25th Annual Conference
Animal Research Facilities 2013
Planning • Upgrades • Operations • Sustainability

Plus! Pre-Conference Training November 17
• Fundamentals of Planning and Design of Animal Labs and MEP Systems
• Physical Plant Expectations and Certification Guidance from AAALAC

November 18-19, 2013
J.W. Marriott on Pennsylvania Ave.
Washington, D.C.
Dramatic changes in the regulatory, financial, and operating requirements for animal research facilities have occurred in just the last few years. You and your institution need to get up-to-speed on these changes and put in motion new action plans.

Attend this conference to get the details on how leading peer institutions have made a quantum leap forward in cost reduction, operational efficiency, health and safety, and compliance with new technology applications, process improvements, and facility modernizations and upgrades.

At this conference you’ll learn what these innovations are and get the project and performance results, facility features, planning metrics, investment results, and lessons learned for:

- Increased utilization of existing space
- Adaptable space for multiple species and multiple programs
- New opportunities for room, rack, and cage efficiencies
- Sustainability through reduced water and energy use
- Improved maintenance processes
- Increased staff productivity
- High efficiency, low maintenance MEP systems
- Long-term operational planning

You’ll also examine first-hand the latest offerings in efficiency-raising equipment and technologies for animal housing, automation, air handling systems and controls, waste processing, surfaces and materials, specialty furniture, decontamination, and more.

Attend this conference as a team (managing veterinarians, research program directors, facility managers, capital project managers, engineering managers, space planners, and financial managers) to build consensus and momentum on the right direction and actions critical to the success of your institution’s research program.

We look forward to seeing you in November!

“I continue to find Tradeline conferences to be first-rate. The caliber of the meetings is a direct reflection of the time, energy and expertise that the Tradeline team puts into selecting the subject matter, speakers and venues, and then managing the entire meeting.”

David L. Ruble, DVM, DACLAM
Director, Institute of Comparative Medicine
Columbia University
The Fundamentals of Planning and Design of Animal Labs and MEP Systems

7:30 a.m. – Registration/Continental breakfast
8:00 a.m. – 4:30 p.m.; a total of 6 hours of instruction

Leaders:
Payette
Jeff Zynda – Associate Principal
R.G. Vanderweil Engineers, LLP
Michael Walsh, PE, LEED® AP BD+C Senior Mechanical Engineer and Principal

What you will learn: Participants will come away with a basic understanding of the vocabulary, concepts, processes, standards, numbers, types of equipment, and furniture (as applicable) involved in the planning and design of animal labs and related mechanical, electrical and plumbing systems. The course will be highly interactive with Q&A throughout.

Who should attend: This course is designed for those involved in the planning and design of animal laboratories including veterinarians, animal program and vivarium managers, research scientists, safety officers, architects, project managers, facility engineers, construction engineers, facility managers, and facility planners.

Module 1: Design Drivers: Programming & Planning Considerations
Module 2: Architectural Considerations
Module 3: HVAC Design
Module 4: Plumbing Design
Module 5: Electrical Design

Space is limited and enrollment is subject to approval.

Six (6) AIA Learning Units are available for this course.

Cost:
$1040 Fundamentals Course only
$900 with registration to the two-day conference November 18-19
(Feeds include course materials, continental breakfast, refreshment breaks, lunch)

Physical Plant Expectations and Certification Guidance from AAALAC

12:00 p.m. – Registration
12:30 p.m. – 4:30 p.m.; a total of 3 hours of instruction

Leader:
AAALAC International
John Bradfield, DVM, PhD Senior Director

What you will learn:
1. An overview of the latest changes to the Guide for Care and Use of Laboratory Animals and how they impact animal facility planning, design, and operations for AAALAC accredited facilities.
2. AAALAC expectations and requirements for the condition and functioning of the physical plant where animals are housed and used. This includes recommendations for corridors, doors, windows, power, lighting, storage, noise control, cagewash, and surgical facilities as well as HVAC standards and needs. Additionally, physical plant requirements of biocontainment research programs will be detailed including institutional policies, animal environment and management, veterinary medical care, physical plant, the 5th edition of the BMBL, and key points related to the use of select agents. The most frequent physical plant deficiencies are also provided to show areas in which most problems are found during AAALAC International site visits.

Space is limited and enrollment is subject to approval.

Three (3) AIA Learning Units are available for this course.

Cost:
$550 AAALAC Workshop only
$500 with registration to two-day conference November 18-19
(Feeds include course materials and refreshment breaks)
Conference Participants

Speakers
- AAALAC International
- Aircuity, Inc.
- Battelle
- BHDP Architecture
- Boehringer Ingelheim Pharmaceuticals, Inc.
- Columbia University Medical Center
- Flad Architects
- gRED Genentech
- Lenderking Caging Products
- Memorial University of Newfoundland
- Oregon Health & Science University
- Payette
- Princeton University
- R.G. Vanderweil Engineers, LLP
- Siemens Infrastructure & Cities – Building Technologies
- SMC-Roe Division of Audubon Machine Corp.
- STERRIS Corporation
- The Clark Enersen Partners
- The ElmCos Group, Ltd
- Treanor Science & Technology
- University of California, San Francisco
- University of Nebraska - Lincoln
- University of Texas Health Science Center at Houston
- University of Washington

Exhibitors
- Allentown, Inc.
- Arcoplast, Inc.
- Art’s Way Scientific, Inc.
- BASF Corporation
- BIOQUELL, Inc.
- Edstrom Industries, Inc.
- Getinge USA
- Innovive, Inc.
- Lab Products, Inc.
- Life Science Products, Inc.
- Mott Manufacturing Ltd.
- New England Laboratory Casework Co., Inc.
- NuAire, Inc.
- Phoenix Controls
- PRI Bio
- Res-Tek, Inc.
- Siemens Industry, Inc.
- SMC-Roe Division of Audubon Machine Corp.
- STERRIS Corporation
- Tecniplast USA, Inc.
- Trespa North America

Special Event Host
- Strobic Air Corp

Courtesy of RFD, Kirk Gittings Photography
Conference Speakers

James Beecher, PE, LEED® AP
Mechanical Engineer
The Clark Enersen Partners

Donald H. Beermann, Ph.D.
Director, Institutional Animal Care Program
University of Nebraska – Lincoln

John F. Bradfield, DVM, PhD
Senior Director
AAALAC International

Patrick J. Burke, III, AIA
Assistant VP of Capital Project Management
Columbia University Medical Center

Laura Conour, DVM, DACLAM
Director, Lab Animal Resources and University Attending Veterinarian
Princeton University, Office of the Dean of Research

Jim Coogan, PE
Senior Principal, Applications Engineer
Siemens Infrastructure & Cities – Building Technologies

Mark A. Corey, AIA
Principal
Flad Architects

Chris Cosgrove
Director of Planning, CEO
The EfmCos Group, Ltd.

Lawrence DiGennaro, AIA, LEED® AP BD+C
Client Leader
BHDP Architecture

Paul Fuson
Senior National Sales Manager, Life Science Solutions
Siemens Infrastructure & Cities – Building Technologies

Mark B. Gold, DVM, MSS, DACLAM
Global Animal Welfare Officer/Director,
Animal Resources
Boehringer Ingelheim Pharmaceuticals, Inc.

Bradford S. Goodwin, Jr., DVM, DACLAM
Professor and Executive Director, Center for Laboratory Animal Medicine and Care
University of Texas Health Science Center at Houston

Stephen H. Hucek
Project Manager, Facilities Engineering & Construction Battelle

George Kemper, RA
Senior Laboratory Planner/Architect
BHDP Architecture

Lauri J. Kempfer
Laboratory Planner
Flad Architects

Dr. Jennifer Keyte
Director, Animal Care Services and University Attending Veterinarian
Memorial University of Newfoundland

Johnathan Klosermeyer, Ph.D.
Application Engineer
STERIS Life Sciences

Jennifer L. Kulseth
Laboratory Planner
Treanor Science & Technology

H. Denny Liggitt, DVM, Ph.D.
Director of Comparative Medicine
University of Washington

Arthur Papineau, BS ChE, MBA
Product Manager – VHP® Solutions
STERIS Corporation

Timothy J. Reynolds, PE
Principal
Treanor Science & Technology

Clifford Roberts, DVM, DACLAM
Director, LARC – Attending Veterinarian
University of California, San Francisco

Philippe Roe
Product Director
SMC-Roe Division of Audubon Machine Corp.

Kim E. Saunders, DVM, DACLAM
Director and Professor, Department of Comparative Medicine
Oregon Health & Science University

Michael Semenuk
President
Lenderking Caging Products

Gordon P. Sharp
Chairman and Founder
Aircuity, Inc.

Andrew G. Stepp
Senior Principal, Architectural Designer & Lab Planner
The Clark Enersen Partners

Tim Sweeney
Designer
Payette

Michael J. Walsh, PE, LEED® AP
BD+C
Senior Mechanical Engineer and Principal
R.G. Vanderweil Engineers, LLP

Derek G. Westfall
President
Tradeline, Inc.

Steve L. Westfall, Ph.D.
Founder and CEO
Tradeline, Inc.

Rhonda Wiler, DVM
Director, Murine Genetics
gRED Genentech

Jeffrey R. Zynda
Associate Principal
Payette
Special Events and Features:

**Hosted Pre-Conference Reception**

Sunday; November 17, 7:30 p.m. Light fare and dessert. Attendees may sign in and pick up their conference materials at this time. Guests welcome.

**Hosted Reception**

Monday; November 18, 4:45 p.m. – 6:00 p.m. Guests welcome.

**Food and Beverage**

Registered attendees will be provided with lunch and refreshment breaks on both meeting days.

A continental breakfast will be served on the first meeting day and a full breakfast will be served on the second meeting day.

**Please Note The Following**

Dress for this conference is business casual. It is our goal to maintain the temperature of the meeting rooms at an acceptable level for all attendees. However, for your maximum comfort we suggest that you plan to dress in layers.

Audio or video recording devices are not permitted at this conference.

---

**Sunday; November 17**

- Registration Sign-in/Continental Breakfast for Fundamentals Course 7:30 a.m. – 8:00 a.m.
- * Fundamentals of Planning and Design of Animal Labs 8:00 a.m. – 4:30 p.m.
- Registration Sign-in for AAALAC workshop 12:00 p.m. – 12:30 p.m.
- * Physical Plant Expectations and Certification Guidance from AAALAC 12:30 p.m. – 4:30 p.m.
- Hosted Dessert and Light Fare Reception; Registration Sign-in 7:30 p.m. – 9:00 p.m.

**Monday; November 18**

- Registration Sign-in/Continental Breakfast 8:00 a.m. – 8:30 a.m.
- General Session 8:30 a.m. – 10:50 a.m.
  - Conference Overview
  - Speakers: University of Washington; Boehringer Ingelheim Pharmaceuticals; Princeton University; Memorial University of Newfoundland
- Concurrent Forum Sessions 11:05 a.m. – 12:00 p.m.
  - F. New capital equipment without capital funding: How to get it (without stealing!)
  - H. Best practices and innovative ideas for facility re-use, repurposing, and upgrades
  - J. Proven designs and best practices: Space, operations, maintenance, safety, and efficiency
- Hosted Luncheon 12:00 p.m.
- Concurrent Forum Sessions 1:05 p.m. – 2:00 p.m.
  - E. Reduce energy use, carbon footprint, and operating costs while maintaining compliance
  - I. Improve vivarium operating efficiency with project stakeholder engagement tools
  - K. Big moves to relieve vivarium operating pressures: Centralization, adaptive re-use, species flexibility
- Concurrent Forum Sessions 2:15 p.m. – 3:10 p.m.
  - A. Best-in-class strategies to reduce energy consumption and operational costs
  - B. Building Management System upgrades for compliance and improvements in operations & energy use
  - C. Vivarium heart transplant: Renovating the cage wash
- General Session 3:25 p.m. – 4:45 p.m.
  - Speakers: Columbia University Medical Center; The University of Texas Health Science Center at Houston; University of California, San Francisco
- Reception Hosted by Strobic Air Corp. (Guests Welcome) 4:45 p.m. – 6:00 p.m.
  - *Additional cost to attend .
Tuesday; November 19

Hosted Breakfast  
7:15 a.m. – 8:00 a.m.

Concurrent Sessions  8:05 a.m. – 9:00 a.m.
A. Best-in-class strategies to reduce energy consumption and operational costs
D. "Flow through bedding": A new cage design to reduce cage change rate and airflow requirements
H. Best practices and innovative ideas for facility re-use, repurposing, and upgrades

General Session  9:20 a.m. – 10:15 a.m.
Speakers: gRED Genentech; Oregon Health & Science University

Concurrent Forum Sessions  10:40 a.m. – 11:35 a.m.
E. Reduce energy use, carbon footprint, and operating costs while maintaining compliance
F. New capital equipment without capital funding: How to get it (without stealing!)
K. Big moves to relieve vivarium operating pressures: Centralization, adaptive re-use, species flexibility

Concurrent Forum Sessions  11:50 a.m. – 12:45 p.m.
G. Decontamination considerations for construction, renovation, and commissioning processes
I. Improve vivarium operating efficiency with project stakeholder engagement tools
J. Proven designs and best practices: Space, operations, maintenance, safety, and efficiency

Hosted Luncheon  12:45 p.m.

Concurrent Forum Sessions  1:45 p.m. – 2:40 p.m.
B. Building Management System upgrades for compliance and improvements in operations & energy use
C. Vivarium heart transplant: Renovating the cage wash

General Session  2:55 p.m. – 3:40 p.m.
Town Hall Knowledge Roundup

Adjourn  3:40 p.m.

+Presented at this time only.
Monday and Tuesday; November 18-19

Attend all of the General Sessions below

**Monday; November 18**

**Five-year plans for vivarium operations: Facilities, staffing, and financial models**

*University of Washington*

**H. Denny Liggitt, DVM, Ph.D. – Director of Comparative Medicine**

What are research organizations doing to ensure that vivarium operations remain financially sustainable for the next five years? Denny Liggitt details what University of Washington is doing and building to position its animal research program for the future and address three critical areas of need: facilities, staff, and revenue models. He examines a robust capital improvement and operating plan that includes providing services to external clients and meeting requirements for capacity, flexibility, study segregation, staffing, and training. He illustrates how this model will deliver higher space and staff utilization and improved bottom-line performance.

**Boehringer Ingelheim’s “Formula 1” model for animal welfare and operating efficiency**

*Boehringer Ingelheim Pharmaceuticals, Inc.*

**Mark Gold – Global Animal Welfare Officer and Director, Animal Resources**

“The best of everything, as simple as possible” — that’s the philosophy behind the design of Boehringer Ingelheim’s new Safety Assessment Building, a mixed species facility built primarily for improved welfare, but with ease of use and efficiency of design as guiding principles. Mark Gold illustrates how ETS 123, European dog laws, GLP, and global corporate standards influenced design decisions and resulted in a more relaxed, less stressful, more cooperative environment for humans and animals alike. He identifies welfare objectives, operating efficiencies, and cost advantages of specific room and pen configurations, multi-animal housing features, procedure rooms, surfaces, and coatings.

**Princeton’s new multi-species vivarium: Raising the bar for compliance and efficiency**

*Princeton University, Office of the Dean of Research*

**Laura A. Conour, DVM, DACLAM – Director, Laboratory Animal Resources and University Attending Veterinarian**

Competitiveness, compliance, and cost-efficiency are what define the new gold standard for animal resource facilities. Laura Conour profiles what Princeton has done to meet that three-part challenge with user-friendly work environments that support emerging global animal welfare standards, and offer a sustainable staffing and operating cost model. She examines rationales for decisions on European design and US cage standards, demand-based ventilation, lighting and water systems, monitoring systems, and mobile technology — all of which represent radical departures from past strategies. She illustrates streamlined process flows that benefit staff and animal welfare, and provides valuable lessons learned from move-in and startup.

**Calculate the full cost of vivarium deferred maintenance: Pay now, or pay more later**

*Memorial University of Newfoundland*

**Dr. Jennifer Keyte – Director, Animal Care Services and University Attending Veterinarian**

To stay competitive and make the best strategic spending decisions, consider the long-term effects of deferred maintenance on animal facilities, operating costs, and research programs, and what it takes to bounce back in terms of budget, time, and effort. Jennifer Keyte illustrates what Memorial University of Newfoundland has learned about animal facilities prioritization in capital reinvestment decisions, and the full ramifications of those decisions for certification, research productivity, worker health & safety, and budgets. She examines stakeholder communication strategies, project funding models, and phasing strategies that facilitate a rapid return to productivity, efficiency, and quality.

**Columbia’s multi-year strategic campus plan for vivarium modernization**

*Columbia University Medical Center*

**Patrick J. Burke III, AIA – Assistant Vice President, Capital Project Management**

Here you’ll see what Columbia University Medical Center is doing within a challenged capital budget to upgrade antiquated 1960s and 1970s facilities for modern research needs, and keep productive research programs running during construction on a space-constrained urban campus. Patrick Burke illustrates features being included in the upgraded facilities including re-allocated and reconfigured multi-species spaces, and big changes to air handling equipment, caging systems, and cage wash. He profiles a combined strategy of new construction, leased space, facility re-use, satellite facilities, researcher engagement, project phasing, study resizing, and temporary housing to facilitate research continuity during construction.

**What to build for constantly changing animal models: Renovation and construction must-haves**

*The University of Texas Health Science Center at Houston*

**Bradford S. Goodwin, Jr., DVM, DACLAM – Professor and Executive Director, Center for Laboratory Animal Medicine and Care**

Changing animal models and associated housing requirements will test the limits of your facility flexibility, capacity models, and operating plans. What design features are proven to support high animal model churn rates and save vivarium facilities from obsolescence? Brad Goodwin examines recent case studies from around the world and distills equipment and facility features and best practices that should be part of your renovation and construction plans. He also illustrates how trends in research priorities and funding models should inform decisions on how best to spend capital dollars.
Recyclable caging study results: Broader applications and selection criteria for today’s project and cost drivers

**University of California, San Francisco**
Clifford Roberts, DVM, DACLAM – Director, LARC – Attending Veterinarian

Results from a worldwide study on recyclable caging adoption and performance metrics should inform plans for facility designs, energy use, and operating efficiency. Cliff Roberts examines the use of recyclable caging technology for a variety of programs, facilities types, and census sizes in the University of California system and facilities worldwide. He sets out selection criteria, and delivers aggregate data on facility square footage, quantity of cages, cage density per unit space, actual costs and estimated savings. He illustrates improved process flows, staffing levels, ergonomics, utility consumption, housing protocols, operating costs, biosecurity and waste handling for both new construction projects and renovations.

Tuesday; November 19

Vivarium operating efficiency improvements start inside the cage

**gRED Genentech**
Rhonda Wiler, DVM, ACLAM – Director Murine Genetics

To get lean process improvement results for cage-related vivarium tasks, start with the end in mind: improved animal health and welfare, with reduced labor requirements and lower operating costs. Rhonda Wiler profiles Genentech’s recent operating efficiency enhancements that begin with asking “How frequently does a cage actually need to be changed?” She details intra-cage environmental assessments processes to evaluate ammonia levels at various cage occupancies and meet pre-defined IACUC end points. She scopes out what’s achievable in terms of ROI while improving animal welfare and Husbandry Staff job satisfaction, and delivers recommendations for standardizing intra-cage environmental assessment methodologies.

Addressing the cost of labor through an electronic personnel utilization program and process streamlining

**Oregon Health & Science University**
Kim E. Saunders, DVM, DACLAM – Director and Professor, Department of Comparative Medicine

Improving the efficiency of vivarium operating staff directly translates to improved vivarium performance, cost competitiveness, and responsiveness to research program changes. Kim Saunders profiles recent efforts at Oregon Health & Science University to make the vivarium workforce more effective and productive through an electronic personnel utilization program, process streamlining, and investments in upgraded equipment. She illustrates techniques for identifying problem areas, setting new performance targets, extracting critical process knowledge and innovative ideas from staff. She demonstrates the positive effects on worker satisfaction, staff retention, and operating cost reduction.

Town Hall Knowledge Roundup

**Facilitators: Tradeline, Inc.**
Steve Westfall – Founder and CEO
Derek Westfall – President

This closing session is where key ideas, new developments, and findings that have been revealed over the course of the entire two-day conference (including sessions you may have missed) get clarified, expanded upon, and affirmed or debated. This is also the opportunity to get answers from industry leaders and the entire audience to specific questions on key and challenging issues. A session transcript of this town-hall-format knowledge exchange will be sent to all attendees.

“[Tradeline] is professionally run, placing emphasis on information sharing and education gained from knowledgeable speakers discussing real-time, pertinent issues... the true value in Tradeline is in the people: meeting and socializing with peers, clients, suppliers, and friends... a tremendous value that delivers exactly as advertised!”

Jeff Williams
Director, Corporate Facilities Management
Charles River Laboratories
A. Best-in-class strategies to reduce energy consumption and operational costs

Payette
Tim Sweeney – Designer
Jeff Zynda – Associate Principal

To reduce energy and labor costs – the two biggest operating expenses that animal facility owners will be paying for decades – forward-looking decisions need to be made during facility design and upgrade planning stages. Tim Sweeney and Jeff Zynda illustrate project management best practices that bring operational cost issues to the forefront of the design process and clarify the effects that first-cost decisions have on long-term vivarium financial sustainability. They demonstrate life cycle cost modeling techniques for animal laboratory and process equipment, maintenance, and HVAC systems. They also examine the use of smart technologies and automation to further reduce operational costs.

Monday 2:15 p.m. – 3:10 p.m. | Tuesday 8:05 a.m. – 9:00 a.m.

B. Building Management System upgrades for compliance and improvements in operations and energy use

Siemens Infrastructure & Cities - Building Technologies
Paul Fuson – Senior National Sales Manager, Life Science Solutions
Jim Coogan, PE – Senior Principal, Applications Engineer

Enhanced building automation and management systems (BAS/BMS) are greatly improving the performance of complex biocontainment HVAC systems, data gathering for regulatory compliance, and facility operating efficiencies. Session leaders profile high-value options for upgrading BAS/BMS to meet current standards, enable proactive identification and resolution of operational issues, and provide information required by animal scientists. They examine lessons learned from recent automation/management system modification projects for research mission changes, illustrate real-time reporting features and mobile solutions that improve data management and utilization for the research and animal science staff, and identify energy use reduction strategies for new construction and upgrades.

Monday 2:15 p.m. – 3:10 p.m. | Tuesday 1:45 p.m. – 2:40 p.m.

C. Vivarium heart transplant: Renovating the cage wash

The ElmCos Group, Ltd.
Christopher Cosgrove – Director of Planning and CEO
Memorial University of Newfoundland
Dr. Jennifer Keyte – Director, Animal Care Services and University Attending Veterinarian

The cage wash and related operations offer some of the biggest savings opportunities available in animal facilities, but they are also the heart of vivarium operations. How can they be upgraded without bringing research to a stop? Chris Cosgrove and Jennifer Keyte detail the effects of multiple stopgap cage wash renovations, and make the case for more strategic capital investment to improve operational efficiency and financial performance. They dissect rationales for cage wash centralization, new more efficient work flows, and the use of mockups. They deliver solutions for ongoing research, noise and vibration mitigation, surprises from existing conditions, temporary relocations, and phasing.

Monday 2:15 p.m. – 3:10 p.m. | Tuesday 8:05 a.m. – 9:00 a.m.

D. “Flow through bedding”: A new cage design to reduce cage change rate and airflow requirements

Lenderking Caging Products
Michael Semenuk – President

A new ventilated rodent cage design using “flow through bedding” promises to reduce the air changes required for cage ventilation by as much as 75%, keep bedding dry, prevent the formation of ammonia, and reduce the cost of labor through dramatically reduced cage change rate. Michael Semenuk examines how the new cage and filter/blower design enabled a multi-million dollar savings in renovation cost for one facility by virtue of decreased airflow requirements and demand-based technology. He delivers a worksheet for determining the cost of supplying air to ventilated cages, and for calculating savings based on extended cage change intervals.

Tuesday 8:05 a.m. – 9:00 a.m.
New Plans And Upgrades (E-K)

E. Reduce energy use, carbon footprint, and operating costs while maintaining compliance

Aircuity, Inc.
Gordon P. Sharp – Chairman and Founder

There are two big prerequisites for reducing first costs, energy costs, and carbon footprint while maintaining AAALAC and ILAR compliance and internal air quality standards: 1) a demand-based ventilation strategy, and 2) real-time data analysis and reporting technology. Gordon Sharp illustrates how to safely reduce vivarium ventilation rates to between 2 and 8 ACH, while maintaining 15-20 ACH capability or more for on-demand purging of the vivarium environment. He delivers answers for AAALAC and ILAR concerns, and profiles the use of particulate, ammonia, and TVOC data to maintain excellent environments for animals, and correct problems in work practices.

Monday 1:05 p.m. – 2:00 p.m. | Tuesday 10:40 a.m. – 11:35 a.m.

F. New capital equipment without capital funding: How to get it (without stealing!)

SMC – Roe Division of Audubon Machine Corp.
Philippe Roe – Product Director

How are your peer institutions able to afford shiny new equipment in the face of reduced grant funding, fixed capital budgets, and skyrocketing maintenance costs? You need a solution to stay competitive – and here it is. Philippe Roe illustrates how to obtain consumable laboratory animal product supplier contracts with “no-charge” capital equipment. He outlines steps to take with internal departments (Finance and Budget, HR, and EH&S) to establish a consensus on both direct and indirect costs as a basis of allowances within the operating budget. He demonstrates achievable results: lower operating costs, enhanced worker productivity, and recruitment advantages.

Monday 11:05 a.m. – 12:00 p.m. | Tuesday 10:40 a.m. – 11:35 a.m.

G. Decontamination considerations for construction, renovation, and commissioning processes

STERIS Life Sciences
Arthur Papineau, BS ChE, MBA – Product Manager – VHP® Solutions
John Klostermeyer, Ph.D. – Application Engineer

The selection of decontamination technology to match research program and facility operating requirements is one of the most significant determiners of vivarium design, first costs, flexibility options, and operational efficiency. Art Papineau and John Klostermeyer scope out critical decision points and action items for factoring decontamination requirements into new facility plans, renovations, upgrades, and commissioning processes. They illustrate the use of hydrogen peroxide vapor for biodecontamination of a new 100,000-sq-ft lab animal research facility – including validation requirements, process selection, facility preparation, material compatibility, and the results. They also deliver best practices on scheduling and staffing, and solutions for demanding environments.

Tuesday 11:50 a.m. – 12:45 p.m.

H. Best practices and innovative ideas for facility re-use, repurposing, and upgrades

Treanor Science & Technology
Tim Reynolds, PE – Principal
Jennifer Kulseth – Laboratory and Animal Facility Planner

Current financial conditions frequently dictate reuse of non-purpose-built facilities to support specialized animal programs and requirements. Here you’ll see processes, plans, layouts, and infrastructure details required to deliver demanding program goals in reused and repurposed facilities. Session leaders profile renovation of a 60-year-old animal facility at the University of Kansas to deliver capabilities including vibration sensitive bio-behavioral measurement, micro-injection and genotyping, pathology, specific pathogen free barrier, and conventional rodent housing and support. They illustrate best practices for assessing facility conditions, solutions for low floor to floor heights and inadequate/inefficient infrastructure, and strategies that deliver code compliance and enhanced life safety.

Monday 11:05 a.m. – 12:00 p.m. | Tuesday 8:05 a.m. – 9:00 a.m.
I. Improve vivarium operating efficiency with project stakeholder engagement tools

BHDP Architecture
George Kemper, RA – Senior Laboratory Planner
Larry DiGennaro, AIA, LEED® AP BD+C – Client Leader

Battle
Steve Hucek – Project Manager, Facilities Engineering & Construction

Higher-than-ever expectations for cost effectiveness, safety, and productivity in vivarium construction and upgrade projects demand new, innovative solutions — the kind that only come from collaborative multi-disciplinary project teams. Session leaders demonstrate the kind of breakthroughs that take place when the wealth of work process knowledge possessed by vivarium staff is adequately captured and communicated to designers and MEP professionals — critical data that has too often been “lost in translation.” They illustrate new project management processes, stakeholder engagement tools, and technologies, the application of which result in more streamlined, efficient, and financially sustainable animal facilities.

Monday 1:05 p.m. – 2:00 p.m. | Tuesday 11:50 a.m. – 12:45 p.m.

J. Proven designs and best practices: Space, operations, maintenance, safety, and efficiency

Flad Architects
Mark Corey, AIA – Principal
Laurie Kempfer – Laboratory Planner

Institutions gearing up for the next five years of animal research activity will be well-served by this redux of lessons learned, operating best practices, and proven vivarium features distilled from 30 years of project experience. Mark Corey and Laurie Kempfer highlight what should now be on every vivarium owner’s shopping list to stay competitive, including flexibility features, streamlined layouts, high performance finishes and equipment, labor-saving operating models, and biocontainment capabilities. They profile research program drivers and solutions from multiple recent projects and institutions, and identify opportunities for first cost and operating cost reduction.

Monday 11:05 a.m. – 12:00 p.m. | Tuesday 11:50 a.m. – 12:45 p.m.

“Tradeline programs have been the foundation for our Design & Construction Group. We haven’t found a quality knowledge exchange that comes anywhere close to what you have to offer. The confluence of thought leaders, peers who are facing the same issues, and consultants who you can evaluate at the conference who also can help you get your jobs done is to me the ‘sheer genius’ of the conference concept you have created and sustained over the years. Congratulations! You are making contributions to what we do and who we serve in ways that you couldn’t in your wildest [dreams] even imagine.”

Walter W. Davis
Assistant Vice Chancellor & Assistant Dean for Facilities Operations [retired]
Washington University School of Medicine
K. Big moves to relieve vivarium operating pressures: Centralization, adaptive re-use, species flexibility

The Clark Enersen Partners
Andrew Stepp – Senior Principal, Architectural Designer and Laboratory Planner
James Beecher, PE, LEED® AP – Mechanical Engineer
University of Nebraska-Lincoln
Donald Beermann – Director, Institutional Animal Care Program

Institutions saddled with old, outdated animal facilities are also under increasing pressure to expand program capabilities and lower operating costs with minimal capital dollars — is there a way out? Here, session leaders demonstrate a phased approach to getting modern, high-performance vivarium facilities. They profile work at University of Nebraska-Lincoln involving adaptive re-use, vivarium centralization, multi-species flexible facilities, and an institution-wide accreditation process overhaul. They set out rationales for choosing between new construction and renovation, space allocation metrics for current and future research programs and species, and strategies for maximizing research uptime during construction.

Monday 1:05 p.m. – 2:00 p.m. | Tuesday 10:40 a.m. – 11:35 a.m.

“Attendance at Tradeline Conferences should be mandatory for anyone who has a facility renovation or expansion on the horizon. If I had been coming to these meetings over the years, the registration fee would be miniscule compared to the thousands of dollars my institution could have saved by avoiding costly errors and by improving design efficiencies.”

Bradford S. Goodwin, Jr., DVM, DACLAM
Professor and Executive Director
The University of Texas Health Science Center at Houston
How to Register:

Conference Registration Fees
Registration fees with payment by 10/18/13:
$1690 for single registration
$1540 per person for groups of 2 or more
Registration fees after 10/18/13:
$1890 for single registration
$1740 per person for groups of 2 or more

Registration fee includes:
All general sessions, selection of forums, a dessert and light fare reception, two lunches, one breakfast, a wine and hors d’oeuvres reception, refreshments, and a conference workbook guide. Presentations will be made available for download to attendees.

Team Discounts!
For groups of 5 or more, please call Tradeline for additional discounts available.

Pre-Conference Training

Fundamentals of Planning and Design of Animal Labs and MEP Systems
$1040 Stand alone course
$900 with full conference participation

AAALAC Workshop
$550 Stand alone course
$500 with full conference participation

Hotel and Travel Information:

Room Reservations
Tradeline has reserved a block of sleeping rooms for this event at the J.W Marriott on Pennsylvania Ave. for registrations received by October 25, 2013. Tradeline will handle and confirm room reservations [based on availability] according to your instructions on the registration form.

After October 25 please call Tradeline for room availability.

Changes: All room reservations and changes must originate through Tradeline, Inc. to obtain the special rate. If you contact the hotel directly, you may be informed that they are sold out, or you may be charged a higher rate.

Room Rate
The discounted room rate for this event is $289/night, single or double occupancy.

A limited number of government per diem rate rooms are available to U.S. federal government employees.

This is a non-smoking hotel.

Room Payment
Tradeline does not accept payment for room reservations. Hotel charges are paid to the hotel directly upon checkout.

Travel Information

Air Transportation
The JW Marriott Hotel is just 10 mins. from the Ronald Reagan Washington National Airport, 45 mins. from Washington-Dulles and 1 hour from Baltimore-Washington International (BWI).

Airport-to-hotel
Taxi cabs are readily available outside baggage claim at all three airports. Estimated one-way taxi fares from Reagan National: $20; from Dulles: $60; from BWI: $90. Super Shuttle provides airport shuttle service from all three airports. Call 1-800-Blue Van for reservations.
1. Please Type or Print Clearly (or register online at www.TradelineInc.com/Animal2013)

- Conference registration is not complete until confirmed by Tradeline, Inc.
- Please confirm airline reservations only after confirmation of registration.
- Only one registrant per form.

Name ____________________________________  First Name for name badge __________
Title/Position ________________________________________________________________________
Institution __________________________________________________________________________
Address ______________________________ M/S ___________________________
City ___________________________ State ___________ Zip Code ______________
Country ____________________________ Phone __________________ Fax ________________
Attendee Contact Email ____________________________
Alternate Contact Email ____________________________

2. Register with payment before Oct. 18, and save $200!

<table>
<thead>
<tr>
<th>Payment by 10/18/13</th>
<th>Full price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Registration</td>
<td>$1,690</td>
</tr>
<tr>
<td>Team Registration Discount*</td>
<td>$1,540/Attendee</td>
</tr>
</tbody>
</table>

*Name of other team registrant(s) ________________________________________________

3. Conference Add-Ons:

   Sunday; November 17, 2013
   - Fundamentals of Planning and Design of Animal Labs
     - $1040  - $900 with registration to the full 2 day conference November 18-19
   - Physical Plant Expectations and Guidance from AAALAC
     - $550  - $500 with registration to the full 2 day conference November 18-19

4. Select a Method of Payment

   To receive early discount, payment must accompany registration. Payment or P.O. # must be received by conference date in order to attend.
   - Visa  - Mastercard  - AmEx  - Name on Card ____________________________
   Card # ____________________________ Exp. Date ___________ Security Code ______
   Billing Address: _____________________________________________________________
   (If different from above)
   - CHECK: Make payable to TRADELINE, INC.  Check # ____________________________
   - INSTITUTIONAL P.O. number (not eligible for early discount) __________________

5. Hotel Reservations

   Please do not call the hotel directly. The special room rate below is available at the J.W. Marriott Washington, DC through Tradeline only.
   - Yes, please reserve a room for me.  Arrival Date: ___________ Departure Date: ___________
   - Single occupancy ($289/night +14.5% room tax)  - Double occupancy ($289/night +14.5% room tax)
   - Government Rate ($183/night at press time) – A limited number of rooms are available for U.S. federal government employees.
   Special Requests*: __________________________
   - No, I will not require a hotel reservation.
Register Now!
www.TradelineInc.com/Animal2013
Register with payment by Oct. 18 and Save $200

TRADELINES 2013 Conferences

- **The 2013 International Conference on Biocontainment Facilities**
  March 18-19 • San Diego, California • Hilton San Diego Bayfront
- **The 2013 Lean Facility Lifecycle Conference**
  April 8-9 • San Diego, California • Hilton San Diego Resort
- **The 2013 International Conference on Research Facilities**
  May 9-10 • Boston, Massachusetts • Westin Copley Place
- **Space Strategies 2013**
  October 7-8 • Scottsdale, Arizona • Hyatt Regency
- **Academic Medical and Health Science Centers 2013**
  October 21-22 • Orlando, Florida • Gaylord Palms
- **College & University Science Facilities 2013**
  October 28-29 • Boston, Massachusetts • Westin Copley Place
- **Animal Research Facilities 2013**
  November 18-19 • Washington, D.C. • J.W. Marriott Pennsylvania Avenue

Solutions for success in planning, modernizing, constructing, and operating facilities