



AptaTrich

D-PhD12-1

Responsible Partner: Anses

Contributing partners: Bfr, McGill University



GENERAL INFORMATION

European Joint Programme full title	Promoting One Health in Europe through joint actions on foodborne zoonoses, antimicrobial resistance and emerging microbiological hazards
European Joint Programme acronym	One Health EJP
Funding	This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 773830.
Grant Agreement	Grant agreement n° 773830
Start Date	01/01/2018
Duration	60 Months

DOCUMENT MANAGEMENT

Project deliverable	D-PhD12-1 'T. spiralis muscle larvae are fixed in ethanol'
Project Acronym	PhD12-FBZSH9-AptaTrich
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Due month of the report	M38
Actual submission month	M38
Type <i>R: Document, report DEC: Websites, patent filings, videos, etc.; OTHER</i>	R Save date: 25-Feb-21
Dissemination level <i>PU: Public (default) CO: confidential, only for members of the consortium (including the Commission Services)</i>	PU This is the default setting. If this project deliverable should be confidential, please add justification here (may be assessed by PMT):
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Development of an aptamer-based test for *Trichinella* detection

1. PhD12-FBZSH9-AptaTrich

1.1. Deliverable 1 : D-PhD12-1 '*T. spiralis* muscle larvae are fixed in ethanol'

During each round of aptamer selection, *Trichinella spiralis* Muscle Larvae (ML) and New Born Larvae (NBL) will be incubated with a ssDNA library of 80mer oligonucleotides for positive and negative selection, respectively. The first goal of the project was therefore to produce both lifecycle stages for SELEX.

Trichinella spiralis Muscle larvae Production

Following infection of OF1 mice with approximately 300 *T. spiralis* muscle larvae, they were left to encyst for at least 5 weeks. Mice were then euthanized using carbon dioxide gas and subjected to artificial digestion by the magnetic stirrer method. Muscle larvae present in the muscle tissue were released during digestion and collected by sedimentation. After counting the larvae, they were fixed in 70% ethanol before being stored at 4°C.

Trichinella spiralis New Born larvae Production

Mice were euthanized 5 days after infection with 1500 *T. spiralis* ML using carbon dioxide gas. Adult worms were first recovered from the mouse intestines by sedimentation and placed in a nutrient medium containing RPMI, L-glutamin, pyruvate sodium, Fetal Calf Serum and antibiotics. During two days of incubation, gravid female worms release the NBLs into the surrounding medium. Finally, the whole medium was filtered with a 40µm diameter cell sieve to separate adults from NBL. After counting the NBL, they were fixed in 70% ethanol before being stored at 4°C.