

BMGT Contacts**Chair**

Janet L. Bryant

janetlbryant@pnl.gov**Chair Elect**Anthonie Lombard,
PhD[exec@chemicalenterpr
rise.org](mailto:exec@chemicalenterpr
rise.org)**Immediate Past Chair**Edward M. Yokley,
PhD[exec@chemicalenterpr
rise.org](mailto:exec@chemicalenterpr
rise.org)**Secretary**

Mark Ahmadjian, PhD

[exec@chemicalenterpr
rise.org](mailto:exec@chemicalenterpr
rise.org)**Treasurer**William S. (Sandy)
Durrell, PhD[exec@chemicalenterpr
rise.org](mailto:exec@chemicalenterpr
rise.org)**Councilors**Sandy Durrell
Kathleen Schulz, PhD**Alternate Councilor**Edward M. Yokley
Mark Ahmadjian, PhD[exec@chemicalenterpr
rise.org](mailto:exec@chemicalenterpr
rise.org)**Newsletter Editor**Daniel T Daly, PhD
dandaly@ua.edu**Newsletter Design**Chad Troutman
[trout004@bama.ua.e
du](mailto:trout004@bama.ua.e
du)

Newsletter

this issueThe 238th Fall National Meeting **P.1**In Vitro Diagnostics **P.4**Business Roundup **P.5****The 238th Fall National Meeting, Washington, DC, August 16-20, 2009**

The overarching theme for the Fall Meeting is **"Chemistry and Global Security: Challenges & Opportunities."**

The challenges and opportunities for chemistry and global security will be explored from several perspectives as part of the Presidential Plenary Symposium. Divisions have organized 113 symposia on subthemes including: Chemistry and Global Security, Education and Careers, Emerging Technologies, Energy and Sustainability, Food Safety and Environment, and Funding Opportunities.

Visit the meetings website to preview the symposia and poster sessions that the divisions are sponsoring and plan your itinerary in advance of the meeting.

While at the meeting, make plans to visit the highly anticipated Exposition from Sunday to Wednesday. The Exposition will feature

more than 250 companies and 400 booths. Attendees will learn about scientific and industrial trends, discover effective technologies and services that may improve productivity, and network with chemical and industrial scientists.

Visit the [Exposition website](http://www.acs.org) at www.acs.org > Meetings to search the exhibitor directory, find information on special events and to sign up for free educational workshops.

As always, the Fall National Meeting will feature the [Career Fair](#) and offer [career assistance services, professional development workshops and short courses](#), along with numerous [social and networking opportunities](#). Visit www.acs.org/washingtondc2009 > "Careers & Education" and "Events & Activities" for more information.

Don't miss the benefits of attending the ACS Fall National Meeting. Make plans

to attend and visit the Fall National Meeting website for further details at www.acs.org/washingtondc2009.

The [online technical program and the technical program summary grids](#) are available on the Fall National Meeting website at www.acs.org > Meetings.

High-Tech Entrepreneurs Wanted

The Division of Business Development and Management (BMGT) of the American Chemical Society is sponsoring a symposium entitled **"Starting an Angel Network Using Alumni to Fund University Entrepreneurs"** on Tuesday August 18th at the Washington Annual ACS Meeting. This symposium will highlight the benefits of engaging alumni in the entrepreneurship activities at a university campus. Thirteen presentations will be given by a highly talented and

New Resources for Your Career Success Available from ACS

Do any of the following apply to you?

- You want to protect your job and career by developing a unique skillset
- Your employer is providing you fewer training and development opportunities
- You are looking for a job--trying to set yourself apart from the competition
- You are preparing for your next career move

If so, the new ACS Leadership Development Program, which was rolled out at the national meeting this spring in Salt Lake City, is a great resource!

Organizations recognize the value of core leadership skills, particularly in these turbulent, challenging times. However, most chemical professionals enter the workplace with virtually no leadership skills or training. When we get our first job, we discover that the technical training and skills we worked so hard to gain in our degree programs are *necessary but not sufficient for success in the workplace!*. Instead, skills such as the ability to lead projects, innovate, and interact effectively with others make the real difference. These skills are critical to our ability to get a job, get noticed and rewarded, and make our next career move.

Ask yourself, what is my level of expertise to:

- ♦ Manage projects effectively
- ♦ Foster innovation within



The 238th Fall National Meeting (Continued)

skilled group including: angel and capital investors, business development managers and university's advancement and technology transfer offices. There will also be a discussion panel where the audience can ask our expert speakers questions on this topic of funding.

The intent of this symposium is to encourage entrepreneur chemists to seek help from their university's alumni and other potential sources for the funding of their start-up companies.

We are anticipating **all BMGT members will want to join us** in attending this valuable symposium.

From Invention to Venture: Women and Entrepreneurship

BMGT is pleased to support and promote the American Chemical Society's Women Chemists Committee (WCC) and the National Collegiate Inventors and Innovators Alliance's (NCIIA) afternoon workshop (Sunday August 16, 2009; 1pm to 5pm Walter E. Washington Convention Center) on the basics

of technology venturing. This workshop is for scientific professionals in academia, industry, or government who want to gain the insight and skills it takes to competitively represent innovation.

There will be a special emphasis on the key challenges facing women as they pursue a start-up opportunity, license or otherwise transfer technology. Sessions will include panel discussions and feature the opportunity for entrepreneurs to "speed pitch" to VIPs and speakers. You do not have to be a member of the American Chemical Society to attend the workshop, but ACS members get reduced rates and can register for the workshop at the same time they register for the 268th ACS National Meeting & Exhibition in Washington, DC. Workshop fee: 40 for ACS members, \$20 for students. The speed-pitch session is \$25 per team for 15 minutes.

Register online via the meeting registration website:

<https://www.xpressreg.net>

</register/acsf089/start.asp>

For more information, including speakers and registration, visit :

<http://www.invention2venture.org/wcc09/>

Great Online Resource Debuts

Look for the debut of a new innovative and paperless electronic online experience for ACS members and potential members. Called *ACS Now More than Ever*, it's the next generation ACS e-annual report plus an overview of ACS member benefits available *now*. This interactive Web site showcases many of the ACS resources that can help you further your research, jumpstart your career and plan your professional future.

Beginning on Aug. 12, you can check it out online at www.acs.org/now.

Better yet, visit our *ACS Now More than Ever*, booth at the Washington Convention Center during the 238th ACS National Meeting in Washington, D.C. Aug. 16- 20. Those who visit the booth will be

The 238th Fall National Meeting (Continued)

eligible to win an iPod touch.

In the 2008 ACS e-annual report, you will still find our financial information, yearly highlights and officers' message. If you would like to just read the e-annual report, go to www.acs.org/annualreport. But we hope you will take

time to enjoy the fuller multimedia experience available at www.acs.org/now, which not only offers access to the ACS e-annual report, but also showcases many of the ACS resources that can help you further your research, jumpstart your career and plan your professional future.

From career advice to educational opportunities to networking possibilities and beyond, this online overview will lead you in the right direction. It's also a great recruiting tool if people ask you why they should join ACS.

Agendas of Interest

BMGT, DIVISION OF BUSINESS DEVELOPMENT & MANAGEMENT

M. L. Hurrey, *Program Chair*

MONDAY MORNING

Washington Plaza -- Adams Room

The Effect of Globalization on the Worldwide Chemical Enterprise

Cosponsored by PROF, IAC, and GLOBAL

A. V. A. Lombard and M. L. Hurrey, *Organizers*

8:00 — Introductory Remarks.

8:10 — International Discussion.

8:40 — Chemical Customer Connectivity (C3X) – Customer needs amidst the global economical downturn **TBD** (live via Germany)

9:10 —1. Globalization and the worldwide chemical enterprise: Promise, potential, and challenges for strategic collaboration. **M. S. Chorghade**

9:40 —2. Concepts of innovation management in the 21st century. **S. A. Di Biase**

10:10 — Intermission.

10:25 —3. Your growth is our growth: A global expansion success story. **C. W. Ribes**, D. B. Akolekar, B. Deshmukh, R. Srivastava, M. Zhai

10:55 —4. Selling chemical security and safety. **N. B. Jackson**

11:25 —5. Globalization and its implications and opportunities for the biotech and pharmaceutical industry: Is it time for the pharmaceutical industry to reevaluate its approach? **P. Chaturvedi**

11:55 —6. Effects of globalization on the Latin American chemical industry. **M. T. Carrizosa**, **J. A. C. Restrepo** (live via Colombia)

12:55 — Concluding Remarks.

CHEMICAL AND TECHNOLOGY IMPORT-EXPORT REGULATIONS, ISSUES, AND SECURITY CHALLENGES

Sponsored by SCHB, Cosponsored by BMGT, PROF, and GLOBAL

MONDAY AFTERNOON

Washington Plaza -- Adams Room

Henry H. Whalen, Jr. Award for Excellence in Development and Management within the Chemical Enterprise: Symposium in Honor of Thomas M. Connelly

Cosponsored by PROF

J. L. Bryant, *Organizer*

3:40 — Introductory Remarks. **R. Bingham**

3:50 —7. Whalen award address. **T. M. Connelly**

4:50 — Presentation of Award. **A. Lombard**, **H. H. Whalen**

LEVERAGING THE INTERNET TO ADVANCE YOUR POSITION IN THE MARKET

Sponsored by SCHB, Cosponsored by BMGT, CINF, PROF, and GLOBAL

TUESDAY MORNING

Washington Plaza -- Adams Room

STARTING AN ANGEL NETWORK USING ALUMNI TO FUND UNIVERSITY ENTREPRENEURS

D. Daly, *Organizer, Presiding*

8:00 — Introductory Remarks.

8:10 —8. Elements of innovation. **S. A. Di Biase**

8:35 —9. The George Washington experience in creating deal flow using angel networks. **T. Stanco**

9:00 —10. PDH Technologies, Inc. experience in raising funds in a university environment. **W. L. Hough-Troutman**, C. Troutman, M. Smiglak, J. Shamshina, D. Daly, R. Rogers

9:25 —11. Engaging alumni and friends to help accelerate technology commercialization. **R. P. Swatloski**

9:50 — Intermission.

10:05 —12. The importance of entrepreneurial training for students in the sciences. **D. Daly**

10:30 —13. The advice Flourishing Business® gives to entrepreneurs. **E. Gordon**

10:55 —14. The art of valuing and investing in biomedical technology. **H. T. Adler**

11:20 —15. Utilizing alumni in a diversified corporate business development program in health care. **N. J.**

TUESDAY AFTERNOON

Washington Plaza -- Adams Room

STARTING AN ANGEL NETWORK USING ALUMNI TO FUND UNIVERSITY ENTREPRENEURS

D. Daly, *Organizer, Presiding*

1:30 — Introductory Remarks.

1:40 —16. What's the story: Seed and venture funding in 2009. **J. A. Jaffe**

2:05 —17. When is science ready to become a business? **J. W. Holaday**

2:30 —18. Biogenetics: Their prospects for approval in the United States. **H. T. Adler**

2:55 —19. The role of Harbert Venture Partners in University technology funding. **R. Crutchfield**

3:20 —20. Matching alumni investors with faculty, student, and alumni-run companies. **J. L. Adelman**

3:45 — Intermission.

4:00 — Panel Discussion.

WEDNESDAY MORNING

GLOBAL HARMONIZATION OF SAFETY CHALLENGES FACING THE CHEMICAL INDUSTRY

Sponsored by SCHB, Cosponsored by BMGT, CHAS, PROF, and GLOBAL

New Resources for Your Career Success (cont)

myself and others

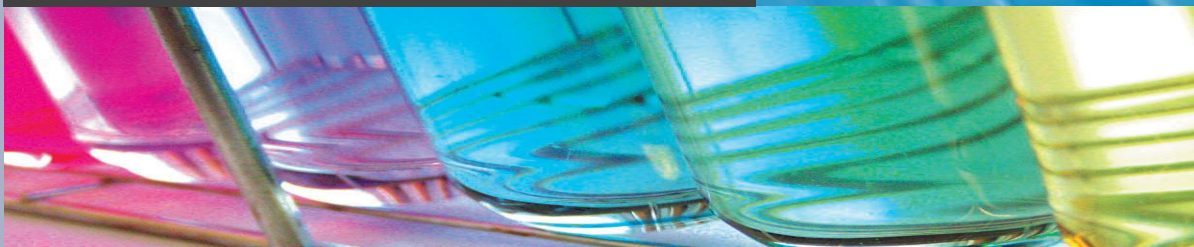
- ♦ Run productive meetings
- ♦ Lead without formal authority
- ♦ Be a *highly effective* communicator

The ACS Leadership Development System (LDS) focuses on these skills and more via 17 facilitated and online courses designed specifically for chemical professionals. The LDS is designed to help members develop leadership skills for both their ACS volunteer work, and for the workplace. For details of the whole 4-tiered system, visit www.acs.org/leaderdevelopment.

The courses are low-cost (\$25 to \$650 each, with most instructor-led courses costing \$150). Scholarships are available, and there are special discounts for unemployed ACS members. A number of courses will be taught at the national meeting in August, and around the country this fall. Some local sections are providing the fall courses free to the first "x" registrants (the number of free slots varies). Check the website above for scholarship information; locations, dates and free registrations for courses this fall). I urge you to visit www.acs.org/leaderdevelopment and take advantage of this fantastic benefit. It could just make all the difference in your career success!

Submitted by:

Kathleen Schulz, BMGT Councilor



In Vitro Diagnostics

One of the goals of this newsletter is to attract more members of the ACS or professional not yet affiliated with the ACS to join and participate in our division of the Business Management and Development (BMGT). In this vein, we will present updates on different business development areas. In this edition we have followed a suggestion to cover (IVD).

IVD is an extremely exciting field where molecular testing will soon be a standard in patient care.

IVD is a quickly developing and expanding area and will bring personalized medicine into reality. In the 1990's IVD was thought of as glucose testing with a few emerging technologies of molecular testing in Tuberculosis and some inherited diseases. This has changed due to advances in functional genomics, bioinformatics, miniaturization and microelectronics.

Currently, scientists in bioinformatics are able to use genetic information to develop a host of biomarkers for diabetes, autoimmune disorders and cardiac diseases. Early stage detection of all known diseases is now a reality. This has contributed to a proliferation in immunoassays and nucleic acid tests.

Biomarkers used for the detection and treatment of disease are endogenous substances or parameters indicative of a disease process and the analysis of these DNA or proteins molecules in laboratory medicine and treatment is revolutionizing patient care.

As most primary care doctors have known for years the human body is a highly complicated and intricate system. This means prior to diagnosis of diseases such as diabetes, cancer or cardiovascular more than one test is necessary. As more

and more biomarkers are identified health care professionals will become reliant on a panel of tests to diagnose the patient's susceptibility to diseases and drug treatments.

With the growing trends in healthcare, testing in central laboratories is going to become more prominent in the mainstream of patient care.

This trend in testing is reflected in the world market for diagnostics. The current market is over \$48 billion and is expected to grow 6% annually to \$56.3 billion by 2012. The leading countries performing the IVD testing are North America, Europe, Japan and Western Europe with 44%, 26% and 11% respectively, making up 81% of the total IVD market.

According to www.Hoovers.com the below is a list of 18 top revenue generating companies selling IVD services:

Company Name	Sales (\$ mil)	Company Name	Sales (\$ mil)
Becton, Dickinson and	7,155.9	Irvine Scientific	31.0
bioMérieux SA	1,565.3	Corgenix Medical Cor-	8.4
Illumina, Inc.	573.2	Omega Diagnostics	7.0
Sysmex America, Inc.	200.0	EraGen Biosciences, Inc.	4.5
Meridian Bioscience, Inc.	139.6	Dxna Llc	3.0
Celera Corporation	138.7	Sierra Diagnostics Llc	0.8
Quidel Corporation	128.1	In- Vitro Diagnostics Inc	0.5
SurModics, Inc.	97.1	Avidnostics, Inc.	0.3
SeraCare Life Sciences,	49.0	Viridis Diagnostics, Inc.	0.3

Business Roundup

The Business Roundup feature contains highlights of the business moves being made in the Industry.

Recession Hits Chemical Workers

June employment data from the [Department of Labor](#) show that job losses in the chemical sector have accelerated during 2009. Preliminary numbers indicate that the industry employs 41,300 fewer workers than at the same time a year earlier, a decrease of 4.8%.

The shrinking chemical workforce is part of a broader contraction in U.S. employment. Total non-farm jobs slipped by 4.2% for the 12-month period. In June alone, an estimated 467,000 nonfarm workers [\(Read More\)](#)

Facts & Figures of the Chemical Industry

It will be a long time before the world's chemical company employees forget the roller-coaster ride that was 2008. The industry had a promising start, but it couldn't avoid the economic devastation that spread to almost every corner of the globe. Indeed, many of the total figures for 2008 recorded in Facts & Figures do not yet reflect the full force of the current recession.

The year started on a high note. Strong demand for the industry's products, made up for rising energy costs. By the end of the

first quarter, however, flat sales volumes and concerns about the effects of the emerging financial crisis suggested tough times ahead. [\(Read More\)](#)

Energy Savings Through American Chemistry

The U.S. business of chemistry is unique. We use energy to save energy. We are the principal supplier of materials that make the U.S. economy more energy efficient. From insulation materials, roof coatings, lightweight vehicle parts and energy-saving tires; to appliances, light bulbs and materials for wind and solar power, our industry is essential to the nation's efforts to save energy and reduce greenhouse gas emissions. As one of America's most energy-intensive sectors, we're improving energy efficiency and reducing greenhouse gas emissions in our own operations.

Using Energy to Save Energy
American Chemistry uses large quantities of energy as raw materials or "feedstocks" in the

production process. Petroleum and natural gas contain hydrocarbon molecules that are split apart during processing and recombined into chemistry products, including a variety of energy-saving materials. Energy saved by the use of these materials equals lower greenhouse gas emissions throughout the U.S. economy. Here are a few examples of the energy-saving materials contributed by American chemistry:

- Building insulation materials made from chemistry save as much as 40 BTUs of energy for every BTU of energy consumed to make the material. House wraps save 360 BTUs of energy for every BTU used to make the material, and foam insulation can make a home up to 70% more energy efficient.
- Every pound of plastics and composites used to "lightweight" an automobile produces 2-3 pounds of weight savings in that vehicle.





- “Low rolling resistance” tires are made by adding chemistry products—silica and polysulfidosilanes—to tire tread to help increase fuel efficiency.
- Automotive and industrial lubricants rely on chemistry products to help reduce friction and energy usage.
- Solar power relies on silicon-based materials and other chemistry products.
- Wind power blades contain many chemistry products, including polyester and resin additives.
- Chemistry-intensive roof coatings help reflect solar heat away from the rooftop, promoting cooler indoor spaces.
- Compact fluorescent light bulbs, made with chemistry to “fluoresce” (give off light), use 70% less energy than conventional light bulbs and last 10 to 20 times longer.

Appliances such as refrigerators and air conditioning equipment contain chemistry, including insulation and coolants, that has helped improve their energy efficiency by 30 to 50% since the 1970s.

Vinyl windows have excellent thermal performance properties, while vinyl-coated wire and cable have high electrical resistivity, helping to prevent energy losses.

Improving Energy Efficiency

The U.S. business of chemistry has achieved significant energy efficiency gains. Since 1974, the business of chemistry has reduced its fuel and power energy consumed per unit of output by nearly half. Since 1990, it has improved nearly 27%, which is the equivalent of a 1.9% annual gain in efficiency. One way the business of chemistry is improving its energy

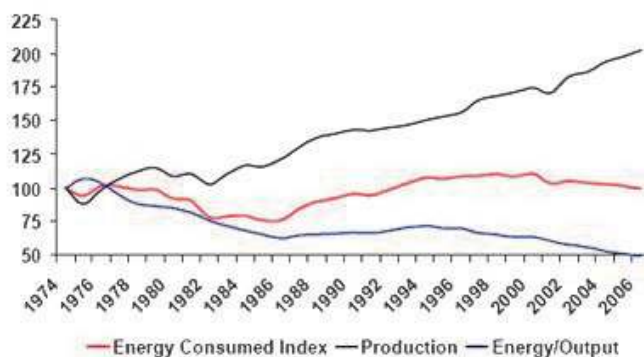
efficiency is through the use of combined heat and power (CHP), also known as cogeneration.

CHP is the simultaneous generation of electricity and heat from a facility located near the manufacturing facility. Because most CHP facilities use natural gas and create two forms of energy (electric power and steam) with the same amount of fuel, they are often twice as efficient as older, coal-burning electric utilities. CHP is responsible for nearly 25% of our industry’s power requirements.

Through the Responsible Care® program, a global chemical industry performance initiative implemented in the United States through the American Chemistry Council, we require members to report energy efficiency and greenhouse gas emissions intensity data to ACC. Through its web site, www.americanchemistry.com/responsiblecare, these companies are making available the most performance information of any private sector industry group.

Article can be found at www.americanchemistry.com

Chemical Industry Energy Efficiency (Where 1974=100)



The Race for Chemical Security

For some in Washington, D.C., the issue of [chemical plant security](#) seemed resolved when Congress passed legislation just prior to the 2006 election recess. However, for the American Chemistry Council (ACC) and its [member companies](#), passage of the legislation was not a checkered flag that ended the race. In reality, there will be lots of hard work ahead and many decisions to be made. Fortunately, thanks to the efforts of ACC and its members, the foundation for the future was laid by the [Responsible Care® Security Code](#).

The quest for legislation

Since 2003, ACC has led the charge for a strong, effective chemical security law. It worked with Congress, testified at hearings, and made sure the final bill took into account the importance of protecting the business of chemistry for the good of the nation. The measure signed into law last October reflected many of ACC's views and met the nation's needs. It granted the Department of Homeland Security (DHS) the authority to establish national performance standards for chemical facility security, to enforce those standards through inspection, as well as the power to require corrective action. Of course, that was only one aspect of ACC's leadership. Following the terrorist attacks of Sept. 11, 2001, without waiting for

legislation or other federal directives, ACC initiated its mandatory RCSC to protect member company communities, employees, products, and facilities. The code covers site, cyber, and transportation security. Its four essential components require member companies to:

- prioritize facilities;
- assess vulnerabilities, using rigorous methodologies developed or approved by experts at Sandia National Lab and the Center for Chemical Process Safety (CCPS);
- implement security enhancements commensurate with risks, and;
- verify physical enhancements through local officials or other credible third parties.

This realistic yet tough-minded process creates a methodology that can also be replicated at non-ACC facilities. Not surprisingly, DHS follows a similar approach in its recently proposed regulatory program, which will be finalized in less than one month.

Out of the starting gate

Typically, rule making of this kind involves a broad exchange of ideas among stakeholders and agency experts, and this process has been no exception. It is clear DHS is already incorporating elements drawn from the RCSC. In particular, DHS regulations will prioritize facilities, requiring "high-risk" sites to undertake vulnerability assessments and develop and

implement site security plans proportionate to its risk level.

Defining what constitutes high risk and determining which facilities cross that threshold will be among the greatest challenges faced by DHS. Ted Cromwell, ACC's Senior Director for Security, explains that DHS is utilizing a four-fold risk model that encompasses:

- off-site consequences, based on the types of chemicals, their quantities, and proximity to population centers;
- sabotage and the threat posed by contaminated products;
- theft and the potential use of stolen products to harm people and property, and;
- economic consequences to national security or the region, due to lost production and reduced accessibility of chemical products.

"ACC supports this analytical framework," Cromwell says. "We believe ACC's members are well-positioned to comply with the new rules, and we are working with DHS to help ensure the rules are coherent, effective, and enforceable."

ACC's formal comments on the rulemaking supported the overall effort and offered guidance on specific issues. Full comments can be downloaded from www.americanchemistry.com/security.

DHS will issue its final regulations on April 4.

A change in attitude?

Throughout the chemical security legislative and regulatory process, Cromwell and his colleagues at ACC and its member companies have seen a significant change in Washington's view of the chemical industry.

"The most refreshing aspect of our new relationship with the government is that our products, facilities, and role in society are seen assets to be pro-

tected, not just liabilities to be regulated," he says.

This growing awareness on the part of the nation's officials is not an accident, but rather, the result of a focused education and outreach effort by ACC and member companies, including the widely praised essential2® campaign, [CHEMTREC®](#), [TRANSCAER®](#), and [Responsible Care®](#) programs. It is also thanks to long hours of hard work by officials in industry-government relations, communications, and regula-

tory affairs.

"It's still early in the race for chemical security," Cromwell notes. "The government, ACC, and our members are well-positioned, and if we all do our part, the real winners will be the people, the communities, and the customers who depend on chemistry every day."

Article can be found at www.americanchemistry.com



American Chemical Society

