Volume XXXVII, No.10

PDA Letter

October 2001

A Monthly Communication for the Members of PDA—
An International Association for Pharmaceutical Science and Technology

EMEA Guidance on Pharmaceutical Water, page 18

Injunction/Seizure/Consent Decree...

2001 PDA Annual Meeting, Courses and Exhibition

Compliance: Challenges and Pragmatic Solutions

December 3–7, 2001 • Marriott Wardman Park, Washington, DC

Injunction/Seizure/Consent Decree...
…Words no company wants to hear, but a reality in this dynamic regulatory environment. Make your plans now to attend the PDA Annual Meeting to learn about the causes for these actions and their impact on the company, senior management and other staff. Review the basis for financial penalties imposed on companies and learn about the process for resolving severe compliance actions. Presentations are based on actual experience from industry experts.

The PDA Annual Meeting, Courses and Exhibition will bring together nearly 1,000 international scientists for high-level education and networking. Topics for discussion include:

- Regulatory Issues;
- Biotechnology Issues;
- Manufacturing Issues;
- Non-parenterals;
- Outsourcing;
- Sterilization;
- Laboratory Testing;
- Computer Issues; and
- Environmental Monitoring and Validation.

Conference Highlights

- Participate in PDA's Interest Group meetings and presentations;
- Visit the sold out Exhibit Hall, offering one of the industry's most informative and educational displays of the latest in science in technology; and
- Choose from among a variety of hands-on training courses offered by PDA's Training and Research Institute.

Make your hotel reservations now! Discover the perfect balance of landmark charm and modern sophistication, in a historic Washington setting at the

Marriott Wardman Park Hotel
2660 Woodley Road, NW, Washington, DC 20008
Reservations: (202) 328-2000
Toll Free: (800) 228-9290 Fax: (202) 234-0015 ■

—Leslie Zeck

For a PDF of the registration brochure for this conference, please visit our Web site at www.pda.org.

Be sure to advise the reservationist that you are attending PDA's Annual Meeting to ensure the discounted rate.

$185.00 Single $205.00 Double
Each Additional Person $20

Winner of the Fred Simon Award Announced

The PDA Awards Committee, consisting of Galen W. Radebaugh, Ph.D. (Chair), Thomas N. Julian, Ph.D., Steven A. Gordziel, Ph.D., and Karl A. Herzog, Ph.D., has selected the paper **"Alternative Microbial Testing: A Novel DNA-Based Detection System for Specified Microorganisms in Pharmaceutical Preparations"** as the winner of the Frederick D. Simon Award for Best Paper published in the *PDA Journal of Pharmaceutical Science and Technology* in 2000. The paper, by **Petra Merker, Lutz Grohmann, Roger Petersen, Jutta Ladewig, Klaus-Peter Gerbling and Frank-Roman Lauter**, was selected because of its overall originality, technical quality and contribution to the pharmaceutical sciences. The award, which will be formally presented at the PDA Annual Meeting in Washington, D.C., on December 3, 2001, is named in honor of the late Fred Simon, who was PDA's Director, Scientific Affairs. ■

—Russell Madsen

PDA
7500 Old Georgetown Road, Suite 620
Bethesda, MD 20814 USA
Tel: (301) 986-0293 Fax: (301) 986-0296
E-mail: *info@pda.org*
www.pda.org

PDA Training & Research Institute
c/o UMBC Technology Center
1450 S. Rolling Road
Baltimore, MD 21227 USA
Tel: (410) 455-5800 Fax: (410) 455-5802

PDA Europe Office
Postfach 620
CH-4144 Arlesheim, Switzerland
Tel: +41 61 703 1688 Fax: +41 61 703 1689
E-mail: *lyda@pda.org*

The ***PDA Letter*** is published monthly by PDA, exclusively for PDA members. Subscriptions are not available.

PDA President
Edmund M. Fry

Director, Communications & Marketing
Linda M. Williams

Editor/Web Editor
Joseph G. Bury

Manager, Publications & Production
Janet Raysick

Important Dates...

- Hotel Discount Deadline for PDA's Annual Meeting—November 9, 2001
- December 26, 2001—Deadline for Room Reservations–PDA-TRI Lake Tahoe Course Series, page 33

IN THIS ISSUE...

Fry

PDA Extends Heartfelt Condolence to the Survivors of the Innocent Victims of the September 11, 2001 Attack

Those of you in attendance at this year's PDA-FDA Joint Conference in Washington, DC will never forget it. The second day of the conference was Tuesday, September 11, a day that began with confusion and ended with extreme horror as the events at the World Trade Center and Pentagon unfolded. Being trapped in the hotel as travel was suspended, we could only watch and wait on Tuesday until it became clear that the rest of the conference must be cancelled. My hat is off to the speakers, panelists and audience who remained calm and did the best they could under the most horrible of circumstances. I am also very proud of the PDA staff, who stayed on the job to make sure the attendees were cared for and organized arrangements with the hotel for all the out-of-towners.

The hotel (Hyatt Regency Capitol Hill) staff also did the best they could, housing and feeding people who could not leave town until long after their planned departure dates. Some of our overseas visitors were not able to arrange flights until as late as the following Wednesday. As did the rest of the country, we experienced a wonderful spirit of teamwork and cooperation during those most trying of times. We wanted desperately to help—as the initial news reports announced blood shortages, our Past Chair Joyce Aydlett tried to organize an impromptu blood drive for the several hundred of us still in the hotel. Then we learned that the Red Cross was swamped with donations, and we could only sit and watch helplessly until we could all find transportation home. In the following days, our staff pooled their most generous contributions to the American Red Cross Disaster Relief Fund, which were matched by PDA and forwarded immediately.

But our experience was nothing compared to the many thousands of innocent victims of the tragedy, and all our staff and Board extends most sincere condolences to the survivors and our sympathies to those whose livelihoods have been damaged or lost.

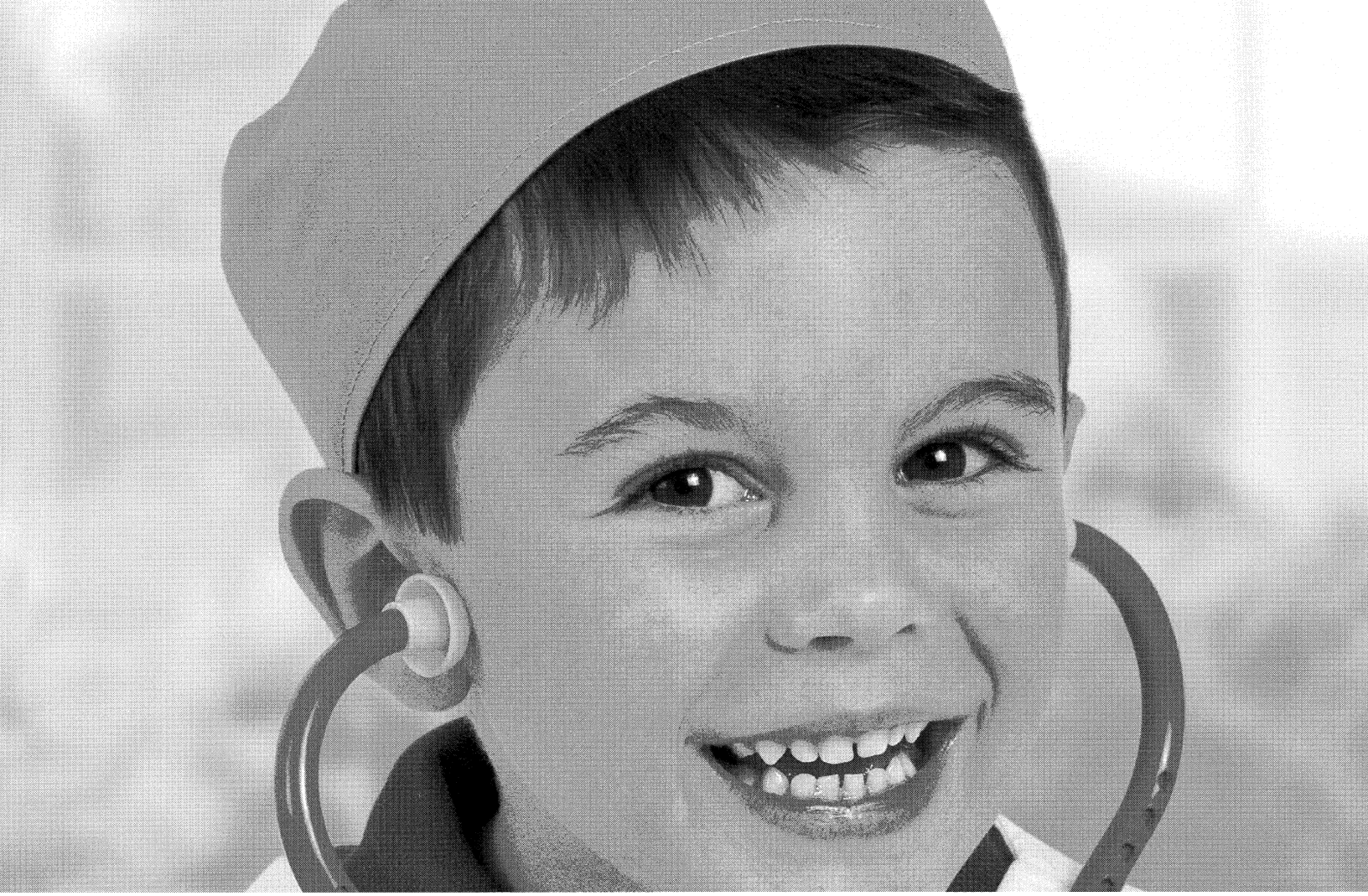
In the days following the tragedy, we received many heartwarming messages of condolence and support from PDA members worldwide. Words can't express how comforting this was, to know that our many friends abroad shared our repulsion and grief over the events. A few quotes illustrate the feelings: "My thoughts are with you and your country, which I always feel welcome in", "We would like to express our compassion and solidarity with all of you and wish you moral strength to overcome this bad time", and "I hold in the name of association A3P his Président and all his board of Directors to present to you our condolences for all the victims of this acts of barbary. Know that all French is with the American People."

As of this writing, the future for all Americans may be altered in ways we don't fully know yet, but PDA will conduct business as usual to the best of our ability. Although events in the week immediately following the attack were cancelled, we resumed our schedule of activities with the Viral Clearance Forum Oct. 1–3, 2001 with the full support of the planning committee and almost all of the speakers. We hope to see you at PDA activities during the coming year, and best wishes to all of you.

PDA Board of Directors On-Line Election

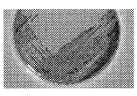
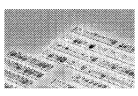
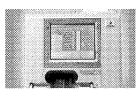
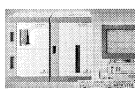
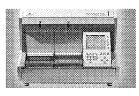
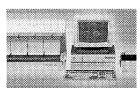
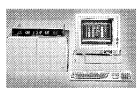
We encourage all PDA members to participate in this year's election for Officers and Directors, which will be conducted on the internet. Please take a moment to examine the flyer that is enclosed with this Letter since it contains voting information and brief biographies of each of the candidates. You may also visit www.pda.org for complete election information and instructions. Voting deadline is November 21, 2001. ■

—by Edmund Fry



Here's the best reason for choosing quality assurance solutions from bioMérieux.

Consumer safety is your major concern. To enable you to control microbiological risk at all stages and meet constantly evolving rules and regulations, bioMérieux offers a complete range of automated instruments and reagents. Certified ISO 9001, bioMérieux manufactures and commercializes rapid, simple and reliable solutions for your control procedures.

Micro Diagnostics™	API®	miniAPI	VITEK®	mini VIDAS®	VIDAS®	Bactometer®
						

CULTURE • IDENTIFICATION TESTING • PATHOGEN SCREENING • QUALITY INDICATOR TESTING

BIOMÉRIEUX INDUSTRY

bioMérieux, Inc. 595 Anglum Road • Hazelwood, MO 63042-2320, USA
Phone: 800/634-7656 • Fax: 314/731-8678
Website: www.biomerieux-usa.com • Email: usa@na.biomerieux.com

bioMérieux ISO 9001 CERTIFIED bioMérieux

TR 32 UPDATE

by Harvey Greenawalt, Audit Repository Center

TR 32 and 21 CFR Part 11

Subpart B, Section 11.10, Controls for closed systems, of the *21CFR Part 11* sets forth the requirement that "procedures and controls used to ensure the validity and integrity of electronic records shall include provisions for validation of systems to ensure accuracy, reliability, consistent intended performance, and the ability to discern invalid or altered records." Volume 62, No. 54 of the *Federal Register* dated Thursday, March 20, 1997, for Department of Health and Human Services, Food and Drug Administration *21CFR Part 11* provides the Agency's response to comments received on the proposed rule. The comments received represented a broad spectrum of affected parties. They included human and veterinary pharmaceutical companies as well as biological products, medical device, and food intrest groups.

In the *Federal Register,* the Agency stated its position on validation requirements for closed systems. Their response to questions concerning validation of closed systems was to apply the same validation concepts to electronic records and electronic signature systems as it does to paper systems. The Agency further stated that commercial availability and wide-spread use is no guarantee that the software has undergone "thorough validation," noting that commercially available software is not accompanied by statements of suitability to established standards, but rather by disclaimers as to its fitness for use. Software producers are not typically under the purview of any regulatory entity. Therefore suppliers are not required by law to validate their products to the extent expected by the Agency. The Agency stated that the need to assure commercially available software is fit to use for its intended purpose is not diminished by the fact that it is not written by those who will use it.

It is expected that the Agency will soon issue guidance on the validation of software used in electronic records and electronic signature systems which is purported to include commercial off-the-shelf (COTS) products and the use of third-party programs for audit during the course of computer validation processes. Until that time, however, the Agency believes it has addressed many of the fundamental issues of software validation in such documents as the "Draft Guideline for the Validation of Blood Establishment Computer Systems" and the "Guideline on General Principles of Process Validation." These will apparently set the foundation for the guidance, while expanding on the new paradigms that involve the use of COTS products and modern systems that utilize Web and Internet-based technologies.

At the PDA/FDA Joint Conference in 1996, the FDA challenged the industry to establish a standard way to assess suppliers providing computer products and services for regulated pharmaceutical operations so as to infer the structural integrity of acquired computer products, e.g., software, and to lower overall costs of validation to the industry. As a direct result of that challenge, a Supplier Auditing and Qualification Task Group (SA&Q) was established by PDA to investigate an appropriate solution to meet the challenge and solve the escalating problems.

PDA *Technical Report 32: Auditing of Suppliers Providing Computer Products and Services for Regulated Pharmaceutical Operations* was issued in January of 2000 in response to the FDA challenge. The SA&Q Task Group, which included members from pharmaceutical companies, suppliers, third party auditors and FDA, used its experiences with supplier audits and performed research to draft a common practice to meet the needs of the industry. The scope of the project included audits of computer products and services required as part of the system validation process to establish documented evidence that provides a high degree of assurance that a specific computer product and/or service will consistently produce a product meeting its predetermined specifications and quality attributes. The efforts of the SA&Q Task Group resulted in a Process Model, Data Collection Tool and the Audit Repository Center to provide consistent, reliable audit information that can be shared at reduced cost within the industry.

Computer supplier audits to support computer validation began over 12 years ago. Since then suppliers have experienced dramatic increases in the number of audits being conducted by the industry while the scope of audits also increased due to new and emerging technologies being used by pharmaceutical companies. The burden of external auditing is costly and unmanageable for both the pharmaceutical companies and suppliers. Suppliers have reported that:

- The length of audits have doubled since 1996;
- Average annual cost per supplier, to host phar-

maceutical company audits, are estimated to be $150K–$200K;
- There is duplication of audits both within and across pharmaceutical companies; and
- The competency of auditors has not kept pace with the evolving technology concepts.

On the customer side (pharmaceutical companies), duplication of effort has similarly been observed, resulting in inefficient use of limited resources. Diverse auditing methods and inconsistent results have produced costly information with limited utility. At an average cost of $9K per audit, some companies are spending an estimated $450K per year in audit execution costs, not including the internal costs associated with these audits.

Since the issue of TR 32 in January of 2000, audits are being scheduled and implemented at an average rate of two per month. This effort is made possible by contributions from pharmaceutical industry subscribers and participating suppliers to PDA's licensed audit repository administered by Audit Repository Center (ARC).

All of the pharmaceutical and biotechnology companies and suppliers who initially subscribed to ARC and the PDA Process in year 2000 have renewed their subscriptions for 2001–2002. Currently seven pharmaceutical and biotechnology companies and five suppliers subscribe to the process.

Subscribers indicate that the quality of information contained in audits performed using the PDA Process provides their audit analysts sound evidence to use in determination of compliance to the regulatory expectations for validation of commercially available computer products. It also allows them to predict the likelihood of technology use problems along with other risk factors and to establish mitigation schemes that result in win-win for both supplier and customer.

Subscribers have reported the following benefits:

- 50% reduction in cost of doing audits;
- 400% increase in the number of audits that can be managed by a single individual;
- Enterprise-wide sharing of audit information for system validation;
- Standardization of method for analysis and consistent look and feel to reports;
- Seamless integration with acquisition and SLC practices; and
- Fulfillment of Part 11 expectations with regard to computer validation and the use of commercially available computer products.

Agency personnel in open forum in the USA and Europe have openly and verbally supported the PDA Audit Process. Representatives from the

continues on page 8

FYI FYI FYI FYI FYI

Computer Products Supplier Auditing Process Model: Auditor Training,

October 11–12 and November 15–16, 2001 in Baltimore, Maryland

$950 PDA members/ $1,100 nonmembers.

For more information, vist our Web site, www.pda.org.

continued from page 7

Agency have stated that the process defined in *Technical Report 32* implemented by qualified personnel will provide reliable data as to the structural integrity of computer systems and products.

It is expected that the Agency will issue guidance on the validation of commercial software used in electronic records and electronic signature systems. Agency sources have indicated that the guideline when issued will make reference to the acceptability of audit results obtained from reliable third party sources.

TR 32 continues to gain recognition as a reliable and cost-effective method to address the aspects of validation of commercially available computer products to meet the regulatory expectations of the "Draft Guideline for the Validation of Blood Establishment Computer Systems," "Guideline on General Principles of Process Validation" and *21 CFR Part 11*.

The participation of suppliers such as SAP, SSA Global Technologies, ProPack Data Corporation, Mercury Interactive, Qumas Ltd. and others affirms the value of the TR 32 Process Model. The large number of pharmaceutical personnel responsible for validation, quality management, regulatory compliance, quality assurance and corporate computer systems, seeking qualification to perform audits using TR 32 is an indication of the rapid acceptance of the TR 32 Process Model. Additionally, several pharmaceutical companies have requested on-site training sessions.

Availability of Audits

Currently 15 audits are available for distribution from the repository. An additional 27 audits are either in process or scheduled to be completed within the next six months.

For more information about the audit repository visit ARC's Web site at www.auditcenter.com or www.pda.org. ■

Table 1.0 provides a summary of the 15 audits that are currently available for immediate distribution to ARC Subscribers on request.

Table 1.0 Audits Currently Available in ARC

	SUPPLIER	PRODUCT
1	Accraply, Inc.	Label Applicators, Automatic Labeling Systems, & Custom Designed and Self Adhesive Material Application Systems
2	ActionPoint	Input Accel Document Imaging LIMS
3	Applied Biosystems	SQL*LIMS — Laboratory Information Management System including the QA Stability & Schedule Modules
4	Decision Management International, Inc. (DMI)	Regulus™ Document Authoring (DA) a member of the Regulus™ off-the-shelf solution set
5	Etrails.com, Inc.	Electronic Data Capture — EDC Electronic Patient Diaries — EPD Electronic Trail Management — ETM
6	Fanuc Robotics North America	Robotic Controllers & Communications
7	First Consulting Group, Inc.	Custom information based strategy software, operations improvements management and integration services
8	Infinity QS International (Lyle-Kearsley, Inc.)	Infinity QS Statistical Process Control Software
9	Merant, Inc.	PVCS Dimensions & PVCS Replicator Configuration Management Systems
10	Precision Solutions	Custom Development, SLE-Capture of check weight data Custom Software Programming
11	Qumas, Ltd. (Participating Supplier)	Qumas-Doc: Electronic Records Document Management Systems
12	SSA Global Technologies, Inc.	Mid range ERP software for manufacturing, supply chain and financial application domains
13	Supply Chain Logic, Inc.	General use COTS Asset Tracking/Delivery Systems
14	Sparta Systems, Inc.	Track Wise Software
15	Entrust Technologies, Ltd.	Digital Security Technology for Enterprise Resources

US Regulatory Briefs

In the *Federal Register*: September 5, 2001 (Volume 66, Number 172, page 46464) the FDA announced the availability of a draft guidance for industry entitled, "Submitting Marketing Applications According to the ICH/CTD Format; General Considerations."

This guidance is intended to supplement the ICH M4 (International Conference on Harmonization) guidances on quality, safety, and efficacy, which were signed off at step 4 of the ICH process in October 2000. Final versions of the M4 guidances on organizing the CTD (Common Technical Document) will be available soon. This general considerations guidance applies to NDAs, ANDAs and BLAs for both new molecular entities and nonnew molecular entities and all related presubmissions, supplements and amendments.

This guidance provides some general information on the organization and format of the CTD as well as recommendations for completing module 1, which contains administrative and prescribing information specific to each regulatory authority. The content of documents in the CTD is provided in other FDA guidance documents. When finalized, this guidance will supersede the "Guidelines on Formatting, Assembling, and Submitting of New Drug and Antibiotic Applications," issued in February 1987.

This level 1 draft guidance is being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). The draft guidance represents the Agency's current thinking on general considerations for submitting marketing applications according to the ICH/CTD format. An alternative approach may be used if such approach satisfies the requirements of the applicable statutes and regulations. Persons with access to the Internet may obtain the document at either: http://www.fda.gov/cder/guidance/index.htm or http://www.fda.gov/ohrms/dockets/default.htm.

Submit written comments on the draft guidance by **November 5, 2001** with Docket Number 01D-0368.

Submitting Type V Drug Master Files to CBER, Draft Guidance.

This document discusses Type V Drug Master Files (DMF) submitted to the Center for Biologics Evaluation and Research (CBER) by a DMF holder in support of an application or supplement. The document also describes the circumstances in which CBER will accept a Type V DMF without a letter of intent from the person who wishes to submit a DMF.

A DMF is a submission of information to the FDA that may be used to provide confidential detailed information about facilities, processes, or articles used in the manufacturing, processing, packaging and storing of human drugs and biological products. CBER has accepted DMFs for many years in support of applications and supplements, such as investigational new drug applications (IND), biologics license applications (BLA), and new drug applications (NDA). DMFs are generally used to allow a sponsor or applicant to reference the material in the DMF without disclosing the contents of the DMF to the sponsor or applicant. FDA reviews information in a DMF only when a sponsor or applicant incorporates material in the DMF by reference.

Previously, the regulations at 21 CFR 314.420 described the following five types of DMFs:

- Type I: manufacturing site, facilities, operating procedures and personnel;
- Type II: drug substance, drug substance intermediate, and materials used in their preparation, or drug product;
- Type III: packaging materials;
- Type IV: excipient, colorant, flavor, essence or materials used in their preparation; and
- Type V: FDA-accepted reference information.

In the *Federal Register* of January 12, 2000 (65 FR 1776), FDA published the final rule "New Drug Applications; Drug Master Files." The final rule amended 21 CFR 314.420 by removing the provi-

continues on page 10

Address for written comment to FDA unless otherwise indicated:
Dockets Management Branch (HFA-305)
FDA
5630 Fishers Lane, Rm. 1061
Rockville, MD 20852

continued from page 9

sion for Type I DMFs. FDA amended the regulation to eliminate submission of information that was not necessary either to conduct inspections of manufacturing facilities or to review the chemistry, manufacturing and controls sections of INDs, NDAs and abbreviated applications. The regulation became effective on July 10, 2000 and the Agency will no longer accept Type I DMFs as of that date.

The FDA has historically reviewed Type I DMFs in support of certain products under an IND. Type I DMFs have also been cross-referenced in BLAs to describe proprietary information. Type I DMFs have been used to provide a list of all products manufactured in a contract facility or other general information such as floor diagrams or standard operating procedures (SOPs) that are common to multiple products or processes in the facility. DMF holders have also submitted information on contract testing facilities in Type I DMFs.

On July 10, 2000, the effective date of the final rule, FDA administratively recategorized current Type I DMFs to other master file types, as appropriate (i.e., Types II, III, IV, or V), with the exception of the DMFs currently listed at http://www.fda.gov/cber/rules/master.htm. FDA recategorized the Type I DMFs that included information described in section II of this guidance as Type V DMFs. Applicants who have current approved applications that reference Type I DMFs that were transferred to Type V DMFs should note this change in their next BLA annual report under 21 CFR 601.12(d).

Comments should be received by **November 21, 2001**, Docket No. 01D-0278.

The full draft guidance can be found at www.fda.gov/cber/gdlns/dmfv.htm.

Guidance for Industry: Revised Preventive Measures to Reduce the Possible Risk of Transmission of Creutzfeldt-Jakob Disease (CJD) and Variant Creutzfeldt-Jakob Disease (vCJD) by Blood and Blood Products.

In the *Federal Register,* August 29, 2001 (Volume 66, Number 168) the FDA announced the availability of a draft document entitled, "Guidance for Industry: Revised Preventive Measures to Reduce the Possible Risk of Transmission of Creutzfeldt-Jakob Disease (CJD) and Variant Creutzfeldt-Jakob Disease (vCJD) by Blood and Blood Products" dated August 2001. The draft guidance document provides comprehensive current recommendations to all registered blood and plasma establishments for deferral of donors with possible exposure to the agent of vCJD. The new recommendations are intended to minimize the possible risk of vCJD transmission from blood products. When the draft guidance is finalized, the guidance document entitled, "Revised Preventive Measures to Reduce the Possible Risk of Transmission of Creutzfeldt-Jakob Disease (CJD) and New Variant Creutzfeldt-Jakob Disease (nvCJD) by Blood and Blood Products" dated November 1999 will be superseded.

Submit written comments to the Dockets Management Branch (HFA-305), FDA, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852. Organizations submitting written comments must include two copies, private citizens may include just one. Comments may also be submitted electronically to http://www.fda.gov/dockets/ecomments. In either case they must be identified with their Docket Number.

Guidance for Industry: Biological Product Deviation Reporting for Blood and Plasma Establishments.

In the *Federal Register*, August 13, 2001 (Volume 66, Number 156, page 43546), the Food and Drug Administration (FDA) announced the availability of a draft document entitled "Guidance for Industry: Biological Product Deviation Reporting for Blood and Plasma Establishments" dated August 2001. The draft guidance document provides licensed blood establishments, unlicensed registered blood establishments and transfusion services with the Agency's current thinking related to the requirements for biological product deviation reporting. The draft guidance document will assist blood and plasma establishments in determining when a report is required, who submits the report, the timeframe for reporting and how to submit the report.

Submit written or electronic comments on the draft guidance by **November 13, 2001** using Docket No. 01D-0220.

Guidance for Industry: Biological Product Deviation Reporting for Licensed Manufacturers of Biological Products Other Than Blood and Blood Components.

In the *Federal Register*, August 13, 2001 (Volume 66, Number 156, page 42547), the FDA announced the availability of a draft document entitled, "Guidance for Industry: Biological Product Deviation Reporting for Licensed Manufacturers of Biological Products Other Than Blood and Blood Components," dated August 2001. The draft guidance document provides licensed manufacturers of biological products other than blood and blood components with the Agency's current thinking related to the biological product deviation reporting requirements. The draft guidance document will assist the licensed manufacturers of biological products other than blood and blood components in determining when a report is required, who submits the report, the timeframe for reporting and how to submit the report. Persons with access to the Internet may obtain the draft guidance document at: http://www.fda.gov/cber/guidelines.htm.

Submit written or electronic comments on the draft guidance to ensure their adequate consideration in preparation of the final document by **November 13, 2001** using Docket No. 01D-0221.

continues on page 12

Biotest

Surface Sampling
Particle Counting
Laboratory Services
Air Sampling
Rapid Hygiene

Contract Microbiology Laboratory

Biotest Diagnostics Corporation has a certified microbiology laboratory available providing quantitative and qualitative analysis of your environmental samples.

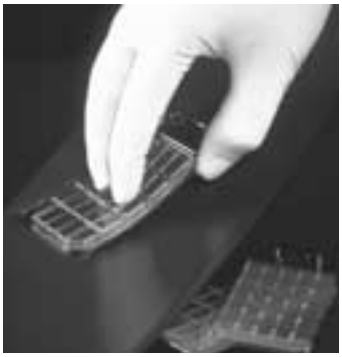
- Microbial identifications of bacteria, yeast and mold to genus/species
- 10 day turnaround time
- "Perfect Score" participant in the EMPAT Program
- Confidential reports for total plate/strip counts and cfu/volume of air
- Consultation with expert Microbiologists on staff
- Free shipping when using Biotest test slides and strips

APC Plus

Airborne Particle Counter

Convenient, economical and entirely portable particle counter detects the presence of airborne contaminants. Accurately and simultaneously measures four particle size ranges: 0.3, 0.5, 1.0 and 5.0 µm. Can be used to monitor controlled environments where particulate contamination is of concern.

- User friendly control panel
- Programmable count and hold times
- Meets JIS for counting efficiency
- Two concentration modes– particles/ft^3 and particles/liter
- Temperature and RH sensors built-in
- Easy to use software included
- Remote and facility monitoring software available



HYCON® Contact Slides

Monitoring liquids and ambient air is not sufficient for most products and processes. Surface monitoring is a must and is recommended in HACCP, ISO and USP guidelines. HYCON® Contact Slides detect surface viable contamination that may adversely affect your product or process.

- Flexible self-contained culture-medium-coated slides ensure surface contact
- Excellent for irregular surfaces
- Provides a 25 cm^2 contact surface
- Various agar media available

Biotest HYCON® RCS High Flow Microbial Air Sampler

The RCS High Flow Microbial Air Sampler allows you to monitor contaminants in any area where reproducible results are necessary. The RCS High Flow monitors air quality—

Faster—the RCS High Flow has an air flow rate of 100 liters per minute, reducing sampling time to 10 minutes for 1 m^3.

Easier—the upgraded infrared remote control with a newly designed keyboard panel and integrated display transmits and receives data from the instrument up to a distance of 10 m.

Better—the rotor, protection cap, and air direction ring are all detachable, easy to clean and autoclavable, allowing less margin for contamination when sampling in any environment.

The instrument is portable and precise and with the use of Biotest HYCON® agar media strips, results are always reproducible. Whether you are monitoring the microbiological quality of ambient air, testing your air handling equipment, or verifying the results of decontamination efforts, you'll find the RCS High Flow to be an effective, reliable sampling device.

Call us at 800.522.0090 for more information.

CE

Biotest DIN EN ISO 9001 HYCON

Biotest

BIOTEST DIAGNOSTICS CORPORATION
66 Ford Road, Suite 131, Denville, New Jersey 07834
Phone: 973.625.1300 • 800.522.0090 • Fax: 973.625.9454
www.BiotestUSA.com

continued from page 10

Medical Devices; A Pilot Program to Evaluate a Proposed Globally Harmonized Alternative for Premarket Procedures; Draft Guidance for Industry and FDA Staff.

In the *Federal Register*, July 25, 2001 (Volume 66, Number 143, Page 38714) the FDA announced the availability of the draft guidance entitled, "A Pilot Program to Evaluate a Proposed Globally Harmonized Alternative for Premarket Procedures." This draft guidance is intended to assist the medical device industry and FDA staff in implementing a pilot premarket review program that may reduce some of the burden on manufacturers associated with current conflicting format and content requirements in different countries. The proposed pilot program will evaluate the utility of two documents created by the Global Harmonization Task Force (GHTF) Study Group 1 (SG1). They are entitled: "Summary Technical Documentation for Demonstrating Conformity to the Essential Principles of Safety and Performance of Medical Devices (STED)" and "Essential Principles of Safety and Performance of Medical Devices" (Essential Principles). The GHTF is a voluntary group of representatives from national medical device regulatory authorities and the regulated industry. This guidance is neither final nor is it in effect at this time. FDA plans to conduct the pilot program for 1 year. The pilot program will begin on the date of publication of the final FDA guidance document. FDA will assess how the pilot is proceeding during its course and may choose to decline receipt of additional submissions using the draft STED format in order to assess the initial experiences. At the end of the pilot, FDA and other GHTF participants will analyze the outcome to determine whether the draft STED document is a viable alternative to current premarket submission procedures, and if the program should be continued or expanded. FDA will post on its Web site a report of the outcome of the pilot program. Guidance documents are also available on the Dockets Management Branch Web site at: http://www.fda.gov/ohrms/dockets/default.htm.

FDA announces a new Web site devoted to Good Clinical Practices.

Good Clinical Practice (GCP) is a standard for the design, conduct, performance, monitoring, auditing, recording, analysis and reporting of clinical trials. Compliance with this standard assures that the data and reported results are credible and accurate and that the rights, safety and well being of trial subjects are protected.

FDA requires that the biomedical research it regulates conforms to GCP standards as articulated in FDA regulations. To help ensure that GCP standards are followed, FDA inspects and audits the conduct and reporting of clinical trials. This program of inspections and audits, known as the Bioresearch Monitoring (BIMO) program, covers all of the parties involved in regulated clinical trials, including clinical investigators, institutional review boards (IRBs), sponsors, monitors and contract research organizations. FDA conducts more than 1,000 inspections annually under this program. FDA's clinical BIMO inspection program complements and supports the Agency's internal review of new product applications.

FDA has established a focal point within the Agency for GCP issues arising in human research trials regulated by FDA. This focal unit is the GCP Staff, located in the Office of Science Coordination and Communication.

In relation to GCP, this unit:

- Coordinates FDA policies;
- Provides leadership and direction through the administration of FDA's Human Subject Protection/Good Clinical Practice Steering Committee;
- Coordinates FDA's Bioresearch Monitoring program with respect to clinical trials, working together with FDA's Office of Regulatory Affairs (ORA);
- Contributes to international GCP harmonization activities;
- Plans and conducts training and outreach programs; and
- Serves as a liaison with the Office for Human Research Protection (DHHS) and other federal agencies and external stakeholders committed to the protection of human research participants.

This link provides convenient access to FDA regulations, guidance, compliance programs, lists of inspected clinical investigators as well as disqualified or restricted investigators and FDA contact information relating to clinical trial conduct. The Web site can be found at www.fda.gov/oc/gcp.

The Department of Health and Human Services has announced the launch of a new Web site that addresses the link between domestic and international health issues. The site, www.globalhealth.gov, provides information on the Department's work on global health issues as well as worldwide health statistics, reports and publications, and links to the department's global health partners. For more information, please see www.hhs.gov/whatsnew.

New Web site explains FDA drug review and approval times.
Charts that plot historical approval times and a glossary of terms are part of a new FDA Web site (www.fda.gov/cder/reports/reviewtimes/default.htm) designed to clarify issues about the length of time required for the Agency to review and approve drugs.

FDA is often asked about the pace of drug approvals and how FDA review time for applications affects it. Since the *Prescription Drug User Fee Act* (PDUFA) was passed in 1992, FDA has met and often exceeded the vast majority of review-time goals established under the *Act*. New drug approval times also have been dramatically reduced (from a median of 22 months in 1992 to a median of less than 12 months in 1999), although a slight increase was seen for the year 2000. The charts in the Web site illustrate this and the relationship between FDA review time for New Drug Applications (NDAs) and actual, start-to-finish, drug approval times. All figures refer to approvals for New Molecular Entities (NMEs).

International Briefs

On July 30, 2001, the Canadian Health Products and Food Branch Inspectorate announced the availability of the guidance document, *Validation Documentation Requirements and Responsibilities for Drug Fabricators, Packagers/Labellers, Distributers and Importers.* This guidance document specifies what the Health Products and Food Branch Inspectorate (HPFBI) considers acceptable from drug fabricators, packagers/labellers and distributers as referred to in paragraph C.01A.003(b), and importers, to demonstrate that they meet validation requirements of the Good Manufacturing Practices. Comments received from stakeholders when the draft version was published were considered in the preparation of this final document.

As specified in the Scope section of the *Validation Guidelines for Pharmaceutical Dosage Forms,* it is expected that importers and distributers of drugs have documented evidence, as outlined in *Validation Documentation Requirements and Responsibilities for Drug Fabricators, Packagers/Labellers, Distributers and Importers*, that the fabricators and packagers of these drugs meet the validation requirements. The availability of validation information is a shared responsibility of the fabricator and the distributer.

The guidance document can be found on the Therapeutic Products Directorate (TPD) Web site at: www.hc-sc.gc.ca/hpb-dgps/therapeut.

The Australian Therapeutic Goods Administration has released a guide for Australian manufacturers and exporters of medicinal products. The full title of the Medicinal Products Annex is: *Medicinal Products GMP Inspection and Batch Certification.* The purpose of the guide is to help Australian manufacturers and exporters comply with the Mutual Recognition Agreement (MRA) between Australia and the European Union. The MRA allows EU Member Countries to recognize certificates of conformity issued by Australia using Australia conformity assessments and vice versa. Stated another way, the MRA provides for conformity assessment to be carried out in the country of manufacture. In recognition that different legislative and regulatory requirements apply between MRA partners, the MRA does not create a direct equivalence between Australia and EU regulations. Rather, it allows for mutual recognition of test results and other conformity assessments.

It is important to note that the MRA only applies to GMP inspections of manufacturers of medicinal products, and subsequent certification of the manufacturer. It does not apply to the mutual recognition of marketing authorization of medicinal products. Australian manufacturers and/or sponsors wishing to market medical products in Europe will still need to lodge an application for product marketing authorization with an individual EU Member Country ("decentralized" procedure) or EMEA ("centralized" procedure).

The Medicinal Products Annex covers all those medicinal products for human and veterinary use that are manufactured in Australia and the EU, and to which GMP requirements apply. Included are chemical and biological pharmaceuticals, immunologicals, radiopharmaceuticals, and products derived from human blood or plasma.

The documents covered by the annex are:

1. Certification of Manufacturer. This is facilitated by the exchange of a "Certificate of GMP Compliance of a Manufacturer" certifying that the manufacturer has been inspected and found to comply with GMP for the manufacture of a specific medicinal product or group of medicinal products.
2. Batch Certification. EU legislation requires that each batch of medicinal product imported into Europe must be accompanied by a batch certificate. This certificate must:
   - Show agreed testing specifications of the product;

continues on page 14

continued from page 13

- Show reference of analytical methods and test results;
- Contain a statement like "batch records reviewed and found to be in conformity with GMP"; and
- Be signed by the person in the company responsible for releasing the batch of medicinal product for sale or supply.

3. Official Batch Release. The official batch release relates to the testing by competent authorities of batches of immunological products (vaccines) and blood products.

A copy of the MRA, including the Medicinal Products Annex, can be obtained from the TGA Web site at www.ecdel.org.au. Further information on the Medicinal Products Annex can be obtained from Mr. Bob Tribe of TGA, phone 02/62328629, fax 02/62328426 for medicines intended for human use. For questions about veterinary medicines contact Mr. Graham Savage of NRA, phone 02/62723418, fax 02/62724753.

The Danish Medicines Agency has produced a new Web site, www.laegemiddelstyrelsen.dk. With a modern design and new functions, the site makes it easier to find relevant and factual information on medicinal products in Denmark. It is available in English and will continuously be developed. The Agency intends to make use of, to an increasing degree, the opportunities that the Internet gives for an interactive dialogue and a digital service for citizens. In keeping with the development of the Internet, demands on usability, design and interactivity have become greater. The Danish Medicines Agency therefore now offers both citizens and the pharmaceutical industry a Web site that combines factual information at a professionally high level with a good layout, usability and an improved service for citizens. Among other things, the Danish Medicines Agency has attached great importance to making the new Web site easily accessible to the visually impaired.

The Australian Therapeutic Goods Administration has issued two updated procedures.

The Uniform Recall Procedure for Therapeutic Goods (URPTG 2001 Edition) defines the action to be undertaken by health authorities and sponsors when therapeutic goods must be recalled. A recall would be an action taken when therapeutic goods for use in humans have an established deficiency in quality, safety or efficacy.

Therapeutic Goods Order No. 69, General Requirements for Labels for Medicines, was published on September 12, 2001. The publication of TGO 69 revokes and supercedes labeling requirements found in TGO 48, TGO 55, TGO 55A, and TGO 62.

Both documents can be found on the Therapeutic Goods Administration Web site at www.health.gov.au/tga.

In the United Kingdom, the Medicines Control Agency has issued recommendations for the labeling and packaging of medicines.

In April of 2001, the Committee on Safety of Medicines established the Working Group on Labeling and Packaging of Medicines. The role of the working group was to advise on the role of the labeling and packaging of medicines to see what improvements could be made to reduce the likelihood of medication errors. The working group has submitted their report and the Recommendations for the Labeling and Packaging of Medicines Consultation Letter: MLX 275 can be found at www.mca.gov.uk. ■

—William Stoedter

PDA Task Group Comments on Draft of New Canadian GMP Guidelines

On August 31, 2001 PDA sent comments on the proposed Canadian Good Manufacturing Practices (GMP) Guidelines. The comments were sent to the Therapeutic Program Directorate (formally the Therapeutic Products Program). The 2002 edition of the Canadian GMPs reflects Mutual Recognition Agreements that Canada has entered into and the fact that Canada has been accepted as a member of the Pharmaceutical Inspection Cooperation Scheme (PIC/S). The Task Group was made up of PDA volunteers from the USA and Canada. The Draft GMPs can be found at www.hc-sc.gc.ca/hpb-dgps/therapeut. PDA comments can be found on the PDA Web site (www.pda.org) under Regulatory Documents.

Two of the major comments are presented here:

1. Page 17, under "Premises," in discussing the possible cross contamination of:

- Highly sensitizing drugs;
- Biologicals;
- Certain hormones;
- Certain cytotoxic drugs; and
- Other highly active drugs.

Item 12.1 states that "Campaign production (separation in time followed by cleaning) of the above products is not acceptable."

The Task Group feels that totally forbidding campaign production is overly restrictive and not in keeping with current EU and USA practices. Campaign production has been accepted on a case-by-case basis by both EU and USA authorities, where, on a substance-by-substance basis, proper justification has been provided, validation conducted and rigorous, validated controls and moni-

toring are in place. The EU GMP Guide, Section 3.6 states "...in exceptional cases (for certain antibiotics, certain hormones, certain cytotoxics, certain highly active drugs and non-medical products) the principle of campaign working in the same facilities can be accepted..."

2. Page 61, Environmental grade requirements, drugs subject to terminal sterilization, 4.3 "Parenterals are filled in an aseptic area of at least a grade B environment or in a grade A zone with at least a grade C background, before terminal sterilization."

It is the opinion of the Task Group that the requirement for terminally sterilized parenterals be filled in at least a grade B or grade A environment with at least a grade C background is beyond the requirements within the EU GMPs. EU Annex 1 provides for the filling of terminally sterilized products in a grade C area unless the products are unusually at risk for microbial contamination. Terminal sterilization provides a validated sterility assurance level that far exceeds that of aseptically-filled products. Requiring these products to be filled in a grade A or B environment places an extra burden on the pharmaceutical industry that is not justified by any improvement in product quality. In addition, this impacts the ability of pharmaceutical companies in the EU and the USA to export terminally sterilized parenterals into Canada. ■

—William Stoedter

FDA Acquires PDA Archive for District Offices

The FDA recently purchased the updated PDA Archive for reference use at all of its District offices. The PDA archive contains more than 50 years of research papers and technical references written by some of the most highly qualified scientists in the pharmaceutical industry. FDA Field Investigators now have access to all of PDA's technical references including PDA Journal articles, Technical Reports, Monographs and selected Meeting Proceedings. For more information, or to purchase your own copy of the PDA Archive on CD-ROM, go to page 40. ■

—William Stoedter

Part II - Introduction to European Authorities

This is the second in a series of articles on the drug regulatory authorities in Europe. Last month we described the EMEA. This month we will provide an overview of the European Directorate for the Quality of Medicines (EDQM), best known for publication of the European Pharmacopoeia (*Ph.Eur)*. The following information is extracted directly from EDQM's own literature. For more information see their Web site: www.pheur.org.

European Directorate for the Quality of Medicines

The European Pharmacopoeia (*Ph.Eur.*)

Director: Dr. Agnes Artige
Location: Strasbourg, France

History and activities

The free movement of medicines, as regards public health as well as international trade, requires that manufacturing and quality control standards be unified for pharmaceutical substances for human and veterinary use and that these standards keep pace with scientific progress. **This means unifying national pharmacopoeias**. It should be recalled that pharmacopoeias are collections of standardized specifications that define the quality of pharmaceutical preparations, their constituents or even their containers. The European Pharmacopoeia was inaugurated in 1964 through a convention elaborated under the aegis of the Council of Europe (European treaty series No 50). Directive 75/318/EEC of May 20, 1975 of the Council of the Communities made the monographs of the European Pharmacopoeia obligatory when constituting marketing authorization dossiers on medicines for human use.

On May 26, 1994 another step was taken in the cooperation between the Council of Europe and the European Union. The European Pharmacopoeia Secretariat took on new responsibilities in setting up a European network of laboratories involved in the quality control of medicines for human and veterinary use. Consequently, the European Pharmacopoeia Secretariat changed its name to the European Directorate for the Quality of Medicines (EDQM) to cover these new activities in addition to its other activities. The construction of the European regulatory system was finalized in 1993 by adopting a regulation and two directives (Council regulation (EEC) No 2309/93 and Council Directives 93/39/EEC and 93/40/EEC, respectively) which established a European Agency for the Evaluation of Medicinal Products (EMEA) and laid down Community procedures for licensing and surveillance of medicinal products for human and veterinary use: on the one hand, a centralized procedure for biotechnology-derived products or any technologically advanced medicinal product. The official network of Official Medicines Control Laboratories (OMCLs) is open not only to countries of the European Union but also to members and observers of the European Pharmacopoeia Commission. Its main goals are mutual recognition of tests carried out at the national level for countries that belong to the European Union, and sharing of expertise, standardization, and international collaboration for the other countries.

In particular, the cooperation program is aimed at:

- Improving communications (establishing a network of European laboratories and its handbook, data base and newsletters);
- Harmonizing methods of work, setting up a harmonized European quality system, including an intensive program of proficiency tests;
- Exchanging information on work programs to optimize the use of expertise and laboratory resources, as well as available analytical data; and
- Organizing collaborative studies (on the validation of methods) or market surveillance of medicines through a coordinated testing program.

European Biological standardization program, 3 lines of work:

- Elaboration of common European standards that are available in sufficient quantities to be used as working standards not only by national control laboratories but also by manufacturers;
- Development and validation of standardized test methods; and
- Validation of alternative methods to reduce or replace the use of laboratory animals.

To ensure optimal quality for patients receiving medicinal substances as complex and sensitive as biological products, immunological products and vaccines, it is necessary for manufacturers and control authorities to make use of a set of regulations involving quality control procedures both before and after the manufacturing process. At every stage, standardized parameters have to be established in relation to common references. Directive 89/342/EEC on immunological substances such as vaccines, toxins, sera or allergens and Directive 89/381/EEC dealing with medicinal substances derived from blood or human plasma further increase the need for standardization. In fact, for a certain number of biological products, one generally considers that *a priori* control (marketing authorization dossier) does not provide suffi-

cient guarantees. This is why the directives have established a batch release system that plays an important part in quality control and assurance. The European Directorate for the Quality of Medicines and the European Pharmacopoeia constitute a natural link in the chain since they take part in the elaboration of that system by defining means to perform validated tests (by developing reference test and assay methods and establishing reference preparations and standards).

Exemplary cooperation between international organizations

An agreement for cooperation was signed in 1991 between the Commission of European Communities and the Council of Europe. This agreement deals with practical and realistic programs meant to be put into application by the Secretariat of the European Pharmacopoeia Commission. These programs are financed by a specific budget contributed by the two contracting parties (65% for the Commission of European Communities and 35% for the Council of Europe). EFTA countries may voluntarily take part in the financing of the programs. The signature of this contract has given new impetus to the activities in the biological field by complementing the work performed by the respective groups of experts. Since then, the Commission of the European Communities has officially become a party to the Convention on the Elaboration of a European Pharmacopoeia and has been making a substantial financial contribution every year to the continuation and growth of biological standardization activities. Moreover, whenever possible, European studies are coordinated with those being carried out or planned by the World Health Organization.

Certification (including TSE)

The Certification Procedure of the European Directorate for the Quality of Medicines is aimed at facilitating and simplifying exchanges between the partners as regards ensuring that the quality of substances is guaranteed and that these substances comply with the European Pharmacopoeia. Under the revised procedure, suppliers of any products (raw material, ingredient, etc.) with TSE risk used in the production or preparation of medicinal products can apply for a certificate concerning the evaluation of the reduction of TSE risk according to the new general monograph. This certificate can then be used by manufacturers of medicinal products in their marketing authorizations for demonstration of compliance with the amended EU directives on medicines for human and veterinary use (75/318/EEC and 81/852/EEC respectively).

The certification procedure is for manufacturers, whatever their nationality, (or the duly authorized representatives of these manufacturers) of organic and inorganic active substances and excipients, obtained by synthesis, extraction or fermentation, and products concerned by TSE. It is not for direct gene products (e.g. proteins), products obtained from human tissues, vaccines, blood products and preparations. Information on the certification program can best be determined from the EDQM Web site.

Reference standards

The establishment of European working standards is part of the authorized scientific programs. Consequently, the titres and potencies of biological products will be expressed with respect to the same reference standard. The existence of reference standards recognized throughout Europe will enable national control agencies and manufacturers to avoid costly duplications of work on secondary standards, which could otherwise lead to disagreements.

Validated alternative methods

Collaborative studies may also be aimed at the validation of alternative reference methods. Comparative tests of various analytical or operating procedures can be used to validate a method of choice or even to establish a close correlation between a method involving tests on animals, an *in vitro* biological method or a method based on physico-chemical analysis, thus facilitating the replacement of one method by another later on.

Open participation

All the official control laboratories for biological products as well as manufacturers present on the European market have been invited to take part in the work on biological standardization. Project leaders from centres of expertise have been appointed for each study; they assist the administrators of EDQM Division IV in the elaboration of protocols for collaborative studies and the evaluation of the results. ■

—James Lyda

Web Sites For European Drug Regulatory Information

EMEA - History and Description (New site this year)
http://www.emea.eu.int/aboutus.htm

EMEA Documents for Download
http://www.emea.eu.int/index/indexh1.htm

EMEA What's New (Recommended)
http://www.emea.eu.int/index/indexwn1.htm

European Commission - Enterprise Directorate (New site this year)
http://pharmacos.eudra.org/F2/home.html

European Commission - GMP Documents for Download
http://pharmacos.eudra.org/F2/pharmacos/gmp_doc.htm

European Commission - What's New
http://pharmacos.eudra.org/F2/pharmacos/docs.htm#news

Pharmaceutical Inspection Cooperation Scheme (PIC/S) Documents for Download
http://www.picscheme.org/index.htm

European Pharmacopoeia (Ph. Eur.)
http://www.pheur.org/

European Federation of Pharmaceutical Industries and Associations (EFPIA)
http://www.efpia.org/

EMEA Guidance on Pharmaceutical Water

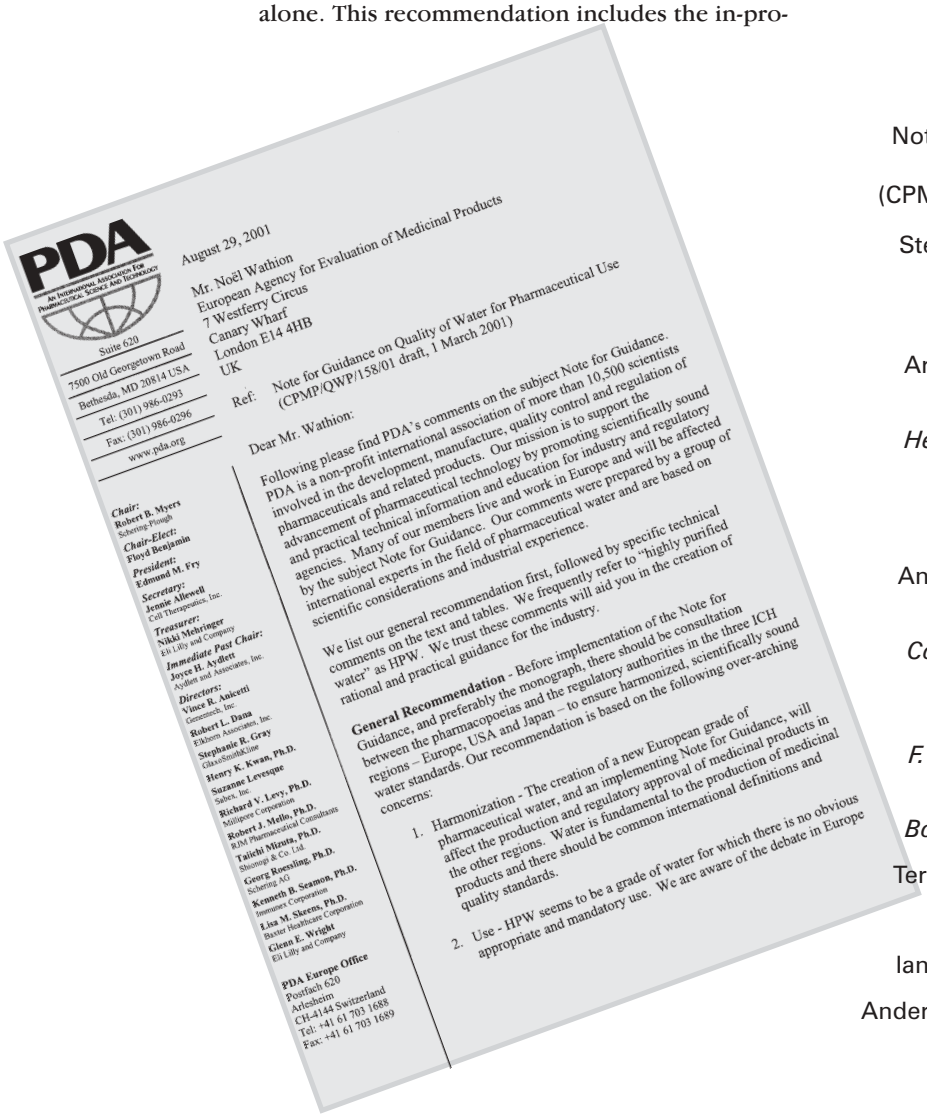
PDA Offers Technical Comments; Harmonization Recommended

On August 29, 2001 PDA offered technical comments on the CPMP's draft Note for Guidance on Quality of Water for Pharmaceutical Use. PDA's Task Force, chaired by Stephen Bellis of AstraZeneca, included many noted water experts both in Europe and the USA.

The primary recommendation is for harmonization of international water standards, including the need for High Purity Water, instead of the development of a new grade of water in Europe alone. This recommendation includes the in-process European Pharmacopoeia monograph on HPW, and is based on the importance and ubiquitous nature of water used throughout drug and API production. Copies of PDA's comments were sent to *Ph. Eur.*, USP and FDA.

The full text of PDA's letter can be downloaded in PDF format from the PDA Web site, www.pda.org. PDA extends appreciation to the expert task force who contributed their time on behalf of the full membership. ■

—James Lyda



PDA
An International Association For Pharmaceutical Science And Technology
Suite 620
7500 Old Georgetown Road
Bethesda, MD 20814 USA
Tel: (301) 986-0293
Fax: (301) 986-0296
www.pda.org

August 29, 2001

Mr. Noël Wathion
European Agency for Evaluation of Medicinal Products
7 Westferry Circus
Canary Wharf
London E14 4HB
UK

Ref: Note for Guidance on Quality of Water for Pharmaceutical Use (CPMP/QWP/158/01 draft, 1 March 2001)

Dear Mr. Wathion:

Following please find PDA's comments on the subject Note for Guidance. PDA is a non-profit international association of more than 10,500 scientists involved in the development, manufacture, quality control and regulation of pharmaceuticals and related products. Our mission is to support the advancement of pharmaceutical technology by promoting scientifically sound and practical technical information and education for industry and regulatory agencies. Many of our members live and work in Europe and will be affected by the subject Note for Guidance. Our comments were prepared by a group of international experts in the field of pharmaceutical water and are based on scientific considerations and industrial experience.

We list our general recommendation first, followed by specific technical comments on the text and tables. We frequently refer to "highly purified water" as HPW. We trust these comments will aid you in the creation of rational and practical guidance for the industry.

General Recommendation - Before implementation of the Note for Guidance, and preferably the monograph, there should be consultation between the pharmacopoeias and the regulatory authorities in the three ICH regions – Europe, USA and Japan – to ensure harmonized, scientifically sound water standards. Our recommendation is based on the following over-arching concerns:

1. Harmonization - The creation of a new European grade of pharmaceutical water, and an implementing Note for Guidance, will affect the production and regulatory approval of medicinal products in the other regions. Water is fundamental to the production of medicinal products and there should be common international definitions and quality standards.

2. Use - HPW seems to be a grade of water for which there is no obvious appropriate and mandatory use. We are aware of the debate in Europe

Chair: Robert B. Myers, Schering-Plough
Chair-Elect: Floyd Benjamin
President: Edmund M. Fry
Secretary: Jennie Allewell, Cell Therapeutics, Inc.
Treasurer: Nikki Mehringer, Eli Lilly and Company
Immediate Past Chair: Joyce H. Aydlett, Aydlett and Associates, Inc.
Directors: Vince R. Anicetti, Genzyme, Inc
Robert L. Dana, Filshorn Associates, Inc.
Stephanie R. Gray, GlaxoSmithKline
Henry K. Kwan, Ph.D., Sabex, Inc
Suzanne Levesque, Sabex, Inc
Richard V. Levy, Ph.D., Millipore Corporation
Robert J. Mello, Ph.D., R.M. Pharmaceutical Consultants
Taichi Mizuta, Ph.D., Shionogi & Co. Ltd.
Georg Roessling, Ph.D., Schering AG
Kenneth B. Seamon, Ph.D., Immunex Corporation
Lisa M. Skeens, Ph.D., Baxter Healthcare Corporation
Glenn E. Wright, Eli Lilly and Company

PDA Europe Office
Postfach 620
Arlesheim
CH-4144 Switzerland
Tel: +41 61 703 1688
Fax: +41 61 703 1689

PDA Task Force

Note For Guidance on Quality of Water for Pharmaceutical Use (CPMP/QWP/158/01 draft, March 1, 2001)

Steve Bellis (Chair), *AstraZeneca, UK*

Theodore H Meltzer
Capitola Consulting Co., USA

Arnhold Baller, *Pfizer, Inc., Germany*

Giorgio Calderari
Helsinn Healthcare SA, Switzerland

William Collentro, *USA*

Paolo Curtò, *D.O.C., Italy*

Antonino Giannetto, *S.I.F.I. SpA, Italy*

Klaus Haberer
Compliance –Advice and Service in Microbiology, Germany

Lothar Hartmann
F. Hoffmann-La Roche, Switzerland

Norbert Hentschel
Boehringer Ingelheim KG, Germany

Terry Munson, *KMI/PAREXEL, Inc., US*

Alan Newbery, *KMI Parexel, UK*

Ian D Symonds, *GlaxoSmithKline, UK*

Anders Vinther, *CMC Biotech A/S, Denmark*

James C Lyda, *PDA, Europe*

William Stoedter, *PDA, USA*

Copies of this letter can be downloaded in pdf format from the PDA Web site, http://www.pda.org/regdocs/index.html.

Registration Form

The Extractables Puzzle: Putting the Pieces Together– Resolving Analytical, Material, Regulatory and Toxicology Issues to Find Solutions – November 12-13, 2001 – Doubletree Hotel – Rockville, Maryland

1. Please type or clearly print your name, address and affiliation.

❑ Mr. ❑ Ms. ❑ Dr. First Name Middle Initial Last Name

Job Title Membership Number (if known)

Company (indicate full company name)

Business Address

City State/Province Zip + 4/Postal Code Country

Business Phone Fax E-mail

☐ Substituting for

(check here only if you are substituting for a previously enrolled colleague. If you are a nonmember substituting for a member, the additional nonmember fee must be paid.)

2. Fees Individuals registering at the nonmember rate receive one full year of PDA membership. (If you DO NOT want to become a PDA member, please check this box ☐). **Nonmembers registering for multiple events need only pay the nonmember fee once.**

	PDA Member	Nonmember	Government*
Full registration	☐ $695	☐ $845	☐ $275
One day only:	☐ $355	☐ $505	
TOTAL FEES			$_____

Full Registration Includes: Conference reference materials on site; Lunch both days; Coffee breaks both days; Reception on November 12

***Government:** You must be an employee of an official government agency to quality for this discounted rate.

3. Please check the appropriate box

☐ Check Enclosed ☐ Wire Transfer Charge to: ☐ MasterCard/EuroCard ☐ VISA ☐ AMEX

Account Number _____ Exp. Date _____

Name Exactly as on Card _____

Signature _____ Date _____

4. Return completed form with payment (payment must be included to be considered registered) made to:

PDA
P.O. Box 79465
Baltimore, MD 21279-0465 USA

Fax: (301) 986-1093 (Credit Cards Only)

Federal Tax I.D. #52-1906152

Payments must be made to PDA in US dollars by check drawn on a US bank, by electronic money transfer (SunTrust Bank ABA #051000020, PDA Account #209364254, Swift #UVBIUS33), net of all bank charges; by MasterCard, VISA or American Express.

Confirmation: Written confirmation will be sent to you once payment is received. You must have written confirmation to be considered enrolled in a PDA event. **Substitutions:** If a registrant is unable to attend, substitutions are welcome and can be made at any time. If you are pre-registering as a substitute attendee, indicate this on the registration form. A nonmember substituting for a member must pay the additional fee. **Refunds:** Refund requests must be made in writing. Registrants whose written requests for refunds are received at PDA **on or before October 15, 2001** will receive a full refund less a $35 (US) processing fee. Registrants whose written requests for refunds are received **after October 15 and on or before October 29, 2001** will receive 50% of the registration fee. **After October 29, 2001** no refunds can be made.

Please tell us how you learned about this event

- ☐ I'm a PDA member
- ☐ Advertisement
- ☐ Direct Mail
- ☐ Fax
- ☐ Internet
- ☐ Colleague
- ☐ Other_____

Business Environment (check one)

- ☐ Academic
- ☐ Consultant
- ☐ Engineering and Construction
- ☐ Government Regulatory Agency
- ☐ Industry Supplier
- ☐ Medical Device Manufacturing
- ☐ Pharmaceutical Manufacturing
- ☐ Pharmacy
- ☐ Recruiter
- ☐ Other_____

Professional Interest
(check all that apply)

- ☐ Aerosols
- ☐ Analytical Chemistry
- ☐ Biologicals
- ☐ Biotechnology
- ☐ Computers
- ☐ Engineering
- ☐ Formulation Development
- ☐ GMP Compliance/ Inspection Trends
- ☐ Liquids
- ☐ Maintenance
- ☐ Manufacturing/Production
- ☐ Microbiology
- ☐ Ointments
- ☐ Ophthalmics
- ☐ Packaging
- ☐ Parenterals
- ☐ Quality Assurance/ Quality Control
- ☐ Regulatory Affairs
- ☐ Research
- ☐ Solid Dosage Forms
- ☐ Sterilization/ Aseptic Processing
- ☐ Training
- ☐ Validation

LTR 0901

PDA Use: Date:_____ Check #:_____ Amount:_____ Account:_____

Interest Group Chairs Announce Plans for PDA's 2001 Annual Meeting

Biotechnology

Frank Matarrese, Chiron Corporation

The Biotechnology IG is planning a work session to refine a list of topic items and plan for the 2002 activities of the group.

Inspection Trends/ Regulatory Affairs

Robert L. Dana, Elkhorn Associates, Inc.

Based on previous member input, the meeting will focus on the recently concluded FDA pilot on the systems approach to the conduct of inspections. A panel of industry speakers will discuss their experience with the pilot, and share thoughts on its future. An FDA speaker is tentatively scheduled to present the Agency's views.

Solid Dosage Forms

Pedro J. Jimenez, Ph.D., Eli Lilly and Company

The group will discuss the recommendation made by the Product Quality Research Initiative task force with respect to Blend Uniformity Analysis. A formal presentation of the proposal will be made and an open discussion will follow. In addition, preliminary discussion will be held in order to define long term plans to deal with the environmental monitoring requirements for dry product facilities.

Sterilization/Aseptic Processing

James P. Agalloco, Agalloco & Associates

Among the presentations will be an update on the revision of PDA TM 1 on steam sterilization.

Training

Thomas W. Wilkin, Ed.D., Schering-Plough

The meeting will be interactive, with discussions focusing on current training topics vital to the industry. Attendees will initially contribute to the development of key topics of interest (e.g., evaluation of training; guidelines for training; SOP and Web-based training, etc.) followed by in-depth discussion of approaches. An update on the planning and content of the upcoming 2002 PDA Training Conference will also be given along with other training-related information. Please direct any questions to the Training Interest Group Chair: Thomas Wilkin, Ed.D., Director, Technical Operations Training, Schering-Plough Corp., Kenilworth, NJ 07033 or by telephone at (908) 298-5213.

Vaccines

Frank S. Kohn, Ph.D., Wyeth-Lederle Vaccines & Pediatrics

The Vaccines IG is planning to have a speaker, followed by a round-table talk, on "Clinical Vaccine GMP Certification Program, New Europe Requirements." Scott Woollens, Director of Vaccine CMC World Wide Compliance, Wyeth Vaccines is scheduled to be the main speaker. A round table discussion of open vaccine industry issues will follow.

Validation

Bohdan M. Ferenc

The Validation IG will discuss Points to Consider for Change Control.

Visual Inspection of Parenterals

John G. Shabushnig, Ph.D., Pharmacia Corporation

The Visual Inspection of Parenterals (VIP) IG has been meeting twice a year for the last five years to discuss visual inspection processes. These open forums are held at PDA's Spring and Annual Conferences and both pharmaceutical manufacturers and inspection equipment builders participate. Discussion topics are solicited from the members of each session and then prioritized by group vote. Any inspection-related regulatory activity since the last meeting is routinely given a review. Past topics have included the evolving Japan foreign material regulations, validation strategies for inspection methods, inspection of lyophilized cakes and powders for foreign material, performance of automated inspection equipment, inspector qualification, reinspection of culled product and statistical audit sampling plans. The group is currently sponsoring a task force to develop a scientifically based specification for visible particulate matter in parenteral products. Progress on this task will be on the agenda at this session. Anyone interested in visual inspection is encouraged to participate. ■

—Russell Madsen

Biotechnology
Frank Matarrese
Chiron Corporation
4560 Horton Street
Emeryville, CA 94608
Tel: (510) 923-3128
Fax: (510) 923-3375
E-mail—
frank_matarrese@cc.chiron.com

Computer Systems
Michael L. Wyrick
KMI/Parexel
2080 St. Andrew's Court
Franklin, IN 46131
Tel: (317) 736-0853
Fax: (317) 736-9249
E-mail—
mwyrick@belmont.kminc.com

Contract Manufacturing
Michael R. Porter
Eli Lilly & Company
DC 3814
Eli Lilly Corporate Center
Indianapolis, IN 46285
Tel: (317) 277-2595
Fax: (317) 277-9693
E-mail—
porter_michael_r@lilly.com

Drug/Device Delivery Systems
Michael A. Gross, Ph.D.
Aventis Behring
1020 First Avenue
P.O. Box 61501
King of Prussia, PA 19406-0901
Tel: (610) 878-4490
Fax: (610) 878-4461
E-mail—
michael.gross@aventis.com

Filtration
James D. Wilson
115 Newell Village Circle
Seymour, TN 37865
Tel: (865) 609-1694
Fax: (865) 609-1690
E-mail—
wilsojdel@chartertn.net

GMP Purchasing
Nancy M. Kochevar
Amgen, Inc.
MS 9-1-E
One Amgen Center
Thousand Oaks, CA 91320-1799
Tel: (805) 447-4813
Fax: (805) 447-1904
E-mail—
nancyk@amgen.com

Inspection Trends/ Regulatory Affairs
Robert L. Dana
Elkhorn Associates Inc.
4828 Patrick Place
Liverpool, NY 13088
Tel: (315) 457-3242
Fax: (315) 451-7363
E-mail—
rld1242@aol.com

Isolation Technology
Dimitri P. Wirchansky
Jacobs Engineering Group, Inc.
Three Tower Bridge
Two Ash Street, Ste. 3000
Conshohocken, PA 19428
Tel: (610) 567-4452
Fax: (610) 238-1100
E-mail—
dimitri.wirchansky@jacobs.com

Lyophilization
Edward H. Trappler
Lyophilization Techology
30 Indian Drive
Ivyland, PA 18974
Tel: (215) 396-8373
Fax: (215) 396-8375
E-mail—
etrappler@lyo-t.com

Microbiology/Environmental Monitoring
Jeanne E. Moldenhauer, Ph.D.
16100 W. Port Clinton Rd.
Lincolnshire, IL 60069
Tel: (847) 478-1745
E-mail—
jeannemoldenhauer@yahoo.com

Ophthalmics
Richard M. Johnson
Abbott Laboratories Inc.
Dept. 03-QA Bldg. AP6C
100 Abbott Park Road
Abbott Park, IL 60064-6091
Tel: (847) 938-1750
Fax: (847) 938-3016
E-mail—
richard.m.johnson@abbott.com

Packaging Science
Edward J. Smith, Ph.D.
Packaging Science Resources
237 Chapel Lane
King of Prussia, PA 19406
Tel: (610) 265-9029
Fax: (610) 265-2307
E-mail—
esmithpkg@aol.com

Production and Engineering
David W. Maynard
Maynard & Associates, LLC
2162 US Highway 206
Belle Mead, NJ 08502
Tel: (908) 431-1919
Fax: (908) 874-8161
E-mail—
davmaynard@aol.com

Quality Assurance/ Quality Control
Don E. Elinski
Lachman Consulting Services
120 Peregrine Circle
Broomfield, CO 80020
Tel: (516) 222-6222
Fax: (516) 683-1887
E-mail—
elinski@aol.com

Solid Dosage Forms
Pedro J. Jimenez, Ph.D.
Eli Lilly & Company
Eli Lilly Corporate Center
Indianapolis, IN 46285
Tel: (317) 277-3618
Fax: (317) 276-4669
E-mail—
jimenez_pedro_j@lilly.com

Stability
Rafik H. Bishara, Ph.D
Eli Lilly & Company
DC 2623 Eli Lilly Corporate Center
Indianapolis, IN 46285
Tel: (317) 276-4116
Fax: (317) 276-1838
E-mail—
rhb@lilly.com

Sterilization/Aseptic Processing
James P. Agalloco
Agalloco & Associates
2162 US Highway 206
Belle Mead, NJ 08502
Tel: (908) 874-7558
Fax: (908) 874-8161
E-mail—
jagalloco@aol.com

Training
Thomas W. Wilkin, Ed.D.
Schering-Plough
Building K-1-2 F41
2000 Galloping Hill Road
Kenilworth, NJ 07033
Tel: (908) 298-5213
Fax: (908) 298-2720
E-mail—
thomas.wilkin@spcorp.com

Vaccines
Frank S. Kohn, Ph.D.
Wyeth-Lederle Vaccines & Pediatrics
4300 Oak Park
Sanford, NC 27330
Tel: (919) 775-7100 ext. 4304
Fax: (919) 774-1142
E-mail—
kohnf@labs.wyeth.com

Validation
Bohdan M. Ferenc
1 Brandywine Ct.
Succasunna, NJ 07876
Tel: (973) 927-9152
E-mail—
biferenc@aol.com

Visual Inspection of Parenterals
John G. Shabushnig, Ph.D.
Pharmacia Corporation
7171 Portage Road
M/S 2130-41-108
Kalamazoo, MI 49001-0199
Tel: (616) 833-8906
Fax: (616) 833-5195
E-mail—
john.g.shabushnig@pharmacia.com

Cleaning Validation

The following remarks are taken from an exchange in the Pharmaceutical Sci-Tech Discussion Group, a PDA-sponsored Online Forum held on the Internet at www.pda.org. PDA Online Forums are free of charge and open to the public. They serve as a platform for exchanging practical, and sometimes theoretical, ideas within the context of some of the most challenging issues confronting the pharmaceutical industry. If you are not currently a member of a discussion group, we encourage you to visit our Web site and join.

This month's posting…

Question 1

Dear Forum,

Here's a question for forum members: In the FDA's guide to inspection of cleaning validation programs, this statement clearly says that "visibly clean" for dedicated equipment does not need to be validated. "When the cleaning process is used only between batches of the same product (or different lots of the same intermediate in a bulk process) the firm need only meet a criteria of 'visibly clean' for the equipment. Such between batch cleaning processes do not require validation."

For easy to clean and easy to see areas, visual examination would be appropriate, if one was sure that they could see any residues, e.g., trace white residue on polypropylene. But for interiors of long, narrow, polypropylene tubing, or for fittings, joints, crevices - would you need to validate for the absence of product, degradants, or cleaning agent residues with an analytical method via swab and/or rinse?

The PDA *Technical Report No. 29* contradicts the FDA's statement. It has a statement that visual inspection for equipment wear, excessive product residuals and foreign material should be validated [beyond visual inspection]...

I am interested in responses from both marketed product companies and companies in the clinical manufacturing stage.

Response 1.1

There are several questions in your posting. One relates to the necessity of cleaning validation for dedicated equipment. Yes, it is true that the FDA guidance document says that validation is not required, and visibly clean may be enough. I have no inside information, but I suspect that that was placed there because there is no need to worry about cross-contamination of actives. However, other concerns that may arise on dedicated equipment include contamination with the cleaning agent, with degradation products, or with microorganisms (or as the PDA document suggests, with equipment wear residues). You should also consult the FDA publication on their new pilot inspection program where they say something like "lack of documentation of cleaning on dedicated equipment can lead to regulatory action" (the contrasting statement for multi-use equipment is "lack of validation of cleaning of multi-use equipment . . ."). While validation may not be required, some kind of documentation is required.

Your other question regards trying to use the visually clean standard if certain surfaces are not readily accessible for viewing. If a critical site is not readily accessible for viewing, then it makes sense that you have to do other kinds of sampling. Generally that will be rinse sampling (if you can't see it, you probably also can't swab it).

Response 1.2

I'm glad you have asked this question. I think it's a topic worth some careful and thoughtful discussion. And I'm curious what others think.

There are a number of instances where I think a simple "visually clean" criteria makes good sense. Various pieces of equipment, such as tablet polishing pans, sorting and branding equipment and certain packaging lines, only make contact with tablet products that have been coated. Because such a significant barrier exists on these products, preventing active ingredient residues from being deposited on the equipment, these products pose little risk of product cross contamination. Even special circumstances, such as chipped or broken tablets, also pose a minimal risk of product cross contamination. Because coated tablets pose such little risk of depositing active ingredient residues, equipment cleaned after processing these tablets could be justified for evaluation by a visual inspection only.

Justification for this approach could be based on an assessment of the risk of significant product carryover on the manufacturing equipment. This assessment could be based on the mass amount of residue required to exceed the maximum allowable carryover (MAC) for that piece of equipment. It has been stated in the literature that ~4 $\mu g/cm^2$ has been found to be the limit of visibility for residue levels.[1] For equipment where these calculations show that the MAC levels for the active ingredient in the coated tablet exceed this visible limit by more than, say, a factor of 10X or 100X, "visually clean" could be designated as the acceptance criteria for cleaning validation of that equipment. At least one major pharmaceutical company has used such an approach

in lieu of actual cleaning validation studies.[2] Since coated tablets primarily leave behind residues of the coating material rather than the active ingredients, even this evaluation would be a "worst case" approach. I even think this approach could also be used for uncoated tablets on packaging lines.

Greater efforts should be spent on equipment that poses greater risks. Thoughts on this?

Response 1.3

I agree that it makes sense to evaluate this in cases where a visually clean criterion is the most stringent. That is one of the nice things about the European PIC/S cleaning validation document - it stresses the establishment of the most stringent of visually clean, a traditional dose-based limit, and the so called "default" limit of 10 ppm (in the next product). In comparing the visual limit to a literature standard, such as 4 $\mu g/cm^2$, I'm not sure, however, why you would want an extra safety factor such as 10X or 100X. It certainly is even more defensible in that case. (But don't we establish enough safety factors in cleaning validation work?) I still think it's better to determine the visual residue limit for the specific target residue, and as long as the calculated dose-based limit is above the experimentally determined visual limit, you have a justification for using that as the worst case (provided that the worst-case or critical locations are readily accessible for visual examination).

Response 1.4

I think it's refreshing that some people are looking at alternative approaches to cleaning validation such as "visually clean" and TOC (my favorite) and doing the development, justification and validation necessary to start employing these techniques.

The 10X or 100X is not a safety factor. As you mention, it defines the condition where visually clean is the tighter specification. Let's say I can see a compound down to 1 $\mu g/cm^2$. If my MAC calculation comes out to a limit of 100 $\mu g/cm^2$, then visually clean is a tighter limit and using it alone can possibly be justified.

This is not to say a simple calculation is enough. It's your first indication that "visually clean" is a viable option. Reading through reference 2 (above) you will see what kind of work needs to be done to justify a "visually clean" approach. There is definitely a certain amount of effort you will have to put into justifying this approach.

For what it's worth, I have spoken personally with one of the authors of reference 2 and confirmed that this approach made it through an FDA inspection. So under the right circumstances, and with a careful, thoughtful justification, visually clean will work. For instance, I think the coated tablet scenario is a perfect candidate for this approach.

I don't expect many people to start thinking out of the standard cleaning validation box—it's been hard enough to get people to accept TOC, or even to break free from the 1/1000th and/or 10 ppm limit, neither of which is scientifically justified. So I don't think many people will take a good look at "visually clean."

Response 1.5

For BPC production I challenge even the visually clean requirement, not just for fun, but because of quality concerns. When using centrifuges for separation, you usually use filter cloth for the liquid solid separation. The filter cloth usually can't be cleaned visually clean in place, so to get them visually clean means removing them. But that can require opening an otherwise permanently closed system to the environment, without any real benefit.

I worked for a company on one product where even after six months of continuous production and more than 400 batches none of the known degradants was detectable in or around the filter cloth. And it had never been removed or specially cleaned. So there was clearly no need for such a cleaning step. But had it been performed it would have posed a contamination risk 400 times, and it

continues on page 24

continued from page 23

would have increased the production times by 100% not to mention the cost.

Do not always look for detailed regulations. No set of rules will fit all kinds of operations. I'm not speaking as a former QA person but as a consumer. I want to be able to afford the medication I or my relatives might need, and I do not want to pay for no-benefit-added nonsense.

Test for buildup of degradants—and do not waste time and money on cleaning validation, which will become fully meaningless by fitting a tube angled or "wrinkled" on its fitting. Validation is necessary for assurance but keep it down to the necessary amount. As I have stated on several occasions, no validation plan designed by the best team of experienced scientists and other experts in an operation can match the creativity of one single lazy operator (or even worse, one creative one looking for ways of improvement).

Question 2

Dear Forum,

Does anyone have any thoughts on what cleaning validation should be applied to freeze driers in a Class 100 area—another low risk piece of equipment?

Response 2.1

Over the years I have noticed that cleaning validation has suffered from a sort of "mission creep." Cleaning validation is now being done on things it probably shouldn't be done on. So I think it's important that every facility develop a policy on cleaning validation that clearly defines the boundaries of what requires cleaning validation and what doesn't. Otherwise you may wind up even taking swabs of the chairs in your production areas. (Don't laugh. I heard an inspector asked about this once.) For example, even laboratory glassware washers are starting to be dragged under the cleaning validation umbrella. These do not, and should not, fall under cleaning validation. You may want to do studies to see if any residues left on your glassware from the glass washer may cause interferences with your methods, but this is really a method robustness issue and not a cleaning validation issue.

Typically cleaning validation draws the line between product contact surfaces and non-product contact surfaces. Rooms and other enclosures would not be included, only the equipment within them that makes product contact. So the walls of a production room are out.

But what about enclosures, such as a glove box for weighing actives, or a freeze dryer as you mention? In the case of a glove box, the weighing utensils and containers do make product (API) contact, need to be cleaned of these residues before further use, and this cleaning should be validated. But the walls of the glove box never make contact with the API or subsequent APIs, so why would they fall under the cleaning validation umbrella? I believe a "visually clean" determination here is sufficient.

I can still see the question arising about cross contamination that, somehow, some surface residue from the API could "fall" into the container you are weighing. I think it would be wise perhaps to put settling plates out before and after cleaning for a period of time equivalent to the weighing process and see how much "residue" falls into them. The potential for cross contamination, or lack thereof, could be demonstrated that way. In fact, if you take the 1–4 $\mu g/cm^2$ visual limit and multiply it by the total surface area of the glovebox to find the total possible mass of residue in the glovebox, and assumed that all of it "jumped" into the weighing container, I think you will find that it would still pass your typical acceptance criteria for MAC by a very wide margin. So I don't see how swabbing the surfaces of these pieces of equipment tells you anything.

So, I think you could easily make a case for visually clean for your situation.

Question 3

Dear Forum,

I'd like to know the group's opinion on cleaning validation of buffer tanks. I'm referring to stainless steel vessels used strictly for the preparation of solutions. The vessels themselves never come in direct contact with the product. Is cleaning validation necessary if the only possible carryover is salt residue that doesn't get rinsed in the cleaning cycle? Only hot water, no detergents are used for cleaning. Is visual inspection sufficient?

Response 3.1

In order to determine whether cleaning validation is necessary I think you have to consider a couple of issues:

- At what step in the process is the buffer to be used? The later the step the more concern.
- Would any salt residue left over be a potential treat of introducing "foreign"matter to the product?
- Should for any reason salt residues be considered special critical for your product?
- You only clean with water, so I assume your buffers are based on water. You may need to consider microbiological load as well.

Response 3.2

The vessels never come in contact with the product, but I assume the buffers are involved in the production process at some point. If the vessels are multipurpose and used for the preparation of more than a single buffer, then I believe that a cleaning validation using swabs to assess cleanliness is called for. If the tanks are dedicated, then I think that assessing by visual means may be sufficient. However, especially if this is an organic buffer (e.g., citrate), degradation products may form under certain conditions and build and ultimately could carry over into the production process. If an inorganic buffer such as phosphate or sulfate, then depending on concentration, visual assessment would be sufficient.

Question 4

Dear Forum,

After collecting swab samples during cleaning validation, is re-cleaning of the equipment necessary? I would think so because of the additional manual procedures in the equipment, the potential of the swab to leave fibers, and the fact that some swab procedures may require a solvent other than Purified Water (or WFI) to adequately recover residues. But I can't find the requirement in any reference materials. Does anyone have a cited reference or opinion on this topic?

Response 4.1

Generally, you don't have to re-clean the equipment following swab sampling since the swab should not shed (I recommend Texwipe, low carbon, polyester) and the solvent should be WFI or some other ultrapure volatile solvent like IPA or ethanol, which will evaporate without leaving a trace. You should have sufficient hold-time study data to demonstrate that no microbial growth will occur during this short period of evaporation.

Response 4.2

I have not found a specific reference, but, for the specific reason you stated, we ask for a repeat of the rinse cycle if WFI is used as solvent. In case of any other solvent, a complete re-wash is performed. The main concern if another solvent is used, however, is demonstrating adequate removal of the solvent post swabbing.

My opinion is that cleaning validation should be followed by a re-cleaning process that will effectively remove any potential critical contamination of the equipment the same way you would consider cleaning of the equipment after, for instance, repair or maintenance work. You should consider documenting this as part of the cleaning validation documentation.

Response 4.3

Yes, it is quite common to re-clean either the sampled surface or the entire equipment following swab sampling. Swab sampling is an "intrusive" process and, as you state, there is a possibility of contaminating the equipment from the swab, the solvent/solution on the swab, or just by the presence of the person swabbing. I don't believe this is in any regulatory document, but it makes good science (and good sense) to evaluate the need for and extent of re-cleaning following such a sampling procedure.

---

[1] G.L. Fourman and M.V. Mullen, "Determining Cleaning Validation Acceptance Limits for Pharmaceutical Manufacturing Operations," Pharm.Technol., 17 (4), 54-60 (1993).

[2] A. P. Alvey and T.R. Carrie, "Not Seeing is Believing - A Non-Traditional Approach for Cleaning Validation," Journal of Validation Technology, Vol. 4, No. 3, May 1998.

—compiled by Russell Madsen

Company, Colleague & Product Announcements

PDA Board Member **Stephanie R. Gray**, Vice President for Global Quality Strategy and Performance at GlaxoSmithKline, recently joined the Advisory Council of the Women's Research and Education Institute (WREI). Gray, who began working for GlaxoSmithKline in May 2000, formerly served as Director of the Office of Compliance at FDA CDER. In 1995, while with FDA, she helped negotiate the Mutual Recognition Agreement with the European Union, which regulated medical information and device trade. Gray also served on the expert working group of the International Conference on Harmonization, which dealt with manufacturing practices for active pharmaceutical ingredients. According to Gray, WREI's focus on women's health and healthcare give her a particular interest in the organization. "Public health and women's health have been lifelong professional, as well as personal, interests of mine," said Gray. WREI is an independent, nonprofit and nonpartisan research center that provides timely data and issue analysis to policymakers, the media and the public. (WREI's Advisory Council was established in 1991 as a forum for members of the public and private sectors to engage in dialogue with the leaders who move women's equity to the front of the federal agenda. The council offers a role for leaders in corporations, trade unions and academia to focus greater national attention on women's roles and responsibilities.) For more information contact Susan Scanlan, President, WREI, at (202) 628-0444 or visit www.wrei.org.

KMI/PAREXEL, a division of PAREXEL International Corporation, announced the appointment of **James E. Kozick** as Director of Medical Device Compliance Services. In this capacity, Kozick will oversee all areas of medical device manufacturing compliance and offer solutions to help clients meet the regulatory demands of global operations. Kozick's responsibilities include providing consulting, auditing and training services to KMI clients worldwide and directing KMI's Medical Device Compliance Services group. KMI/PAREXEL offers a full range of compliance and validation services to meet the regulatory demand of global operations. These services include strategic compliance and audits, in-house training programs and integrated validation and technical consulting. For more information, contact Kate McCorriston at (610) 565-9400, kate.mccorriston@parexel.com, or visit www.parexel.com.

Biotest Diagnostics Corporation announced that they now offer the HYCON® Contact slide for determining microbial contamination levels on surfaces. The new slides are *easier to open* (the package was extended about 1 cm to allow for a better grasp and a quick opening, even with gloves on); *available in Gamma-Sterilized and double packed TC* (for aseptic transfer into cleanrooms), the integrated hole allows for hanging during gaseous decontamination; *is clearly labeled* (the lot number is now imprinted into the plastic tab); and has *modified packaging* (now available in packages of 20 or 100). HYCON® Contact Slides still feature: flexible culture media carrier to ensure contact with curved or irregular surfaces; 25cm² of surface contact that meets International Guidelines USP and EP; individual packaging (that prevents potential contamination, reduces cost and waste since the exact number of slides can be used as needed and can be securely sealed after use to avoid lost lids and ruined samples); and standard and selective media is available. For additional information, please contact Biotest Diagnostics Corporation at (800) 522-0090 or visit www.BiotestUSA.com. ■

—compiled by Joseph G. Bury

Send us your news . . .

. . . address news releases to Joe Bury via e-mail at bury@pda.org or mail hard copy to PDA headquarters in Bethesda.

A filter validation promise to customers all around the world:

30

Dreissig Tage
Trente jours
Dertig dagen
Trenta giorni
三十天
Trienta dias
Thirty days

No Excuses. Yes, We Can!

From vaccines and cell cultures to blood products– only Sartorius lets you validate with CONFIDENCE®

In matters of validation, Sartorius makes an extra effort to ensure quality in your process. And we do it all in 30 days or less. It's all part of our FACTS® program of Fully Advanced Customer Total Support. We take the time to do it right. We test your filters with your product under your process conditions. We run "worst-case" bacteria challenge tests and worst-case extraction. Our modern analytical validation labs include FT-IR, GC/MS, RPHPLC, UV-VIS, GPC, HPCE, SFC, NVR and TOC. No other filter manufacturer performs these validation procedures with more accuracy than Sartorius.

So when it comes down to deciding who the most viable filtration partner is to properly challenge your process, in 30 days or less, call us. Yes, we can!

Focus On *Validation* Support

sartorius

Sartorius AG, Germany: 49 551 308 0 • Sartorius S.A., France: +33 1 69 19 21 00 • Sartorius Ltd.,UK: +44 1 372 737100
Sartorius S.p.A., Italy: +39 055 505671 • Sartorius Corp., USA: +1 800 368 7178 • Sartorius K.K., Japan: +81 3 3329 5533

The Extractables Puzzle: Putting the Pieces Together

Resolving Analytical, Material, Regulatory and Toxicology Issues to Find Solutions

November 12–13, 2001 • Doubletree Hotel • Rockville, Maryland

To register for the conference, visit PDA's Web site at www.pda.org.

PDA's Conference on Extractables Science is nearing a sold-out status! If you are an analytical chemist, formulator, material scientist, material and component supplier, packaging scientist, regulatory affairs professional, toxicologist, or either a CMC or DMF writer, you need to make your plans to attend today.

Representatives from FDA CBER, CDER and CDRH will participate in panel discussions covering the four disciplines that are necessary for the assessment of extractables: analytical chemistry, material science, toxicology and regulatory affairs. Confirmed attendees from FDA include:

Ronald P. Brown, *FDA, CDRH*

Martin David Green, Ph.D., *FDA, CBER*

Robin Huff, Ph.D., *FDA, CDER*

Raju Kammula, D.V.M., Ph.D., *FDA, CDRH*

Thomas Papoian, Ph.D., *FDA, CDER*

Breakfast roundtable discussions will feature case studies that will be introduced at the beginning of the meeting and developed during breakfast breakout sessions on the morning of the second day of the Conference. A survey of current practices will be conducted from among Forum registrants and other PDA members, with a presentation of survey results at the Forum. Each registrant will receive a "regulatory sourcebook" which includes a comprehensive reference list of key documents and a compendium of definitions of important terms.

Gordon Hansen, of Boehringer Ingelheim Pharm. Inc., and Chair, IPAC-RS, will present the luncheon address, *An Integrated Strategy for the Determination and Qualification of Leachables and Extractables in Orally Inhaled and Nasal Drug Products.*

The Survey

Conference participants and visitors to the PDA Web site (www.pda.org) are invited to complete an anonymous survey of their current extractables practices. The survey questions cover the four dimensions of the Conference (regulatory, toxicology, materials, and analysis). Results will be tabulated and presented at lunch on the second day of the Conference.

■

—Leslie Zeck

PDA BSE/TSE Issues Forum

Extend your PDA Annual Meeting travel schedule and take part in this groundbreaking event.

December 5-6, 2001 • Marriott Wardman Park Hotel • Washington, DC

PDA will host a cutting-edge conference on BSE/TSE issues. The conference will bring together the world's leading experts on BSE/TSE, including heads of industry task forces assigned with monitoring this important issue for their companies.

The conference will address the following:

- The State-of-the-Science;
- Clearance Studies and Inactivation of the Agents;
- USDA Bovine Spongiform Response Plan Summary;
- HHS Action Plan;
- FDA Action Plan: An Overview;
- Disinfecting and Sterilizing Devices;
- Laying the Regulatory Groundwork;
- EU Regulatory and Industry Perspectives;
- US Regulatory and Industry Perspective; and
- Industry and Regulatory Views of the Future.
- Special sessions on
  - Gelatin;
  - Milk and Milk Derivatives and Bi-Products; and
  - Tallow Derivatives.

The following speakers have been invited to participate in this cutting-edge forum:

David Asher, FDA, CBER

Paul Brown, PhD, Senior Research Scientist, National Institute of Neurological Disorders and Stroke, National Institutes of Health

Thierry Chignon, Senior Consultant, Quintiles, Europe
Dr. Linda Detweiler, APHIS, USDA
Kiki Hellman, FDA, CDRH
Murray Lumpkin, Ph.D., Office of the Commissioner, FDA
Brian Matthews, Ph.D., Alcon Laboratories, UK
Rheinhard Schreiber, Former Head, Gelatin Manufacturers of Europe
David Taylor, Ph.D. Consultant Scientist, Edinboro, Scotland

An industry panel discussion will facilitate the exchange of important information on how multinational companies are dealing with global regulations in this environment of change.

Be at the forefront on this issue. Make your plans now to attend this state-of-the-science conference in Washington, DC. To register, visit www.pda.org and click on "BSE/TSE Issues Forum." ■

—Leslie Zeck

Doing Business as a Multi-National in 2002 ...

Basel 2002
PDA International Congress, Courses and Exhibition:
Adding Value to the Pharmaceutical Industry: Leveraging the Future

Convention Center Basel, Switzerland
February 11–13, 2002 **Congress and Exhibition**
February 14–15, 2002 **Courses**

... Just one of the topics to be

discussed at PDA's prestigious 2002 International Congress, Courses and Exhibition in Basel, Switzerland. Professionals and scientists from across the globe, working in the parenteral, sterile products, biotechnology and related fields, will cover the latest issues in regulatory, compliance, harmonization, validation, biotechnology and more.

Adding Value to the Pharmaceutical Industry: Leveraging the Future will feature a multi-track format of topics important to the industry, including:

- Aseptic Processing;
- Biotechnology and Biologics Issues;
- Computer Issues;
- Current Management Issues for Manufacturing;
- Harmonization and Compendial Issues;
- Non-Sterile Products;
- Pharmacopaeial Issues;
- Regulatory Issues; and
- Sterilization.

One of the highlights of this biennial conference will be a Banquet at Safran Zunft Hall in Basel.

Exhibits

The Basel Conference will feature the latest exhibits in pharmaceutical science and technology. For information on exhibiting and/or sponsoring an event, contact PDA via e-mail at kiani@pda.org.

Make your travel plans now to be in Basel for PDA's International Congress!

For more information, visit www.pda.org and click on Basel 2002. ■

—Leslie Zeck

International Calendar

2001

OCTOBER

October 24–26, 2001
A3P 14th International Congress
Espace Bellevue
Biarritz, France
INFORMATION AND REGISTRATION:
Frédéric Estassy
A3P Services – Le Gros Moulin – F-45200
Amilly – France
E-mail: info@a3pservices.com
Tel: +33 (0)2 38 071 – Fax: +33 (0)2 38 071 072
Web site: www.a3pservices.com

NOVEMBER

November 30, 2001
Visual Inspection of Injectables
Hilton Hotel, Berlin, Germany

2002

FEBRUARY

February 11–13, 2002
Basel 2002: PDA International Congress, Courses and Exhibition
Adding Value to the Pharmaceutical Industry—Leveraging the Future
Basel Convention Center
Basel, Switzerland
For Exhibit Information Contact:
Nahid Kiani, PDA
(301) 986-0293 ext. 128
kiani@pda.org

Contact PDA or go to www.pda.org for additional details on PDA events

2002 PDA Spring Conference, Courses and Exhibition

Environmental Monitoring and Aseptic Processing: Reaching a Common Understanding of the Regulatory and Technical Requirements

March 11–15, 2001 • Rosen Hotel, Orlando, Florida

Make your plans now to join PDA in Orlando, Florida next March for a scientific meeting that will attract 300+ international scientists for high-level education and networking. Your participation will serve to significantly expand the current body of knowledge in pharmaceutical science and technology.

The Conference will focus on aseptic processing issues. Presentations will be made on the following issues:

- Airflow velocity measurements;
- Surface monitoring of sterile product contact surfaces during aseptic filling operations;
- Alert and action level excursions during microbial monitoring of aseptic filling operations;
- Identification requirements for environmental and sterility test isolates;
- Media fill acceptance criteria and duration;
- Gowning qualification and frequency of requalification;
- Resolving dis;
- Agreements about 483 items and filing requirements; and
- HEPA filters.

Tabletop exhibits featuring the latest products and services in our industry will be a conference highlight. Interactive breakfast roundtables, discussion groups and a reception will provide attendees with additional networking opportunities. To reserve your exhibit space, contact Nahid Kiani at (301) 986-0293 ext. 128; kiani@pda.org.

The agenda for the conference is currently in development. Watch your mail for the official brochure or visit PDA's Web site at www.pda.org. ■

—Leslie Zeck

PDA/USP Joint Conference on Sterile Product Manufacturing

May 19–22, 2002 • Sanibel Harbour Resort, Fort Myers, FL

New regulations have been developed and changes in existing regulations have occurred since the last open conference on the topic of sterility assurance. PDA, in collaboration with the USP, will host an "open" Conference on Sterile Product Manufacturing to address the issues companies are confronting in this shifting regulatory climate. Participants in the Conference will:

- Explore the continuum of the microbial control and test in the manufacture of sterile pharmaceutical products;
- Determine the inconsistencies in compendial, regulatory and industrial practices in microbial control and identify how they an be made more consistent; and
- Establish consensus positions whenever possible.

In addition, the Conference will address the following topics:

1. Advanced aseptic processing;
2. Moist heat sterilization;
3. Environmental monitoring;
4. Criteria for processing simulation testing;
5. Sterilization by membrane filtration; and
6. Microbiological analysis.

Participation is limited to 300 participants so as to ensure scientifically useful feedback from participants. Please watch for the brochure on this important conference by visiting either www.pda.org or www.usp.org/conferences. ■

—Leslie Zeck

Upcoming PDA-TRI Education Courses

These courses will be held at PDA-TRI in Baltimore, Maryland unless otherwise noted.

For course content information, call PDA-TRI directly at (410) 455-5800.

To register, call PDA headquarters in Bethesda, Maryland at (301) 986-0293. PDA-TRI Location/Hotel Information follows.

Cleaning Validation (PDA #400), October 22–24, 2001—*taught by Jon Voss, cGMP Systems, and Bob O'Brien, BIOPURE*; $1,900 members/$2,050 nonmembers.

Validating a Steam Sterilizer (PDA #322), *one date remaining:* October 25–26, 2001—$1,500 members/$1,650 nonmembers.

Basic Microbiology: Theory & Practice (PDA #109), November 12–14, 2001—*taught by Leah Autrey, Abbott Laboratories, Hospital Products Division*; $1,850 members/$2,000 nonmembers.

Computer Products Supplier Auditing Process Model: Auditor Training (PDA #474), October 11–12, 2001; November 15–16, 2001 in Baltimore, Maryland; $950 PDA members/$1,100 nonmembers. *For more information, vist our Web site,* www.pda.org.

Introduction to Developing Effective Audit Strategies for CGMP Cleanrooms (PDA #200), November 15–16, 2001—*taught by Strother Dixon, GMP Trainer for PDA-TRI*; $1,150 members/$1,300 nonmembers.

Identification of Microorganisms Using Comparative DNA Sequencing (PDA #232), November 28–29, 2001—*taught by Michael G. Waddington, Accugenix*; $1,500 PDA members/$1,650 nonmembers.

Contamination Control Basics (PDA #213), *One date remaining*: November 30, 2001—*taught by Sandra A. Lowery, President of Quality Systems Consulting*; $750 PDA members/$900 nonmembers. ■

PDA-TRI Location/Lodging Information

For additional hotel information, please visit www.baltconvstr.com, the Baltimore Convention and Visitors Bureau's Web site.

Transportation to PDA-TRI: All listed hotels are no more than a 15–20 minute taxi ride to the Training and Research Institute. All hotels can assist you with taxi arrangements. Registrants may prefer to rent a car for easier access to and from the Institute.

Unless otherwise noted, PDA Institute courses are held at: PDA Training and Research Institute, 1450 South Rolling Road, Baltimore, MD 21227, Tel: (410) 455-5800; Fax: (410) 455-5802. PDA has not secured any specific room blocks for participants attending courses at the Training and Research Institute. There are several hotels in the Inner Harbor (downtown Baltimore) and BWI airport areas. These include, but are not limited to:

- **Baltimore Hilton & Towers Inner Harbor**—Tel: (410) 539-8400; Fax: (410) 625-1060
- **Baltimore Marriott Inner Harbor**—Tel: (410) 962-0202; Fax: (410) 625-7892
- **Embassy Suites-BWI**—Tel: (410) 850-0747; Fax: (410) 859-0816
- **Holiday Inn-BWI**—Tel: (410) 859-8400; Fax: (410) 684-6778
- **Holiday Inn Inner Harbor** —Tel: (410) 685-3500; Fax: (410) 727-6169
- **Homewood Suites BWI****—Tel: (410) 684-6100; Fax: (410) 684-6810
- **Hyatt Regency Baltimore Inner Harbor**—Tel: (410) 528-1234; Fax: (410) 685-3362
- **Sheraton Inner Harbor Hotel**—Tel: (410) 962-8300; Fax: (410) 962-8211.
- **Marriott Residence Inn-BWI****—Tel: (410) 691-0255; Fax: (410) 691-0254. ■

***no on-site restaurant*

Aseptic Processing 2002 Dates

A Comprehensive Program in Manufacturing Sterile Products

To be held in Baltimore, Maryland

January 14–18 & February 11–15, 2002

April 8–12 & May 6–10, 2002

September 9–13 & October 7–11, 2002

October 28–November 1 & November 18–22, 2002

For Course Content Information, contact PDA-TRI directly at (410) 455-5800.

For Registration Information, contact PDA at (301) 986-0293 or visit www.pda.org.

PDA-TRI Lake Tahoe Course Series

January 16–18, 2002 • Hyatt Regency Lake Tahoe Resort & Casino • Incline Village, NV

PDA-TRI is pleased to announce **the Lake Tahoe Course Series**. Facilitated by expert faculty, these courses will address the current needs of the pharmaceutical professional.

Scheduled courses include:

- GMP Training Manager Workshop taught by David Gallup and Jeffrey Masten;
- Calibration in the GMP Setting & Cost Effective Validation taught by Amnon Eylath;
- A Practical Guide to Change Control taught by Steve Wiseman;
- Strategic and Practical Approaches to Part 11 Compliance taught by Steve Wiseman and Blane Stroh;
- GMP Fundamentals & Training for Performance taught by James Vesper;
- Basic Concepts in Cleaning and Cleaning Validation taught by Destin A. LeBlanc;
- Validation by Design & A Comprehensive Guide to OOS Regulations taught by Lynn D. Torbeck;
- Designing Regulatory Training that Works taught by Rick Rogers; and
- Basic Statistical Tools for Quality Assurance and Manufacturing Personnel taught by Ron Stellon.

Course participants must contact the Hyatt Regency Lake Tahoe Resort & Casino directly at (775) 832-1234, mention PDA and **reserve a room no later than December 26, 2001**, in order to receive the group rate of $155.00—single occupancy.

For course ***registration information***, direct your inquiries to PDA by phone (301) 986-0293, e-mail info@pda.org, or visit PDA's Web site at www.pda.org. For course ***content information*** direct your inquiries to PDA-TRI by phone (410) 455-5800 or email info-tri@pda.org. ■

—Strother Dixon

This event is being held at:

Hyatt Regency Lake Tahoe Resort & Casino
Incline Village, NV

Tel:
(775) 832-1234

Visit www.pda.org to download the Registration brochure and form, or use the form on page 34!

PDA-TRI Thanks the Following...

Sponsors

Abbott Laboratories
Allegiance Healthcare Corporation
Alma, Inc.
Becton Dickinson Microbiology Systems
Berkshire Corporation
bioMerieux Vitek, Inc.
Biotest Diagnostics Corporation
Chemunex, Inc.
Cole-Parmer
Comar, Inc.
Contec, Inc.
Corning, Inc.
Dow Corning, Inc.
DuPont Pharmaceutical Co.
Dycem Ltd.
Eagle Picher
Eisai U.S.A., Inc.
Electrol Specialties Company
Endosafe
Environmental Monitoring Technologies
General Econopak, Inc.
Genesis Machinery Products, Inc.
GlaxoSmithKline
Helvoet Pharma
IDEXX Laboratories, Inc.
Interpharm
Kimberly Clark, Corp.
KMI/Systems
La Calhene, Inc.
Larson Mardon Wheaton
Micro Diagnostics
Micronova Manufacturing, Inc.
MIDI Laboratories, Inc.
Millipore Corporation
M.W. Technologies, Inc.
Nalge Co.
Pacific Scientific Instruments
Pall Corporation
Particle Measuring Systems, Inc.
PML Microbiologicals
Raven Biologicals, Inc.
Research Equipment Services
Rhone-Poulenc Rorer
Sartorius AG
Siemens Building Technologies, Inc.
SGM Biotech, Inc.
STERIS Corporation
Veltek Associates, Inc.
VWR Scientific Products
West Pharmaceutical Services
Wilco AG
Wyeth-Ayerst Laboratories

Contributors

Amgen, Inc.
Automated Liquid Packaging, Inc.
Berkshire Corporation
Chesapeake Biological Laboratories, Inc.
Cotter Corp.
Eli Lilly and Co.
Fedegari
Kaye Instruments, Inc.
Kimberly Clark, Corp.
National Instrument Co., Inc.
Neslo, Inc.
Perfex Corporation
Pharmacia
Sievers Instruments, Inc.
Technovation

PDA-TRI Education Courses Registration Form

1. Please type or print your name, address and affiliation.

❑ Mr. ❑ Ms. ❑ Dr. First Name Middle Initial Last Name

Membership Number

Job Title Company

Business Address

City State/Province ZIP/Postal Code

Tel Fax E-mail

❑ Substituting for (Check only if you are substituting for a previously enrolled colleague; nonmember substituting for member must pay the additional fee.)

2. Indicate the course(s) you'd like to attend (please print). Individuals registering at the nonmember rate receive one full year of PDA membership. Nonmembers registering for multiple events need only pay the nonmember fee once. (If you do **NOT** want to become a PDA member, please check here ❑).

COURSE TITLE	COURSE #	DATE	LOCATION	PRICE (member or nonmember)
			TOTAL :	$

3. Please check the appropriate box:

❑ **Check** enclosed ❑ Wire Transfer ***Charge:*** ❑ MC/EuroCard ❑ VISA ❑ AMEX

Account Number_____ Exp. Date _____

Name _____
(exactly as on card)

Signature_____ Date _____

Payments must be made to PDA in US dollars by check drawn on a US bank, by electronic money transfer **(SunTrust Bank ABA #051000020, PDA Account #209364254, Swift#UVBIUS33), net of all bank charges**; by American Express, MasterCard, or VISA.

4. Return completed form with payment made to:

PDA
P.O. Box 79465
Baltimore, MD 21279-0465 USA
USA Fax: (301) 986-1093 (credit cards only)

Payment must be included to be considered registered.

Federal Tax I.D. #52-1906152

Deadline*: Enrollment is limited for the benefit of all attendees; this necessitates early registration. Paid registrations must be received one week prior to the event.*
Confirmation*: Written confirmation will be sent to you once payment is received. You must have this written confirmation to be considered enrolled in a PDA event.*
Substitutions*: If a registrant is unable to attend, substitutions are welcome and can be made at any time, even on-site. If you are pre-registering as a substitute attendee, indicate this on the registration form.*
Refunds*: Refund requests must be in writing. If received one month prior to start of an event (course series, conference, etc.), a full refund, minus a $35.00 handling fee, will be made. If received two weeks prior to the event, one-half of the registration fee will be refunded. After that time, no refunds will be made.*
Event Cancellation*: PDA reserves the right to modify the material or instructors without notice or to cancel an event. If the event must be canceled, registrants will be notified as soon as possible and will receive a full refund of fees paid. PDA will not be responsible for discount airfare penalties or other costs incurred due to a cancellation.*

LTR 10/01

PDA USE:
Date:_____ Check:_____ Amount:_____ Account:_____

Q7A Training Workshop Registration Form

Chicago, IL – October 22-24, 2001
Princeton, NJ – November 7-9, 2001
Newport Beach, CA – February 25-27, 2002
San Juan, PR – April 8-10, 2002

ICH Q7A Good Manufacturing Practice Guidance for Active Pharmaceutical Ingredients (APIs)

1. Please type or clearly print your name, address and affiliation.

❑ Mr. ❑ Ms. ❑ Dr. First Name Middle Initial Last Name

Job Title

Company (indicate full company name)

Business Address

City State/Province Zip + 4/Postal Code Country

☐ Substituting for

Business Phone Fax E-mail

(check here only if you are substituting for a previously enrolled colleague.

2. Fees. Please plan to attend all three days of this training workshop. One-day registration is not available. **Full Workshop Registration Includes:** Conference reference materials on site, Lunch on each day, Networking Reception on Day 1.

	Industry	Government*
Chicago, IL – October 22-24, 2001	☐ $995	☐ $395
Princeton, NJ – November 7-9, 2001	☐ $995	☐ $395
Newport Beach, CA – February 25-27, 2002	☐ $995	☐ $395
San Juan, PR – April 8-10, 2002	☐ $995	☐ $395
TOTAL FEES		$_____

*Government: You must be an employee of an official government agency to qualify for this discounted rate.

3. Please check the appropriate box

☐ Check Enclosed ☐ Wire Transfer Charge to: ☐ MasterCard/EuroCard ☐ VISA ☐ AMEX

Account Number_____ Exp. Date _____

Name Exactly as on Card _____

Signature _____ Date _____

4. Return completed form with payment (payment must be included to be considered registered) made to:

PDA
P.O. Box 79465
Baltimore, MD 21279-0465 USA
Fax: (301) 986-1093 (Credit Cards Only)

Federal Tax I.D. #52-1906152

Payments must be made to PDA in US dollars by check drawn on a US bank, by electronic money transfer (SunTrust Bank ABA #051000020, PDA Account #209364254, Swift #UVBIUS33), net of all bank charges; by MasterCard, VISA or American Express.

Please tell us how you learned about this event

- ☐ Advertisement
- ☐ Direct Mail
- ☐ Fax
- ☐ Internet
- ☐ Colleague
- ☐ Other_____

Confirmation: Written confirmation will be sent to you once payment is received. You must have written confirmation to be considered enrolled in this event.

Substitutions: If a registrant is unable to attend, substitutions are welcome and can be made at any time. If you are pre-registering as a substitute attendee, indicate this on the registration form. Refund deadlines and amounts are as follows:

Chicago, IL: If request for refund is received at PDA ***on or before September 24*** registrants will receive a full refund less a $35 (US) processing fee. If received ***after September 24 and on or before October 8*** registrants will receive 50% of the registration fee. After ***October 8***, no refunds can be made.

Princeton, NJ: If request for refund is received at PDA ***on or before October 8*** registrants will receive a full refund less a $35 (US) processing fee. If received ***after October 8 and on or before October 22*** registrants will receive 50% of the registration fee. After ***October 22***, no refunds can be made.

Newport Beach, CA: If request for refund is received at PDA ***on or before January 21*** will receive a full refund less a $35 (US) processing fee. If received after ***January 21 and on or before February 4*** registrants will receive 50% of the registration fee. After ***February 4***, no refunds can be made.

San Juan, PR: If request for refund is received at PDA ***on or before March 8*** registrants will receive a full refund less a $35 (US) processing fee. If received ***after March 8 and on or before March 22*** registrants will receive 50% of the registration fee. After that, no refunds can be made.

LTR0901

PDA Use: Date:_____ Check #:_____ Amount:_____ Account:_____

PDA Round-table Meeting

Technical Monograph No. 1 Steam Sterilization

by Ian Symonds, GSK

Chorleywood — August 2001

Speakers: (Left to right) Wilf Allinson, Nigel Halls (Meeting Chairman), Ian Symonds, Keith Shuttleworth.

The purpose of this round-table was to engage and update UK and Ireland Chapter members in the development of this document. The number of delegates was restricted to ensure active participation by all. Companies represented at the meeting were GlaxoSmithKline, Honeyman Associates, Shuttleworth Associates, AHE and Aventis.

This meeting was a landmark for the UK & Ireland Chapter as it was the first technical meeting fully organized and run by the Chapter.

Dr. Nigel Halls chaired the meeting and provided the introductory session which focussed on the history of Technical Monograph No. 1 and on the current re-drafting process in hand. Halls provided an insight into the role of the European review team and specifically their role in the development of a section on porous load validation which puts the issue of steam quality in context. Ian Symonds followed with an overview of the whole document highlighting the key objectives of each section. Wilf Allinson provided a detailed technical review on the proposed section on porous load sterilization further putting into context where steam quality is important. Keith Shuttleworth presented a paper which was directed towards steam standards and testing methodology.

All of the presentations stimulated lively debate which primarily sought to clarify rather than challenge. All of the delegates were pleased to see progress in the development of the monograph and were particularly heartened to see the inclusion of steam testing in the correct context of porous load sterilization.

Halls closed what was en extremely enjoyable and interesting meeting and invited further comments to be channelled back through members of the European Task Group.

Special Thanks to Miss Rachel Harrison, Meeting Administrator. ■

Speakers and participants.

Participants at PDA UK & Ireland Chapter's first independently organized event discuss the revision of Technical Monograph Number 1.

New member contact information is forwarded to chapters on an ongoing basis. For immediate notification of chapter events, please contact your local representative below and ask to be placed on the chapter mailing list.

Australia Chapter
Contact: **Mary Sontrop**
ZLB Bioplasma AG
Tel: +41-31-344-4305
Fax: +41-31-344-5555
E-mail: *mary.sontrop@zib.com*

Canadian Chapter
Contact: **Grace Chin**
Pellemon, Inc.
Tel: (416) 422-4056 x230
Fax: (416) 422-4638
E-mail: *ching2@snc-lavalincom*
Web site: ***www.pdacanada.org***

Capital Area Chapter
Areas Served: Maryland, District of Columbia, Virginia, West Virginia
Contact: **Allen Burgenson**
DynPort Vaccine Company, LLC
Tel: (301) 607-5046
Fax: (301) 607-5099
E-mail: *BurgensA@dynport.com*
Web site: ***www.pdacapitalchapter.org***

Delaware Valley Chapter
Areas Served: Delaware, New Jersey, Pennsylvania
Contact: **Mark Kaiser**
Lancaster Laboratories
Tel: (717) 656-2300 x1263
Fax: (717) 656-2681
E-mail: *Mwkaiser@lancasterlabs.com*
Web site: ***www.pdadv.org***

Central Europe Chapter
Contact: **James Lyda**
PDA Europe Office
Switzerland
Tel: +41-61-703-1688
Fax: +41-61-703-1689
E-mail: *lyda@pda.org*

Israel Chapter
Contact: **Karen S. Ginsbury**
PCI–Pharmaceutical Consulting Israel Ltd.
Tel: +972-3-9214261
Fax: +972-3-9215127
E-mail: *kstaylor@netvision.net.il*

Italy Chapter
Contact: **Vincenzo Baselli**
Pall Italia
Tel: +39-02-477-961
Fax: +39-02-4122-985
E-mail: *vincenzo_baselli@pall.com*

Japan Chapter
Contact: **Hiroshi Harada**
Tel: +81-3-3815-1681
Fax: +81-3-3815-1691
E-mail: *van@bcasj.or.jp*

Korea Chapter
Contact: **Jong Hwa A. Park**
Tel: +82-2-538-9712
Fax: +82-2-569-9092
E-mail: *Jong_Hwa_Park@pall.com*

Metro Chapter
Areas Served: New Jersey, New York
Contact: **Felicia Manganiello**
Tel: (732) 521-8274
Fax: (732) 521-5933
E-mail: *fmanganiello@aol.com*

Midwest Chapter
Areas Served: Illinois, Indiana, Ohio, Wisconsin, Iowa, Minnesota
Contact: **Robert S. Murphy**
Searle
Tel: (847) 581-6118
Fax: (847) 581-6553
E-mail: *robert.s.murphy@monsanto.com*

Mountain States Chapter
Areas Served: Colorado, Wyoming, Utah, Idaho, Nebraska, Kansas, Oklahoma, Montana
Contact: **John M. Elvig**
Colorado Quality Assoc., Inc.
Tel: (303) 666-0319
Fax: (303) 926-9006
E-mail: *carl10@prodigy.net*

New England Chapter
Areas Served: Massachusetts, Connecticut, Rhode Island, New Hampshire, Vermont, Maine
Contact: **Robert A. Pazzano, P.D.**
Validation and Training Services
Tel: (508) 870-0007 x140
Fax: (508) 870-0224
E-mail: *robert_pazzano@vtsinc.net*

Southeast Chapter
Areas Served: North Carolina, South Carolina, Tennessee, Virginia, Florida, Georgia
Contact: **Mary Carver**
Eisai, Inc.
Tel: (919) 474-2149
Fax: (919) 941-6934
E-mail: *carver@eisai.com*
Web site: ***www.pdase.org***

Southern California Chapter
Areas Served: Southern California
Contact: **Maria Wagner**
International Medication Systems Limited
Tel: (626) 459-5279
Fax: (626) 459-5592
E-mail: *mariaw@ims-limited.com*

Taiwan Chapter
Contact: **Tuan-Tuan Su**
Tel: +8862-2550-9301
Fax: +8862-2555-4707
E-mail: *pdatc@ms17.hinet.net*

United Kingdom and Ireland Chapter
Contact: **Colin Booth**
GlaxoSmithKline
Tel: +44-1-920-883-637
Fax: +44-1-920-882-295
E-mail: *cb3883@glaxowellcome.co.uk*

West Coast Chapter
Areas Served: Northern California
Contact: **Randall Tedder**
Filtrex, Inc.
Tel: (510) 783-3700
Fax: (510) 783-8715
E-mail: *randallt@filtrex.com*

PDA
An International Association For Pharmaceutical Science And Technology

PDA Books Available

For a full listing of documents available, please contact PDA or visit our Web site, www.pda.org.

Change Control; *S. Schwartze*; 2001; 40 pp; $90 members/$109 nonmembers. This manual provides a well-organized, practical process for the management of changes to Information and Control Systems used in GxP-related operations. It provides a complete example of the change control process, details about planned and unplanned changes, sample report forms for errors/changes, change requests, a log of change-related actions, a log of maintenance actions, recommended actions in case of changes to the hardware, software, or users, and much more. A very valuable reference. **Item No. 17189**

Cleaning & Cleaning Validation: A Biotechnology Perspective; *R. Brunkow* et al.; 1995; 190 pp; $125 members/$145 nonmembers.
Item No. 13002

Electronic Records and Electronic Signatures Compliance Assessment; *C. Reid and B. Mullendore*; 2001; 50 pp; $90 members/$109 nonmembers. Electronic Records and Electronic Signatures (ERES) provides practical guidance on the interpretation of 21CFR Part 11 and defines the steps you need to take to address current and future compliance issues. This quick guide is designed to help you identify ERES business benefits, establish policies, procedures, and processes that ensure compliance, and define and evaluate system requirements. This guide is a must-have for everyone concerned with any aspect of ERES regulation. **Item No. 17177**

GMP in Practice: Regulatory Expectations for the Pharmaceutical Industry; *J. Vesper*; 2001; 224 pp; $100 members/$124.50 nonmembers. This is a comprehensive, easy-to-use reference, designed to simplify and enhance understanding of most of the current GMP expectations and how they apply to ongoing manufacturing tasks.
Item No. 17191

Microbiology for Pharmaceutical Manufacturing; *R. Prince, ed.*; 2001; 908 pp; $240 members/$299 nonmembers. This book systematizes and updates the technical discipline of pharmaceutical microbiology. Providing valuable knowledge for the novice and expert alike, it contains the wisdom and guidance of 40 leading pharmaceutical microbiologists, engineers, and other thought leaders.
Item No. 17185

Pocket Code of Federal Regulations GMP Guide - 2001 Edition; 21 CFR Part 210-CGMP in Manufacturing, Processing, Packing, or Holding of Drugs; general. 21 CFR Part 211; 56 pp; $4 member/$7 nonmember. CGMP for Finished Pharmaceuticals. Reproduced in pocket size by PDA. April 1, 2001. **Item No: 13004**

Quality Control Systems for the Microbiology Laboratory: The Key to Successful Inspections; *L. Clontz*; 2001; 192 pp; $120 members/$149 nonmembers. Written by an experienced microbiologist, this manual contains chapters covering: current inspection trends; chemical and biological reference standards; laboratory equipment and facilities; preparation of media, buffers and reagents; environmental monitoring; water systems for laboratory use; data trending and statistical process control; use of disinfectants and sanitizers; training of laboratory personnel; and the quality assurance program for the laboratory. **Item No. 17176**

The Internal Quality Audit; *M. Grimaldi and J. Gough*; 2001; 100 pp; $120 members/$149 nonmembers. Here is the common-sense guidance you need to perform an effective, systematic internal quality audit. As a quality professional, you are well aware of the repercussions caused by a nonconforming product entering the marketplace; customers may experience adverse effects or worse, and your company will certainly lose credibility and profit. This book helps you identify and prevent systemic weaknesses by providing you with the evaluation tools you need to prevent such occurrences. **Item No. 17179**

Understanding GMP: An Expert's View on Merging Global Regulatory and Manufacturing Perspectives; *M. Becker*; 2001; 224 pp; $120 members/$149 nonmembers. Now at Merck, Sharp, and Dohme Ltd., Martyn Becker is an ex-UK MCA Manager and Senior Medicines Inspector. In this book, he shares his expertise and perspectives on GMP regulations, legislation, applications and practical challenges and solutions to applying GMP to the manufacturing environment. Anyone concerned with quality and GMP should have this book on a shelf nearby. **Item No. 17174**

Part 2—Complying with 21 CFR Part 11, Electronic Records and Electronic Signatures; 92 pp; $95 members/$180 nonmembers
Item No. 19001

PDA Archive on CD-ROM

PDA Archive on CD-ROM - PDA Archive Retrieval Index; The PDA Archive will give you easy access to more than 50 years of research papers written by highly qualified research scientists in the pharmaceutical industry. All PDA Journal articles, Technical Reports and Monographs, and selected Meeting Proceedings are available on this fully searchable CD-ROM. The archive is updated each year adding six issues of the PDA Journal, all PDA Technical Reports and Monographs, and selected PDA Meeting Proceedings. The archive is a 4-CD set.
Archive; Price: $395 members/$495 nonmembers. **Item No: 01101**

2000 Update
Price: $95 members/$195 nonmembers. **Item No: 01002**

Select PDA Technical Reports Available

TR 34 NEW! Design and Validation of Isolator Systems for the Manufacturing and Testing of Health Care Products; This technical report addresses essential user requirements for the application of isolator technology to a broad range of manufacturing, development and testing applications in the health care product manufacturing industry. It covers not only product sterility assurance, but also the use of isolators for the containment of hazardous materials. 2001; 32 pages; $75 member $125 nonmember. **Item No. 01034**

TR 33 Evaluation, Validation and Implementation of New Microbiological Testing Methods; This report is intended to provide a general approach to the introduction of new microbiology methods in a government-regulated environment. It is also intended to provide guidance for the successful evaluation, validation and implementation of new microbiological methods needed by the pharmaceutical, biotechnology and medical device industries to assure product quality. These new methodologies offer significant improvements in terms of the speed, accuracy, precision and specificity with which testing can be performed. 2000; 37 pp; $75 members/$125 nonmembers. **Item No. 01033**

TR 32 Auditing of Suppliers Providing Computer Products and Services for Regulated Pharmaceutical Operations; Developed in response to an FDA challenge to develop a standard way to assess the structural integrity of acquired software, TR 32 was written by the PDA Supplier Auditing and Qualification Task Group (SA&Q), which included pharmaceutical companies, suppliers, auditors and FDA members who used their experiences with supplier audits and performed research to draft a common practice to satisfy industry needs. The scope of the project included audits of computer products and services and describes how the SA&Q Task Group, led by George J. Grigonis, Jr., Merck and Co., Inc., developed and tested a Process Model and Data Collection Tool. Use of these tools will provide consistent audit information that can be shared within the industry. December 1999; 277 pp; $90 members/$140 nonmembers (paper copy; **Item No. 01032**); **CD**—$50 members/$75 nonmembers (CD-ROM format; **Item No. 01132**).

Select PDA Proceedings Available

2001 PDA Good Electronic Records Management (GERM) Conference Proceeding, April 2–6, 2001, Tampa, Florida; 2001, 492 pages.
Price: $150.00 members, $175.00 nonmembers.
Item No. 04029

2001 PDA Spring Conference Proceeding Modern Pharmaceutical Microbiology-Advancing the Science, March 11–16, 2001 Las Vegas, Nevada; 2001, 368 pages.
Price: $150.00 member, $175.00 nonmember.
Item No. 04030

TR 31 Validation and Qualification of Computerized Laboratory Data Acquisition Systems; Prepared by the PhRMA CSVWG and the PDA Computer Related Systems-Laboratory Systems Task Group, TR 31 provides guidance to lab scientists, technicians and managers responsible for the implementation, testing, control and usage of Laboratory Data Acquisition Systems (LDAS) used within a GMP-, GLP- or GCP-regulated environment. Addresses computerized LDAS within a regulated environment; also applicable to systems critical to the operation of a company, department or function, regardless of the system's regulatory impact. 1999; 12 pp; $50 members/$75 nonmembers. **Item No. 01031**

TR 29 Points to Consider for Cleaning Validation; This document provides guidance relative to the validation of cleaning for a broad range of processing systems and product types within the pharmaceutical industry. The report includes perspectives on the application of cleaning validation guidance in the areas of finished pharmaceuticals, bulk pharmaceutical chemicals, biopharmaceuticals and clinical products. It is the pharmaceutical companion to *Cleaning and Cleaning Validation: A Biotechnology Perspective* published by PDA in 1996. 1998; 23 pp; $75 members/$125 nonmembers. **Item No. 01029**

TR 13 REVISED! Fundamentals of an Environmental Monitoring Program; The purpose of this document is to identify microbiological and particulate control concepts and principles as they relate to the manufacture of sterile pharmaceutical products. It expands substantially upon the first edition of Technical Report No. 13 (Revised), *Fundamentals of a Microbiological Environmental Monitoring Program*, published by PDA in 1990. While this publication cannot possibly supplant the wealth of information published on this subject, it provides summary information and appropriate references for the reader to consult, if necessary. The objective was to contemporize the first edition through the utilization of current definitions, recognition of improved environmental monitoring procedures, and equipment. This document serves as a source on clean room environmental test methods, and although some non-viable particulate and endotoxin testing data are included, its primary focus is microbiological control. The concepts for sterile product manufacturing are the most stringent application, but these concepts can also be applied to non-sterile product manufacture. The focus is environmental monitoring as it relates to facility control and compliance. This document was compiled to aid in setting up a program that is meaningful, manageable, and defendable. 2001; 44 pages; $75 member $125 nonmember. **Item No. 01013**

To Order, Use Form on Page 40

For complete descriptions, visit our Web site, www.pda.org, and look for the 2001–2002 Fall/Winter Publications Catalog Coming Soon!

Ordering Documents and Publications from PDA

Use this form to order any of the documents mentioned in the *PDA Letter*. If ordering by mail, include a check payable to PDA to the address below. Be sure to include shipping and handling charges in the total. If ordering by fax, please include all credit card information. All orders must include payment.

Name _____ Member No. _____

Company _____

Address _____

City _____ State _____ Country _____ Zip/Postal Code _____

Tel: _____ Fax: _____ E-mail: _____

Payment type: ☐ Check drawn on a US bank ☐ MC ☐ VISA ☐ AMEX

☐ Wire Transfer

Credit Card # _____ Exp. _____

Mail to: PDA, P.O. Box 79465
Baltimore, MD 21279-0465 USA
Fax: (301) 986-1093

Name as it appears on credit card (please print clearly) _____

Questions? (301) 986-0293 x133 or *info@pda.org* Signature _____

Document No.	Title	Qty.	Price	Total

Shipping
Domestic US orders are shipped via UPS Ground. Second-day and Next-day Air service is available. Call or e-mail for prices.

Domestic US Shipping & Handling Rates

If your order totals:	*Add:*
$ 15.00 and under	$ 5.95
$ 15.01–$ 75.00	$ 7.95
$ 75.01–$150.00	$ 9.95
$150.01–$250.00	$11.95
$250.01 or more	$13.95

International orders (including Puerto Rico & Canada): Please add 20%, minimum $18.00, maximum $150.00. Items are sent priority air, but 2-day service is available for some countries; please call for details.

Payment
Payments must be made in US dollars by check drawn on a US bank, **by electronic money transfer (SunTrust Bank ABA #051000020, PDA Account #209364254, Swift #UVBIUS33), net of all bank charges**; or credit card.

Federal Tax I.D. #52-1906152

Please allow 4-6 weeks for delivery on some items.

Subtotal	
Shipping & Handling	
5% Tax *(MD Residents Only)*	
TOTAL	

LTR 10/01

PDA USE:
Date: _____ **Check:** _____ **Amount:** _____ **Acct:** _____

Calendar begins on back cover

APRIL

April 8-10, 2002
Training Workshop
ICH Q7A Good Manufacturing Practice Guidance for Active Pharmaceutical Ingredients (APIs)
Caribe Hilton, San Juan, Puerto Rico

April 8-12, 2002
PDA-TRI Laboratory Course:
Aseptic Processing Training Program (week 1)
PDA-TRI Baltimore, MD

April 29-May 1, 2002
PDA Isolation Technology Conference
Hilton East Brunswick, East Brunswick, NJ

MAY

May 6-10, 2002
PDA-TRI Laboratory Course:
Aseptic Processing Training Program (week 2)
PDA-TRI Baltimore, MD

May 16-17, 2002
PDA-TRI Laboratory Course:
Environmental Mycology Identification Workshop
PDA-TRI Baltimore, MD

May 19-22, 2002
PDA/USP Joint Conference on Sterile Product Manufacturing
Sanibel Harbour Resort, Fort Myers, FL

JUNE

June 3-5, 2002
PDA-TRI Florida Course Series
The Diplomat Resort Country Club & Spa, Hollywood, FL

AUGUST

August 27-29, 2002
PDA-TRI Vermont Course Series
Sheraton Burlington Hotel & Conference Center
Burlington, VT

SEPTEMBER

September 9-13, 2002
PDA-TRI Laboratory Course:
Aseptic Processing Training Program (week 1)
PDA-TRI Baltimore, MD

September 19-20, 2002
PDA-TRI Laboratory Course:
Environmental Mycology Identification Workshop
PDA-TRI Baltimore, MD

September 23-26, 2002
2002 PDA/FDA Joint Regulatory Conference, Courses and Tabletop Exhibition
Hyatt Regency on Capitol Hill, Washington, DC

OCTOBER

October 7-11, 2002
PDA 2002 Biennial Training Conference
Charting a Course for Success
Hyatt Regency Tampa, Tampa, FL

October 7-11, 2002
PDA-TRI Laboratory Course:
Aseptic Processing Training Program (week 2)
PDA-TRI Baltimore, MD

October 28-November 1, 2002
PDA-TRI Laboratory Course:
Aseptic Processing Training Program (week 1)
PDA-TRI Baltimore, MD

NOVEMBER

November 18-20, 2002
PDA-TRI Las Vegas Course Series
Alexis Park Resort & Spa, Las Vegas, NV

November 18-22, 2002
PDA-TRI Laboratory Course:
Aseptic Processing Training Program (week 2)
PDA-TRI Baltimore, MD

DECEMBER

December 4-5, 2002
PDA-TRI Laboratory Course:
Environmental Mycology Identification Workshop
PDA-TRI Baltimore, MD

December 10-13, 2002
2002 PDA Annual Meeting, Courses and Exhibition
New Orleans Marriott, New Orleans, LA

www.pda.org

PDA Membership Application

Return your completed PDA membership application, with payment made to: **PDA, P.O. Box 79465, Baltimore, MD 21279-0465 USA** or fax it to: (301) 986-1093. *(If form is faxed, it must include necessary credit card information.)*

Member Info

Please type or print clearly

Last Name _____

Mr.❍ Ms.❍ Dr.❍ First Name _____ MI_____

Job Title _____

Company _____

Address _____

City _____ State/Province _____

Country _____ Zip+4/Postal Code _____

Business Phone# _____ Fax# _____

E-mail _____

Member Profile

Business Environment (check only one)

- ❑ Academic
- ❑ Consultant
- ❑ Engineering and Construction
- ❑ Government Regulatory Agency
- ❑ Industry Supplier
- ❑ Medical Device Manufacturing
- ❑ Pharmaceutical Manufacturing
- ❑ Pharmacy
- ❑ Recruiter
- ❑ Other

Professional Interest (check all that apply)

- ❑ Aerosols
- ❑ Analytical Chemistry
- ❑ Biologicals
- ❑ Biotechnology
- ❑ Computers
- ❑ Engineering
- ❑ Formulation Development
- ❑ GMP Compliance/Inspection Trends
- ❑ Liquids
- ❑ Maintenance
- ❑ Manufacturing/Production
- ❑ Microbiology
- ❑ Ointments
- ❑ Ophthalmics
- ❑ Packaging
- ❑ Parenterals
- ❑ Quality Assurance/Quality Control
- ❑ Regulatory Affairs
- ❑ Research
- ❑ Solid Dosage Forms
- ❑ Sterilization/Aseptic Processing
- ❑ Training
- ❑ Validation

Membership dues are non-refundable and non-transferable.

Payment (US Dollars Only)

Please note: *Contributions or gifts to PDA are not tax-deductible as charitable contributions. However, they may be deductible as ordinary and necessary business expenses.*

Individual Membership $150. Please check the appropriate box:

❑ **Check** enclosed ***Charge:*** ❑ MC/EuroCard ❑ VISA ❑ AMEX ❑ **Wire Transfer:** *(must be net of all bank charges; include member name)* Instructions: SunTrust Bank, ABA #051000020, PDA Account #209364254, Swift#UVBIUS33

Account Number _____ Exp. Date _____

Name _____
(exactly as on card)

Signature _____ Date _____

Federal Tax I.D. #52-1906152

LTR 10/01

PDA USE:
Date:_____ Check:_____ Amount:_____ Account:_____

WHEN THERE'S NO ROOM FOR ERROR...**TRUST KAYE.**

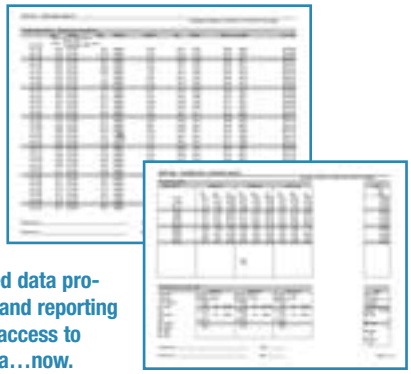
Introducing

ValProbe™

Another innovation from the leader in process validation.

Process monitoring has never been easier.

Wireless design. Advanced data processing. Wide operational ranges. FDA compliant. Customized reporting. It all adds up to a revolutionary wireless process monitoring and validation system with unprecedented ease-of-use benefits.



Advanced data processing and reporting provide access to your data…now.

Accuracy and flexibility you can count on…because it's from Kaye.

The ValProbe system employs a wireless probe design which eliminates the need for hard-wired sensors, simplifying access to hostile, remote, and hard-to-reach environments. Operating from –60° C to 360° C and 0–75 psi, it's suitable for a wide range of applications including steam and Et0 sterilization, tunnels, ovens, incubators, rotating machinery, and conveyors.

Innovation from the leader.

ValProbe's ability to rapidly process data from up to 50 sensors saves time and provides quick access to critical temperature, humidity, and pressure data. Of course, the ValProbe system complies with FDA Regulation 21 CFR Part 11, ensuring that the most stringent requirements for electronic signatures and records are met.

To request more information or a demonstration of this breakthrough process validation system, call us at

1-800-964-5293

or visit us at www.kayeinstruments.com

- **ACCURACY**
- **COMPLIANCE**
- **EASE OF USE**
- **SERVICE**

KAYE®

Calendar of Events

PDA
An International Association For Pharmaceutical Science And Technology

Be sure to watch
www.pda.org
for conference and course updates!

2001

NOVEMBER

November 5-9, 2001
PDA-TRI Laboratory Course:
Aseptic Processing Training Program (week 2)
PDA-TRI Baltimore, MD
Sold Out

November 7-9, 2001
Training Workshop
ICH Q7A Good Manufacturing Practice Guidance for Active Pharmaceutical Ingredients (APIs)
Hyatt Regency Princeton, Princeton, NJ

November 12-13, 2001
The Extractables Puzzle: Putting the Pieces Together
Resolving Analytical, Material, Regulatory and Toxicology Issues to Find Solutions
Doubletree Hotel, Rockville, MD

November 12-14, 2001
PDA-TRI Laboratory Course:
Basic Microbiology—Theory & Practice
PDA-TRI Baltimore, MD

November 15, 2001
PDA Southern California Chapter Seminar
Irvine Crowne Plaza Hotel, Irvine, CA

November 15-16, 2001
PDA-TRI Course: Computer Products Supplier Auditing Process Model—Auditor Training
PDA-TRI Baltimore, MD

November 15-16, 2001
PDA-TRI Laboratory Course: An Introduction to Developing Effective Audit Strategies for CGMP Cleanrooms
PDA-TRI Baltimore, MD

November 28-29, 2001
PDA-TRI Laboratory Course: Identification of Microorganisms Using Comparative DNA Sequencing
PDA-TRI Baltimore, MD

November 30, 2001
PDA-TRI Laboratory Course:
Contamination Control Basics
PDA-TRI Baltimore, MD

November 30, 2001
Visual Inspection of Injectables
Hilton Hotel, Berlin, Germany

DECEMBER

December 3-7, 2001
2001 PDA Annual Meeting, Courses and Exhibition
Compliance: Challenges and Pragmatic Solutions
Marriott Wardman Park, Washington, DC
PDA-TRI Courses:
December 6
Auditing Techniques for CGMP Compliance
December 6-7
Advanced Regulatory Compliance Training for the Supervisor/Manager
Computer-Related Systems Validation
December 7
Change Control and Documentation

December 5-6, 2001
PDA BSE/TSE Issues Forum
Marriott Wardman Park, Washington, DC

December 10-11, 2001
PDA-TRI Laboratory Course:
Environmental Mycology—Identification Workshop
PDA-TRI Baltimore, MD
Sold Out

2002

JANUARY

January 14-18, 2002
PDA-TRI Laboratory Course:
Aseptic Processing Training Program (week 1)
PDA-TRI Baltimore, MD

January 16-18, 2002
PDA-TRI Lake Tahoe Course Series
Hyatt Regency Lake Tahoe Resort & Casino
Incline Village, NV
January 16
A Comprehensive Guide to OOS Regulations
A Practical Guide to Change Control
Calibration in the GMP Setting
Cost Effective Validation
Training for Performance
January 16-18
GMP Training Manager Workshop
January 17
GMP Fundamentals
Strategic and Practical Approaches to Part 11 Compliance
January 17-18
Basic Concepts in Cleaning and Cleaning Validation
Validation by Design
January 18
Basic Statistical Tools for Quality Assurance and Manufacturing Personnel
Designing Regulatory Training that Works

January 30-31, 2002
PDA-TRI Laboratory Course:
Environmental Mycology Identification Workshop
PDA-TRI Baltimore, MD

FEBRUARY

February 11-15, 2002
Basel 2002: PDA International Congress, Courses and Exhibition
Adding Value to the Pharmaceutical Industry—Leveraging the Future
Basel Convention Center, Basel, Switzerland

February 11-15, 2002
PDA-TRI Laboratory Course:
Aseptic Processing Training Program (week 2)
PDA-TRI Baltimore, MD

February 25-27, 2002
Training Workshop
ICH Q7A Good Manufacturing Practice Guidance for Active Pharmaceutical Ingredients (APIs)
The Sutton Place Hotel, Newport Beach, CA

MARCH

March 11-15, 2002
2002 PDA Spring Conference, Courses and Tabletop Exhibition
Environmental Monitoring and Aseptic Processing: Reaching a Common Understanding of the Regulatory and Technical Requirements
Rosen Hotels and Resorts, Orlando, FL

Calendar continues on page 41