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President’s Letter
Dear BBANYS Members,

This year BBANYS is looking for a few new board members. What makes someone a successful and impactful board member? Leadership traits, hard work, and willingness to work together as a team. This is a good opportunity to discuss some traits and work habits that make people good leaders in their institution and on committees, boards, and other organizations.

Highlights of this year’s meeting:
• 19 separate guest speakers presenting on subjects including platelets, blood banking, RHD genotyping, antibody identification, emerging infectious diseases, and more
• An oral abstract presentation session with selected abstract speakers
• Thursday's workshop will feature case studies involving post transfusion adverse events. Friday morning's workshop will be on antibody identification.
• Friday Administrative Session including commonly cited deficiencies from NYSDOH CLEP surveys, error management, forms creation and mindfulness.
• Opportunities to meet with industry representatives
• 3rd annual Barb Gonnella Fostering Future Leaders Award presentation
• BBANYS Annual Business Meeting
• Socialization time with colleagues from across the state

Registration:
• Register online by June 5, 2017, to get the best rates!
• Download a printable registration form here.

Full Meeting Registration:
(All activities are included for June 15 & 16)
Member - By 6/5 - $250; After 6/5 - $270
Non-Member - By 6/5 - $295; After 6/5 - $315
MT/MLT Student - By 6/5 - $110; After 6/5 - $110

Please join us at the Marriott Syracuse Downtown for the 2017 BBANYS Annual Meeting! There will be lectures covering a wide range of topics and exhibitors to keep you up-to-date on the latest products and services. Register online today or download a printable registration form and join us in Syracuse!

7. Do It, Document It
Most people talk too much and don't do enough. If you want to be a leader in the lab, act upon something. Develop AND implement your plan. Record your work so others may build on your innovation. Develop a new SOP, write and complete a validation plan, or write a contract.

8. See Opportunities Everywhere
There is no need to create opportunities for yourself to lead. The opportunities to lead are everywhere. You just need to be mindful of these opportunities. Are there any opportunities to take on the important, but challenging project no one wants?

9. Be Open
Be open to criticism, feedback is important to develop self-awareness and self-improvement. When you are open to feedback, you have a free source of new ideas that you may not have thought of yourself.

10. Give, Give, Give
Ask not what your lab can do for you, ask what you can do for your lab. Give all your ideas, thoughts, plans. Don't spend your time worrying about whether you are getting credit for what you have done. Just keep giving. It will be noticed.

While there are many paths to success in transfusion medicine, the above suggestions contain a path that has led to success in many individuals, in health care organizations and beyond. I hope you will all consider taking on a greater role in BBANYS, whether as a committee member, an author of a podcast or a newsletter article, or a board member. Please check out the BBANYS website at bbanys.org to learn more about the opportunities to become a leader in our field. On behalf of the BBANYS board, we welcome your participation!

Best regards,

Melissa Cushing, MD
BBANYS President

Join Us for the 2017 Annual Meeting cont'd here

Thursday Registration:
(Daily registration includes all planned meal functions for that day)
Member - By 6/5 - $170; After 6/5 - $190
Non-Member - By 6/5 - $200; After 6/5 - $220
MT/MLT Student - By 6/5 - $70; After 6/5 - $70

Thursday Half-Day Registration:
Half-day registration does not include lunch--will need to indicate am or pm.
Member - By 6/5 - $80; After 6/5 - $100
Non-Member - By 6/5 - $95; After 6/5 - $115
MT/MLT Student - By 6/5 - $30; After 6/5 - $30

Friday Registration:
(Daily registration includes all planned meal functions for that day)
Member - By 6/5 - $80; After 6/5 - $100
Non-Member - By 6/5 - $95; After 6/5 - $115
MT/MLT Student - By 6/5 - $40; After 6/5 - $40

Register Today!
Visit us at bbanys.org for more details and updated information!

Missed a webinar? Want to watch a past event that you particularly enjoyed? Past webinars are archived for members.

Have a question? Have an answer? Visit our LinkedIn private discussion forum.

Download educational audio files or listen to them on your computer. A new podcast is released every month.

BBANYS Website
Member Resources

Log-in and enjoy using your BBANYS member benefits. If you haven't checked out the website, make sure to visit bbanys.org and log-in today!

Username: members
Password (case sensitive): excellence17

Thursday Registration cont’d here

Presidents Letter cont’d here

Webinar Recordings
Discussion Forum
Audio Podcasts

Join Us for the 2017 Annual Meeting cont’d here

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Best regards,

Melissa Cushing, MD
BBANYS President
Blood Banks/Transfusion Services are increasingly being asked to help surgeons and operating rooms with the New York State Department of Health (NYSDOH) and Food and Drug Administration (FDA) regulations that follow the implantation of human tissues. Hospitals or surgical centers in New York State where human tissues are being transplanted should contact New York State Department of Health Blood & Tissue Resources Program for a tissue transplantation license.

The Blood Banks can be responsible for the ordering, storage, tracking and product usage, or they can have a hybrid relationship with surgery, where surgery retains the ordering process and selection of human tissue. There are many possible tissue products that surgeons use including cardiovascular, musculoskeletal, eye tissue, dura mater, amniotic membrane, nerves, human milk, etc. that would require a tissue transplantation license. The blood bank can provide help with tracking and storage of human tissue.

Approved policies and procedures would be needed in the application for licensure. The policies and procedures will clarify the facility’s organizational guidelines and the responsibilities of each department and individuals that will be involved in handling tissue products.

NYSDOH Blood & Tissue Resources Program sends out an annual Tissue Banking Activities Report to be completed by the licensed tissue transplantation facility. The report requires the names of all tissue suppliers, all the tissues types that were implanted and the amount of tissues and patients. The facilities tissue log could include all this information so that the report could be completed quickly.

There should be a designated individual responsible for checking the infectious disease testing and license of each tissue supplier for all tissues that are used in the facility. Infectious diseases that NYSDOH Blood and Tissue Resources requires for each tissue category are listed in Public Health Law Article 43-B, Part 52, Tissue Banks and Nontransplant Anatomic Banks. For instance: all musculoskeletal tissue products that are implanted in New York State require additional infectious disease test results that the FDA does not require. Unless the tissue is to be virally inactivated, antibodies to human T-lymphotropic virus type I (HTLV-I) testing must be done on each piece of musculoskeletal tissue that is implanted in New York State (NYS) unless the manufacturer has asked for and received a variance. Most tissue manufacturers post their regulatory information on their website. The forms that they typically put on the website are their FDA registration, NYSDOH tissue bank license, AATB registration and other states tissue licenses.

Quality assurance for a tissue implantation facility must be detailed in the tissue implantation policy and procedures. Tracking records for each piece of tissue must be accurate and available. Records of temperature monitoring of the tissues while they are temporarily stored in the facility must be available and reviewed. Tissues must be stored according to manufacturer's requirements and documented.
BBANYS and Your Pathology Residents

with the opportunity to network and exchange ideas with the other blood bank professionals.

In conclusion, BBANYS can be an important resource to promote education and healthcare quality for trainees within the context of the ACGME NAS and CLER. Nevertheless, I do believe that it is an underutilized resource for trainees because of several important barriers including the fact that many pathology residents are not primarily focused on transfusion medicine as their long-term career goals, there are competing interests such as other pathology societies that residents may participate in, and finally, because BBANYS may not be as well known to trainees as noted above. (Thanks to Drs. Madrigal and Prajapati who contributed to this article).

Robert M. Faw

The Power of Happiness at Work

Bob Faw

I’ve been astonished at the many benefits of happiness at work. When I was first trained as a consultant 25 years ago I was taught that happiness was not relevant. Yet, more and more research shows that happiness helps people to be more optimistic about goals, more creative, friendlier with colleagues, get sick less often, and even perform better.

Both optimism and pessimism are contagious. Spread happiness! I tell my clients to spread "positive gossip". Gossip is a human need, and it cannot be stopped. But it can be redirected to spreading good things about each other. As the "One Minute Manager" describes it ‘catch people doing things right,’ then spread it to others. This will make your colleagues happier, and you more popular. For leaders, the research is showing that this is the single easiest way to increase performance. A Gallup poll showed that workplaces where people have real friends have higher engagement. Show people you care about them, and most will care for you. Plus, they’ll feel more loyal to you and the company.

Spreading happiness builds rapport so that when things get stressful you have those relationships to rely upon. It’s far easier to build trust in advance, than to repair it later. A genuine smile is worth its weight in gold. Work hard, care a lot, and be a smile spreader.

Bob Faw, Positive Change Consultant, Author and Energizing Speaker, Matchbox Group

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Oral Platelet Inhibitory Drugs and Bleeding Complications: Implications for Transfusion

By Barbara A. Konkle, MD, Associate Chief Scientific Officer, Director Hemostasis, Platelet Immunology and Genomics Laboratory, Associate Director, Washington Center for Bleeding Disorders, Bloodworks Northwest, Professor of Medicine, University of Washington School of Medicine, and the Scientific Publications Committee, America’s Blood Centers

General Background: Drugs that inhibit platelet function may contribute to increased bleeding risk, whether spontaneous or traumatic in nature.1 The degree of risk and significance of clinical repercussions are determined by the specific medication(s) used, the patient’s condition, and the type(s) of interventions applied.

The Medications: The most commonly used anti-platelet drug is aspirin. It irreversibly inhibits platelet cyclooxygenase 1 (COX-1), an effect lasting the lifetime of the platelet. In individuals with typical platelet turnover, the defect reverts to near-normal functionality within 2-3 days after the last dose.2 Many procedures, including cardiopulmonary bypass and dental extractions, can be done in non-coagulopathic patients on low-dose aspirin, e.g., 81 mg/day1, with minimal or no increased bleeding risk.

Other nonsteroidal anti-inflammatory drugs (NSAIDs), e.g., ibuprofen and naproxen, also inhibit COX-1, though not as strongly as aspirin and only while the drug circulates.3 For ibuprofen, with a relatively short half-life ($t_{1/2}$) of $\approx 2$ hours, reversal of inhibition is observed after $\approx 24$ hours.3 For naproxen ($t_{1/2} \approx 15$ hours), scant data suggest loss of platelet inhibitory effect by 2 days after discontinuation.3

COX-2 specific inhibitors, such as celecoxib, have no significant platelet inhibitory activity.4

Drugs inhibiting the platelet ADP P2Y$_{12}$ receptor, e.g., clopidogrel, prasugrel, and ticagrelor, are in widespread use, often in conjunction with low-dose aspirin. Clopidogrel and prasugrel bind irreversibly to the receptor. The inhibitory effects of these drugs are stronger than those seen with aspirin or other NSAIDS, alone, and can be detected 5-9 days after the last dose; improved platelet function here correlates with new platelet production.1,2 Platelet aggregation results for ticagrelor, which binds reversibly to the receptor and has a $t_{1/2}$ (for the active metabolite) of $\approx 9$ hours, approach pre-treatment levels by 3 days after discontinuation.1,2,5 Both prasugrel and ticagrelor provide stronger platelet inhibition than clopidogrel and are associated with an increased bleeding risk compared to the latter.2

Vorapaxar is a protease-activated receptor-1 (PAR-1) antagonist inhibiting thrombin-induced platelet aggregation.2 It is used along with low-dose aspirin and/or clopidogrel in patients who have had myocardial infarction or have peripheral arterial disease.2 It is associated with increased bleeding and its anti-platelet effects are still measurable at four weeks after discontinuation.2

Dipyridamole and cilostazol inhibit phosphodiesterase, leading to increased platelet cAMP and decreased platelet response.2 Neither, alone, appears to increase the risk of bleeding with surgery.6

Implications for Transfusion: The role of platelet transfusions to prevent or treat bleeding with anti-platelet therapy varies by the medication(s) used as well as the severity (and risk of consequences) of the

Key Points
- Platelet inhibitory drugs may contribute to spontaneous bleeding and exacerbate bleeding complications during trauma and surgery.
- Many procedures can be performed on patients taking low-dose aspirin without a significant increase in blood loss.
- Platelet transfusions appear to have some efficacy in correcting the platelet inhibitory effect in patients on aspirin and clopidogrel; efficacy in patients on prasugrel, and particularly ticagrelor and vorapaxar, is less clear.
- Scant evidence supports the use of desmopressin in some patients.
bleeding. For aspirin and other NSAIDs, platelet transfusions are rarely indicated, but may be used in the setting of life-threatening bleeding or for emergent, high risk procedures, such as those involving the posterior eye chamber and central nervous system.

The APTITUDE studies evaluated: (1) ex-vivo addition of non-treated autologous platelets in patients receiving a loading dose of drug prior to percutaneous coronary interventions (APTITUDE-ACS), and also (2) patients on stable drug regimens receiving platelet transfusions for bleeding with CABG (APTITUDE-CABG). These studies found measurable effects of platelet transfusions in both groups receiving clopidogrel, and less for those receiving prasugrel or ticagrelor, although the numbers were small.7 Limited data suggest platelet transfusions may be less effective in reversing the platelet inhibitory effect of ticagrelor, consistent with the reversible platelet binding of this drug and its metabolite (both of which would be expected to lead to rapid inhibition of freshly transfused platelets).5

In primates, platelet transfusions decreased bleeding times in animals on aspirin, vorapaxar, and clopidogrel (though vorapaxar’s FDA-approved prescribing information states there is no known treatment to reverse the anti-platelet effect). The recently published PATCH trial strongly suggested that platelet transfusions do not lead to improved—and may even worsen—outcomes in patients with acute hemorrhagic strokes who have been on selected anti-platelet medications (aspirin, clopidogrel, and/or dipyridamole).6

When transfusing platelets to treat bleeding, a single dose (e.g., one apheresis unit, or the equivalent, for an adult) usually is sufficient for patients on aspirin alone; larger doses may be required for patients on other drugs, e.g., clopidogrel,9 known to respond to platelets.

### Table: Anti-Platelet Drugs – Mechanisms Plus Recommendations for Platelet-Directed Treatment of Bleeding

<table>
<thead>
<tr>
<th>Drug</th>
<th>Effect on:</th>
<th>R vs. I</th>
<th>Platelet-Directed Treatment of Bleeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirin</td>
<td>COX-1</td>
<td>I</td>
<td>Desmopressin + Plt tx (severe bleeding)</td>
</tr>
<tr>
<td>Other NSAIDS</td>
<td>COX-1</td>
<td>R</td>
<td>Generally not required</td>
</tr>
<tr>
<td>Clopidogrel</td>
<td>P2Y12</td>
<td>I</td>
<td>Plt tx + Desmopressin</td>
</tr>
<tr>
<td>Prasugrel</td>
<td>P2Y12</td>
<td>I</td>
<td>Plt tx + Desmopressin</td>
</tr>
<tr>
<td>Ticagrelor</td>
<td>P2Y12</td>
<td>R</td>
<td>Unclear if Plt tx is helpful</td>
</tr>
<tr>
<td>Vorapaxar</td>
<td>PAR-1</td>
<td>R</td>
<td>Unclear if Plt tx is helpful</td>
</tr>
<tr>
<td>Dipyridamole</td>
<td>PDE</td>
<td>R</td>
<td>Not indicated</td>
</tr>
<tr>
<td>Clostazol</td>
<td>PDE</td>
<td>R</td>
<td>Not indicated</td>
</tr>
</tbody>
</table>

1Reversible (R) vs. irreversible (I); includes ibuprofen and naproxen, does not include NSAIDS having only a COX-2-specific effect.

Legend: COX-1 = Cyclooxygenase 1; P2Y12 = A purinergic signaling protein present on the platelet surface; PAR-1 = Protease-activated receptor-1; PDE = Phosphodiesterase; Plt tx = Platelet transfusion.

Desmopressin is often administered to patients on aspirin and other platelet inhibitors before surgical procedures. For aspirin, reports document its correction of tests, such as bleeding time or Platelet Function Assay-100 (PFA-100).5,10 Prospective, randomized trials to determine if desmopressin-treated patients have better clinical outcomes than those receiving no therapy are lacking.

Can lab tests predict bleeding risk and/or be used to monitor transfusion effects? A number of assays are used to assess the degree of platelet inhibition, e.g., the VerifyNow platelet aggregometry test for aspirin and clopidogrel, the PFA-100, and viscoelastometric testing. A relationship between test results and bleeding is not always clear; caution should be applied when deciding which, if any, to use in guiding transfusion therapy.11

**Conclusion:** Widely used anti-platelet drugs contribute to bleeding risk; thus, reversal of their platelet inhibitory effects may be required for patients bleeding spontaneously from injuries or from surgery. Refer to the Table for a summary of the means by which bleeding caused by these drugs may be treated.

### References


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