

MDCH Welcomes New Virology Section Manager

Patricia Somsel, Dr. P.H.
Division of Infectious Disease

While growing up in Paris, Anthony Muyombwe fancied the idea of being a bush doctor moving in a safari-like vehicle from one village to another attending to the patients. Dr. Muyombwe has traveled many roads since then to reach Lansing.

Born in Kitwe, Zambia, in Southern Africa, he moved to Paris with his parents at the age of one. After completing his secondary school studies in Paris and with his interest in microbiology and immunology fired by the AIDS epidemic, Muyombwe spent two years in Zambia working for the WHO-Ministry of Health program on blood bank safety. Next he pursued a program in Medical Technology co-located in France and the University Teaching Hospital in Zambia. He improved his mastery of English and immersed himself in his native culture.

Having learned of the unique educational experiences afforded at Berea College, Muyombwe traveled to Kentucky, where he completed a Bachelors of Science in Pre Medical Studies. Following his time in Kentucky, he completed a Masters of Science in Microbiology and Immunology



at the Université Laval in Québec, and then went on to complete a Doctorate of Science in Bioengineering at the Tokyo Institute of Technology, in Japan. Not yet having completed his education or his globe-trotting, he completed a post doctorate in Medical Microbiology at the University of Lund, Malmo, Sweden (1999-2001) and a post doctorate in Clinical Microbiology at the Mayo Clinic in Rochester, MN (2001-2003).

Muyombwe began his career in the field of public health in the Laboratoire de Sante Publique du Québec in 2003, serving as the Manager of Virology/Serology and Bacterial Identification. In 2005, he spent a 6-month tenure serving as a consult to the Association of Public Health Laboratories as Chief of the Laboratory Section at the CDC-Botswana (BOTUSA) program.

Muyombwe was accompanied on his move to Lansing by his wife, Karen Modesto, a physician and native of Brazil, and his little girl, Lara. And what happened to his dream of being a bush doctor? He says he can still pursue that dream by helping Africa improve the laboratory and public health infrastructure from his position in public health in the United States.

Please join the Bureau of Laboratories in welcoming Dr. Anthony Muyombwe.

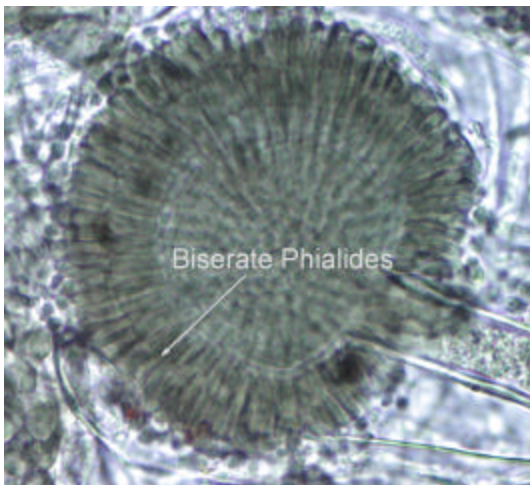
FUN FUNGI.....

Aspergillus niger

Sandy Arduin MT(ASCP) & Bruce Palma MT(ASCP) - Mycobacteriology/Mycology Unit

Aspergillus niger is a frequent agent of Aspergilloma. It is often isolated from cases of chronic otitis, typically colonizing the outer ear canal. *A. niger* occasionally causes pulmonary disease and disseminated aspergillosis in immunocompromised patients. It is commonly isolated from soil and decomposing plant material. *A. niger* is also one of the most commonly reported fungi from indoor environments and foods such as seeds, fruits and nuts.

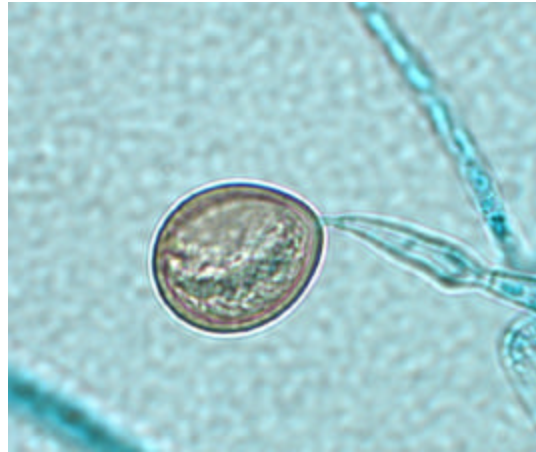
Colonies are downy to powdery and grow rapidly. Colony color is originally white to yellow, becoming deep brown to black on the surface with a pale yellow reverse. *A. niger* has conidial heads that radiate, often splitting into columns with age. The conidiophore stipes are hyaline, becoming brown near the apex, and terminate in a globose to sub-globose vesicle. Conidiogenous cells are biseriate and cover virtually the entire surface of the vesicle. Conidia are brown to black, globose, and roughened with warts and ridges.



References:

1. Klich, Maren, 2002, *Identification of common Aspergillus species*, Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands.
2. St-Germain, Guy, Summerbell, Richard, 1996, *Identifying Filamentous Fungi, A Clinical Laboratory Handbook*, Star Publishing Co. Belmont, CA.
3. www.doctorfungus.org/thefungi/Aspergillus_niger.htm

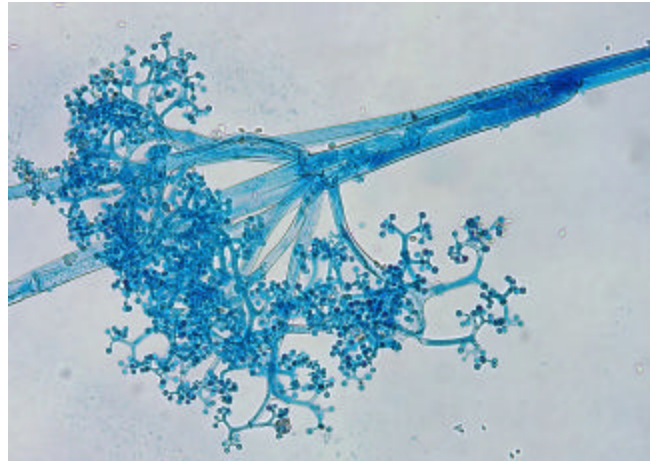
Last Issues Picture Quiz Answer:



Acremoniella species

Acremoniella species are commonly found in plant seeds and soil. Microscopically, conidiophores are short, hyaline and inconspicuous. Sporogenous cells taper sharply and bear a large, solitary, thick walled conidium at the tip. Conidia are globose to ovoid, pigmented and may be rough or smooth walled.

This Issues Picture Quiz: What Mould is this?



Hint: It's a Zygomycetes.

Chemical Terrorism Laboratory Preparedness Update

Marty Boehme MT (ASCP)
and Ninah Sasy, MT
Division of Chemistry and Toxicology

Do you know what role your hospital laboratory would have in a chemical exposure (terrorism) event? Do you know what patient specimens to collect and how to properly handle them?

In August, MDCH provided one shipping kit (Chemical Terrorism Kit - Unit #22) to each laboratory in a facility with an emergency center. This kit contains the materials needed to properly pack and ship specimens from a chemical exposure event.

There are changes in the CDC guidance for handling human blood and urine specimens following a chemical exposure (terrorism) event. The changes for clinical laboratories include:

1. It is no longer necessary to seal each individual blood tube or urine cup with evidence tape. Evidence tape should be placed on the wrapped packages of tubes and cups. (See # 2 and #3).
2. The wrapped racks of tubes or box of urine cups should be sealed with evidence tape, and labeled with your initials (½ on tape and ½ on package).
3. The secondary packaging (e.g., in the MDCH-provided CT shipping kit this is the outer Tyvek bag) should be sealed with evidence tape, and labeled with your initials (½ on tape and ½ on package).
4. Clarification: Only two empty blank tubes and cups from each lot number are required, not four. (i.e., two purple-top tubes, two grey- or green-top tubes, and two urine cups).
5. Specimens shipped by air must be packed according to IATA Packing Instruction 650. The proper shipping name when shipping by commercial air carrier is "Biological Substance, Category B" and the UN number is "UN 3373."

("Diagnostic specimens" and "Clinical specimens" are no longer proper shipping names after January 1, 2007 according to IATA regulations).

These changes have been added to the packaging and shipping instructions that are posted on the Michigan Prepares web page at www.michigan.gov/prepare. Click on the link for Chemical Emergencies, then Health Care Provider Information, then Laboratory Services.

Please verify that your laboratory has received the shipping kit by visiting <http://www.questionpro.com/akira/TakeSurvey?id=501375>. MDCH can provide on-site training, a CT laboratory response kit, and materials for shipping specimens to the MDCH laboratory in Lansing. Contact Marty Boehme at 517-335-9654 or boehmem@michigan.gov or Ninah Sasy at 517-335-9152 or sasyn@michigan.gov for kits or to schedule training.

Bureau of Laboratories Vision

The Bureau of Laboratories is a stronger, more diverse team within an integrated public health system. We utilize advanced technology and innovative leadership to provide comprehensive public health services in our dynamic global community.

Bureau of Laboratories Mission

We are dedicated to continuing leadership in providing quality laboratory science for healthier people and communities through partnerships, communication and technical innovation.

Pilot Study for Fax Delivery of Newborn Screening Laboratory Reports to Start November 2006

Harry C. Hawkins, B.S.
Newborn Screening Section

A pilot study for delivery of newborn screening laboratory reports by "secure" fax is about to become a reality. The technical problems that caused delays in the implementation of this option have been resolved and testing is now in the final phases. In the pilot study ten hospitals, clinics, and individual submitters of newborn screening samples will receive results days earlier via facsimile instead of mailed copies. This option will be offered to all submitters in early 2007.

The procedure originally used for a facility to request faxed results is still in place. Thirty facilities have already requested this service. It is easy for a facility to replace mailed reports with faxes. A short statement of understanding must be filled out to indicate the desire to receive results this way. Reports can only be sent to a "secure" fax machine. This means a restricted access dedicated line available 24/7 to receive this confidential information. A dual use phone is not acceptable. The application form can be found at http://www.michigan.gov/documents/AutoFax_6-04_95287_7.pdf

The MDCH will contact facilities that have previously requested faxed results to make sure the information they submitted is current before switching over to faxed results. Please contact Harry Hawkins at (517) 335-8095 or at hawkinsh@michigan.gov with any questions.

Chemistry & Toxicology Website Renovation

Ninah Sasy, MT
Division of Chemistry and Toxicology

The Chemistry and Toxicology Division is in the process of renovating its web pages. The section managers, Division Director, and web author have been meeting bimonthly since June. Currently in the beginning stages of renovation, there are already many accomplishments.

The content has been separated into four distinct categories (a division category and section categories) which are intended to keep analogous material together. For example, when the user selects a Newborn Screening Page only newborn screening material will appear on the right menu pane as related content. It is anticipated that this modification will help users find information more readily on the website without sorting through non-related pages.

Related documents and links have also been added to pages within the site. This will be helpful for customers who may be looking for supplementary information on a particular topic. In the near future, POD casts, search features, and additional elements will be added in hopes of making the web pages easier to use.

So please look, and return in a few months to see the progress. To view the pages please go to www.michigan.gov/mdchlab then select Chemistry & Toxicology from the left menu pane. The Division looks forward to feedback regarding the changes to the website. Please submit comments or suggestions to Ninah Sasy at 517-335-9152 or at sasyn@michigan.gov.

QUIRKY BUGS...

Keeping Sane in a Crazy (Cocci) World

Glenn Fink, MT (ASCP)
Reference Bacteriology Unit

The number of genera being described from human clinical sources continues to be modified and expanded with the application of molecular techniques, and microbiologists must adapt accordingly to identify these isolates. The dynamic nature of taxonomy is well illustrated with the facultatively anaerobic catalase-negative gram-positive cocci, a group that has undergone considerable reclassification, with additional changes sure to follow. Several recent submissions to the reference bacteriology unit at MDCH underscore the need to be able to differentiate among these unusual and relatively newly described organisms.

Several isolates from blood and eye cultures have been submitted within the last year from different hospitals and different geographical regions within the state. The initial Gram stains revealed relatively large, round, gram-positive cocci arranged in pairs, tetrads, and clusters, resembling staphylococci. Growth on 5% sheep blood agar produced small, grayish-white, non-hemolytic to slightly alpha-hemolytic colonies resembling the viridans streptococci. Further testing revealed these organisms to be catalase negative and both PYR (pyrrolidonyl arylamidase) and LAP (leucine aminopeptidase) positive. There was a large zone of inhibition around the penicillin (10 µg) and vancomycin (30 µg) disks.

When considering catalase-negative gram-positive cocci that are vancomycin sensitive and both PYR and LAP positive, several genera must be differentiated (See Table 1). These include *Enterococcus*, *Lactococcus*, *Vagococcus*, *Gemella*, *Abiotrophia*, *Facklamia*, *Alloiococcus*, *Ignavigranum*, and *Dolosigranulum* species. Cellular arrangement on gram-stain (chains versus clusters) can be

helpful in an identification scheme but alone is not reliable as variation does occur among some of these genera.

The isolates grew in 6.5% NaCl (eliminating *Gemella* and *Abiotrophia* species) but were bile esculin negative (eliminating *Enterococcus*, *Lactococcus*, and *Vagococcus* species), and were non-motile (eliminating *Vagococcus* species). They grew under anaerobic conditions (eliminating *Alloiococcus* species) but did not grow at 10°C (eliminating *Lactococcus* species) or 45°C. Negative results were obtained for the production of urease, arginine dihydrolase, and a wide variety of fermentative sugars. The isolates were esculin hydrolysis positive (eliminating *Facklamia* and *Ignavigranum* species). An API 20 Strep gave a biocode of 0160000 (PYR+/LAP+/PAL+), a very good ID to the genus level for *Gemella* species. Preliminary identification at MDCH was *Dolosigranulum pigrum*. The first two isolates were submitted to CDC and confirmed as *Dolosigranulum pigrum* by conventional biochemical tests as well as 16S rRNA sequencing studies.

Dolosigranulum pigrum was first described by Aguirre and associates in 1993. It has been isolated from a variety of sources, most commonly from blood cultures, eye cultures, and nasopharyngeal swabs, but also from a spinal cord at autopsy, sputum, sinus, gastric, urine, and in all likelihood a synovial fluid. It has been suggested that the natural habitat of this bacteria is the nasopharynx. While the incidence of this organism is unknown, reports of it causing a wide spectrum of clinical disease in humans certainly suggest it being a potential pathogen of clinical significance.

Preliminary studies at the CDC indicate that *Dolosigranulum pigrum* susceptibility patterns are similar to those of *Gemella* species. Broth dilution MIC studies using Mueller Hinton broth supplemented with lysed horse blood and using CLSI breakpoints of *Streptococcus pneumoniae* produced results interpreted as susceptible to amoxicillin, cefotaxime, cefuroxime, clindamycin, levofloxacin, meropenem, penicillin, quinupristin-dalfopristin, rifampin, tetracycline, and vancomycin. Resistance was noted for the majority of strains to erythromycin and a rare strain to trimethoprim-sulfamethoxazole. Approximately half were intermediate to chloramphenicol. These findings differ substantially from *Facklamia* species, which shows considerable antimicrobial resistance, reinforcing the importance of accurate identification.

Although several new genera have been added to the facultatively anaerobic catalase-negative gram-positive cocci, the tests necessary for the microbiologist to identify *Dolosigranulum pigrum* are already employed by most clinical laboratories. A positive esculin test can differentiate *Dolosigranulum pigrum* from the phenotypically similar *Alloiococcus*, *Ignavigranum*, and *Facklamia* species. Extended incubation of the esculin slant may be necessary, as some require as long as two (2) weeks incubation. The use of a relatively few number of tests can aid in the identification of these unusual organisms and help keep us sane in a sometimes crazy world.

References:

1. Facklam, Richard and Elliott, J.A. Oct. 1995. Identification, Classification, and Clinical Relevance of Catalase-Negative, Gram-Positive Cocci, Excluding the Streptococci and Enterococci. *Clin.Micro.Reviews*. Vol. 8, No. 4. p.479-495.
2. Laclaire, L. and Facklam, R. July 2000. Antimicrobial Susceptibility and Clinical Sources of *Dolosigranulum pigrum* Cultures. *Antimicrobial Agents and Chemotherapy*. Vol. 44, No. 7. p. 2001-2003.
3. Hall, G.S. et.al. March 2001. Case of Synovitis Potentially Caused by *Dolosigranulum pigrum*. *Journal of Clin. Micro*. Vol. 39, No. 3. p. 1202-1203.
4. Laclaire, Leslye L. and Facklam, Richard R. June 2000. Comparison of Three Commercial Rapid Identification Systems for the Unusual Gram-Positive Cocci *Dolosigranulum pigrum*, *Ignavigranum ruoffiae*, and *Facklamia* Species. *Journal of Clin. Micro*. Vol. 38 No. 6. p.2037-2042.
5. Miller, P. H. et.al. April 1996. Atmospheric Growth Requirements for *Alloiococcus* Species and Related Gram-Positive Cocci. *Journal of Clin. Micro*. Vol. 34, No. 4. p. 1027-1028.
6. Murray, Patrick R. et.al. ed. 2003. Manual of Clinical Microbiology, 8th ed. ASM Press, Washington, D.C.

Table 1 Phenotypic Characteristics Of PYR & LAP Positive Catalase-Negative Gram-Positive Cocci

GENUS	GRAM STAIN	VANCO SCREEN	PYR	LAP	NaCl	10°C	45°C	MOT	BE	ESC
Enterococcus	ch	S/R	+	+	+	+	+	v	+	+
Lactococcus	ch	S	+	+	v	+	v	-	+	+
Vagococcus	ch	S	+	+	+	+	-	+	+	+
Gemella	cl/t/ch	S	+	v	-	-	-	-	-	-
Facklamia	cl/ch	S	+	+	+	-	-	-	-	-
Alloiococcus	cl/t	S	+	+	+	-	-	-	-	-
Ignavigranum	cl/ch	S	+	+	+	-	-	-	-	-
Dolosigranulum	cl/t	S	+	+	+	-	-	-	-	+*
Abiotrophia	ch	S	+	+	-	-	-	-	-	-

GRAM STAIN cellular arrangement: ch = chains; t = tetrads; cl = clusters
 VANCO SCREEN: S = susceptible; R = resistant
 PYR = production of pyrrolidonyl arylamidase
 LAP = production of leucine aminopeptidase
 NaCl = growth in broth containing 6.5% NaCl
 10°/45° C = growth at respective temperature
 MOT = motility
 BE = bile esculin
 ESC=esculin hydrolysis (*requiring as long as 2 weeks incubation for *D.pigrum*)
 V = variable



**The MI Volunteer Registry
 Register Now. You Could Make a Difference.**

Virginia Ball, M.A.
 MI Volunteer Registry Project Coordinator
 Office of Public Health Preparedness

The MI Volunteer Registry is a centralized resource for identifying appropriate personnel to serve during an emergency. Individuals from public health, healthcare, emergency management, other agencies or organizations interested in volunteering are encouraged to pre-register by securely entering their contact information on the website. The registry assembles volunteers based on verification of their identity, credentials, and qualifications. During an emergency, volunteer information will be gathered and appropriate volunteers contacted by authorized personnel. There are currently over 1,000 volunteers registered from the state of Michigan and border state counties.

Many additional fields have recently been added that will help to ensure a strong response in the event of an emergency. Volunteers registered prior to July 11, 2006 are encouraged to visit the site and review their individual profile information. This will help to ensure being among those called on when needed in an emergency. In addition, various training and exercise opportunities may be posted from time to time on the volunteer group homepages.

To register or update your profile go to www.mivolunteerregistry.org. You may also visit the MDCH, Office of Public Health Preparedness Website at www.michigan.gov/ophp for more information. Additional help is available by contacting help-mivolunteerregistry@michigan.gov or 866-636-6324.

Michigan's Newest Brominated Threat

Paul R. Locanto, Ph.D.
Analytical Chemistry Unit

Ever since polybrominated biphenyls (PBBs, sold as Firemaster®) were inadvertently substituted for cattle feed in the early 1970s precipitating a public health emergency, chemists at the Michigan Department of Community Health Bureau of Laboratories (MDCH-BOL) have been conducting biomonitoring (BM) to quantitatively determine PBBs and more specifically, PBB-153 (principal ingredient in Firemaster®) in human and animal samples (1, 2). Liquid-liquid extraction techniques with subsequent Florisil and Silica Gel column chromatographic cleanup (LLE-Cleanup) with fractionation has enabled MDCH-BOL to monitor numerous organochlorine pesticides, polychlorinated biphenyls and PBBs in human serum.

Polybrominated-diphenyl ethers (PBDEs) represent an emerging class of persistent organic pollutants. The level of selected PBDE congeners such as BDE-47 seems to be increasing at an alarming rate in human serum (3). Chemists within the Division of Chemistry and Toxicology at MDCH-BOL recently presented preliminary findings for a new and more cost effective approach to the isolation and recovery of PBDEs from serum at a recent meeting of the CDC Chemical Terrorism Laboratory Network (CTLN) Level-1 meeting held at the state laboratory in St. Paul, MN. Acquisition of a new GC-MSD instrument has enabled a cost effective approach to serum PBDE analysis and is adding value to the existing MDCH BM program.

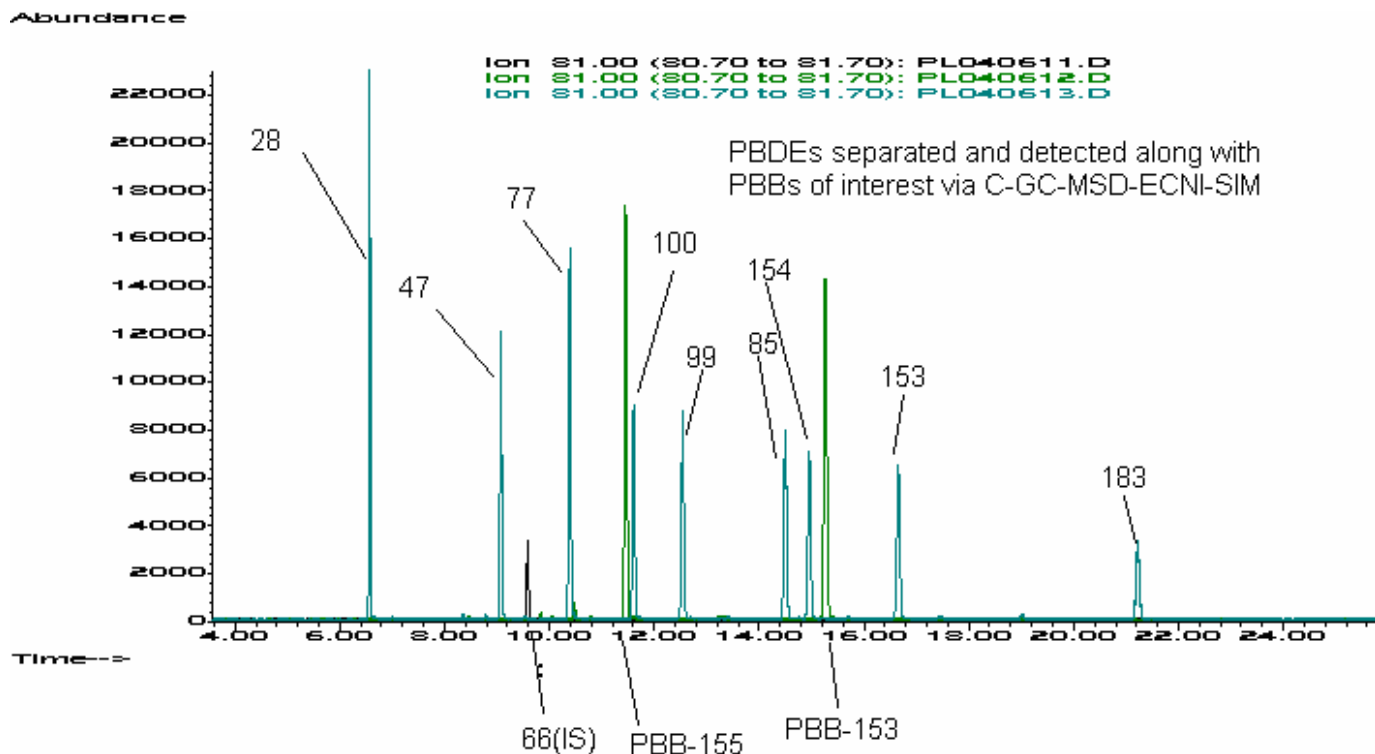
In 2001, about 24,500 metric tons of penta-BDE was marketed in the United States. Approximately 98% of the global penta-BDE is produced and used in the U.S. as flame-retarding polyurethane foam in furniture upholstery. It consists of tetra-, penta-, and hexa-brominated congeners, especially BDE-47(tetra), BDE-99 (penta), BDE-153 (hexa) and also BDE-100 (penta) and BDE-154 (hexa) (4). PBDEs topped the list of chemicals found in the blood of one individual according to a recent article published in a popular magazine (5). PBDEs have been linked to developmental neurotoxicity and endocrine disruption (6). Schechter and co-workers suggest a potential for neurodevelopment deficiencies,

peripheral nervous system damage, endocrine disruption and cancer (4). Laboratory animals dosed with high levels of PBDEs exhibit neurological deficiencies and endocrine disruption (7).

State epidemiologists as well as university scientists who depend on MDCH to conduct trace analysis of human serum to determine persistent organic pollutants (POPs) have requested the addition of a select number of BDE congeners to the existing menu of POPs. It was important that a method be found to distinguish between PBB-153 and any of the nine PBDEs selected. It is likely that human serum specimens from Michiganians would contain PBB-153 and perhaps other PBB congeners from the Firemaster® disaster. It is very important that biomonitoring to be able to measure concentration levels of POPs in human serum at or below 1 part-per-billion (ppb). Finding 6.9 ppb of BDE-47 in human serum corresponds to 6.9 ng BDE-47 in each milliliter of serum for that particular individual. The challenge of measuring low levels of PBDEs was met using capillary gas chromatography-mass selective detection with electron-capture negative ion and selective ion monitoring (C-GC-MSD-ECNI-SIM) along with a unique temperature programming technique. The chromatogram shown on page 9 demonstrates that PBB-155, which is added to each and every serum sample for quality control purposes, and PBB-153 are both chromatographically baseline resolved from all nine BDE congeners.

Chemists at MDCH-BOL are currently performing trace quantitative analysis for POPs to include PBDEs, as well as exploring alternative and more cost effective approaches to sample preparation for human serum, breast milk and tissue. Our objective is to determine the extent to which these brominated chemicals pose a threat to the health of Michigan residents.

C-GC-MSD-ECNI-SIM Chromatogram showing baseline chromatographic resolution among the nine targeted PBDEs and PBB-155 (added as a surrogate in LLE-Cleanup) and PBB-153 (principal congener in Firemaster®, possibly present in human serum specimens). BDE-66 is added to the final extract as an internal standard (IS).



References:

1. Fries, G., *CRC Crit Rev Toxicol* (1985) 16: 105-156.
2. Halbert, F. and S. Halbert, Bitter Harvest. The Investigation of the PBB Contamination: A Personal Story. (1978) Eedmans Pub. Co., Grand Rapids, MI.
3. Sjödin, A., et al. Retrospective Time-Trend Study of PBDE and PBB and PCB Levels in Human Serum from the United States, *Environmental Health Perspectives*, 112(6), May, 2004, 654-58.
4. Schechter, A., et al. PBDEs in U.S. Mother's Milk, *Environmental Health Perspectives*, 111(14), Nov, 2003, 1723-1729.
5. Duncan, D. The Pollution Within Us, *National Geographic Magazine*, October, 2006 p. 116.
6. Focant, J. et al. *Analytical Chemistry*, 76 (2004), 6313-6320.
7. Morland, K. et al. *Environmental Health Perspectives*, 113(12), Dec 2005, 1689-1692.

2006 Survey Of Michigan Laboratories on the Use Of eGFR Calculations

John Dyke, Ph.D.
Bureau of Laboratories

Kidney Foundation of Michigan were key factors. As indicated in the 2004 survey, the lack of capacity to re-program laboratory information systems continues to be a barrier for laboratories in the implementation of eGFR reporting.

Summary of Hospital Laboratory eGFR Reporting Practices, Michigan, 2004 and 2006.

	2004 n= 67	2006 n= 70
Routinely report eGFR	22 (22%)	47 (67%)
Report eGFR upon request	13 (19%)	7 (10%)
Do not report eGFR	39 (58%)	16 (23%)
Plan to implement eGFR reporting		10
No plan to implement at this time		6
Reason for implementing eGFR reporting		
Physician request		30
NKFM education efforts		25
Medicaid Policy		18
PA 327		7

In July 2004, the Michigan Department of Community Health Bureau of Laboratories sent a survey to Michigan hospital laboratories regarding their protocol for the reporting of glomerular filtration rate (eGFR) when a creatinine test was performed. The results of that survey helped establish laboratory practice consensus guidelines that were published in the Bureau of Laboratories *LabLink* volume 10, number 2 page 9 (www.michigan.gov/mdchlab). Since that time, the National Kidney Foundation of Michigan (NKFM) has initiated a statewide awareness program on the benefits of eGFR, Michigan Medicaid published a policy bulletin requiring eGFR reporting and Governor Jennifer Granholm signed PA 327, which requires eGFR reporting whenever a creatinine test is performed.

In August, Michigan clinical laboratories were once again surveyed to evaluate the impact of policy changes and educational efforts on the availability of eGFR reporting. The results from the 2006 survey indicated that, compared to the 2004 results, there was a significant increase (odds ratio of 5.21 with a range from 2.25 to 12.18) in the number of laboratories that now include eGFR in routine reporting. In 2006, 67% of the laboratories indicated routinely providing eGFR results compared to 22% in 2004. Twenty-three percent (23%) of the 2006 respondents are not currently providing eGFR results. More than half of those not currently reporting eGFR plan to implement reporting within twelve months.

When laboratories were asked what was the major motivation for implementing eGFR, respondents reported that physician requests and the educational efforts of the National

Division of Chemistry-Toxicology Staff Update

Kevin Cavanagh, Ph.D.
Division of Chemistry and Toxicology

Martha Boehme, MT(ASCP), Chemical Terrorism Laboratory Educator.

Martha (Marty) was previously the Project Coordinator of the CDC-supported Initiative to Integrate Clinical Laboratories in Public Health Laboratory Testing at the Michigan Department of Community Health Bureau of Laboratories. As the new chemical terrorism laboratory educator/coordinator, she is excited to continue working with laboratory colleagues she met through the Integration Initiative, the goal of which was to strengthen the existing network of clinical and public health laboratories by providing technical support and educational resources, particularly in the area of antimicrobial susceptibility testing.

Marty will conduct hospital training "Laboratory Response and Hospital Preparedness in a Chemical Exposure (Terrorism) Event," and will work with other partners to coordinate the state's chemical preparedness activities. She earned her B.S. degree in Medical Technology from Michigan State University, and prior to joining MDCH in 2001, spent nearly 25 years in Sparrow Hospital's Microbiology Laboratory in Lansing, MI.

Ninah Sasy, Departmental Analyst/Lab Scientist

Ninah began working at MDCH- Bureau of Laboratories as a General Office Assistant. She recently graduated from Michigan State University with a Bachelor of Science Degree in Medical Technology. While working at MDCH she has taken the initiative of working with the Chemistry & Toxicology managers to update the division's web pages. She has also enhanced her database development skills,

which have been helpful for tracking grant preparedness activities. Ninah will be active in education and outreach of laboratory preparedness activities for hospital and public health staff. She looks forward to pursuing a Master's in Public Administration this spring at Central Michigan University.

Christin Lott, Laboratory Scientist

Christin attended Louisiana State University and graduated with a Bachelor of Science degree in Chemistry. She hopes to complete a Forensic Science Master's program next year having completed her internship at Sparrow Hospital's Toxicology Testing Center. Her research involved screening postmortem blood and urine specimens for basic drugs using capillary electrophoresis. Christin began working at MDCH as a laboratory scientist in the Analytical Chemistry section working on the Fish Monitoring Program, testing for PCBs and pesticides.

LabLink is published quarterly by the Michigan Department of Community Health, Bureau of Laboratories, to provide laboratory information to Michigan health professionals and the public health community.

Director, Bureau of Laboratories
Frances Pouch Downes, Dr.P.H.

Editor
Susan L. Shiflett

DCH is an Equal Opportunity Employer,
Services and Programs Provider

DCH-0096