



# FONDAZIONE GUIDO BERNARDINI

BETTER EDUCATION FOR BETTER SCIENCE

## TWO DAY COURSE

CPD credits: pending

# Facility Planning, Logistics and Technological Solutions

17<sup>th</sup> to 18<sup>th</sup> of September 2015

### 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.*

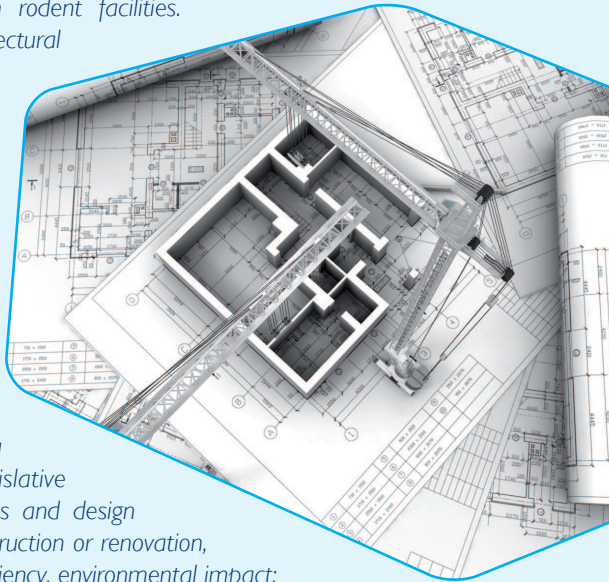
*Work efficiency and personnel safety are presented in terms of state of the art technological solutions.*

### 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.*



Day 1	<b>Regulatory perspective</b>	Impact of animals, personnel and research on design Requirements of an animal programme Performance based guidelines Common issues during a site visit
	<b>The planning and design process</b>	Building requirements and cost considerations The design team and your role The planning process The design process
	<b>Key architectural features</b>	Holding and procedure rooms Air locks and passthroughs Cage processing areas Support spaces Architectural considerations for human occupants
	<b>Planning and design of mechanical systems</b>	Regulatory requirements Integration of mechanical and architectural designs Redundancy and failure analysis HVAC distribution, supply/exhaust locations, modeling tools Pressure relationships and controls IVC and HVAC integration
	<b>Energy efficient mechanical systems</b>	Demand based control systems Energy recovery systems Environmental impact of different technical solutions
	<b>Operations and processes</b>	The use of risk assessment in design Barrier concepts for isolation and containment Operational flows and adjacencies Process analysis
	<b>Research and containment functional areas</b>	Quarantine ABSL2 areas Imaging suits
	<b>Impact of logistics on operations</b>	Holding room operations Cage processing operations Capital and operational costs Other considerations
Day 2	<b>Benchmarking</b>	Research requirements Sizing metrics Benchmarking cost exercise
	<b>Evaluation of the economical impact of technological choices: better before than after...</b>	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
	<b>Case study of how modern technological solutions can improve safety and efficiency</b>	Impact of different housing systems Barrier technologies (autoclaves, washing equipment, decontamination chamber, etc.) Impact of automation - advantages and limitations Expectation for technological solutions
	<b>Security in animal facility</b>	Risk assessment Structural solutions Procedural solutions Management of personnel
	<b>Description of the participants' facilities</b>	To be confirmed by the participants two weeks before the course

