FONDAZIONE GUIDO BERNARDINI

BETTER EDUCATION FOR BETTER SCIENCE

AALAS affiliate

2014 Training Courses

NEVER STOP LEARNING.

The FGB training courses have been awarded CPD (Continuing Professional Development) credits by:
the Institute of Animal Technology (IAT),
the Swiss State Veterinary Association,
the German Academy of Continuing Veterinary Education (ATF).

TC•1

THE HEALTH MONITORING OF RODENTS AND THE CAGE-LEVEL ENVIRONMENT IN MODERN ANIMAL FACILITIES

March 27-28, 2014 - Milan

OBJECTIVES:

The course is designed to provide the participants with advanced concepts of animal health and environmental monitoring. Simulation of health monitoring laboratory schemes are provided through interactive theoretical sessions. A small group of participants will be guided by expert instructors through the routine procedures, laboratory test programmes and the interpretation of results.

CONTENTS:

Laboratory techniques for health monitoring of mice and rats; Traditional and emerging pathogenic agents; Relevant international guidelines; Practical applications in rodent units; Monitoring of incoming animals; Disaster plan in case of confirmed infection; Environmental monitoring of IVC equipped rodent facilities; Environmental microbiological monitoring; Monitoring of physical parameters.

RECIPIENTS:

Facility managers and supervisors, veterinarians, animal welfare officers, senior technicians, quality managers and laboratory biologists.

SYLLABUS:

- Discussion on the experience and interests of the participants

Why should we be worried about health monitoring?

- Microbiological agents and real risks
- FELASA guidelines

Laboratory techniques for health monitoring investigation

- Reliability
- Alternative methods
- New techniques
- Interpretation of results and their management at laboratory level
- Monitoring of biological specimens to be used for scientific research

New technical answers to the challenging health monitoring in IVCs

- IVCs and their impact on prevalence of infection
- IVCs and their impact on health monitoring

Health monitoring programmes in facilities equipped with different caging systems

- Proposed approach for open cages facilities
- Peculiar needs of isolator maintained rodent colonies
- Overview of the health monitoring system at the Research Centre
- Sentinel cage distribution, time table, sentinel replacement, rotation
- Dirty bedding system in use at the Research Centre
- Additional tests

Infection detected and confirmed: disaster plan

Incoming animals

- Health certificate evaluation of incoming rodents
- Destination of the animals - quarantine procedures
- Alternative strategies
  - Importation of embryos
  - Rederivation by embryo-transfer
- What to do: pros and cons of the different options
- The experience of the Research Centre

Microbiological monitoring

- Microbiological monitoring of food and bedding
- Microbiological monitoring of water: qualitative and quantitative aspects.
- Surface microbiological tests, meaning and applicability
- Air microbiological evaluation and alternative tests
- Practical examples

Monitoring of physical parameters

- Temperature and RH monitoring; meaning, frequency, equipment, target
- Alarms and their interpretation
- IVCs microenvironment: NH_3, CO_2, O_2, temperature and RH

Discussion on other experiences

- Positive findings: what to do

IAT CPD credits: 9 points | 1.5 day continuing education course by Swiss State Veterinary Association | 9 hours by German Academy of Continuing Veterinary Education (ATF)

TC•2 ORGANIZATION AND PROCEDURES IN THE MODERN LABORATORY RODENT FACILITY

May 6-9, 2014 - Milan

OBJECTIVES:

The course aims to instruct participants on the organization and management of a modern laboratory animal facility in all its aspects. The programme includes management concepts and technological advances applicable to the facility. The participants will improve their skills to face and solve everyday problems through theoretical and practical activities.

CONTENTS:

Layouts, functional areas, equipment, and workflows; Bio-containment and bio-exclusion: definitions and technical solutions; Main procedures in "clean" and "dirty" areas; Washing and decontamination; Health monitoring programmes; Colony management; Staff training and management: duty assignment and working scheduling, per diem calculation and attribution.

RECIPIENTS:

Facility managers and supervisors, animal welfare officers, veterinarians, veterinary assistants, senior technicians, quality managers.

SYLLABUS:

Essential principles in the care and use of laboratory animals

The animal facility: functional areas and workflows

- Facility planning and design
- Key components in an animal facility
- Workflows of animals, personnel and equipment: risks and possible solutions
- Pros and cons of different choices when layouting
- Different functional areas

Overview of the Research Institute and its organization

- Description of the Research Centre
- Research activity and technological services
- Different activities in the animal units
- Layout of the three animal facilities
- Ancillary areas
- Equipment
- Flows of people, animals and materials
- Technical staff organization

Bio-containment and Bio-exclusion - Classroom session

- Bio-containment and Bio-exclusion: definition and meaning
- Bioprotection of staff
- Allergen control
- Pathogens, protection of animals
- Pathogens, protection of staff and environment (BSL2 & BSL3)
- Technical solutions/barriers, primary containment
  - Filter Top
  - Isolators
  - Cubicles
  - Individually Ventilated Cages (IVC)
- Impact on the organization and workload

Equipment logistic in animal facilities

- Bio-containment and Bio-exclusion: our choice, why and how
- Cage change procedures
- Integral cage change vs partial cage changes: impact on biosecurity, workload, layout, and budget
- Strength of our procedures: choice for dual protection
- Alternatives

Cleaning routines procedures in the animal facility

- Washing: why, when and how
- Washing equipment
- Visually vs. microbiologically clean
- Standard loads, special loads, cycles
- Use vs non use of detergents
- Bottle washer, frequency of bottle change, cleanliness evaluation
- Organization of cage change at Research Centre and its impact on the washing area

Autoclaving

- Why autoclaving?
- Definitions and meaning related to the Research Centre activity: choice and compromise
- Equipment and workload
- Standard cycles, preparation of loads, health/non health resistant materials
- Cycle monitoring
- Possible problems and drawbacks

Decontamination

- Selection of non heat-resistant equipment
- Preparation of loads
- Definition of VHP cycles
- Monitoring VHP cycles
- Pros and cons of chemical disinfection
- Decontamination: our choice, why and how

Health monitoring in IVC equipped facilities

- Why to worry about health monitoring?
- Microbiological agents and real risks
- FELASA recommendations
- IVCs and their impact on health monitoring

- Proposed approach to peculiar needs in IVCs health monitoring programmes
- Positive findings: what to do
- Quarantine procedures
- Rederivation

Health monitoring system in the Research Centre
- Health monitoring programme: organization and costs
- Interpretation of health monitoring results in IVCs at the Research Centre: our experience

Visit to the "clean" area
- Entrance procedures
- Different functional areas and equipment
- Main procedures and workflows
- Overview of the experimental activities
- Breeding and maintenance of transgenic colonies
- Cage change procedures
- Health monitoring procedures
    - Sentinel cage distribution, timetable, sentinel replacement, rotation
    - Dirty bedding system in use at Research Centre
    - Additional tests

Visit to "dirty" areas
- Different functional areas and equipment
- Main procedures and workflows

Animal care procedures - Technician weekly schedule

Non-animal Care procedures - Theory and practice
- Approach and services provided
- Management of genetically modified mice
- Data recording, the Research Centre software systems
- Technician workload and weekly schedule

Disaster plans

Budgeting

"I have attended several courses and conferences organised by FGB and have found consistently a format to the sessions which for me as some one who wants to learn not only the theory of a subject but also the practical solution and the resolution of problems has been excellent.
The lecturers are professional and have significant experience within their own field, this level of experience ensures that the combination of theoretical and practical sessions stimulates a constructive exchange of views and considerations.
I enjoy the informal atmosphere and the opportunity to meet and talk with people from many different countries.

Jan Honetschalger, IMG-AS-CR Czech Republic"

IAT CPD credits: 22 points

3.5 day continuing education course by Swiss State Veterinary Association

TC•3

CLEANSING AND DECONTAMINATION: BEST PRACTICES IN WASHING, DISINFECTION AND STERILIZATION IN THE LABORATORY ANIMAL FACILITY

June 11-13, 2014 - Milan

OBJECTIVES:

The course provides cutting-edge knowledge on washing, decontamination and sterilization procedures as they are implemented in modern animal facilities. The in-depth discussion of all related aspects includes: cleansing methods, their frequency, appropriate use of detergents and disinfectants, technologies for sterilization processes and methods to assess their effectiveness. Validation processes of all cycles, from soil removal to microbiological load reduction, are also covered.

CONTENTS:

Introduction to cleansing and washing methods and technologies; Detergents and disinfectants: selection criteria, applications and safety aspects; Washing equipment; Validation of cleansing and cage washing processes; Cage and bottle wash operations in practice; Throughput and work-load calculations for different equipment/scenarios; Varying logistic flows for different operations; Decontamination and sterilization: definitions and selection of the appropriate method; Sterilization procedures, validation, and monitoring of a steam sterilization process.

RECIPIENTS:

Facility managers and supervisors, veterinarians, senior technicians, quality managers.

SYLLABUS:

Cleansing of the animal unit: why, when and how

- Hygienic state
- Procedures, frequency and characteristics
- Validation of the cleansing programme
- Monitoring of hygienic state

Washing: why, when and how

- Generalities about washing equipment
- Technologies available:
  - Cabinet washers
  - Rack washers
  - Tunnel washers
  - Bottle washers

Selection of detergents: their meaning and applications

- Chemical composition of common detergents
- Why detergents are needed
- When neutral, acid or alkaline
- Combination of detergent action and temperature
- Chemical compatibility of detergents
- Appropriate rinse efficiency assessment
- Rinse aids: chemical structure and working principles
- Centralized dosing systems
- Cleaning and antimicrobial activity
- Use of disinfectants in washing equipment
  - Chemical compatibility of disinfectants
  - Appropriate use and expectations
- Safety aspects
- Water quality
- Typical problems (corrosions, discolorations, etc.) of cages and bottles
- German working group AK KAB: guidelines and recommendations
- Further process chemicals with special characteristics

Validation of a cage washing process

- Back-ground information and relevant norms and/or guidelines
- Why validation is needed
- Steps of the validation process
- Visually versus microbiologically clean
- Organically versus microbiologically clean
- Methods available for microbiological and organic/soil removal assessment
- Acceptance criteria and interpretation of results
- Standard versus special cycles
- Thermal disinfection

Maintenance programmes: overview and related benefits

- Operation in the washing area at the Research Centre
- Discussion on other experiences

Cage and bottle wash operation

- Throughput and workload analysis to size equipment and wash area
- Importance of logistic evaluation and selection of supporting equipment (carts, trolleys, etc.)
- Organization of cage change and management of logistic workload through weekly peaks

Automation: workload reduction and personnel protection

Lessons learnt during project management and installation

Overview of equipment and logistic solutions selected at Research Centre

Decontamination: definitions and meanings

- Overview of the concept of decontamination
- Overview of the concept of disinfection and sterilization
- Differences between disinfection and sterilization
- Application and meaning in a laboratory animal facility

Decontamination procedures

- Why decontamination is required
- Choice of the appropriate decontamination method
- Choice of the appropriate chemicals and working principles

- Vaporized hydrogen peroxide
  - Generators
  - Pros and cons
- Gaseous chlorine dioxide
  - Generator
  - Pros and cons
- Chemical fogging:
  - Chemicals available
  - Pros and cons
- Overview of the typical application to decontamination equipments and supplies

Validation of a decontamination process

- Why validation is needed
- Steps of the validation process
- Selection of a typical load or validation of the worst case
- Microbiological vs chemical indicators: meaning of use
- Acceptance criteria and interpretation of results
- What to do when dealing with a non-standard load

Sterilization procedures

- Definitions Sterilization methods: steam, dry heat, ionising radiations, filtration, ethylene oxide, formaldehyde, and other cold agents
- References: pharmacopoeia, CE Directives, GMP, Standards, Guidelines
- Main applications in the bio-pharmaceutical field and related guidelines
- Sterilization kinetic
- Performance qualification and validation
- Sterilization procedures: principles and facts
- Steam sterilization
- Dry heat sterilization
- Ionising Radiations
- Chemical sterilization
  - Ethylene oxide
  - Formaldehyde
- Filtration
- Other agents
- Applications for hazardous pathogens and prions
  - Characteristics of the equipment and cycles

Decontamination and sterilization methods in use at the Research Centre

- Load-related selection of the appropriate procedure
- Preparation of the loads for sterilization
- Standard cycles

"Cleansing and decontamination is an area o fan overall animal care and welfare program that considerably contributes to animal welfare, but also to the reliability of scientific investigations. The training course at Fondazione Guido Bernardini provided both new insights and good refreshers on the topic. It conveyed the currently existing international reference standards and best practices and allowed a very interactive exchange with the guest speakers. This was also possible due to the consciously selected low number of participants. Where additional information or references were desired they were willingly provided in addition by the guest speakers. Implementation practices, also including most recent automated robot technologies, as a means for optimization of operational efficiency was nicely demonstrated by practical illustration in the directly adjacent animal facility and it's barrier system. Participants were very well being take care of. So from overall perspective everything was well organized. Apart from that this was a good opportunity for networking in the working arear of animal care and use!"

Achim Schenk, Head of Animal Welfare Officer & Interface Management Global Animal Welfare Officer Boehringer Ingelheim Animal Health GmbH - Germany

IAT CPD credits: 15 points

3 day continuing education course by Swiss State Veterinary Association

TC•4

THE MANAGEMENT OF GENETICALLY MODIFIED RODENT COLONIES

September 25-26, 2014 - Milan

OBJECTIVES:

The course covers the management of GM rodents from the breeding, husbandry and care and methods to securing genetic material according to the latest views. The generation of transgenics is not a prime subject of this course. Theoretical and practical views are presented. The programme includes a session where participants are given the opportunity to present one or more cases from their daily practice for discussion with the faculty and the other participants.

CONTENTS:

Colony organisation; Breeding; Animal characterisation and identification; Animal welfare; Ethical considerations; Cryo-banking; Databases and networks.

RECIPIENTS:

Facility managers and supervisors, animal welfare officers, veterinarians, lab biologists, senior technicians, GM colony managers.

SYLLABUS:

Theory of "transgenesis"

Impact on animal husbandry
- Colony exchange
- Health status and quarantine
- Colony size and space
- Specific requirements
- Colony management solutions
- Animal welfare
- Ethical considerations

Husbandry solutions for genetically modified rodents
- Housing systems
- Animal care

Animal identification and tissue sampling
- Different techniques: pros and cons
- Available guidelines

Cryopreservation
- Embryo
- Sperm
- Ovary
- Internal Vs external service

Repositories and consortia

"Having now attended a number of FGB events over the last 2 years I can wholehearedly recommend these events for anyone wishing to expand their knoledge in animal care and husbandry. The courses are always well organized with knowledgeable and experienced international speakers, group size are small, and the breaks and meals are well organized with opportunities to network and socialize with others in the field.

Dewi Rowlands, Hong Kong"

IAT CPD credits: 10 points

1.5 day continuing education course by Swiss State Veterinary Association

TC•6

FACILITY PLANNING, LOGISTICS AND TECHNOLOGICAL SOLUTIONS

November 13-14, 2014 - Milan

OBJECTIVES:

The course covers the key aspects to be considered during the planning and designing of modern rodent facilities. Details related to different architectural solutions in relation to various needs for new constructions or renovations are included. Different approaches to workflow organization, logistics, and procedures will be described. Work efficiency and personnel safety are presented in terms of state of the art technological solutions.

CONTENTS:

Methodology to approach a new project; Guidelines and legislative requirements; Planning considerations and design drivers: research purposes, new construction or renovation, flexibility, operational issues, cost efficiency, environmental impact; Approach to workflows and logistics; Security in animal facilities.

RECIPIENTS:

Facility managers and supervisors, architects, engineers, animal welfare officers, veterinarians.

SYLLABUS:

International guidelines and European regulations: a performance based approach

Considerations for:

- Animals
- Personnel
- Research activities

Animal facility design: relevant issues:

- The design team
- Different locations
- The planning and design

Defining key architectural components and solutions to meet the requirements

- Sizing the facility (quantitative needs)
- Assessment of structural/physical constrains
- Research needs
- Technologies and equipments

New constructions Vs renovations

- Approaches and challenges
- Balance between needs and feasibility

Logistics answers to different architectural solutions

- Flow diagrams
- Technical solutions
- Compromise
- Expectations and challenges
- Evaluation of results

How modern technological solutions can improve facilities' safety and efficiency

- Impact of different housing systems
- Barrier technologies (autoclaves, washing equipment, decontamination chamber, etc.)
- Impact of automation: advantages and limitations
- Expectation for technological solutions

Evaluation of the economical impact of technological choices: better before than after…

- Budgeting: definitions and people involved
- Priorities
- Examples of selective criteria
- Direct and indirect savings (capital costs, running costs, etc.)
- Economical impact on health and safety
- When compromise is acceptable

Planning of efficient, clean and green facilities

- Concept design
- Layouting
- Specific requirements
- Key points to be addressed

Environmental impact considerations in animal facility planning

- Legal requirements: an overview
- Challenges and solutions
- Practical examples

Security in animal facilities

- Risk assessment
- Structural solutions
- Procedural solutions
- Management of personnel

IAT CPD credits: 10 points

1.5 day continuing education course by Swiss State Veterinary Association

TC•7

MANAGING RESOURCES IN THE MODERN ANIMAL FACILITY

November 17-19, 2014 - Milan

OBJECTIVES:

The course is designed to provide a mix of technical and non-technical skills useful to effectively cope with increasingly complex and sometimes new issues such as ensuring quality care of the animals, compliance with regulations and guidelines, funding and administration, hiring staff and human resources management. Part of the training will be delivered by a human resources training group that will broaden the understanding and experiences of facility managers outside the specific field of laboratory animal science. The course aims at those wishing to move into management positions or to improve their managerial performance.

CONTENTS:

A wealth of information will be available both from within and outside the field of laboratory animal including: Facility management and planning; Monitoring of facility operation; Supply procurement; Tender preparation; Budgeting; Personnel actions including hiring and training; Competence identification and assessment; Engagement and motivation; Communication strategies; Relationship and conflict resolution.

RECIPIENTS:

Facility directors, Facility managers and supervisors, Assistant/Associate managers, Senior technicians.

SYLLABUS:

Facility characteristics and operations
- Functional areas
- Identification of requirements
- Justification of resources and benchmarking
- Criteria for equipment selection / replacement
- Priorities
- Organization of workflows and procedures

Tender preparation

Management tools and new technologies:
- Case study scenario

Monitoring of facility operations efficiency

Budgeting

Leadership and personnel management

Recruiting
- Job description
- Candidates selection
- Biosecurity - internal rules

Security screening

Training

Competence identification/assessment

Duty assignment
- Identification of skills matching to task requirements
- Task variation
- Workload assessment

Performance evaluation
- Definition of qualitative and quantitative standards
- Goal setting for teams and individuals

Engagement and motivation

Communication strategies

Conflict resolution

Relationship/team building

Workshop: Communication and conflict resolution

IAT CPD credits: pending continuing education course by Swiss State Veterinary Association

www.fondazioneguidobernardini.org

The Fondazione Guido Bernardini offers courses and scientific events such as symposia, seminars and workshops.

The expert team imparts the latest innovations and most updated information through constant interaction with the participants to develop their knowledge, skills and competence. The Fondazione also aims to promote and disseminate emerging technologies applicable in a modern laboratory animal facility for a more efficient organization and reduction of operating costs. The Scientific Committee of the Fondazione collaborates with public and private institutions in different countries to develop programmes based upon specific and local requirements.

For 2014 FGB has planned scientific events on topics such as Pathology of the mouse in medical research, Human health and ergonomics in the animal facility, Stem Cells in research, etc.

Visit the Fondazione website to obtain information on the upcoming courses and scientific events at: http://www.fondazioneguidobernardini.org

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