bioWIRE

A NEWSLETTER BRINGING TOGETHER INDUSTRY LEADERS, RESEARCH & INNOVATION.

From Europe to South America to Haiti, bioBUBBLE covered A LOT OF ground — installing projects and meeting incredible individuals along the way. Here are the top facility designs:

Rebuilding Haiti: MDR Tuberculosis Laboratory

University of Florida | Build a Better Haiti Project | Gressier, Haiti

June 18, 2013 marked a high point for the employees of bio**BUBBLE**. After months of preparation, hundreds of collective hours of donated time and labor, and an endowment of materials and equipment by the company, the "Haiti Project" culminated into a reality. bio**BUBBLE** Representatives Kim Dazey and Jackson Cooley traveled over 2,400 miles and worked for two days to complete the installation of the 309 square foot BSL3 Containment Enclosure for the University of Florida Tuberculosis Lab Training Center in Gressier, Haiti.

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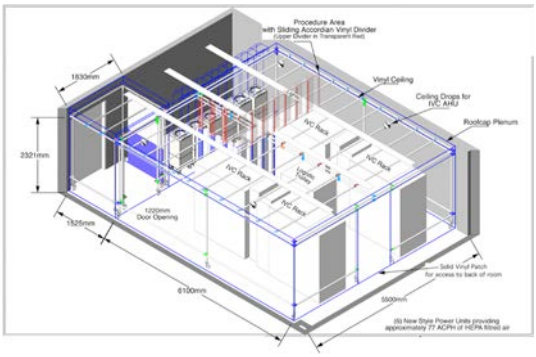
Representatives from the University of Florida, Christianville Foundation and bioBUBBLE collarborate on the new Tuberculosis Lab Training Center in Gressier, Haiti.



iCS conceptual design

Upgrading Health Status in an SPF Facility Without Renovation or Downtime

Institut Clinique de la Souris | Illkirch, France

In February of 2013, bio**BUBBLE** installed a Class 100/ ISO 5 cleanroom at Institut Clinique de la Souris, a mouse breeding and banking center in Illkirch, France. The challenge? To improve mouse health and generate mice free of Helicobacter, Pasturella, and Norovirus in a fully occupied, endemically infected breeding facility.

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Animal Facility Expansion at a Fraction of the Cost

Sage Labs | Saint Louis, Missouri USA

bio**BUBBLE** consultants expanded the breeding and research operations at this private CRO, providing a savings of more than 64% compared to hard construction and facility outfit costs. The project design reclaimed an "unusable" shell/ warehouse space to create:

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Specialized vinyl for sensitive animal models

Visit **www.bioBUBBLE.com** for the latest news and trade show exhibition locations.

Rebuilding Haiti : CONTINUED FROM PAGE 1

Simplified designs and minimal construction requirements make this low-maintenance solution ideal for improving and converting existing facilities in areas of the world without readily available resources.

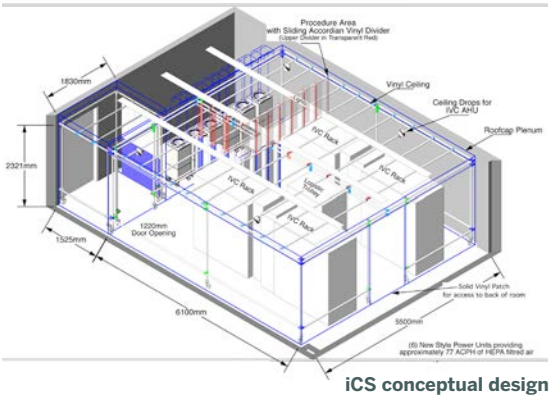
"We spend our working lives designing equipment that we know indirectly helps people, but this is the first time that we truly got to know the people we are helping. To say that the experience was satisfying is a gross understatement. We can now make the connection between our work and the resultant good that it does. We are proud to have been the catalyst encouraging other private companies to contribute to this vital scientific effort for the people of Haiti and affected peoples around the world."
–Interview with Kim Dazey and Jackson Cooley

The University of Florida has been involved with research in Haiti for over five years. Working in partnership with the Haitian and U.S. governments, their mission is to "work with the Haitian people to improve public health, to foster economic sustainability, and to build a better tomorrow for Haiti." Since the earthquake of 2010, this industrious group has conducted local vaccine programs, rebuilt schools, established school-based wellness clinics, and expanded school-based nutrition programs. In 2011, they opened the University of Florida Public Health Laboratory, receiving NIH and Department of Defense funding to research infectious diseases including cholera, malaria and tuberculosis.

We would like to thank BTX Global Logistics for their generous shipping donation. We would also like to express our gratitude to Dr. Mohammed Rashid, Justin May, Dr. Madsen Beau De Rochars and the entire crew from the University of Florida for their invaluable assistance with the installation of the bio**BUBBLE** Enclosure. Thank you for sharing this incredible experience with us.

To join the efforts of the University of Florida and Build a Better Haiti, please contact: Dean Michael Perri at mperri@phhp.ufl.edu

Representatives from the University of Florida, Christianville Foundation and bioBUBBLE collaborate on the new Tuberculosis Lab Training Center in Gressier, Haiti.



iCS conceptual design

Upgrading Health Status : CONTINUED FROM PAGE 1

Their study showed that after 10 weeks in the bioBUBBLE Environment, none of the agents were detected within the cleanroom. Most importantly, this was accomplished without any building renovations or shutdown time.

For project information and study results, you can view the academic poster presented by iCS at the Séminaire Réseau Opérationnel de Centres pour faciliter l'Accès et la Distribution des modèles souris (ROCAD) in Montpellier, France.

AAALAC Coming To Mexico

Centro de Investigación y de Estudios Avanzados (CINVESTAV) | México, DF, México

Upon completion, CINVESTAV will have housing capacity for over 25,000 SPF/MPF rodents (mice, rats, gerbils, and hamsters) and an estimated annual breeding production of 35,000 to 50,000 animals of 65 different biomodels.

CINVESTAV Conceptual

Eighty percent (80%) of these animal models will be transgenic, immunodeficient, SCID and knockout models. bioBUBBLE Cleanrooms will provide separate HEPA-filtered environments in which the IVC caging for these sensitive animal models will be housed. Two bioBUBBLE Containment Environments will be used for ABSL-2 pathogen work. **> To read more, check out the bio**BUBBLE** website and sign up to receive bio**WIRE**- The Research and Innovation Quarterly for project and product updates.**

Convert an Outdated Facility to SPF Status

Universidad de Chile | Santiago, Chile

The bio**BUBBLE** project in Santiago propelled the Universidad de Chile's research program to become the cleanest animal facility with the highest health status in South America. bio**BUBBLE** Consultants worked with the group to convert an outdated facility to SPF status. The design converted the standard separate clean/ dirty corridors into a single corridor vivarium design to simplify operations, increase housing capacity and improve separation between the clean and dirty cagewash areas. Design features include three separate bioBUBBLE softwall cleanrooms (120.89 m² / 1,301.25 ft²) with a capacity for housing over 14,000 rats and mice, procedural rooms, gowning antechambers and environmental separation between the clean and dirty cagewash areas. The renovation took only 10 days to install and created a cost effective solution to upgrade an antiquated facility. The revamped research program at the Universidad de Chile is now prepared for 2014 and beyond.

University of Chile Conceptual Design

bioBUBBLE PROJECT DESCRIPTION PROVIDED BY UNIVERSIDAD DE CHILE

(SP): Uso de bio**BUBBLE**: Esta tecnología de aislamiento permite crear barreras contra patogenos debido a que las unidades cuentan con ultrafiltración tipo HEPA, que proporcionan 70 cambios de aire/ hora dentro de los bioterios, lo cual mejora significativamente la calidad del aire entregado a los animales hospedados sin la necesidad de adquirir equipos de mayor costo y tecnología (ej: rack IVC). Esta tecnología es dependiente del sistema de aire acondicionado central por lo cual cada unidad es independiente de la otra, cada uno teniendo acceso a inyección provistapor el sistema central.

(EN): bio**BUBBLE** Use: This isolation technology creates barriers against pathogens because ultrafiltration (Power) Units have HEPA type (filters), which provide 70 air changes / hour (ACPH) within the animal facility, which significantly improves the air quality delivered to the animals housed without the need for higher cost of acquiring equipment and technology (e.g. IVC racks). This technology is dependent on the central air conditioning system whereby each unit is independent of the other, each having access to supply air provided by the central system.

Animal Facility Expansion : CONTINUED FROM PAGE 1

bio**BUBBLE** consultants expanded the breeding and research operations at this private CRO, providing a savings of more than 64% compared to hard construction and facility outfit costs. The project design reclaimed an "unusable" shell/ warehouse space to create:

- Separate housing environments using multiple bio**BUBBLE** Ultra-Clean Enclosures
- A quarantine area for incoming animals of questionable health status within a bio**BUBBLE** Containment Enclosure
- Protection between the new housing area and the older section of the facility using bio**BUBBLE** Air Showers

Specialzed vinyl for sensitive animal models

The expanded facility design includes:

- bio**BUBBLE** Changing Stations for cage change procedures
- Color-coded bioBUBBLE Rack Covers for clean and soiled materials transport

In addition, the bio**BUBBLE** housing enclosures were specifically designed for a highly sensitive mouse model. Mice are unable to see the color red and perceive it instead as grey or dark. For this reason, the design concept replaced the standard clear vinyl walls with translucent red vinyl. The "dark" walls prevent this animal model from outside distractions, reducing anxiety and providing a calming environment. The translucent nature of the material still allows adequate light transmission while maintaining the benefits of the standard enclosure walls: facilitated supervision and communication and a visually open environment.

PRODUCT SHOWCASE

In 2013, bio**BUBBLE** was pleased to present the new Class I Benchtop Biocontainment Enclosure. Increasing demand for the Benchtop Biocontainment Enclosure (BBE) and changing guidelines prompted development of the Class I BBE. Designed for operator protection, the Class I BBE captures aerosols and other airborne particulates generated during laboratory procedures and exceeds US Class I specifications.

bioBUBBLE Class I Benchtop Biocontainment Enclosure (BBE)

The bio**BUBBLE** BBE is an ideal primary containment solution for cell sorters, incubators, microscopes, and any other type of benchtop laboratory equipment.

FEATURES INCLUDE:
100 fpm airflow through user access
Low turbulence
Low noise and vibration
Energy efficient design
Easy access for use and maintenance

Research & Development

We frequently monitor guidelines from regulatory agencies and listen to customer feedback to improve existing products and develop new ones.

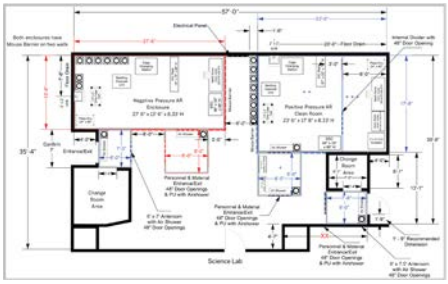
If you have any suggestions, we'd love to hear from you.
Please email your comments to **sales@biobubble.com** with "**bioBUBBLE Product Feedback**" in the subject line.

PRODUCT MAINTENANCE **CHECK YOUR STOCK OF PREFILTERS AND HAVE YOUR HEPA FILTERS TESTED.**
Prefilters should be changed when visibly dirty. All HEPA filters should be tested annually.
To order your replacement items, simply fill out the form and a sales representative will be in contact.
http://biobubble.com/#order/

Rederivation Facility: Ultra-Clean & Containment Solution

University of Calgary | Calgary, Alberta Canada

This will be the first bio**BUBBLE** rederivation facility design to incorporate both negative and positive pressure bio**BUBBLE** enclosures within the same hard architectural space.



University of Calgary Conceptual

The challenge posed is to subdivide a 2,000 sq ft hard room in order to create suitable housing and procedural areas for the university rederivation facility.

As a solution, bio**BUBBLE** will install two large bio**BUBBLE** Environments, one containment, one ultra-clean, for infected vs. clean animal groups. The ultra-clean enclosure conceptual design has internal separation for embryo transplant procedures. Both enclosures feature antechambers for personnel and materials traffic to support each individual environment. Each enclosure will be equipped with Changing Stations and Bedding Disposal Stations for self-sustained cage changing procedures. Anterooms with bio**BUBBLE** Air Showers create air barriers between the exterior and interior of the hardroom as well as between the barrier and containment zones inside the hardroom.

Come and meet us, we'd love to see you!

USDA ARS 3rd International Biosafety and Biocontainment Symposium Baltimore, MD *Feb 2-4*

Laboratory Animal Science Bioconference Live
http://new.labroots.com/virtual-event/id/2 *Feb 4-5*

54th CALAS-ACSAL Symposium Montréal, Quebec
May 30-June 2

58th Annual Biological Safety Conference
Providence, RI *October 9-14*

AALAS 66th National Meeting
Phoenix, AZ *November 1-5*

For more project and product news and trade show calendar updates, you can find the latest information on our website and in future editions of bioWIRE, the quarterly bio**BUBBLE** Newsletter.

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