

IN A DIFFERENT VEIN

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PRESIDENT'S MESSAGE

By Laura Cooling, MD, MS



A Happy Fourth of July to our membership. This spring has been extremely productive, thanks to our education committee. In May, the spring workshop was again held on the MSU campus. By all

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accounts, the workshop was a success with over 20 participants this year. The turn-out and enthusiasm of the participants is encouraging and we hope that the spring workshop can, once again, be a routine right of spring. This year's topic was identification of multiple alloantibodies. We need suggestions for next year's theme. Please send any suggestions to Theresa Downs, Kathryn Watkins or other members of the education committee (please see our web page). You can also bring your suggestions to the annual meeting.

SAVE the DATE. Yes, the annual meeting is just around the corner. Our annual meeting is **September 17 and 18 at Schoolcraft College**. Suzanne Butch has put together a terrific program, including two lectures from Dr. Mary Jo Drew. Topics include blood bank role in hemoglobinopathy patients, trauma, transfusion safety; manufacture of serologic reagents; and the Kay Beattie lecture in immunohematology. Amy Dixon, a perennial favorite, will be back speaking on coping with 4 generations in the workplace. As always, case studies will be back, including a new session on administrative issues.

HOLD THE DATE

**54th MABB
 Annual Meeting:
 September 17 -
 18, 2008**

Registration forms for the annual meeting will be emailed, and sent via US mail, in the next several weeks. If you need hotel reservations, please contact Suzanne Butch. We need to reserve our rooms by August 2nd for preferred rates.

Finally, the board has set a goal of revising our old membership brochure. Sharon Lowry, Ann Steiner and others are the lead people of this project. We hope to include a few statements of **"What MABB membership has done for me"** as part of the brochure. We are openly calling for comments from the membership for the brochure. I would like to include all the comments as part of a running slide show and the MABB web site. Please consider dropping us a line.

I look forward to seeing you this September.

Education Committee News

By Terry Downs
Education Committee Chair



Thursday, May 8, 2008 was the date for “Project: Antibody ID”, the subject of the MABB Spring Wet Workshop. Approximately 20 participants attended this special session in designing their own workshop. Drawing on the theme of Project Runway, technologists from around the state were given a challenge to solve a complex workup using a variety of methods available. A

morning session of lectures started with Diane Stockman from Southeast Michigan American Red Cross with a presentation on performing antibody ID’s. Kathy Shortridge (Immucor) and Beth Brauer (Ortho) presented on the theories behind solid phase and gel technologies respectively. Kathryn Watkins described the process to perform rule outs and Terry Downs discussed finding blood for patients with antibodies. Then everyone moved to the lab for the rest of the day to ID their samples using solid phase, gel, and tube methods. Additionally, ficin treated panel cells were available to compare with untreated cells. There were several lab proctors (Vija Miske, Michelle Bensette, Andrea Davis and Suhur Yusef) helping and available for assistance.



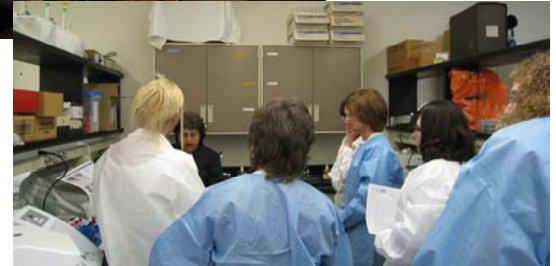
The day was beautiful, the campus (Michigan State University) was lovely and the workshop was a complete success. Everyone was able to ID their samples. Some technologists just wanted practice with the methods they use at their facility, some wanted to see new methods and some wanted to try them all and compare. Since MABB is a sponsor of P.A.C.E.® credit, technologists were able to document their credit for continuing education purposes. This is one of the few wet workshops in the country and we are proud that MABB has continued to support this venture.

The Education Committee is now in the process of planning two fall RAP sessions on transfusion reactions.



Dr. O’Malley and Sharon Lowry will be presenting at these RAPs at a Southeast Michigan location and up in Gaylord. Watch for information to come!

More Photos from the Spring Wet Workshop!





Call For Posters

We are once again calling for posters to display at the MABB annual meeting. Last year, we had posters from Henry Ford and the Univ. of Michigan. If you have a poster you displayed at a recent meeting, please consider sharing it at our fall meeting. Please contact either Laura Cooling (lcooling@med.umich.edu) or Suzanne Butch (butchs@med.umich.edu). We will need the title of the poster, dimensions and date of last presentation.

What Does MABB Membership Mean To You?

The board has decided to update our membership brochure. As part of that effort, we would like to include a few comments from the membership. All comments will also become a part of our web site and will be included in a running slide program during the 2008 Annual Meeting.

Please take a few minutes to write a sentence or two to share a personal anecdote, a rewarding educational experience, remembrances or attending your first meeting, examples of networking or professional advancement. You can send your comments to Sharon Lowry (lowrysh@med.umich.edu), Ann Steiner (ASteine2@ocdus.jnj.com), Laura Cooling (lcooling@med.umich.edu) or any member of the board.

The Potential for Inappropriate Cryoprecipitate Usage in Argatroban Toxicity

Malti P. Kshirsagar, M.D.^{1*}, Stephen Pipe, M.D.², and Laura Cooling, M.D., M.S.¹

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To the Editor. - Argatroban (Texas Biotechnology Laboratory, Houston, TX) is a reversible, direct thrombin inhibitor known to prolong both the PT and aPTT.^{1,2} Argatroban's potential effects on other coagulation testing is less well known and could lead to improper blood product usage.^{1,3} We recently observed a case of supra-therapeutic argatroban levels associated with a misdiagnosis of a consumptive coagulopathy.

The patient was 58-year-old man with a history of heparin-induced thrombocytopenia (HIT), idiopathic biventricular heart failure and a congestive hepatopathy, who was transferred to our institution for left ventricular assist device (LVAD) placement. Because of a possible underlying pneumonia, he was deemed ineligible for emergent LVAD placement. Over the next 48 hours, the patient rapidly declined and was placed on extracorporeal membrane oxygenation (ECMO) as a bridge to LVAD placement. Because of his history of HIT, the patient was anticoagulated with argatroban during ECMO.⁴ He was started on the recommended infusion dose of 2 mcg/kg/min. Within 24 hrs of argatroban infusion, he had a pronounced prolongation of his PT and aPTT, accompanied by a 20% decrease in fibrinogen. A request for cryoprecipitate was placed for an "argatroban-induced" consumptive coagulopathy. Because the patient's fibrinogen > 100 mg/dL, the request was referred to a pathologist for review.

A medical review of the patient's laboratory and clinical findings showed relatively stable hemoglobin and platelet counts after initiation of ECMO (Table 1). There was, however, an acute rise in hepatic transaminases. Because argatroban is largely metabolized by the liver and can reach toxic levels in patients with hepatic dysfunction, an anti-Factor IIa level was performed as a measure of argatroban activity. As shown in Table 1, the anti-Factor IIa was significantly elevated at 1.6 mcg/mL (therapeutic range 0.4 - 1.2 mcg/mL). It was concluded that the patient's falling fibrinogen levels likely reflected a laboratory artifact due to argatroban toxicity. The request for cryoprecipitate was cancelled and the patient's argatroban dose was decreased to a hepatic-adjusted dose (0.5 mcg/kg/min). Therapeutic levels of argatroban were reached in the following 2 days, accompanied by a nearly 2-fold increase in measured fibrinogen (246 mg/dL).

A derivative of arginine, argatroban directly binds to the thrombin active site, inhibiting the conversion of fibrinogen to fibrin. As a consequence, argatroban can dramatically interfere with clot-based assays,¹⁻³ including the modified Clauss clottable fibrinogen assay (Dade Behring Inc, Deerfield, IL) used by our institution. Argatroban can reportedly decrease the measured fibrinogen by 10-30% in vitro at therapeutic concentrations (0.4-1.2 mcg/mL).¹ As illustrated by

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our patient, supra-therapeutic argatroban concentrations can interfere with the PT, aPTT and fibrinogen assays, yielding abnormal laboratory values suggestive of DIC. The present case highlights the need for caution when interpreting abnormal coagulation results in patients treated with direct thrombin inhibitors to avoid the unnecessary transfusion of blood products.

1. Gosselin RC, King JH, Janatpur KA, Dager WH, Larkin EC, Owings JT. Effects of pentasaccharide (Fondaparineux) and direct thrombin inhibitors on coagulation testing. Arch Pathol Lab Med. 2004 Oct; 128(10): 1142-5.
2. Gosselin RC, Dager WE, King JH, Janatpour K, Mahackian K, Larkin EC, Owings JT. Effect of direct thrombin inhibitors bivalirudin, lepirudin, and argatroban on prothrombin time and INR. Am J Clin Pathol. 2004 Apr; 121(4): 593-9.
3. Walenga JM, Fasanell AR, Iqbal O, Hoppensteadt DA, Ahmad S, Wallis DE, Bakhos M. Coagulation laboratory testing in patients treated with argatroban. Semin Thromb Hemost. 1999; 25 Suppl 1: 61-6.
4. Kawada T, Kitagawa H, Hoson M, Okada Y, Shiomura J. Clinical application of argatroban as an alternative coagulant for extracorporeal circulation. Hematol Oncol Clin North Am. 2000 Apr;

Table 1: Laboratory Findings in Our Patient with Argatroban Toxicity

		Days On ECMO*						
		Day 0	Day 1 AM	Day 1 PM	Day 2	Day 3	Day 4	Day 6
Argatroban dose (mcg/kg/min)		1.5	2	2	0.038	0.1	0.1	0.12
Laboratory Tests	Normal Range							
PT	9.2-11.1 sec	29.6	59.2	83.4	72.8	ND	ND	ND
PTT	19.2-29.9 sec	43.8	>100	>100	72.8	87.1	57.2	49.7
Fibrinogen	150-450 mg/dL	ND†	ND	163	130	246	221	195
Anti-Factor IIa‡	(0.4-1.2 mcg/mL)	ND	ND	ND	1.6	0.5	0.6	0.3
AST	(2-35 IU/L)	54	258	659	808	457	129	56
ALT	(0-45 IU/L)	53	196	432	612	491	307	151

* Patient placed on ECMO between Day 0 and Day 1

†ND=Not done

‡ Measure of argatroban dose

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www.mabb.org

Announcements - Newsletter - Upcoming Events -
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- Useful Links - Photo Gallery - Meet the Board -
Membership Information

Save That Date!!!

The MABB Annual Meeting will be held on September 17-18, 2008. Please save the date and plan to attend! Registration brochures will be arriving in the mail shortly, and the registration form is also available to you online at http://www.mabb.org/meeting_registration.htm.

The program this year offers many valuable presentations, and with both Wednesday and Thursday's sessions approved for P.A.C.E. credits, the Annual Meeting offers plenty of educational value for you. Below you can get a preview of the Meeting's agenda. We hope to see you there!

Wednesday, Sept. 17

- 8:00 Registration & Continental Breakfast
- 8:40 Introduction
- 8:50 Phenotyping for Sickle and Thalassemia Patients: What To Match?
Robertson D. Davenport, MD
- 9:40 Reagents - How Antisera and Reagent Red Cells Are Made
Tama Copeland, MT(ASCP)
- 10:30 Exhibits
- 11:10 2008 Kay Beattie Lecture:
Antibody ID changes over the years
Louann Dake, MA, MT(ASCP)SBB
- 12:00 Lunch & Exhibits (*Sandwich buffet*)
- 1:15 MABB Business Meeting
- 1:45 TRALI & Tribulations
Mary Jo Drew, MD, MHSA
- 2:45 Exhibits & refreshments
- 3:15 Why We Do What We Do -
QC Documentation - Anne Sepienza, MT (ASCP),
CSSGB
BPDR - Sharon Lowry, MT(ASCP)SBB
Stat Testing using various methods - Kathryn
Watkins, MT(ASCP)
- 4:10 Serologic Case Studies
Coordinator: Jan Hamilton, MT(ASCP)SBB
Claudia Grabowski, MT(ASCP)
Brigitte Becker, MT(ASCP)
Sheri Roberts, MT(ASCP)
- 5:00 Adjourn

Thursday, Sept. 18

- 8:00 Registration & Continental Breakfast
- 8:40 Introduction
- 8:50 Coping with 4 Generations in the Work Force
Amy Dixon
- 9:40 The Role of the Transfusion Safety Officer
Colleen Slapak, MS, MT(ASCP)SBB
- 10:30 Exhibits
- 11:10 Blood Avoidance
Cecilia Wells, LPN, AST
- 12:00 Lunch (*Pasta Italiano Bar*)
- 1:00 The Blood Bank Response to Trauma
Sue Adams, MT(ASCP)SBB
- 1:50 Break
- 2:05 The Donors, They Are A Changin'!
Mary Jo Drew, MD, MHSA
- 2:55 Clinical Case Studies
Coordinator: Sherwin Imlay, MD
Laura Cooling, MD, MS
Hui Guan, MD
Supriya Hukka, MD
- 4:00 Adjourn

John Judd Retires

By Louann Dake



On May 9, 2008 the University of Michigan Blood Bank said an official farewell to W. John Judd, FIBMS, MIBiol. John's retirement marks the end of an era for the Blood Banking community in Michigan.

A honorary lecture was presented early in the day by John's former classmate, Marion Reid, Phd. Dr. Reid is currently laboratory head of Immunochemistry at the New York Blood Center. Her presentation included information on molecular methods in Immunohematology and was followed by a luncheon.

Professor Judd was honored by family, friends and colleagues at a retirement dinner that evening hosted by the Department of Pathology at the Michigan League. John was accompanied by his wife Jane. His son, Oliver and daughter-in-law came from England to join John for this special occasion.



John's family: L-R John & Jane (wife), Katie (daughter-in-law) & Oliver (son)



John & Marion Reid



Again that evening, Dr. Reid was a featured speaker and entertained us with stories of John as a student in blood banking. She shared anecdotes from their time together as students in England as well as from early days in John's career. Pictures of a much younger, thinner John (complete with mutton-chop sideburns) were shown. Antics of the "British Mafia", a group of illustrious immunohematologists including Peter Issitt, Malcolm Beck, and George Garritty along with John were remembered.

Dr. Laura Cooling, associate medical director, at the University of Michigan Hospital Blood Bank, and Dr. Robertson Davenport, medical director, were next to pay "tribute" to John. Rumors relayed by John Moulds about John's involvement with a character named Nookie Green were exposed. Details of John's scheme to preserve genetic material from genius Immunohematologists were discussed. John was thoroughly roasted!



John, Dr. Cooling, & Dr. Davenport

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John's humor and valuable expertise will be missed by all his colleagues here at the University of Michigan and at the MABB. We hope John enjoys a well deserved retirement in sunny North Carolina.



John & Dr. Cooling



John & Michelle Tuson

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The deadline for next issue is October 1st!

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