Profiling the surface-exposed proteins of *Fasciola hepatica* extracellular vesicles

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Helminth parasites release extracellular vesicles (EVs) that can transfer a range of effector molecules to host cells. Several studies have described the contribution of parasite-derived EVs to the modulation of the host immune system or the pathological effects on host cells. However, the mechanisms of interaction/internalisation between parasite-derived EVs and host cells remain elusive and a better understanding of these processes may open new avenues for parasite control. We recently showed that *Fasciola hepatica* releases an EV population loaded with various internal cargo proteins, including several known immunomodulators. Here, we have used a membrane-impermeable biotin to label proteins specifically exposed on the outer surface of the parasite vesicles. Following streptavidin pulldown and mass spectrometry we identified a number of protein functional groups, including membrane pumps, tetraspanins, integrins as well as trematode-specific antigens that detail EV surface architecture but may also provide insight into how parasite-derived EVs interact with host cells. Experiments are currently underway to investigate the role of the surface-exposed proteins and whether these could be targeted by novel anti-parasite therapies.