



**NEVER STOP LEARNING.**



**FORTHCOMING IN 2018**

**Course**  
"Anesthesia for Fish in Aquaculture Research"

March 6, 2018  
Bergen, Norway



**Course**  
"Organizing and Operating Activities in a Rodent Animal Facility "

March 14-16, 2018  
Milan, Italy



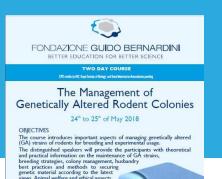
**Course**  
"Microbiota and Gnotobiotic Rodents"

April 12-13, 2018  
Milan, Italy



**Course**  
"The Management of Genetically Altered Rodent Colonies"

May 24-25, 2018  
Milan, Italy



**Microbiota and Gnotobiotic Rodents**  
12 to 13 of April 2018

**OBJECTIVE**  
The course is designed to provide the participants with the most recent knowledge on the biology of the microbiota and the development of gnotobiotic models. The programme of the course includes the management of facilities, the breed and maintenance of gnotobiotic mice and the impact of numerous species of microorganisms on the development of many diseases.

**COURSE TOPICS**  
The course will include lectures, practical sessions and a practical meeting. The participants will be able to practice the different techniques available and the gnotobiotic strains of interest will be distributed.

**TARGET AUDIENCE**  
Head of animal facilities, veterinarians, persons responsible for the health monitoring and control of laboratory animal facilities, quality assurance specialists.

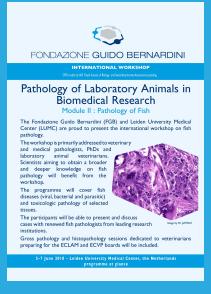
**The Management of Genetically Altered Rodent Colonies**  
24 to 25 of May 2018

**OBJECTIVES**  
The course addresses important aspects of managing genetically altered (G.A.) rodent colonies in a safe and effective way. The distinguished speakers will provide the participants with theoretical and practical knowledge on the management of G.A. rodent colonies, best practices and methods to secure quality and safety of the animals. Animal welfare and ethical aspects will also be addressed. The course will be a good opportunity for the discussion of G.A. rodent colonies not a private subject of the course.

**TARGET AUDIENCE**  
G.A. rodent managers and caretakers, facility directors and supervisors, veterinarians, senior technicians, laboratory biologists, persons responsible for overseeing the welfare and care of animals.

## International Workshop Pathology of Laboratory Animals in Biomedical Research Module II "Pathology of Fish"

June 5-7, 2018  
Leiden, the Netherlands



## Course "Microbiological Monitoring of Laboratory Rodents: traditional and innovative approaches"

October 11-12, 2018  
Milan, Italy

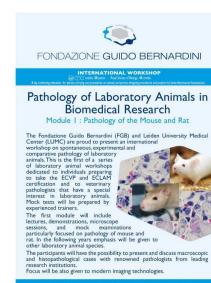
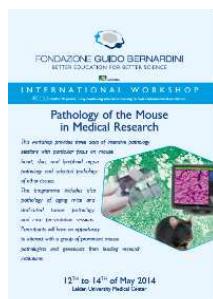


**Don't wait till the last minute to register  
because seats are limited**

**Additional events are being planned, further  
information will be published during 2018!**

## **Leiden University Medical Center and Fondazione Guido Bernardini: a fruitful and long-standing collaboration**

In this issue of the Newsletter I would like to highlight what for Fondazione Guido Bernardini is an ongoing prestigious and fruitful collaboration with Leiden University Medical Center (LUMC - The Netherlands). Such a collaboration was initiated in 2014 thanks to the efforts of prof Jan-Bas Prins who is the Chief of LUMC Central Laboratory Animal Facility and an active member of FGB Scientific Committee since 2009.



The first collaborative initiative was carried out in 2014 at LUMC as a three days' International Workshop, entitled: **"Pathology of the Mouse in Medical Research"**. On

that occasion Dr Daniela Salvatori, an Experimental Laboratory Animal Pathologist and the Designated Veterinarian for Leiden University & LUMC, joined the collaboration between LUMC and FGB. The scientific programme and the participation of prominent mouse pathologists and geneticists from leading research institutions around the world as speakers was very much appreciated by the numerous attendees.

In 2017 a second three-days' International Workshop, entitled: "**Pathology of Laboratory Animals in Biomedical Research-Module 1: Pathology of the Mouse and Rat**" covered topics relating to spontaneous, experimental and comparative pathology of laboratory animals. It was the first of a planned series of laboratory animal workshops dedicated to individuals preparing to take the ECVP (<http://www.ecvpath.org/>) and ECLAM (<http://eslav-eclam.org/>) certification and to veterinary pathologists with a special interest in laboratory animals.

The second module: "**Pathology of Fish**" will be run in June 2018 (see announcement above) and will cover fish viral, bacterial and parasitic diseases and toxicologic pathology of selected tissues.

A further reason of pride for us is the support of FGB to a LUMC research project titled: 'Substitution of the mouse tumorigenicity assay with a complete *in vitro* microRNA based assay for testing malignancy of human induced pluripotent stem cells' that has been designed and is led by Daniela Salvatori. In 2016 such a project was successful in obtaining a **grant** by ZonMW, for the programme "MKMD" (Meer Kennis met Minder Dieren; more knowledge with less animals). The project aims at the implementation of an *in vitro* assays that should reduce/replace the "teratoma assay" for malignancy and pluripotency of embryonic and human induced pluripotent stem cells (hiPSCs). The "teratoma assay" is considered the gold standard method for determining whether hiPSCs are pluripotent and for testing their tumorigenicity; it consists in injecting stem cells into immunodeficient mice where they form tumors. The research aims at proving the validity of the *in vitro* mi-RNA based assay in drug-discovery and preclinical pipelines.

The impact of such an important research on the animals' welfare can be summarized as follows:

- **Decrease in animals' discomfort and pain:** early detection of malignant miRNA in sera of the animals (smaller teratomas)
- **Fewer animals:** monitoring of blood means animals will not be sacrificed for each time point;
- **Fewer animals:** clinical grade cell lines undifferentiated and differentiated will be tested *in vitro*; ultimately the project aims to detection of malignancy markers in the undifferentiated cells (*in vitro*)..

The preliminary results of the study were presented at the **ESLAV/ECLAM Conference in Edinburgh, on Sept 25-26, 2017** entitled "**Safety tests for stem cells. Do we still need the mouse based Teratoma assay?**".

FGB, as the NGO partner in the project, will continue to collaborate and support LUMC in the organization of workshops and courses, and will be pleased and honoured to contribute to disseminate the results of the research that are in line with the FGB strong commitment to the Three Rs.

Gemma Perretta - President of FGB Scientific Committee

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## The winner of 2017 FGB TECHNICIAN TRAINING SCHOLARSHIP

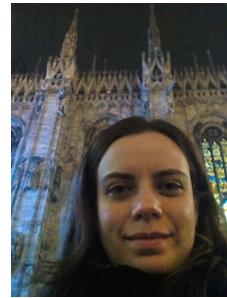
*I would like to thank you for giving me the opportunity to attend the "implementation of the 3Rs in the experimental design" course, by choosing me for the*

*2017 Technician Scholarship.*

*It was a great experience and I gained a lot of knowledge about the ethical approach in the experimental design and about solving problems before and during the experimentation.*

*It was an interactive course that gave me the opportunity to obtain new knowledge and scientific approaches in the field of bioethics. All speeches were very informative and vital for my training in that scientific field.*

*I also want to express my gratitude for your hospitality and everything you offered me. It was an honor that I attended that accredited course.*



Argyro Lappa  
Hellenic Pasteur Institute,  
Greece

# FEEDBACK

## HOW ARE WE DOING?

### Report on the Conference “Severity Classification of Animal Procedures: a tool for project designing and evaluation, implementation of refinement and reporting to the public”

FGB Conference Centre, June 29-30, 2017

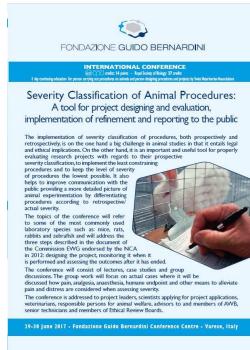
*The conference on Severity Classification was definitely useful to share common practices on severity classification of procedures in different countries. I was really surprised that, despite the very same legislation, different Member States are applying different standards to the *in vivo* research: one procedure classified as moderate in one country can be classified as severe in another one.*



*This, of course, has a great impact on the research done in one specific country and on the reaction of the public to animal research. For this purpose, the lecture on openness about severity really helped the audience to understand what can be done to establish a productive communication with the public, also in case of procedures classified as severe.*

*The panel of speakers was really experienced, bringing some insights into various research areas and including not only rodents, which was an added value. I think this workshop should be organized regularly and, moreover, should be mandatory for Animal Welfare Body members and people involved in projects authorization, in order to have in depth perspective of animal research.*

Viola Galligioni - Trinity College Dublin, Ireland



*First of all, I would like to highlight the opportunity to attend to such as important conference "Severity Classification of Animal Procedures" 29 - 30, June 2017 in Varese Italy. Everyone who works with lab animals can not miss this kind of reunion for any reason. The conference was full of updated contents and the lectures were of the highest scientific level. All the topics covered during the conference were of my interest and exceeded my expectations.*

*During the conference I had the opportunity to know more about severity classification and how it can help in assessing and alleviating pain, stress and distress in species like rats, mice, rabbits, zebra fish and animal models in cancer. It was very interesting the talk on "Openness about severity - helping the public to understand 'harm'" because of the importance to maintain the public informed regarding animal procedures and how they are used in biomedical research. On the first day, there was a work group session; we were able to revise and study real cases and gave conclusions. I was part of the group headed by Dr. Anne - Dominique Degryse, she is an outstanding professional and a kind person and the whole group was fantastic. The attendees have the possibility to access to the presentations that are available on line. During the conference there were interesting debates between lecturers - attendees. I really thank for the opportunity to hear, see and meet outstanding peoples like Jan - Bas Prins, David Smith, David Anderson, Anne - Dominique Degryse, Wendy Jarret, Aurora Bronstad, Matt Leach, Maja Cemazar, Klas Abelson, Coenraad Hendriksen, Penny Hawkins, Lynne U. Sneddon.*

*Milano is a beautiful city like its people. The venue is a beautiful building and very comfortable and of an modern architecture. The classroom was adequate, as well as the reception and assistance to the guests. The organizing committee headed by Laura was an excellent host and they were pending of every detail during the two days of the conference. Laura, I really appreciate every help I received from you, you are an extraordinary person.*

*I hope that the Fondazione Guido Bernardini continues with this kind of meetings during the next years, it is a nice and accessible chance for us who work with lab animals for improving our knowledge in laboratory animals science. All the knowledge I got during the conference I will try to implement in my facility and share it with my colleagues.*

*I would like to thank all the speakers for sharing with us their knowledge and experiences and thanks to the organizing committee for being so efficient and hardworking people. Congratulations to the organizers and speakers!*

Alain Yadir Garcia Varona - Centro Internacional de Restauración Neurológica, Cuba

## Report on the course “Health Monitoring of Rodents: traditional and innovative approaches”



*I was very glad to attend the “HEALTH MONITORING OF RODENTS: TRADITIONAL AND INNOVATIVE APPROACHES” conference held in Milano (Italy), where I had the chance to meet with Mrs. Laura, the “Fondazione Guido Bernardini” team and Health professionals from other countries.*

*I have learned a lot about Health monitoring programs in different caging systems and the advanced concepts of the role of pathology in Health monitoring programs, a lot of which we already started implementing at the Animal Care Facility at AUBMC, Lebanon.*

*I was very grateful learning some new diagnostic techniques and professionally managing in disaster situations.*

*What made this conference even more interesting was sharing experience with other veterinarians from different facilities in Europe, which improved my communication skills, leadership and team work.*

*I'm looking forward to attend the next session and I strongly recommend all veterinarians to take this course.*

Rana Bou Khalil  
American University of Beirut, Lebanon

# Report on the course

## "The Implementation of the 3Rs in the Experimental Design"



*This course was one of the most useful continuing education courses that I have attended. The small class size encouraged interaction and discussion amongst the participants. Direct access, both during sessions and breaks, to the instructors created a level of comfort that allowed unprecedented access to experts in the field. I was so inspired by the practical applicability and accessible way that statistics were presented that I have proposed to my management that we bring in a similar course. This information would be useful to graduate students, post-docs, and veterinary staff alike in their study designs. The information gained will go a long way toward reducing animal numbers through better study design. Improved study design through the tools gained in this course will not only serve the 3Rs mission of the course, but will improve the quality of the science as well. I would highly recommend the course and will look forward to attending another in the future.*

*Well worth the trip!*

Christina Winnicker  
Institute of Comparative Medicine, Columbia University,  
USA



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