Hassan II Academy of Science and Technology
Rabat - Morocco

Institut Agronomique et Vétérinaire Hassan II
IAV

Hassan II Academy of Science and Technology
(Kingdom of Morocco)
In its tenth anniversary of its installation by His Majesty Mohammed VI

and

Hassan II Institute of Agronomy and Veterinary Medecine
In its fiftieth anniversary

organize a

Summer School

on

REPRODUCTION IN SMALL RUMINANTS AND DROMEDARY: IMPLICATIONS FOR LIVESTOCK PRODUCTION

October 24-25, 2016- Hassan II Agronomy and Veterinary Institute-Rabat, Morocco

Scientific committee

Ouafaa Fassi- Fihri
Albert Sasson
Ahmed Tibary
Abdelkarim Filali-Maltouf
Zaid Zouagui
Khalid El Allali
Abdelmalek Sghiri
Lahsen Derqaoui
Rachid Boukhliq

Local organizing committee

Khalid El Allali
Zaid Zouagui
Ouafaa Fassi- Fihri
Abdelkarim Filali-Maltouf
Aziz El Hraiki
Hicham Farsi
Driss Harti
Fatima Zahra Zarhouni

Presentation of the school

Climate change, desertification, the continual growth of world population and the problems of intensive modern agriculture may result in an international crisis regarding nutritional requirements, particularly animal protein. Alternative research is now needed to overcome this crisis. In this context, some animal species well adapted to arid climates, such as camel and goat and some local sheep breeds, appear as rational alternatives to face the predicted global warming and desertification. The ***Hassan II Academy of Science and Technology*** and ***Hassan II Institute of Agronomy and Veterinary Medecine*** (**IAV Hassan II**) pooled their efforts to propose this School on Reproduction in small ruminants and dromedarians with a focus on reproduction biotechnology. The objective for medium and long-term is to improve basic knowledge that will lead to innovative agro-economical applications. The purpose of this school is to provide an opportunity for Moroccan PhD students to acquire knowledge of the theoretical and technical advances in the field of reproduction of small ruminants and dromedary, and how these might be applied to their own research. Students will have the opportunity to understand 1) the basic reproduction (structural, behavioral and physiological mechanisms) in these species and how it is adapted to arid biotopes; 2) how the reproduction biotechnology is used and applied to these specific species and breeds.

Further to the basic knowledge that will be given to the PhD students, the school will focus on all aspects of biotechnologies allowing veterinarian and breeders to enhance the poor performance of reproduction of these species. New data and recent findings in the field will be presented and discussed, especially neuroendocrine and hormonal regulations, induced ovulation control conservation of semen and embryos techniques, medical imaging using ultrasonography.

This is why we have chosen to have two sessions, one during the first day and focused on dromedary, and the second day devoted to the small ruminants. The school will include: presentations from high-level international lecturers from Morocco, USA and United Arab Emirates (UAE); sessions devoted to the research topics and work of PhD students; interactive dialogue; a final round table for overall discussion; and closing remarks.

In addition to lecturers and experts, a group of 15 participants (PhD and post-doctoral students, including 3 to 4 from sub-Saharan Africa) is considered adequate for the school.

The students' travel and accommodation costs will be covered by the organizers. The IAV Hassan II will offer the participants accommodation in its new center for post-graduate studies in Rabat.

SCIENTIFIC PROGRAM

Day 1: October 24th , 2016

08:00 ***Registration and welcoming of participants***

08.30-09.30 ***- Opening and presentations***

Omar Fassi Fihri, Ouafaa Fassi Fihri and Albert Sasson.

- Explanation given about the objectives of the school by Albert Sasson.

- Presentation of students and instructors.

09.30-10.00 *Coffee break*

Session 1- New insight in dromedary reproduction

Chairs: Rachid Boukhliq & Abdelkarim Filali-Maltouf

10.00-10.45 Follicular wave and its control, embryo transfer and related biotechnologies, artificial insemination (**Tibary Ahmed**, Washington State University, Pullman, USA)

10.45-11.30 Developments in reproduction in dromedary camels (**Julian Alexandra Skidmore**, Camel Reproduction Centre, Dubai, UAE)

11.30-12.15 Discussion

12.15-14.00 *Lunch*

Chairs: El Mzibri Mohammed & Zouagui Zaid

14.00-14.45 Control of reproduction in dromedary camel: the use of ultrasonography as reproductive management tool (**Abdelmalek Sghiri,** IAV Hassan II, Rabat, Morocco)

14.45-15.30 Seasonality of reproduction and the induced ovulation in camel: what is new in the field? (**Khalid El Allali**, IAV Hassan II, Rabat, Morocco)

15.30-15.45 Seasonality of reproduction in the camel: a main role of melatonin, kisspeptin and RFRP in the neuroendocrine control (**Hassan Ainani**, IAV Hassan II, Rabat, Morocco / University of Strasbourg, France)

15.45-16.00 Kisspeptin and RFRP in the neuroendocrine control of seasonal reproduction and metabolism (**Raja Talbi**, Faculty of Sciences Fès, Morocco / University of Strasbourg, France)

16.00-16.30 *Coffee break*

16.30-16.45 The neuronal growth factor: βNGF and the central induction of the ovulation in the female of camel dromedary, *(***Najlae El Bousmaki**, IAV Hassan II, Rabat, Morocco)

16.45-17.00 Development of a referential of camel production and reproduction performances in the southern of Morocco: a basic tool for strategies focusing on improving camel husbandry *(***Mehdi M'Hani**, IAV Hassan II, Rabat, Morocco)

17.00-17.15 Title to be confirmed (**Saida Boumakrat**, IAV Hassan II, Rabat, Morocco)

17.15-17.30 Title to be confirmed (**From Khemssi Group / Ben M'sick Faculty, Casablanca)**

17.30-18.15 Scientific discussion and exchanges with PhD students

18.15-18.30 Evaluation of activities of the day by students

Day 2: October 25th , 2016

Session 2- Reproduction biotechnologies in sheep and goat

Chairs: Aziz El Hraiki & El Abbadi Najia

08.00-08.45 Reproduction in small ruminants: from a global view to a focus on biotechnologies used in husbandry (**Lahsen Derqaoui**, IAV Hassan II, Rabat, Morocco)

08.45-09.30 Assisted reproduction technics as a tool for sheep production enhancement and genetic ressources conservation in Morocco (**Bouchra El Amiri,** INRA Settat, Morocco)

09.30-10.15 Reproduction technologies in small ruminants (**Mouad Chentouf,** INRA Tanger, Morocco)

10.15-10.45 Coffee break

10.45-11.30 Sperm and embryo cryopreservation of small ruminants (**Tibary Ahmed**, Washington State University, Pullman, USA)

11.30-12.15 Title to be confirmed (**Mame Balla SOW**, Coordinator of Dairy sector Development Program, Dahra, Senegal**)**

12.15-14.00 Lunch

Chairs: Skidmore & Nadia Lotfi

14.00-14.15 Reproduction control in local goats in northern Morocco (**Sara El Kadili,** INRA Tanger, Morocco/ University of Namur, Belgium)

14.15-14.30 *Ex-situ* semen conservation of the INRA180 synthetic breed of sheep (**Ben Moula Anass,** INRA Settat, Morocco / University Hassan 1er, Settat, Morocco)

14.30-14.45 Performance evaluation, phenotypic and genetic characterization of the Beni Arous breed goat (**Btissam Hilal,** IAV Hassan II, Rabat, Morocco / INRA Tanger, Morocco)

14.45-15.00 Skimmed milk and Tris egg yolk supplemented with saffron to improve Boujaad ram semen liquid storage (**Badi Abdelmoughit,** INRA Settat, Morocco / University Hassan 1er, Settat, Morocco)

15.00-15.15 Characterization of the reproductive season in the Moroccan black goat (**Hicham Farsi,** IAV Hassan II, Rabat, Morocco)

15.15-15.30 Title to be confirmed (PhD **student from Senegal)**

15.30-15.45 Title to be confirmed (PhD **student from Senegal)**

15.45-16.15 Coffee break

16.15-17.00 Scientific discussion and exchanges with PhD students

17.00-17.15 Evaluation of activities of the day by students

Self evaluation of students

17.15- 18.45 Round table discussion (***Tibary Ahmed & Khalid El Allali***)

18.45 – 19.00 Closing remarks and summary (***Ouafa Fassi-Fehri & Albert Sasson***)

19.30 ***Closing dinner***