Minutes: EDA-EMERGE Specialized Course 8:

"Biotechnology for environmental issues"

Venue: WatchFrog, Evry, France

Organizer: Dr. Andrew Tindall

Date: 18.03.2014

Time: 9h00 – 18h00

Attendance List:

Name	Institution	Country of Partner Institute	Fellow / external Researcher
Carolina di Paolo	RWTH Aachen	Germany	ESR1
Manoj Sonavane	INERIS	France	ESR2
Petra Spirhanzlova	WATCHFROG	France	ESR3
Ana de Almeida	NIVA	Norway	ESR4
Anita Hidasi	EAWAG	Switzerland	ESR5
Sara Tufi	IVM-VU	Netherlands	ESR6
Sanja Koprivica	IRB	Croatia	ESR7
Zuzana Rabova	EI	Slovakia	ESR8
Jennifer Schollee	EAWAG	Switzerland	ESR11
Jean Froment	NIVA	Norway	ESR12
Xiyu Ouyang	IVM-VU	Netherlands	ESR13
Victoria Osorio Torrens	KWR	Netherlands	ER
TOTAL number of participants			**12**
Number of participations of external researchers			**0**

AGENDA

Tuesday, 18.03.2014		
Time	**Title**	**Lecturer**
9:00 - 9:10	Welcome and introduction to the course.	Dr. Andrew Tindall
9:10 - 10:30	*"*Business aspects of running a private company *".*	Dr. Gregory Lemkine
10:30 - 10:50	Coffee break	
10:50 - 12:00	"Routine testing using WatchFrogs Technology".	Petra Spirhanzlova
12:00 - 13:30	Lunch break	
13:30 - 17:00	Lab tour, visit of animal facility, hands on experiments.	Dr. Andrew Tindall, Petra Spirhanzlova, Dr. David Du Pasquier
17:00 - 18:00	General discussion and questions.	All
18:00	Closure	

COURSE CONTENT

The SC8 was a one day EDA-EMERGE training course Biotechnology for environmental issues. Said training course gave an introduction to *in vivo* tests using transgenic aquatic organisms to detect endocrine disruption. The introduction was based on lectures, which have been combined with open discussions and by practical exercises. In the practical part of the course, the participants were setting up an experiment analysing endocrine disruption of estrogen-active substances.

The course covered the following topics:

- Business aspects of running a private company
    - Mission and goals
    - Technology / products / service
    - Advantages of amphibian models
    - Water quality testing
    - Business model (Lab tests; FrogBox – on site monitoring, selling products and expertise)
    - Regulatory context
    - Competitive environment & marketing strategy
- Routine testing using transgenic models to test/detect endocrine disruption of estrogen-, androgen-, and thyroid-active substances - theory an examples
    - *Oryzias latipes* (Japanese rice fish)
        - Procedure and planning of routine tests for clients
        - Cultivation and reproduction of medaka
        - Choriogenin H-GFP medaka model
        - Fluoresecence reading
        - Image and data analysis
    - *Xenopus laevis* (African clawed frog)
        - Procedure and planning of routine tests for clients
        - Cultivation, reproduction and *xenopus* development
        - THbZIP amphibian line
        - Fluorescence reading
        - Results – analysis
        - FrogBox
- Application of tests demonstrating disruption of estrogen axis using the transgenic fish model, including a lab tour and a visit of animal facilities

This amounted to a minimum total academic involvement of 7.5 hours (0.25 ECTS) for the participants.