



The Communicator

Second Facility Offers Genetic Testing

The University of Pittsburgh Medical Center (UPMC), in Pittsburgh, Pennsylvania, joins PreventionGenetics, LLC, a Marshfield, Wisconsin biotechnology company, as the second facility offering molecular genetic testing for malignant hyperthermia susceptibility.

“We’re looking forward at UPMC to working with physicians, MHS patients, and MHAUS to provide a comprehensive genetic program for the MH community built on technical excellence and consultative support,” said Dr. Jeffrey Kant, of UPMC. “The Division of Molecular Diagnostics in the Department of Pathology is an active academic medical center laboratory providing more than 50 different tests including DNA sequence-based assays for inherited disorders. In addition, the laboratory works closely with the Center for Medical Genetics to facilitate expert genetic counseling when appropriate, and has a longstanding relationship with an MH clinical expert in our Department of Anesthesiology.”

Those who have tested positive by the biopsy contracture test; relatives of those who have been tested positive by the contracture test; those who have been found to have a mutation causative for MH under a research protocol; relatives of those with a known mutation for malignant hyperthermia; and those with a very high likelihood of having experienced an MH episode can now contact either of the two CLIA-licensed laboratories for molecular genetic testing.

PreventionGenetics was the first lab in North America to offer a DNA test for MH earlier this year. Since that time, it has conducted eight tests for MH



**James Weber, Ph.D.,
President,
PreventionGenetics**

susceptibility. James Weber, Ph.D., President of PreventionGenetics, is pleased with the response and proud of the valuable service his company provides in preventing disease and disability through genetic testing.

“MH is an almost perfect example of disease prevention through genetic testing,” said Dr. Weber. “The RYR1 gene is very large. It’s relatively expensive and difficult to find causative mutations within this big gene.

However, once such a mutation is detected in one family member, then other family members can be tested at much lower cost.”

It is recommended to consult your biopsy center director to be referred for genetic testing. Molecular genetic testing for MH susceptibility does not replace the muscle biopsy test, and genetic counseling is strongly advised to help interpret the results of the test and evaluate family members for testing.

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The Communicator is published four times each year by the Malignant Hyperthermia Association of the United States (MHAUS) and is made possible by a generous grant from Proctor & Gamble Pharmaceuticals, manufacturers of Dantrium. The Communicator is intended to serve the information needs of MH-susceptible families, health care professionals, and others with an interest in MH.

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Malignant Hyperthermia (MH) is an inherited muscle disorder which, when triggered by potent inhalation anesthetics and succinylcholine, may cause a life-threatening crisis. The incidence of MH is low, but, if untreated, the mortality rate is high. Since the advent of the antidote drug, dantrolene sodium, and with greater awareness of the syndrome, the mortality rate has decreased. Great advances in our understanding of MH have been made since it was first recognized in the early 1960s, but the nature of the fundamental defect(s) is still unknown.

MHAUS advocates that all surgical patients undergoing general anesthesia should receive continuous temperature monitoring, that adequate supplies of dantrolene be stocked near the OR and that thorough family histories be obtained.

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Second Facility Offers Genetic Testing

Continued from front page

The molecular genetics test simply requires a blood sample. Blood can be drawn in a local laboratory and sent to the testing facilities. The doctor ordering the test will receive a report and evaluate the results. No biopsy or special tissue is required.

MH is inherited in an autosomal dominant fashion, meaning only one mutated gene will lead to the disorder and it may come from either parent. MH has been associated with at least 23 mutations. One particular gene, called the RYR1 gene (ryanodine receptor of skeletal muscle) is associated with the majority of cases of MH. There are other genes that may cause MH as well.

Genetic testing done with a DNA sample is less expensive and less invasive than testing a muscle biopsy because DNA can be extracted from cells that are found in a blood sample or from any tissue. The value of genetic testing resides in the fact that if a mutation is found in a family member, the other family members with that same mutation are considered susceptible to MH and are at risk. In statistical terms, the test is

Molecular Genetic Testing Sites For MH

PreventionGenetics, LLC

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Marshfield, WI 54449 USA
Phone: (715) 387-0484
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www.preventiongenetics.com

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S701 Scaife Hall
3550 Terrace Street
Pittsburgh, PA 15213
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not very sensitive but is very specific, meaning that a positive report listing a documented causative RYR1 mutation virtually confirms the patient of being at risk for MH.

The Malignant Hyperthermia Association of the United States is a not-for-profit organization dedicated to reducing the morbidity and mortality of malignant hyperthermia and other heat-related disorders by: improving medical care related to MH; providing support information for patients; and improving the scientific understanding and research related to MH and other kinds of heat-related syndromes.

For more information or for materials on malignant hyperthermia or MHAUS' programs, call 607-674-7901; write MHAUS, PO Box 1069, Sherburne, NY 13460; or visit us on the Internet at www.mhaus.org.

MH Testing Brochure Explains Issues, Procedures

MHAUS has completed a brochure that provides information about the muscle contracture and molecular genetic tests for MH susceptibility. The brochure is in four colors and folds out to 22" x 8-1/2". One side contains information about the muscle contracture test, while the other side explains molecular genetic testing for MH.

Geared toward both medical professionals and the general public, the brochure will be available at conventions, on the MHAUS website at www.mhaus.org, or by calling the MHAUS office at 607-674-7901.

ASA Abstract Based On MH Registry Data

It is noteworthy that of the 11 abstracts on the subject of MH that were accepted at the 2005 American Society of Anesthesiologists meeting, only one was selected for poster discussion presentation. The others get more limited exposure as poster presentations. This one, by Dr. J. Burkman from the University of Washington in Seattle, is the only study this year based on data in the North America MH Registry.

Dr. Burkman and his advisors defined their project in the fall of 2004. The project underwent IRB review at the University of Washington. Because the Registry serves as an 'Honest Broker' this and many other projects receive expedited review. Dr. Burkman received his data, reviewed it with Registry staff in January 2005, and completed his successful abstract on schedule. We hope that more investigators will also find the Registry data useful. Call anytime at 412-692-5464.



The brochure will help the medical profession and the general public better understand the issues and procedures involved with MH testing.

The brochure will help readers better understand the issues and procedures involved in testing for MH. The brochure

explains why the muscle contracture test is the "gold standard" for diagnosis of MH. It also explains who should be tested and why. The cost, complications, alternatives, as well as the accuracy of the contracture test are all discussed.

The molecular genetic testing section explains the test and when someone should consider the test. It also explains how molecular genetic testing applies to MH and who is eligible for the test.

The brochure also lists all the lab centers throughout North America that offer the contracture or molecular genetic test.

You are cordially invited to attend the upcoming

Malignant Hyperthermia Association of the United States Recognition Reception

in honor of

2005 Hotline Partnership Award Recipients

given to highlight the partnership between a Hotline Consultant and a Medical Professional contacting the MH Hotline for help

Daniel Massik – MHAUS

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MHAUS Media Award

&

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Barbara W. Brandom, MD

7:00 - 8:30 p.m., Sunday, October 23, 2005

Embassy Suites Hotel

Atlanta at Centennial Olympic Park

Lobby Level

Atlanta, GA

(phone) 607-674-7901 (fax) 607-674-7910 (e-mail) gloria@mhaus.org

Report From The MHAUS Planning Meeting

The MHAUS Board and staff met in August 2005 at The Inn at Montchanin Village located in the heart of the Brandywine Valley of Delaware. The attendees enjoyed the charming countryside setting and braved the high heat and humidity to participate in planning activities for MHAUS for the coming year. Dr. Henry Rosenberg, President of MHAUS, convened the meeting, welcomed all and reviewed the various accomplishments achieved in the past months. He reported there is word of possible new submissions to the FDA, which could be of interest to the organization, and noted plans to watch pending developments. "A company, Lyotropic Therapeutics, has submitted a request for approval to the FDA of a new formulation of dantrolene that would not require mixing with water and would be more concentrated than the current preparation," reported Dr. Rosenberg.

The NMSIS portion of the organization reported positive achievements over the past months. These include: new Patient Brochure to help answer some of the many questions posed by NMS patients and caregivers; updates/improvements made to the NMSIS website, such as the addition of information on Serotonin Syndrome (thanks to Dr. Paul Keck), an updated, secure ordering system for NMSIS brochures and reprints, and incorporation of a quarterly online *NMSIS Update* to highlight important advances within the organization. Of particular importance this past year is the *Promising New Investigators Awards*. This new program,

supported by Janssen L. P., offered two monetary awards for early-career psychiatrists' submissions that were reviewed by a panel of judges. The best two papers submitted, on the topic of new insights on psychotropic drug safety and side effects, received monies to help them attend the American Psychiatric Association's annual meeting to take advantage of the many educational opportunities made available there. Plans for an NMS slide show (with CME credits) on the NMSIS website, the possibility of other CME conferences (for both MHAUS and NMSIS), and the development of treatment guidelines for NMS will also be pursued in the coming year.

Dianne Daugherty, MHAUS Executive Director, spoke about the work being administered to promote MH education and awareness. The MH Procedure Manuals, specifically designed for either a hospital, ambulatory surgery center, or office-based center, are extremely popular items as they offer "one-stop shopping." The manuals not only outline how to recognize and treat MH, but they also incorporate a checklist for each staff member involved in the management of an MH incident. The manuals have the potential to decrease response time by 50%! Promotion of all MH educational materials is ongoing, and MHAUS is expanding the number of meetings attended in an attempt to reach specialties such as pediatric anesthesiologists, oral and maxillofacial surgeons, and plastic surgeons with our MH educational message. A new MH Alert Packet

containing a bright red MH alert band and two large stickers to be placed on the patient's chart, and a red silicone MH Awareness Band designed to bring attention to the disorder and to MHAUS, are new ideas being received with much enthusiasm.

With the new MH molecular genetics blood test now available for MH-susceptibles and their family members (who fit specific criteria), the development of a thorough system to answer questions and direct callers to the appropriate contacts has been a high priority. MHAUS staff consistently offers suggestions and insight to enhance the present programs and provide additional avenues for the membership and community-at-large. The MHAUS website remains very active and is a growing focus for the organization as a way to quickly communicate the most up-to-date information. The Patient Liaison Committee and staff are working together to share the patients' concerns through a planned patient mini-conference in July 2006. "Grass roots" initiatives are bringing the concerns of MH susceptible patients to the attention of their state legislatures and insurance providers.

The Board reviewed and approved the budget and plans for the upcoming fiscal year. A presentation was made by Dr. Jim Weber, President of PreventionGenetics, LLC, the first molecular genetics testing center for MH, to help all at the meeting understand the molecular genetics test. Dr. Weber introduced him

continued on next page

self and his business. He shared information about all the clinical tests his company currently performs and described his present and future plans for the MH test. He then went over a report on the molecular genetics findings so far from the testing his company has completed and offered suggestions for future development options and opportunities available through appropriate funding and resources. "In the opinion of many MH experts, people who want to have genetic testing done through PreventionGenetics should be evaluated at MH Diagnostic Biopsy Centers first and have the prescription for testing at PreventionGenetics written for them by the biopsy center physician. This will ensure that the person and family gets relevant followup discussion," said Dr. Barbara Brandom.

As additional insight, Tina Sellers, Genetic Counselor at Coriell Cell Repositories, also spoke to the board about the history of the Coriell Institute for Medical Research, clarified what a cell repository is and, specifically, what happens at a human genetic cell repository. She outlined how Coriell can work with MHAUS to advance MH research. Ms. Sellers completed her presentation by explaining the logistics of sample submissions and answered questions from the board members. "Ms. Sellers' presentation offered valuable insight into the new directions being offered in the molecular genetics arena and gave the board 'food for thought' regarding ways MHAUS and NMSIS might take advantage of the opportunities available," said Dianne Daugherty.



It was agreed that, in addition to the ongoing programs, specific areas of focus for the coming year will be: MH molecular genetics testing; CME educational offerings via the website(s); a drive to increase awareness on the part of medical researchers that the North American MH Registry database is available for the production of clinical papers; and an initiative of support for improvement of the sensitivity of the molecular genetic blood test for MH through testing and research and joint cooperation of the molecular genetics testing centers, the muscle biopsy testing center directors, the NAMH Registry of MHAUS, the MH Hotline Consultants, and MHAUS administration.

Al Rothstein, MHAUS Public Relations Consultant, reported on ways to make public relations a contributor in supporting the mission of MHAUS and outlined his focused plan and timeline to accomplish specific goals. "Public relations can be more than simply public awareness," said Rothstein. "Once that awareness is established, medical specialties see our value to them,

which includes the items we offer that will help them prepare in case of an MH episode."

The North American MH Registry of MHAUS Director, Dr. Barbara Brandom, relayed the Registry goals and how it can benefit MHS patients and remain a strong part of the research effort to find mutations that are causal of MH. The liaison the Registry performs between MHAUS, the biopsy testing centers, and the Registry's impressive database is an important facet in the positive future direction of the organization. She discussed the development of the Registry's database to make it more accessible and outlined future directions she would like to see MHAUS support. "We are making steady progress toward our goals," said Dr. Brandom.

The current slate of officers will remain for another year via a unanimous vote. The meeting ended on a Saturday afternoon after vigorous discussion on the direction of focused efforts for the coming year. Modifications were made to the budget to incorporate the efforts into the regular activities of MHAUS administration.

PeriAnesthesia Nurses Visit MHAUS Booth in Chicago

MHAUS was represented in April 2005 at the 24th National Conference of the American Society of PeriAnesthesia Nurses (ASPAN) in the Windy City, Chicago. ASPAN is a national organization supporting the interests of the nation's 49,000 registered nurses practicing in all phases of preanesthesia and postanesthesia care, ambulatory surgery, and pain management.

During the five-day conference, which had record-breaking attendance, perianesthesia nursing professionals swarmed the MHAUS booth asking questions regarding MH care, looking for the new educational items, and providing answers to a short MHAUS survey.

"Thanks for attending," "We're happy you could be here," and "We appreciate what you do" were some of the comments shared with MHAUS Business Manager Jo Nichols, who attended the booth. On display were

samples of the popular MH Procedure Manual, to help emphasize the benefits it provides. The Procedure Manual is an essential tool for training staff to respond to an MH crisis in a timely and efficient manner. "The manuals have the potential to reduce the response time by 50%," explains Jo. The manual is MHAUS' most popular educational tool. The nurses who have used one had no problem sharing their enthusiasm with their colleagues at the booth. The MH Procedure Manual is available in three versions to accommodate hospital, ambulatory, and office surgery settings.

During the conference, nurse Pat Brockway, BSN, RN, CPAN, CAPA, conducted an accredited course entitled *Malignant Hyperthermia Mock Crisis*. "Pat's accurate, well-organized presentation was informative and inspiring," says Jo Nichols. Recognition and prompt, efficient

treatment of MH are mandatory for a successful outcome to this uncommon anesthetic-related disorder. The presentation gave hands-on experience using a team approach to a mock MH crisis, that included practicing the mixing of expired dantrolene sodium, the MH antidote. The attendees can now return to their workplace to review and enhance the existing MH protocols to help increase efficiency and understanding. "Many nurses expressed their disappointment at being turned away from this course, in spite of the fact that ASPAN allowed attendance to double from the 60 originally approved," commented Jo Nichols.

Formerly known as recovery rooms, Post Anesthesia Care Units (PACU) originated in the 1940s as a result of the necessity to centralize patients, equipment and personnel for the efficient postoperative treatment required. Surgery patients had been cared for postoperatively in all nursing areas of the hospitals. But the more extensive and complicated surgeries being performed increased the need for adequate and more detailed postoperative care.

Throughout the years since the 1940s, PACU administrations have aggressively introduced new equipment and technology to improve patient care in the units, and the increased nursing staffs have demanded educational sources specific to their specialty. Because of the importance of risk management, ASPAN has introduced the ASPAN Standards of PeriAnesthesia Nursing Practice.

Honor Your Anesthesia Care Professional

MHAUS has developed a way you can recognize a particular anesthesia professional in print! Through our program called "Honor Your Anesthesia Professional," we offer the following: For a \$50 donation or more, your personal thank you message can be directed to your "special" anesthesia professional in our quarterly newsletter, *The Communicator*. We will print your personal message (25 words or less) as well as highlight the names of those professionals in a prominent location in *The Communicator* for a full year.

Additionally, recognition will be highlighted on the MHAUS website reserved for this elite group. If an address is available, MHAUS will send a congratulatory letter to the anesthesia professional passing along the appreciation of one of his/her patients.

If you feel your anesthesia professional deserves your special thanks, please call or email the MHAUS administrative offices to express your appreciation of their outstanding care!

MHAUS Attends FASA Convention

MHAUS Executive Director Dianne Daugherty attended the Federated Ambulatory Surgery Association (FASA) Convention this past spring to increase the awareness of MHAUS and its educational material, develop liaisons with the AAAHC, AAAASF and JCAHO accrediting organizations, and to research joint efforts with other exhibitors.

MHAUS was there as an attendee and found that accrediting agencies are interested in sharing educational material on

MH and, as part of their protocol, the preparedness for MH. It was discovered that the AAAASF does require that, if an accredited facility uses triggering agents or succinylcholine, they either stock 12 vials of dantrolene and have an agreement with a facility nearby to get an additional 24 vials within minutes, or they have 36 vials on hand at the site. JCAHO does not require a particular number but does recommend stocking dantrolene where triggers are used.

Dianne Daugherty spoke with various exhibitors and discussed the fact that there have been MH deaths recently and preparedness to treat MH needs to be a priority in ASCs as well as hospitals. Some exhibitors relayed a willingness to consider including the MH Hotline number with their products.

Discussions regarding accrediting insight into ASCs and ways to promote MH awareness were discussed with JCAHO and AAAASF representatives to better understand their rules for accrediting and the strong market growth of ASC. Additional discussions are planned to develop ways to offer advice on patient safety measures to take when it comes to handling a possible MH incident.

“Malignant Hyperthermia recognition and treatment” was suggested to FASA leadership as a featured topic for the next FASA meeting in Orlando, Florida, on May 17-20, 2006.

Looking for a way to make your gift last?

Lifetime Memberships in MHAUS are now available for a one-time cost of \$500 or more. MHAUS Lifetime Members receive a special membership card, no renewal notices, an uninterrupted subscription to *The Communicator*; as well as special acknowledgement in the MHAUS Contributor List each year.

The Lila and Jerry Lewis Memorial Fund

There are many special people who take the time each year to remember their loved ones in a way that helps MHAUS. The people below have made gifts during FY 04-05 in memory of Lila and Jerry Lewis. We are most grateful for their support and special tribute gifts.

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MH Hotline Activity For January - March 2005



Malignant Hyperthermia Hotline Consultants once again answered calls referred by the Poison Center nurses between January and

March 2005. Drs. Adragna, Bandom, Belani, Herlich, Gronert, Litman, Lubin, Melton, Miller, Parness, Rosenberg, Tobin, Theroux, Wedel, Welinski, and Wong fielded 62 reports (actual or suspected cases of MH) and 24 inquiries (questions about MH). The calls originated from 30 states, Canada, and one aircraft carrier. Most of the callers were anesthesiologists (physician anesthesiologists) and certified registered nurse anesthetists (CRNAs). Other callers included intensive care unit specialists, surgeons, and pharmacists. Some of the calls originated from ambulatory surgical centers, but most came from hospitals.

Seventeen of the reports involved children; the youngest was 59-days-old. The most common reason for a Hotline consultation was the development of fever during or shortly after an operation. There are many reasons for fever, most of which fortunately occur far more frequently than malignant hyperthermia. Indeed, the Hotline Consultants felt the majority of cases were either not MH, or unlikely to be MH. The most likely cause of fever was sepsis (infection in the blood), particularly after operations involving the teeth and urinary

tract. The highest temperature was 41.5°C (106.7°F) in a patient who was probably infected from her kidneys or uterus. Another cause of fever was a transfusion reaction during blood product transfusion.

A common reason for Hotline consultation was an increase in carbon dioxide in the patients' expired gas (from the lungs) during the operation. Expired gas carbon dioxide level is monitored during every general anesthetic. The correct amount of carbon dioxide is an important indicator of adequate breathing and gas (oxygen and carbon dioxide) exchange. An increase in carbon dioxide is almost always present during an MH crisis. Although this is often the first sensitive sign of MH, other signs of MH usually accompany the rise in carbon dioxide and Hotline consultants frequently asked callers about their presence. Other causes of carbon dioxide increases that were suspected by Hotline consultants included inadequate ventilation (breathing), equipment problems, and increased delivery of carbon dioxide to the lungs (during laparoscopic procedures when carbon dioxide is intentionally blown into the abdomen) or after reperfusion of an extremity (sudden return of blood flow after it has been blocked for a period of time).

Other presenting signs or symptoms of MH included masseter muscle rigidity (a form of lock jaw), total body rigidity, an increase in blood potassium level, sore muscles after an operation,

and an increase in breathing rate. All of these also precipitated Hotline calls.

The most common question concerned the anesthetic management of patients with a family history of malignant hyperthermia who are scheduled to undergo surgery. Often the family or personal MH history is not straightforward, or important information is missing, and the caller is seeking advice as to whether the patient needs to be treated as MH susceptible. This is a reminder to all anesthesiologists to provide patients who have had a possible MH episode with a written description of the episode, as this is very helpful to future anesthesia providers in their decision making. Other questions included the stocking of dantrolene (the drug used to treat MH is rather expensive and rarely used, so that many small facilities would rather not stock a full supply) and whether rare congenital syndromes (e.g., Noonans syndrome, Russell Silverman syndrome, King syndrome) are associated with MH susceptibility. A most interesting question was whether a donated kidney from a patient with a family history of MH put the transplant recipient at risk for MH. This question was discussed electronically among the Hotline consultants, most of whom agreed that there was no reason to think this would be a problem. The recipient and the new kidney apparently did well.

continued on next page

In the U.S. and Canada, the MH Hotline is 1-800-644-9737

Outside the U.S., call 1-315-464-7079

During the three-month period there were four Hotline reports of cases that consultants felt were probably MH and three that were definitely MH. Several cases provided interesting learning points. A patient with a known family history of malignant hyperthermia was undergoing a non-triggering anesthetic. (Drugs known to trigger MH were being intentionally avoided). During the case the patient required additional anesthetic and an MH-triggering anesthetic gas was briefly given to the patient! The lesson to be learned from this case is that anesthesiologists should disable the anesthetic machine to make it impossible to administer anesthetic gases to an MH susceptible patient (by removing the vaporizers or taping them in the off position) and removing the succinylcholine from the operating room.

Another lesson that consultants have learned before, and again this quarter, is that skin temperature does not necessarily accurately reflect core body temperature (the temperature of the internal organs). Skin temperature was being monitored during a general anesthetic and was 35°C (95°F). Toward the end of the procedure the carbon dioxide appeared to be increasing and core temperature was checked and found to be 43.8°C (111°F)!

Because of cases like this one, most Hotline Consultants recommend that core temperature be monitored during any general anesthetic.

Finally, a young patient had moderate masseter muscle rigidity after induction of anesthesia with sevoflurane (gas) and succinylcholine (both triggering agents). The anesthetic course was otherwise uneventful and there were no other signs of MH. Several hours after surgery the patient complained of severe muscle aches and blood-tinged urine. The consultant did not think this was MH and felt the sore muscles were a minor side effect of succinylcholine, but he recommended checking the urine for myoglobin (a muscle breakdown product found

in the blood and urine after severe muscle damage). To the consultants' surprise, blood tests indicated the presence of severe muscle damage (the CK was 69,000 U/L). The patient probably had undiagnosed underlying myopathy (muscle disease) that was unmasked by the anesthetic administration.

In summary, review of the Hotline reports and questions indicate that the Hotline serves a useful purpose in helping anesthesiologists and other health care providers differentiate MH from other disease. Providers are considering MH in the diagnosis of patients who have signs and symptoms often associated with MH and are seeking advice as to the best course of action.

Meet This Issue's Hotline Consultant

Dr. Cynthia Wong is an anesthesiologist at the Northwestern University Feinberg School of Medicine in Chicago. She has enjoyed being a Hotline Consultant for 13 years and was formerly the assistant medical director of the now closed Northwestern University MH Testing Center. Her clinical and research interests center on obstetric anesthesiology. Dr. Wong lives in Chicago with her husband and four daughters.



Dear Friend,

Thanks to you, MHAUS has accomplished many significant advances in its quest to prevent death and disability from MH.

The long-awaited MH molecular genetic blood test is now available at two laboratories. MH policy and procedure manuals are available to prepare for an MH crisis and MH education in Spanish is offered via the website. Our new "Patient Safety Awareness Program" includes an MH-Susceptible Alert Package and the MH Awareness Band.

These advances are in addition to our basic vital MH programs, such as the lifesaving 24/7 Hotline, updated educational materials, and website.

Your continued support is essential to move future programs forward, like the new in-service video and CD-ROM, web-based accredited programs, Speakers' Bureau, support for MHS patients who need financial assistance with the molecular genetic test, and ongoing research efforts to eliminate the threat of MH.

Your support is tremendously appreciated.

Cindy, Diane, Dianne, Fay, Gloria, Jo, the Board of Trustees, the PAC, Hotline consultants, and North American MH Registry of MHAUS staff

NMSIS Offers 2nd Annual Promising New Investigator Awards

The Neuroleptic Malignant Syndrome Information Service (NMSIS) is pleased to announce the 2nd Annual Promising New Investigator Awards. Residents, fellows, students, and junior faculty are invited to submit a manuscript on psychotropic drug safety and side effects by February 28, 2006. Prizes of \$2500 and \$1500 will be awarded to first and second place winners at the American Psychiatric Association (APA) convention in Toronto, Canada, May 20-25, 2006. The money is intended to encourage research in drug safety and to help toward the costs of attending the APA meeting. *Current Psychiatry*, a journal of practical evidence-based clinical reviews, will offer consideration of selected entries for publication. **Please see the rules for this contest at www.nmsis.org or email info@nmsis.org for more information.**

MH Case Of The Month

Have you challenged yourself with the new MH Case of the Month? Visit www.mhaus.org and go to the *Home or Professionals' Info Center* pages and submit what you think is the correct way to proceed with these actual MH cases. Answers with narratives are provided for the previous month's cases. **You could be a winner, too!**

P&G

Pharmaceuticals

Makers of

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To order Dantrium® IV, call 1-800-448-4878

Slide Show Presentation For MH Risk Available

MHAUS offers a slide show kit (CD-ROM and slides format) with lecture notes on "Managing Malignant Hyperthermia Risk in Today's Surgical Environment." This presentation reviews the risk of MH and assesses current trends in the management of MH in the inpatient and outpatient settings. Two CMEs are available.

This is a valuable tool to assist in developing standard of care practice guidelines and algorithms to ensure patients at risk will have access to appropriate interventions for treating MH. This program is arranged so that it can also be used as a self-study program to enhance individual knowledge of MH and the risks involved.

Cost is \$135 plus shipping and handling for the slides and CD. Call 607-674-7901 or visit www.mhaus.org to order.

Every MH-Susceptible Should Wear A Medical ID Tag

MHAUS now has help available for the MH-susceptibles who have no insurance or cannot afford to purchase a medical ID tag.

The **Sandi Ida Glickstein Fund** was established for the purpose of providing free ID tags for MH-susceptible patients who qualify.

To take advantage of this program, please send us a letter indicating why you would like MHAUS to provide you with a complimentary ID tag.

The goal of the free ID tag program is to ensure the safety of MH-susceptibles during an emergency situation and to prevent a tragic outcome from MH.

For further information, please contact MHAUS at P.O. Box 1069, Sherburne, N.Y. 13460-1069; call 607-674-7901, or visit www.mhaus.org.

Have you visited us lately? Log on to www.mhaus.org to get the latest information on MH, order materials, post a message to the bulletin board or learn about the "Hotline Case of the Month."

Yes! *I want to support MHAUS in its campaign to prevent MH tragedies through better understanding, information and awareness.*

A contribution of: \$35 (Basic) \$50 \$100 \$250 \$500 \$1000 (President's Ambassador) or (other amount) \$ _____, will help MHAUS serve the entire MH community.

Please print clearly:

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City: _____ State: _____ Zip: _____

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I am MH Susceptible I am a Medical Professional

Please charge my Visa Mastercard Discover American Express

Name on card: _____

Credit Card Number: _____

Expiration: _____

Please clip out this handy coupon, or feel free to photocopy if you prefer to keep your issue intact, then mail to: MHAUS, PO Box 1069, Sherburne, NY 13460-1069

MHAUS Happenings, Events and Notices

Carry The Card That Cares

Thank you to our many members who are already using the MHAUS affinity credit card offered by MBNA, the only bank whose core business is affinity marketing. This support program, initiated in 1998, provides one more way for our members to help benefit MHAUS while receiving benefits themselves. MHAUS receives royalties from retail transactions.

Through a mutual agreement, MHAUS sends MBNA a random list of names and addresses (no other information is released) for the sole purpose of mailing an invitational letter offering the program. MHAUS does not sell addresses to MBNA nor are any names/addresses released when a member requests us not to do so, and all letters are approved by MHAUS.

Our goal is to provide a credit card program superior to existing premium cards that benefits you. With every purchase, your benefits include the earning of rewards that will give you the flexibility of selecting travel rewards or merchandise, all in one program. The rewards earn miles toward travel worldwide with no blackout dates. There is no annual fee. The credit line is available up to \$100,000 with an introductory 0% APR for one year. Additional benefits are outlined in the letter.

If you have not already received an offer through a special mailing from MBNA, watch for the next invitation to arrive. Or, we would be happy to assist you from the MHAUS office. We invite you to consider participating in this program which benefits all concerned.

□ **Panel Discussion: Malignant Hyperthermia in Outpatients – Cases from the MHAUS Hotline**
Ronald S. Litman, D.O., F.A.A.P., Henry Rosenberg, M.D., Joseph Tobin, M.D., Ph.D., and Richard F. Kaplan, M.D. will take part in a panel discussion from 3:00 to 4:30 pm on Friday, October 21, 2005, at the SAMBA Mid-Year Meeting at the Atlanta Hyatt, in Atlanta, GA. Educational goals include learning about management of MH-susceptible patients in the ambulatory surgical setting, preparing the ambulatory center for prevention and treatment of MH, and the types of associated disease states that might be associated with MH.

□ **THANKS!** MHAUS is grateful for the financial support of the following State Societies of Anesthesiology: **Arkansas, Califor-**

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LCDR Alan Lovejoy, Chief Nurse Anesthetist aboard the USS Vinson

nia, Connecticut, Florida, Indiana, Maine, Michigan, New Hampshire, Ohio and Pennsylvania. Our grateful appreciation also goes to the following state components of the American Society of PeriAnesthesia Nurses: **Arkansas, Texas and Wisconsin.** Call the MHAUS office today to ask how your group can help.

□ **New Prices go into effect on October 1, 2005** New prices on all MHAUS products will go into effect on the first of October this year. Please contact the MHAUS office for more details.

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