All the 78 French isolates were able to multiply in vitro at 37°C.

In addition, 240 specimens of flowers from "Brière", belonging to 15 different species, were collected during June 1990 and tested for spiroplasmas : all were negative.

Finally, from March to November 1990, 81 animals sera were collected from "Brière" (3 horses, 2 sheep and 76 cattle) and examined using Deformation test and 11 different spiroplasmas from honey bees, mosquitoes and tabanids. 61 bovines sera (or 80,3 %) were found positive but exclusively for Ar 1357 spiroplasma, a mosquito-beetle-flower associated agent belonging to serogroup XVI (Cantharis spiroplasma) and previously isolated in this area from Aedes mosquitoes (Le Goff et al., 1990).

At present we have no explanation for the paradoxical absence of antibody to tabanid spiroplasmas in cattle since all French tabanid spiroplasmas are able to multiply in vitro at 37°C and, at least for two isolates, in suckling mice.

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Professeur Claude CHASTEL

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