Bio/Pharmaceutical NEWS

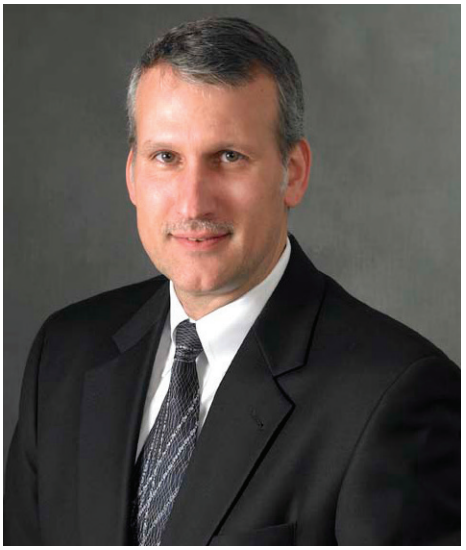
Summer 2013

■ *Eurofins' GMP Product Testing sites*

Discover Global GMP Testing Solutions page 2

eurofins | Lancaster Laboratories

Remaining ahead of the curve as the world's largest provider of BioPharma testing solutions



by Timothy S. Oostdyk, Ph.D., President, Eurofins Lancaster Laboratories, Sr. Vice President, Eurofins BioPharma Product Testing Group

At Eurofins Lancaster Laboratories we are passionate about continually looking ahead to discover the latest technological advances and enhancing the customer service experience.

As the largest global biopharma product testing organization, one might ask what our strategy is to maintain our growth momentum and continually enhance and deliver the most comprehensive services in the industry? Our conviction to be the premier provider of global solutions for GMP testing is resolute. Here's how we are working to stay ahead of the curve.

Drive regional and international market share by continually expanding our capacities, capabilities, and geographic footprint.

Our goal is to provide strong regional coverage throughout Europe and the U.S., while also delivering a compelling global offering to our international customers. In this way we can maximize our service to our global R&D customers, while also offering excellent service to our local manufacturing customers. To support these complementary objectives, we are actively engaged in pursuing M&A, as well as expansion of our existing laboratories. Early this year we acquired CTP Laboratories in the Tuscany region of Italy. The acquisition of this group expands our geographic footprint and clearly positions us as the largest GMP contract lab in Italy. This year we are completing a 78,000-sq. ft. addition to our Lancaster campus which will greatly increase our capacity for both biologics and small molecules, and will add state-of-the-art cell banking suites. We have expanded our Munich, Germany facilities, and are currently installing virus clearance and testing capabilities there. And we have either completed, or are planning, expansions of our operations in Ireland, Paris, Copenhagen, and Milan. Currently we have 14 GMP sites globally (see cover) to serve our customers.

Continue further integration and harmonization of services and systems across the network.

In order to provide a truly global service, our laboratories must be harmonized. Our goal is to provide our clients with a consistent experience and quality no matter where the testing is performed. Major initiatives to support this goal include the development of a Global Quality Policy Manual, the deployment of a single Exceptions/CAPA system, and a uniform document control and training records system. Our quality leaders throughout the world are working together to drive consistency and excellence in our quality program. A major key to harmonization is IT systems. We have committed significant resources to developing a global IT migration strategy that will phase our laboratories on to a common platform while minimizing any disruption to our operations. Importantly, this project will implement LabAccess (our market leading online data access product which provides features and benefits not matched by the competition) in all laboratories by early 2014.

Deliver flexibility and options for our clients as they seek to optimize their outsourcing strategies.

We recognize that our clients face many challenges, and constantly adapting our services to meet their ever changing needs is critical to developing strategic relationships. For this reason more than ten years ago we developed our very successful multiple tier service delivery model:

- Fee for Service
- FTEs (full time equivalents) at Lancaster working exclusively for one client
- PSS (Professional Scientific Staffing)—our insourcing model where Lancaster staff work within the client's facility

Within each service model we tailor programs to maximize cost effectiveness and meet project needs, and we find that for many of our clients it is very effective to utilize multiple tiers. This has enabled us to develop many excellent strategic relationships which continue to drive value for our customers.

Deliver the most comprehensive BioPharma Product Testing service offering in the industry with a continued global expansion in small molecule and biologics capabilities.

Our objective is to provide our customers with the most comprehensive range of laboratory services available in the industry. We are a team of laboratory professionals, and providing lab services is our 100% focus. We have worked and invested diligently to become your proverbial "one stop shop" for GMP testing services. We have the technical expertise, equipment, and experience to test everything from your starting materials, to your process intermediates, to your drug substance/unprocessed bulk, and your finished product. If your product is a synthetic small molecule, protein, peptide, conjugate, vaccine, enzyme or cell/gene therapy you will find at Eurofins the experienced chemists, biochemists, molecular & cell biologists, virologists, and microbiologist to cover all testing aspects of your molecule.

At Eurofins we know that to effectively leverage spend volume and maximize costs savings, customers achieve real benefits and savings from a service provider with a global footprint, the widest breadth of services, and extensive capacity. And in our industry today, as in almost every global industry, companies are actively consolidating vendors and developing a limited number of strategic relationships. This saves transactional costs in audits and agreements, and can generate big savings by leveraging spend volume. For this reason we are working hard every day to be your laboratory of choice.

Thank you for the confidence that you have placed in us. We very much appreciate your business, and the opportunity to serve you. At the heart of all of our business strategies, high-tech instrumentation, and vast global capabilities lies a basic desire to delight our clients. When we are at our best, we help clients be at their best, and we all stay ahead of the curve.

4 new viral clearance suites, 4 service models, all 4 you

Flexibility has been the key driving force behind the success and growth of Eurofins Lancaster Laboratories' Viral Clearance program. "When we introduced four levels of service solutions for viral clearance studies, our clients responded well. They value our tailored programs to address all their scientific, safety and scheduling challenges," says Dr. Kate Bergmann, Manager of Viral Safety and Clearance. To provide additional capacity, the Group is expanding to include four additional Viral Clearance Suites. This growing capacity, along with four flexible service models, enhances the client's experience and provides significant time and cost savings; here's why:

Viral clearance studies are a critical element toward ensuring that an acceptable level of viral safety has been achieved for biological products. The goal of these studies is to demonstrate that the manufacturing purification process has the ability to inactivate and/or remove a broad variety of virus types, including those viruses known to contaminate or which may possibly contaminate the starting materials.

Typically, individual processing steps in the manufacturing process, such as column chromatography, solution inactivation, and virus removal filtration steps, are scaled down from manufacturing-scale to bench-scale. In the viral clearance study, the input material for each step is spiked with high-titer virus, and both input and output samples from the step are collected and quantitatively assayed for virus. The difference in the amount of virus spiked into the step and that found in the output sample represents the amount of virus cleared by the step.

As manufacturers cannot bring virus into their manufacturing facilities due to the risk of contamination, viral clearance studies are almost always outsourced to companies such as Eurofins Lancaster Laboratories. Sample generation in a viral clearance study has typically involved the hands-on participation of the client. In the most common scenario, Eurofins Lancaster Laboratories' personnel and client personnel work side-by-side to set up the studies, spike the steps with virus, and collect the samples for analysis in the virus testing laboratory.

The time that clients spend in the viral clearance lab equates to time spent away from their manufacturing responsibilities. Eurofins Lancaster Laboratories is aware that sending client personnel to assist in the generation of viral clearance samples can be an inconvenience for many clients due to a shortage of personnel, lack of time and travel costs.

To provide additional options for the client, Eurofins Lancaster Laboratories offers these four viral clearance service models:

- **Level 1 –** Basic Service: The client provides all materials and down-scale procedures and performs the study in Eurofins Lancaster Laboratories' viral clearance suites.
- **Level 2 –** Enhanced Service: The client provides all materials and down-scale procedures and performs all column chromatography steps. Eurofins Lancaster Laboratories personnel perform inactivation and virus removal filtration steps.
- **Level 3 –** Full Service: The client provides all materials and down-scale procedures for transfer to Eurofins Lancaster Laboratories personnel, who perform all clearance steps.
- **Level 4 –** Turnkey Service: The client provides a description of the full-scale manufacturing process. Eurofins Lancaster Laboratories personnel develop and validate the down-scale procedures and perform all clearance steps.

Our viral clearance program includes the following:

- Multiple virus clearance suites
- Multiple AKTA chromatography systems
- Capacity to accommodate studies with minimal delay
- Variety of validated and well characterized viral stocks to support animal and human-derived products.
- Viral stocks with titers of 107 pfu/mL or greater
- Purified virus stocks
- Validated infectivity and qPCR assays
- Infectivity assays performed real-time
- Large volume assays for increased sensitivity

Viral clearance customers rely on us for the following:

- Highly qualified staff with over 70 years cumulative experience in the industry and thousands of studies performed
- Ongoing program improvements, such as:
  - Additions to our virus panel, including new/emerging viruses
  - Improvements in virus assays
  - Improvements in virus stock titer & purity
- Experience with "unusual" products, including plant- and tissue-derived products
- Ongoing regulatory support during study design & performance, and after completion
- Cleaning validation studies to quantify the elimination of viruses during the cleaning procedures used at your manufacturing facility
- Collaboration with the industry to evaluate and improve new technologies for viral clearance

For all stages throughout the development, manufacturing and release of your biological product, Eurofins Lancaster Laboratories offers comprehensive, fully cGMP-compliant Viral Clearance Services; contact Business Development for more information.

Drive the design

Help us design our new viral clearance suites

In the spirit of advancing science, sharing best practices and ultimately meeting your specific project needs, we ask: what instrumentation would you like to see in what are essentially your viral clearance suites at Eurofins Lancaster Laboratories?

"With the addition of four new viral clearance suites later this year, we see great value in reaching out to our clients to help us design the suites in ways that will best accommodate their needs," says Dr. Jeri Ann Boose, Director of Biopharmaceutical Services. "To that, I envision the possibility of different suites having slightly different designs based on client feedback."

And while maintaining client confidentiality is paramount to us, we'll feature a few winning design ideas in the fall newsletter, without revealing proprietary information, of course.

To help drive the design, go to LancasterLabsPharm.com and click on the survey under News and Events. Or if you happen to be speaking with your project manager, pass along your ideas to them as well. Either way, we'd be happy to hear from you.

Expanded Capabilities to Support Validation of Disposables for Bioprocessing

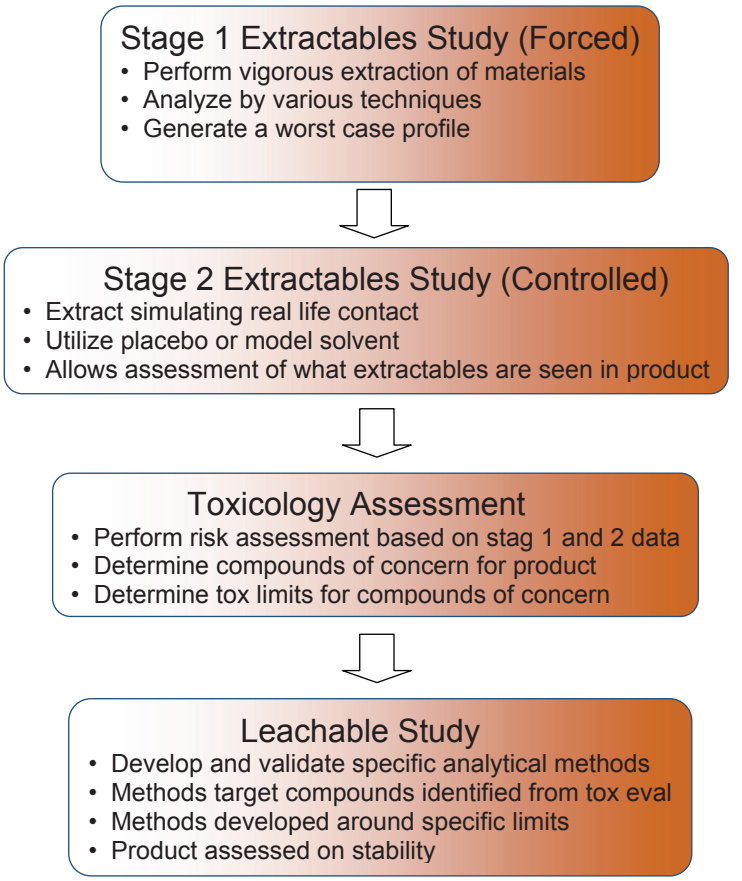
by Jon Kauffman, Ph.D., Biopharmaceutical Director

A current trend in biopharmaceutical processing is the utilization of single-use products. These disposable products can eliminate costly capital expenditures for stainless steel tanks and piping and reduce the risk of cross-contamination between production batches. However, the materials used to construct these components may introduce unwanted contaminants into biopharmaceutical intermediates and final products. Many of these contaminants are added to single-use products to enhance usability of the material. Sources of these contaminants include antioxidants, anti-static agents, stabilizers, colorants, plasticizers and lubricants. In addition to the additives, contaminants from the polymerization process, such as monomers, oligomers and polymeric fragments are possible. Therefore, careful evaluation of single-use systems is required.

Evaluation of these impurities and the validation of disposable systems can be an arduous task. Potential contaminants must be identified and quantified using a wide array of microbiological and analytical approaches. Data generated from these studies must undergo toxicological assessment so that risk-based, informed decisions can be made on the acceptability of single-use products and disposables. Validation should be addressed early in the process to avoid regulatory delays for the drug manufacturer.

These disposable systems contain a wide range of fluids including culture media, additives, buffers, bulk intermediates and final formulations. In many cases microbial control or sterility is required to ensure product purity and safety. Radiation sterilization is a common means of microbial control in single-use systems. As part of the validation of sterilization processes or as part of the materials qualification program, sterility and /or endotoxin testing is required.

Single-use systems pose unique challenges during testing due to their size and complexity. A large scale system, could be, for example, a 3000 L bag connected to several meters of tubing, high area filter housing that could be 10 inches or larger, and a connector with a complex design. Large articles are especially difficult to manipulate aseptically. Specific issues include introducing such large articles into controlled spaces, aseptically adding or removing fluids to the test article, and aseptically handling large fluid volumes required for testing. Cleanrooms have the advantage of offering considerable space for operators and materials, compared with isolator technology and provide a solution for sterility testing of large single-use systems.



Non-microbiological contaminants fall under the label of extractable and leachable compounds. Extractables are compounds that can be extracted from a component under exaggerated conditions such as in the presence of harsh solvents and/or at elevated temperatures. These compounds have the potential to contaminate the drug product. Leachables are compounds that leach into the drug product formulation from the component as a result of direct contact with the formulation under normal conditions. Leachables are typically a subset of extractables. Nitrosamines and polynuclear hydrocarbons (PAHs), which are classes of carcinogenic compounds found in rubber, are examples of potential leachables.

Many drug products are distributed or administered in packages made of plastic and rubber components, and therefore, phthalates, PAHs, and/or nitrosamines could potentially come into contact with the drug product and be passed on to the patient.

Design of these studies is critical. Extraction of the components of interest should represent worst case conditions, but not stress components to the point of material breakdown. When determining extraction conditions, the shelf life of the product must be considered for packaging, and the contact time and temperature must be considered for manufacturing materials. Based on this information extraction conditions are selected that will result in extract solutions that will be tested for extractable compounds. These

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Cell Banking expertise and project management fuel expansion

As the saying goes, "Practice makes perfect," and for Eurofins Lancaster Laboratories, it also makes growth.

With many years of experience preparing and characterizing a wide variety of cell banks, including non-production and research banks as well as mammalian cGMP master and working cell banks, coupled with tailored project management, the company's Cell Banking Group is expanding. Two additional cell banking suites will be custom designed and qualified to meet aseptic processing guidelines. And all of the non-production banks are prepared in clean cell culture laboratories that are both positively pressured and HEPA filtered. The Group also has multiple ISO 7 clean cell banking suites to support the preparation of all production cell banks.

In addition to expanding cell bank preparation capacity, we've also been focused on the management of cell banking projects. Because of the overall duration of cell bank preparation and characterization projects, we recognize the importance of an upfront understanding of client needs and a collaborative partnership through the various project phases. As a result, we created several tools to support project management initiatives.

First, we created a form that helps us to clearly capture pertinent project details and requirements upfront, enabling us to understand your needs and provide guidance as necessary. Our highly experienced cell banking experts will work with you to design a comprehensive project plan including projected project timelines and recommended biosafety testing for the cell bank(s) being generated. We also use this information to prepare a detailed and accurate price quote summarizing your banking needs as well as your characterization requirements.

We've also created a tool that allows us to track your project from start to finish. It includes detailed information regarding the pre-bank activities, master cell bank preparation and characterization testing activities, working cell bank preparation and characterization testing activities and project termination details. And this of course can be customized to meet your unique project requirements. In addition to encouraging routine conference calls, your Project Manager will proactively provide project updates as we progress through the various project phases through the use of this tool.

As a result of these initiatives, we've found that we're able to tailor cell banking programs to meet the complexities and deadlines of unique client requirements. And as a result of our technical expertise, quality service and exceptional project management, we continue to grow and increase capacity.

Our cell banking capabilities and comprehensive characterization services provide you with a single source solution for all of your cell line needs. Contact your Project Manager or Business Development for more information.

Validation of Disposables for Bioprocessing

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extracts must be screened for a wide array of potential contaminants using analytical approaches such as GC/MS, LC/MS, and ICP/OES.

The results of the extractables testing should then be subject to a toxicological evaluation to determine the potential risk to product from the observed compounds. The toxicologist will need to take into account the dose delivered to the patient, the frequency of dosing as well as the result from the extractable study. This information will be utilized to determine a tolerable intake and tolerable exposure (TE) for each compound, and the TE value will be compared to the amount of compound released in the extractable study.

The presence of compounds determined to be at risk in the final product need to be monitored. Methods specific for these compounds need to be developed and validated in the product matrix to allow for monitoring for the presence of the compound. These methods are commonly utilized as part of a stability study to prove that the leachable compound of interest does not adulterate the product during the determined shelf life of the product.

Eurofins Lancaster Laboratories provides these complete services in both the US and Europe, coordinated by expert project managers. For more information, contact your Project Manager or Business Development.

Contact us

For information on services, literature requests or address changes, please contact: Bio/Pharmaceutical Business Development, 717-656-2300 or pha@lancasterlabs.com

See how our Flexible Service Models can meet your project needs at: LancasterLabsPharm.com.

Embracing Corporate Social Responsibility

At Eurofins Lancaster Laboratories, we are committed to the highest ethical standards in conducting our business and operating in a socially responsible manner. The core of our business is in helping our clients ensure the safety of their products and services, which in turn benefits consumers' access to more innovative pharmaceutical products and a clean environment. A strong reputation for quality is critical to the success of our business, and integrity in how we conduct business and maintain our relationships with all our stakeholders is central to our corporate principles. Our mission and values underscore our commitment to professional and ethical behavior, while staying at the forefront of growth and innovation. This spring, Pharmaceuticals Manager Chrissy Leslie (Read more about Chrissy on page 7.) was named Sustainability Officer to oversee the implementation and maintenance of sustainable business practices by:

Promoting Employee Safety and Wellness

We strive to enhance the quality of life of our employees through our extensive employee benefits and workplace safety programs. As a part of our wellness program, we provide annual health screenings that include comprehensive blood chemistry, urinalysis and exam with a physician. Many national organizations have recognized the unique character of Eurofins Lancaster Laboratories and honored us with awards for workplace excellence and family-friendly business practices.

We recognize that a world class health and safety program allows employees to be healthy, productive and actively engaged in workplace safety. With a goal to maintain a high level of safety awareness at all levels within the organization, Eurofins Lancaster Laboratories has a solid safety record of zero OSHA or EPA notices of violation in over 50 years.

Regardless of this exemplary compliance record, we aim to continually improve and engage our employees in workplace safety. We dedicate resources to implement key ergonomic changes at high risk operations, which has cut our reportable ergonomic claims in half since 2010 despite a 25% increase in exposure hours.

Our team of more than 30 certified safety committee members participates in continued training, including hazard recognition, assessment and control in laboratories and regularly conducts internal audits to identify ways to improve practices within our laboratories and increase awareness of safety expectations among our laboratory staff. We also have a safety incentive program aimed at engaging employees in workplace safety by offering rewards to employees who take action to report common workplace hazards.

Encouraging Community Involvement

We believe it's important to be good corporate citizens and help to make our communities a better place to live and work. Employees have the opportunity to volunteer through two company-sponsored initiatives, including science volunteers and community heroes. Employees also participate in annual fundraising events such as the Susan G. Komen Race for the Cure, Salvation Army Toys for Tots and YWCA Race Against Racism as well as volunteer for and/or donate to the Humane League and many other local non-profit organizations.

We also provide corporate donations to national organizations like the United Way, Habitat for Humanity, American Cancer Society, American Heart Association, American Red Cross and many other national and local organizations.

In addition, we host blood drives through our local hospital every six weeks and encourage employees to donate blood to help others in the community.

Practicing Environmental Stewardship

We implement environmentally conscious choices throughout our organization in an effort to reduce our impact on the environment we all share. We established a Green Team, which is a group of environmentally conscious employees who work together to reduce consumption, encourage recycling, promote conservation and educate the workforce for the goals of improving the efficiency, reducing costs and minimizing the environmental impact of our operations. Some of our sustainable initiatives include:

- Reduction of our carbon footprint by over 25,000 pounds of CO_2 annually. We implemented a patented automatic brine delivery system that uses bulk salt to eliminate the need for dried bagged salt. The use of the AUTOBrine® system allows us to avoid sending 4,797 plastic bags to the landfill each year as well as pallets and stretch-wrap.
- Procurement of 100% renewable electricity for our 259,000 square-foot facility in Lancaster, PA.
- Efforts to update lab equipment with new ENERGY STAR® rated equipment when possible.
- Water monitoring programs that have reduced water consumption for our facility.
- Energy conservation efforts such as the use of CFL, T8 replacements and LED lighting; installation of motion sensors in offices, restrooms and hallways to turn off lights during times of inactivity; signage on fume hoods to prompt employees to lower sashes when not in use and reminders to turn off computers/monitors when not in use. These measures have reduced the overall heat load in the buildings by approximately 40 tons/year.
- Implementation of a user-friendly, campus-wide recycling program. In addition to recycling aluminum, plastic and glass, Eurofins Lancaster Laboratories also recycles cardboard, batteries, magazines and stainless steel/HPLC columns. The company also partners with a local organization to recycle electronics.
- Establishment of a Garden Club, which turned unused space into productive space. The primary goal is to grow fruits, vegetables, herbs and flowers - using sustainable, organic methods - to share with company employees. The Club also shares the space with the Hildebrandt Learning Center and Lancaster Generations Adult Day Care facilities so that the children, adults, teachers and caregivers have an outdoor space where they can learn about ecology, enjoy time outside and share in the harvest of crops.
- Recognition by the National Wildlife Federation (NWF) as a Certified Wildlife Habitat for providing food, water, shelter and places to raise young wildlife.
- Qualification as a business partner with iConservePA to show a commitment to promoting conservation in Pennsylvania.

People are the chemistry

At Eurofins Lancaster Laboratories, we believe that our people provide our strength. Their dedication to quality, professional competence and hard work is the key element in the company's success. In this regular feature, we introduce you to some of the people who have helped make Eurofins Lancaster Laboratories an industry leader.

Most great leaders know they are only as good as their team, and this is emblematic of Chrissy Leslie. As the Manager of the Pharmaceutical Product Testing and Glassware Groups, Chrissy finds working with her team of 50 people to help clients get their products to the marketplace very rewarding. "The people I work with--no matter what role they are in--are very dedicated to the success of our clients," says Chrissy. "And there is such variety of testing, methods, products and projects, we are continuously tasked to tap into individual strengths, pull together as a team and rise to the challenges our clients present to us," she says. "This makes us all feel a sense of accomplishment at the end of the day." Chrissy began her career with the company in 2000 and has been promoted four times since then. And recently appointed Sustainability Officer, Chrissy will lead the company's Green Team, oversee sustainability reports, act as point person to handle client inquiries related to sustainable business practices, provide education for clients/employees related to sustainable business practices and green initiatives, and drive continuous improvement.

What does your current job entail?

I am one of the Managers in our Pharmaceutical Product Testing Group. My group focuses on supporting stability and release work for solid dosage form finished products (i.e. tablets, capsules, novel devices). We support some very early phase clinical studies as well as some very large marketed stability programs. The group also specializes in Comparator Product testing, which involves the analysis of over-encapsulated products used in blinded clinical studies. We also have experts within the department who focus on a variety of container testing ranging from dye ingress container closure integrity testing to compendial container testing.

It is my responsibility to ensure quality and compliance within the department as well as to provide technical consultation to our clients. I also work with our business development group to travel to client sites to help to establish relationships with new clients as well as to strengthen partnerships with our existing clients.

I also manage the Glassware Group for the Pharmaceutical Division. This group helps to provide clean glassware to all of the bio/chemistry and microbiology groups. They also help to support our Portage, MI, site. It is my responsibility to ensure that the group is meeting turnaround-time expectations for all of the labs, processing rush requests as necessary, and following all cleaning procedures. I also review all of the labware cleaning system monitoring data to ensure that none of our cleaning systems exhibit any negative trends related to contamination.

Why should clients trust us with their projects?

One of the things that I am most proud of about working at Eurofins Lancaster Laboratories is the people. We have a very loyal workforce, all of whom are dedicated to providing phenomenal service to our clients. Quality, Integrity, Customer Focus and Team Spirit are our core values, and I truly see this played out in all aspects of how we complete our work every day. Whether people are in our technical or support groups, we always emphasize that everything we do ultimately impacts our clients.

How would you characterize your leadership style?

My leadership style is based on the establishment of mutual trust and respect. I want the folks in my groups to feel empowered to make decisions, suggest ideas for improvements, and to grow through their own experiences. I will always step in as necessary to provide support or advice, but I do not like to micro-manage. My greatest satisfaction as a leader is to witness the growth and successes of those on my team. I constantly feel like I am learning and evolving as a leader because I strongly believe that a good leader should always be open to change.

What kind of volunteer activities have you been involved with?

I have worked closely with our local humane league for 7-8 years. Every year we organize a Wish List collection at the lab to collect items to donate to the shelter. We have a lot of animal lovers here so we always have 2-3 truck/car loads of donations to take to the Humane League every year. The folks (as well as the animals) at the shelter are always very appreciative of our efforts. I also organize a team to participate in the Tailwagger's Trot, which is another fundraiser for the Humane League of Lancaster County. Team "Scratch & Sniff" has participated in this event for three years.

And when you're not working?

When I'm not working, I'm usually outside. My partner Kelly and I enjoy kayaking, camping, and hiking with our dogs Rayne & Willow. Recently, I was accepted into a program to become a certified Master Naturalist in the State of Pennsylvania, which will involve a commitment of time volunteering to educate people in Lancaster Co. about the importance of conserving our local natural resources.

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Can We Talk?

Learn from our experienced scientists at these presentations:

ISBioTech:

Heather Beyer, PhD, will present on *Virus Inactivation by UVC Treatment.*

Weihong Wang, PhD, will speak on *Cell-Based Potency Assays.*

Sartorius-Stedim 2013 Downstream Technology Forum:

Kate Bergmann, PhD, will present on *Inactivation of Viruses by UVC Treatment Using the UVivatec.*

View Our Webinar Series

Chemistry and Microbiology Perspectives on Cleaning Validations and Disinfectant Efficacy Studies

October 10, 2013 | 1:00 p.m. EST

Learn strategies for establishing the best and most cost-effective approach to a cleaning, disinfection and monitoring program.

View our past webinars:

Best Practices for Extractables and Leachables Testing

Effective Strategies for Managing Comparator Product Testing

Outsourcing Cell Based Potency Assays: Perspectives from a Sponsor and a Contract Testing Laboratory

Critical Aspects of Antibody-Drug Conjugates: Structural Characterization and Analysis

For registration information and access to past webinars, visit LancasterLabsPharm.com.

See us at...

BioProcess International	Sept. 16-20	Boston, MA
Contract Pharma Contracting & Outsourcing Conference	Sept. 19-20	New Brunswick, NJ
Well Characterized Biologicals	Oct. 21-23	Washington, DC
PDA Annual Global Conference on Pharmaceutical Microbiology	Oct. 21-23	Bethesda, MD
AAPS Annual Meeting	Nov. 10-14	San Antonio, TX
PDA/FDA Advanced Technologies for Virus Detection in the Evaluation of Biologicals	Nov. 13-14	Bethesda, MD

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