

Course report

The CRU course “Developmental origins of disease: Effects of early-life chemical exposure on the reproductive, metabolic, and neuronal systems (2 hp)” was given 13-17 June 2022 at evolutionary biology center (EBC) in Uppsala. Despite 15 registrations only 6 students followed the course. The schedule and the lecturers are shown below.



The course was given at EBC



A course dinner was held at Kitchen and Table

The purpose with the course was to provide holistic understanding and broad knowledge of developmental toxicity in vertebrates, focusing on reproduction, neuronal functions, and metabolism. The overall goal was to help build a base for collaboration among researchers from different areas. Thus, the course was composed of a broad range of lectures and a project work where the students worked in groups to collect information about a selected group of pollutants. The course examination consisted of the presentation of this work. Each student presented her/his own research in a 10-15 min seminar during the course.

The course participants were expected to follow the lectures on site, but in order to make the lectures available for others the presentations were shared on zoom.

During the course, lunch and coffee was served at Hassan’s restaurant at EBC.

Course Schedule

	Monday 13/6	Tuesday 14/6	Wednesday 15/6	Thursday 16/6	Friday 17/6
08.30-09.00	Registration Welcome MJ, TK, YS			08.00-09.45 Effects of DDT on mitochondria and thermoregulation, ML Only on zoom	
09.00-09.15					
09.15-10.00	Developmental disrupters in the environment, AR	Placental development and functions, SL	Effects of chemicals on adipocyte development and blood lipids in zebrafish MJ		Project work

10.00-10.30	Fika	Fika	Fika		Fika
10.30-11.15	Chemical exposure in humans, RB	Placental toxicity, FI	Developmental neurotoxicity DL		Project work
11.15-12.00	Barker hypothesis - implications for Swedish health registries and biobanks, TK	Molecular Mechanisms of Sex Determination and Differentiation, AP	From molecular initiation events to adverse outcome, DL	11.40-12.20. The roles of leptin in the regulation of feeding and reproduction in zebrafish, ET	Project work
12.00-13.00	Lunch	Lunch	Lunch	Lunch	Lunch
13.00-13.45	Embryo development and teratology HB	Pollutants: Impacts on the Reproductive System, AP	Student presentations: Tessa Schillemans Linus Wiklund Sebastian Pineda	Endocrine disruption and developmental effects – novel methodologies for testing and assessment, AB	Examination: Heavy metals Tessa Joanna Sebastian DDT Linus Denise Sandra
13.45-14.30		Student presentations: Denise Strand Sandra Fernandez Sebastian Pineda	Project work		
14.30-15.00	Fika	Fika	Fika	Fika	Fika
15.00-15.45	Student presentation: Joanna Szlendak	Project work	Project work	The Barker hypothesis applied on environmental chemicals: the importance of prenatal chemical exposure for childrens' growth up to school age in the SELMA study, CG	
16.00-16.45	Project work	Project work	Risk assessment of developmental toxicity from the perspective of KEMI, AG	Project work	
17.00-18.00		Upplandsmuseet*	Pub with KEMI		
18.30-21.30	Course diner				

Lecturers/organizers: MJ: Maria Jönsson, Uppsala University, maria.jonsson@ebc.uu.se
TK: Theodora Kunovac Kallak, Uppsala University, theodora.kunovac_kallak@kbh.uu.se
YS: Ylva Sjunnesson, Swedish University of Agricultural Sciences, yva.sjunnesson@slu.se
SÖ: Stefan Örn, Swedish University of Agricultural Sciences, stefan.orn@slu.se
AR: Anna Roos, the Swedish Museum of Natural History, anna.roos@nrm.se
RB: Richelle Björvang, Uppsala University, richelle.duque_bjorvang@kbh.uu.se
HB: Henrik Boije, Uppsala University, henrik.boije@igp.uu.se
SL: Susanne Lager, Uppsala University, susanne.lager@kbh.uu.se
FI: Francesca Ietta, University of Siena, francesca.ietta@unisi.it
AP: Ajay Pradhan, Örebro University, ajay.pradhan@oru.se
DL: Diana Lupu, Uppsala University, diana.lupu@ebc.uu.se
AL: Anne-Lee Gustafsson, Swedish Chemicals Agency, anne-lee.gustafson@kemi.se
ML: Michele LaMerill, University of California, Davis, mlamerrill@ucdavis.edu
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