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Forum Origine, Diversité et Territoires

[Workshop n°3], [Session n°2]

[The VHEEP project: investigation of the "contextual everything" of the hepatitis E virus in Corsica]

[Hepatitis E virus (HEV) is a model 'One Health' pathogen par excellence. Often asymptomatic in humans in its acute form, HEV can nevertheless cause a variety of symptoms, and sometimes chronic or fulminant hepatitis (Peron et al., 2007; Kamar et al., 2008). The transmission routes are multiple (consumption of products, water, contacts, including human-animal contacts), the virus being highly resistant in the environment and affecting many wild and domestic animal species (Doceul et al., 2016; Kamar et al., 2017). The main reservoir of the disease for humans in industrialised countries is the swine reservoir, and liver-based charcuterie products are a major source of contamination. The growing problem of HEV raises questions about the evolution of processing and consumption practices (cooking, raw), and in particular the need to produce and certify HEV-free products. But the question of HEV flows between compartments is far from being clearly established. For example, some studies counter the idea that wildlife is a reservoir of disease for livestock, and argue in favour of transmission from pig farms to the wild compartment (Jori et al., 2017; Charrier et al., 2018), and thus to other potentially water-contaminated environments, such as village sludge and fountains. HEV is thus a potential indicator of a set of complex relationships in a socio-pathosystem (Charrier and Barbier, 2021), the analysis of which implies going beyond the biological cycle of a pathogen (objectified by the biological sciences), risk analysis (dominated by epidemiology), or a sociology of risk approach, to apprehend the mode of existence of HEV in a "contextual whole" (Dewey, 1993).

Our objective is to present the VHEEP project as a project responding to a One Health approach undertaken on a territorial scale. This project is being implemented in Corsica (hyper-endemicity, expansion of HEV in wildlife, artisanal and industrial practices for processing pork products, etc.), with a view to researching a critical zone (Latour, 2014). It combines interdisciplinary approaches, between eco-epidemiology and zootechnics (e.g. studies of practices influencing contacts between pigs and wild boars), molecular epidemiology (highlighting the sharing and distribution of strains between reservoirs and humans); geography of processing practices (blending of livers, origin of the raw material), consumption (evolution of practices and perceptions of consumers of liver sausages) and regulations (production standards, risk prevention messages, etc.) It aims to connect the identification of HEV strains (and their genetic proximity within and between compartments) to the objectification of socio-technical networks

in order, in fine, to produce a "nexus"-type understanding of the pathogen's mode of existence on the one hand, and to question the research paradigms and methodologies in a "one health" approach on the other. The general perspective of the project is therefore that of 'enquiry' (Dewey, 1993), necessarily situated in a territorial 'contextual whole', the socio-technical systems in Corsica.

The first results of the project have enabled the identification and mapping of about fifty strains of the virus, and the establishment of hypotheses on their relationship in different socio-technical and socio-ecological networks (e.g. importing livers from the mainland for the manufacture of ficatellu for a specific market). The expected results of the project will therefore be, in addition to risk mapping, a typology of networks that will make it possible to understand the modes of existence of a "One Health" pathogen and to consider its territorial management.]

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