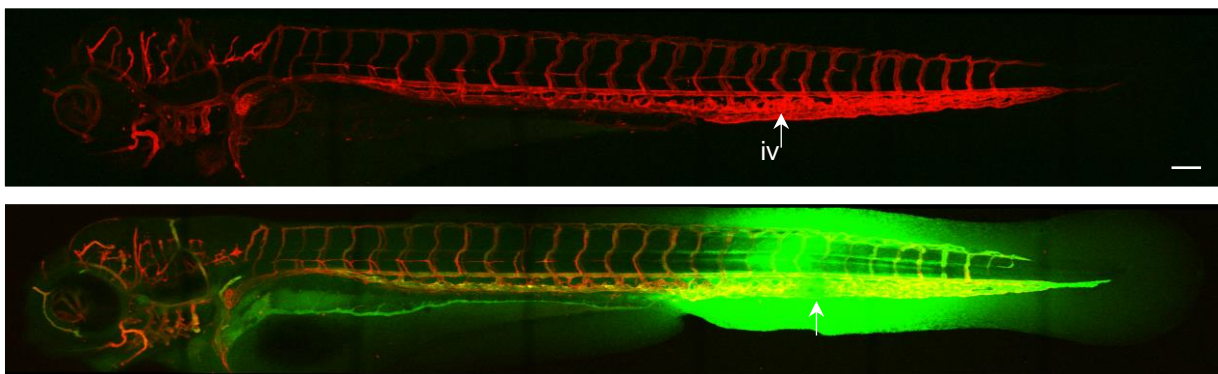


## Investigating the spatio-temporal distribution of mycolactone *in vivo* using zebrafish

Collaboration with Laure Guenin-Macé and Caroline Demangel, Immunobiology of Infection Unit, Institut Pasteur, INSERM U1221, Paris, France. Funded by Institut Pasteur GPF Microbe and Brain, Myconeuro project.

Mycolactone is the major virulence factor of *Mycobacterium ulcerans*, the human pathogen causing Buruli ulcer (BU) disease. Mycolactone is able to diffuse from infected tissues to exert immunomodulatory and analgesic effects at the systemic level, yet the *in vivo* spatiotemporal distribution of mycolactone remains largely unknown. We use the zebrafish larva to investigate the spatiotemporal distribution of a fluorescent derivative of mycolactone *in vivo*, combining real-time imaging approaches and fluorescent transgenic zebrafish lines to monitor the diffusion and bio-distribution of mycolactone at the whole organism level.



Confocal acquisition of zebrafish larvae (red vessels highlighted) injected in the bloodstream (iv) with fluorescent mycolactone (green). Lateral view of the whole larva, head on the left. Top panel: vehicle injected larva; bottom panel: mycolactone injected larva, 2 hours post injection. (Emma Colucci-Guyon and Laure Guenin-Macé).