

Workshop Venue

Leiden University Medical Center - Building I (for patient care)
lecture room Building I (indication will be present at the main entrance)
Albinusdreef 2, 2333 ZA Leiden
telephone number +31-(0)71-5269111 | Dr Daniela Salvatori
<http://www.lumc.nl>



We thank for the support



FONDAZIONE GUIDO BERNARDINI

INTERNATIONAL WORKSHOP

 credits: 20 points - Royal Society of Biology:  62 CPD credits

Pathology of Laboratory Animals in Biomedical Research

Module II : Pathology of Fish

The Fondazione Guido Bernardini (FGB) and Leiden University Medical Center (LUMC) are proud to present the international workshop on fish pathology.

The workshop is primarily addressed to veterinary and medical pathologists, PhDs and laboratory animal veterinarians. Scientists aiming to obtain a broader and deeper knowledge on fish pathology will benefit from the workshop.

The programme will cover fish diseases (viral, bacterial and parasitic) and toxicologic pathology of selected tissues.

The participants will be able to present and discuss cases with renewed fish pathologists from leading research institutions.

Gross pathology and histopathology sessions dedicated to veterinarians preparing for the ECLAM and ECVP boards will be included.

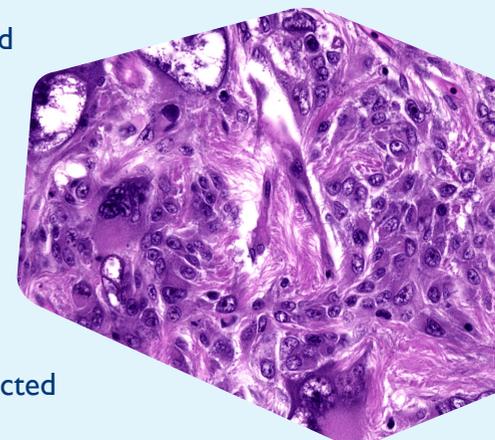


Image by Dr Jeff Wolf

5th of June

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| Opening registration | 09:30 |
| Chair: Dr Jerrold M.Ward | |
| Normal anatomy, histology, and physiology of fish | 10:00 - 11:00 |
| Jeffrey C. Wolf | |
| Coffee Break..... | 11:00 - 11:30 |
| Husbandry | 11:30 - 12:30 |
| Olga Haenen | |
| Diseases of Laboratory Fish: | |
| Viral Diseases | 12:30 - 13:15 |
| Olga Haenen | |
| Lunch..... | 13:15 - 14:15 |
| Practicum: Ante-mortem sample collection and necropsy (hands-on session) Olga Haenen et others..... | 14:15 - 17:15 |
| Coffee Break..... | 15:30 - 15:45 |
| Gross Pathology and Histology: ECVF style approach | 17:15 - 18:00 |
| Barbara Banco | |
| Dinner..... | 18:15 - 19:30 |
| Disease Investigations | 19:30 - 20:30 |

6th of June

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| Chair: Dr Jerrold M.Ward | |
| Diseases of Laboratory Fish: | |
| Bacterial Diseases | 09:00 - 10:00 |
| Olga Haenen | |
| Parasitic Diseases | 10:00 - 11:00 |
| Olga Haenen | |
| Coffee Break..... | 11:00 - 11:30 |
| Health monitoring in experimental fish facilities | 11:30 - 12:15 |
| Massimo Foa | |
| Lunch..... | 12:15 - 13:30 |
| Chair: Prof. Jan-Bas Prins | |
| Overview of fish tumor models | 13:30 - 14:30 |
| Raoul Kuiper | |
| Fish toxicology pathology | 14:30 - 15:30 |
| Jeffrey C. Wolf | |
| Coffee Break..... | 15:30 - 15:45 |
| Hepatic and Renal Lesions in Fish | 15:45 - 16:30 |
| Jeffrey C. Wolf | |
| A Walk on the Wild Side: Endocrine Disruption in Fish and Amphibians | 16:30 - 17:15 |
| Jeffrey C. Wolf | |

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|-------------------------|---------------|
| Case presentations..... | 17:15 - 18:15 |
| Social Dinner | 18:15 |

7th of June

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| Chair: Dr Jerrold M.Ward | |
| ESLAV/ECLAM presentation:..... | 08.30 - 09.00 |
| Martje Fentener | |
| Case presentations | 09:00 - 09:45 |
| Jerrold M.Ward | |
| if you have interesting cases to be discussed please send a short description (.pdf) to secretary@fondazioneguidobernardini.org by May 15th | |
| Coffee Break..... | 09:45 - 10:15 |
| Fish Toxicologic Pathology: The Growing Credibility Gap and How to Bridge It | 10:15 - 11:15 |
| Jeffrey C. Wolf | |
| Misdiagnoses and Missed Diagnoses: Challenges in Fish Toxicologic Pathology..... | 11:15 - 12:15 |
| Jeffrey C. Wolf | |
| Lunch..... | 12:15 - 13:30 |
| Practicum: Histopathology (behind the microscope) (preparation histo case) | 13:30 - 15:30 |
| Barbara Banco & Stephanie Muller & Daniela Salvatori | |
| Coffee Break..... | 15:30 - 16:00 |
| Practicum: Histopathology (behind the microscope) (preparation & discussion histo case) | 16:00 - 18:00 |
| Barbara Banco & Stephanie Muller & Daniela Salvatori | |
| Closing remarks | 17:30 - 18:00 |

Organizing Committee

Jan-Bas Prins - Leiden University Medical Center, Leiden, the Netherlands
Daniela Salvatori - Leiden University Medical Center, Leiden, the Netherlands

Scientific Committee - Faculty

Barbara Banco - University of Milan, Italy
Martje Fentener - Erasmus University Rotterdam, the Netherlands
Massimo Foa - IDEXX Windsor, Berkshire, United Kingdom
Olga Haenen - Wageningen Bioveterinary Research (WBVR), the Netherlands
Raoul Kuiper - Karolinska Institute, Stockholm, Sweden
Stephanie Muller - IDEXX, Ludwigsburg, Germany
Jan-Bas Prins - Leiden University Medical Center, Leiden, the Netherlands
Daniela Salvatori - Leiden University Medical Center, Leiden, the Netherlands
Jerrold M. Ward - Global VetPathology, Montgomery Village, Maryland, USA
Jeffrey C. Wolf - Experimental Pathology Laboratories, Sterling, Virginia, USA

Secretarial Support

Laura De Francesco - Fondazione Guido Bernardini, secretary@fondazioneguidobernardini.org



Barbara Banco

I'm a specialist veterinary pathologist, graduated from the University of Milan (Italy) in 2007 and a PhD in Histological and immunohistochemical phenotyping of testicular and ovarian canine neoplasms in 2012 (Università degli Studi di Milano). After completing a residency program at the School of Veterinary Medicine of Milan, I diplomated -the European College of Veterinary Pathologists (ECVP)- in 2013.

I am currently working as Postdoctoral Researcher and as co-tutor for Training for the ECVP examination together with Prof Paola Roccabianca, trainees tutor for the University of Milan. My research interests include reproductive pathology (canine testis cancer, female genital system pathology, Rabbit testicular pathology), stillbirths and abortions in small animals, immunohistochemical phenotyping of neoplastic diseases in domestic animals, comparative pathology and necropsy in small animals.



Massimo Foa

He currently covers the position of medical and scientific manager for IDEXX Bioresearch for the EMEA region.

Massimo has more than 10 years of experience in bioresearch in the specific area of health monitoring with rodents and other species.

He graduated at the University of Milan in 1994, after some years in private practice, he moved to the bioresearch field, first with

Marshall, later with Charles River..

There he developed a strong interest in the challenges of health monitoring, especially with regards of the use of microisolation system as IVCs .

Massimo moved in 2013 to Idexx Bioresearch when Idexx started its activity in Europe. There he was introduced by Dr Marcus Crim to zebrafish and other aquatic species.

He presented at several national and international meetings (e.g. FELASA, ESLAV, LASA, Gv Solas, PolLasa, SCANLAS, AISAL) and he is author and co author of several posters (e.g. NC3Rs, FELASA, IAT, SECAL, LASA).(e.g. NC3Rs, FELASA, IAT, SECAL, LASA).



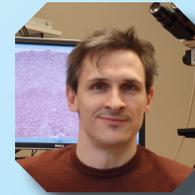
Olga Haenen

Since over 30 years, Dr. O.L.M. (Olga) Haenen raised and heads the National Reference Laboratory (NRL) for Fish, Shellfish and Crustacean Diseases of Wageningen Bioveterinary Research (WBVR) at Lelystad, The Netherlands. In 1995 Olga completed her PhD on the pathobiology of *Anguillicola crassus*, an emerging nematode of European eel, including histopathology.

Olga is an all-round expert in multidisciplinary diagnosis of especially fish diseases (clinical pathology, parasitology, bacteriology, virology, and histopathology), was and is involved in (international) research projects on eel and carp diseases, contact zoonotic infections, including vibriosis, and MALDI-TOF (sub

typing of fish pathogenic bacteria, leads international workshops, and gives (inter) national courses on fish diseases. Olga has a worldwide network. participates in various, e.g. EC, EFSA, and FAO advisory boards, and other consultancy. From 2006-2009 Olga Haenen was member of the OIE Aquatic Animal Health Standards Commission at Paris. Olga published >70 peer reviewed papers and >125 other papers, and presented hundreds of lectures.

Since 1st January 2018 she has also become professor at HAS University of Applied Sciences, 's-Hertogenbosch, on "Novel proteins, Insects and Fish: Healthy, Sustainable and Safe", related to culture of edible insects and fish.



Raoul Kuiper

Raoul Kuiper was born in Venray, the Netherlands, 1974. During primary and continued school educational years, a keen interest in nature and biology was soon apparent, as well as a fascination for observation of also the smallest creatures with the unaided, and aided eye. He commenced his veterinary education at the University of Utrecht, the Netherlands, in 1992, making several sidesteps from the regular curriculum to add further courses on

ecology and evolution, and later to engage in a number of research projects focusing on analysis of pesticide residues in farmed fish, and the effect of environmental pollutants on the fish immune system. After graduating as a legitimate veterinarian, he continued research in the environmental toxicology field with the laboratory of pathology and immunobiology of the Dutch national institute of health and the environment (RIVM) in Bilthoven, and the departments of pathobiology of the Faculty of veterinary medicine in Utrecht, the Netherlands, where he concurrently enrolled in a residency program in veterinary pathology. Following the defense of his PhD thesis in 2007 and passing the ECVP certifying exam in 2008, while continuing collaboration between the department of pathobiology and RIVM, he familiarized himself with rodent-based models for human disease, with main focus on murine progeroid models for aging-related disorders and intervention, and breast cancer. During that time, based in Utrecht, he was also involved in the establishment of a center for comparative pathology support for research. In 2012 he moved to Stockholm, Sweden, where he continues to serve as a comparative pathologist, heading the Karolinska Institute core facility for Morphologic Phenotype Analysis, where he is also enrolled in teaching histotechnique and laboratory animal pathology.



Stephanie Muller

Stephanie Muller currently covers the position of veterinary pathologist at IDEXX and IDEXX Bioresearch for the EMEA region. She has more than 10 years of experience in veterinary pathology and bioresearch with rodents and other species. She graduated at the Veterinary School of Alfort, France in 2001. She received her master's degree in toxicology from the University of Paris 5 in 2003. After some years in private practice, she completed a residency program at the University of Bern, Switzerland. There she was introduced

by Dr. Heike Schmidt-Posthaus and by Prof. Dr. Thomas Wahli to aquatic species. She is diplomated of the European College of Veterinary Pathologists (ECVP) since 2007. Stephanie worked at the Institut Clinique de la Souris ICS/IGBMC, Illkirch, France. There she was introduced by Dr. Julien VERMOT to zebrafish. She moved to Idexx in 2011. There she is working with Dr. Falk Wortberg, specialist in aquatic species. She presented at several national and international meetings and she is author and co-author of several publications. She was member of Institutional Animal Care and Use Committee (IACUC) of the ICS, Strasbourg until 2010. Stéphanie is member of European Society of Veterinary Pathology (ESVP), European Society of Laboratory Animal Veterinarians (ESLAV), the French Society of Toxicologic Pathology (FSTP) and the Charles Louis Davis and Samuel Wesley Thompson DVM Foundation for the Advancement of Veterinary and Comparative Pathology.



Jan-Bas Prins

Jan-Bas Prins received his master's degree with honors from the Wageningen University in the Netherlands. He went on to doing his PhD in Laboratory Animal Science with Prof. Dr. L.F.M. van Zutphen at the University of Utrecht. After post-doctoral projects at the University of Oxford, UK, and the Erasmus University, Rotterdam, The Netherlands he became the head of the pre-clinical division of the Department of Pulmonary Diseases at the Erasmus Medical Centre. In 2002, he took the position of Director of the Central Animal Facility of the Leiden University Medical Centre, LUMC, in the Netherlands. A position he still holds. He is Professor of Laboratory Animal Science at the LUMC and the University of Leiden. He is member of the Netherlands National Committee for the protection of animals used for scientific purposes. Jan-Bas Prins is a past-President of FELASA, Chairman of Laboratory Animals Ltd, Vice-chairman of the Scientific Committee of the Fondazione Guido Bernardini, Animal Welfare Officer and scientific advisor on animal welfare of Infrafrontier (IF2020), member of the External council for Comparative Medicine at the Karolinska Institute, Stockholm, Sweden and an AAALAC ad hoc specialist.



Daniela Salvatori

Daniela Salvatori obtained her veterinary degree in Italy. She served the University of Perugia and Camerino (Italy) as a researcher and teacher in infectious disease of domestic animals. In 2005 she received by the University of Edinburgh her PhD. In Edinburgh, during her PhD period at the Moredun Research Institute and at the Edinburgh Veterinary Faculty started her love for pathology. She is a European certified veterinary pathologist (ECVP) and a Dutch certified laboratory animal pathologist /toxicologist (CRP/TP). Daniela Salvatori works from 2008 for the Leiden University Medical Centre (LUMC, NL) where she leads the Laboratory Animal Pathology Unit. The pathology core facility is devoted to phenotype analysis. She also serves as the designated veterinarian for the LUMC and for and for the other Laboratory Animal facilities within Leiden University. Her time is shared between pathology support and research activities. Her research is focused on studying alternative in vitro assays for testing pluripotency

and malignancy of stem cells. She is project leader of two recently obtained ZonMW grants within the call "More knowledge with fewer animals".



Jerrold M. Ward

Dr. Ward is currently a consultant in Veterinary Pathology after retiring from the National Cancer Institute. He is also a Special Volunteer in the Laboratory of Immunopathology, NIAID, NIH; Adjunct Professor at Cornell University College of Veterinary Medicine, and on the Adjunct Faculty at The Jackson Laboratory. Dr. Ward received his DVM from Cornell University and PhD in Comparative Pathology from The University of California at Davis. His thesis concerned the discovery of FIP virus and pathogenesis of FIP. He is a Diplomate of the American College of Veterinary Pathologists (ACVP). Dr. Ward has spent much of his career in veterinary pathology employed by the US federal government. He was at the National Cancer Institute in several programs in toxicology (cancer drug development, NTP), chemical carcinogenesis and laboratory animal pathology. Dr. Ward was in the original NCI Carcinogenesis Bioassay Program in the 1970s testing environmental chemicals that led, in part, to the present National Toxicology Program (NTP). For the past 20 years much of his work has involved veterinary pathology support of toxicology, cancer, immunology and infectious disease research, often with genetically-engineered mice. His special interests include pathology of the hematopoietic and immune systems, CNS, liver, and respiratory tract, tumor pathology, and infectious disease. He is a co-author of many publications in journals, and books and has co-edited several books. Dr. Ward was on the Executive Committee of the Society of Toxicologic Pathology (STP) and is an Associate Editor for Toxicologic Pathology and Veterinary Pathology.



Jeffrey C. Wolf

Dr. Jeffrey C. Wolf, DVM, DACVP, is a graduate of Michigan State University's College of Veterinary Medicine, and received further training in anatomic pathology at the University of Florida and at Virginia Tech. He was board-certified by the American College of Veterinary Pathologists in 1997. Dr. Wolf has been employed at Experimental Pathology Laboratories (EPL®), Inc., a contract toxicologic histopathology organization, since 1999 and is currently the Chief Scientific Officer for the company, and Manager of Pathology at EPL's Sterling, Virginia laboratory. Dr. Wolf's primary area of expertise is toxicologic pathology of aquatic animals, with emphasis on reproductive and thyroid endocrine disruption studies that utilize various species of fish, frogs, and birds, including both native and laboratory specimens. Dr. Wolf is a long-standing co-editor of the Journal of Aquatic Animal Health, a faculty member of the internationally renowned Aquavet® II Comparative Pathology of Aquatic Animals course, in which he teaches a two-day seminar on the "Toxicologic Pathology of Fishes", and the primary author or co-author of greater than 60 articles in peer-reviewed publications, plus several book chapters, the most recent of which is "Alternative Animal Models" in Haschek and Rousseaux's Handbook of Toxicologic Pathology.