Chemists Without Borders
Humanitarian Solutions Worldwide

Newsletter #12

April 30, 2011

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Organization News

Arsenic Field Event, Boron, CA, USA

The weekend of March 11-13 saw a lot of chemical activity in the high desert of California! The Mojave Section of the American Chemical Society and Chemists Without Borders collaborated to involve students and community members (as well as professional chemists) in exploring some of the issues around arsenic in drinking water supplies.

Friday afternoon Drs. Steve Chambreau (Vice-President, Chemists Without Borders), Andrew Guenthner (Chair, American Chemical Society, Mojave Desert section), and Lois Ongley (Secretary, Chemists Without Borders) invaded Dr. John Stenger-Smith's Cerro Coso Community College chemistry lab for experiments comparing two Digital Arsenators[1] and conducting an initial evaluation of the arsenic filter prototype. The Principal Investigators were ably assisted by Mr. Timothy Godaire (Unity College '12), one of Ongley's students. Dr. Stenger-Smith's students capably demonstrated the similarity of the two Digital Arsenators and that the filter system would probably work well by measuring arsenic concentrations in water with both instruments before and after the arsenic filter prototype use. This preliminary work helped to ensure the success of the following day's event in Boron, CA.

The next day saw a first…the Arsenic Field Event in Boron California, a community science experiment undertaken to compare the effectiveness of various arsenic removal systems on the water from the Desert Lake municipal well in Boron, CA. Preliminary results indicate that reverse osmosis and the arsenic filter prototype performed well. A common household pitcher filter did not remove arsenic and it should be noted that the manufacturer makes no claim of

[1] The Arsenator is a trade-marked product of Wagtech International.

arsenic removal. Definitive results await the correlation of the Digital Arsenator measurements with those of an ICP.

Finally on March 13, Ongley described the experiential pedagogies used at Unity College (and other colleges and universities) to relate chemistry to common environmental problems. Her general chemistry class analyzes water from around the world to compare parameters such as alkalinity, hardness, and chloride concentrations. A student in her analytical chemistry class performed a QA/QC study of the Unity College Arsenator. Upper-level class service-learning projects have included investigating lake eutrophication (excessive algal growth due to nitrate and phosphate introduction in the watershed) and chromium contamination of sediments exposed when a dam was removed. Both projects were in Winslow, ME and each was triggered by the request of residents in the area.

Dr. Andrew Guenthner noted that "These events helped us to illustrate, in this the International Year of Chemistry, how chemists can contribute to solving one of the important challenges facing people throughout the developing worlds, namely access to clean drinking water."

Pictures from the Arsenic Field Event. Above: Dr. Stenger-Smith and Dr. Guenthner; on the right: Dr. Chambreau with the arsenic filter prototype.

Bangladesh University, Dhaka, Bangladesh

Chemists Without Borders is very pleased to have entered in to a collaboration with Bangladesh University. In early March, Professor Lois Ongley (Chemists Without Borders and Unity College) and Ms. Rachel Pokrandt (Beyond Benign) spent a week at Bangladesh University in Dhaka at the invitation of Mr. Jamil Azher and Mr. Shihab Azhar, Trustees of the University. Discussions with faculty, staff and students covered a range of topics including green chemistry, lab equipment needs, the environmental challenges facing Bangladesh and environmental science curricula.

The exhibition "Architecture and the Built Environment" organized by Ms. Jubaida Gulshan Aga and sponsored by the Departments of Architecture and Pharmacy, offered an opportunity to compare sustainability efforts in rural and urban Bangladesh with those in rural Maine, USA. Many rural Bangladeshis cope with extensive annual flooding, building their homes on elevated plots of land that become islands for several months each year. In urban Dhaka, efforts are being made in urban renewal to restore lakes and to provide better housing and communities for tannery workers and other residents. In Unity, Maine, the focus has been on energy efficient buildings and use of passive solar heating as winters provide low temperatures for 4-5 months each year. The following day, Dr. Ongley presented an overview of the research she has done with colleagues and undergraduates studying the arsenic contamination in Mexico's Zimapán Valley. This opened discussion of the arsenic contamination in Bangladesh and the efforts of Drs. Hussam and Munir to address those.

Chemists Without Borders is assisting Bangladesh University as it seeks to educate its students to solve the nation's environmental problems with a global perspective. Anyone interested in contributing to this effort (intellectually or monetarily) should contact Dr. Ongley.

Chapter News

World Water Day, Thompson Rivers University, Kamloops, BC, Canada

Mr. Nick Azad, President of the Chemists Without Borders Chapter at Thompson Rivers University fund-raising event.

On March 15, 2011, Chemists Without Borders Chapter at Thompson Rivers University in Kamloops, British Columbia, Canada held their first annual fundraising event. Focusing on the United Nation's World Water Day theme of Water and Cities, the group educated the campus and community about the mission and international projects of Chemists Without Borders, and the urgent need to protect the planet's precious water reserves. Not only was the fundraising event fun and educational, the group raised around $300. Amanda Jones and Marisa Azad offered excellent support to Nicholas Azad, Chapter President, and ensured the success of the fundraising event.

AIDSfreeAFRICA

2010 was an exciting year for AIDSfreeAFRICA, a community of professionals dedicated to empowering Africans to become self-sufficient in producing pharmaceuticals. In 2010, one factory in Cameroon started full scale drug production. Five products are already being sold in

pharmacies, and fifteen more medications should be in production shortly. A second factory is expected to come on-line this year.

AIDSfreeAFRICA is facilitating more US business interaction with Cameroon. These collaborations have resulted in 1.) establishing import, sales, and licensing of an anti-fungal drug, benefiting AIDS patients; 2.) importing 150 pounds of essential drugs, and 3.) accepting the donation of saliva-based AIDS tests, with 3000 more tests promised. Two revolving drug funds have been established, making a difference by providing access to drugs for large rural villages. Another will be added in 2011. AIDSfreeAFRICA also received a gift of 3.3 acres of land.

Dr. Rolande Hodel, President of AIDSfreeAFRICA, sits on the Board of Directors of Chemists Without Borders. The Cameroonian government, including the prime minister, Philemon Yang, is so excited about her work that Rolande was given permanent resident status, allowing her to come and go without applying for a visa.

AIDSfreeAFRICA's focus for 2011 is to train local pharmaceutical personnel and cause technology transfer to produce malaria drugs, especially for children.

Member News

Nina Paquette, Strategic External Communications Officer

Nina will plan strategic direction for Chemists Without Borders' external communications, while working with the internal communications and fundraising team members on overall communication strategy. She will lead communications in the recruitment of key board members, advisors and partners and develop relationships with media contacts. A member of the executive leadership team, she will help define the external face and voice of Chemists Without Borders. Nina is a freelance communicator and owner of Brand New Ideas, L.L.C., in Midland, Michigan. She has a master's degree from the University of Wisconsin- Madison and, before starting her own business, she was a senior account executive in a marketing and communications agency in Midland. She and her husband, Dr Michael Paquette, have three grown sons who currently live in San Francisco, Chicago and Ulsan, South Korea.

Dhruti Shah, Internal Communications Officer

Dhruti Shah is primarily responsible for internal communications. Dhruti obtained her MBA from Rutgers Business School in New Jersey and moved to the Bay Area in 2009. Her expertise lies in providing content for website and blogs. With the shift in marketing from traditional to online sources, Dhruti will be helping Chemists Without Borders to maintain a strong presence across all platforms, right from the website to Facebook to LinkedIn. With around four years of experience in Human Resources prior to her MBA, Dhruti will also lend her advice to the organization for talent management and retention.

Management Team

President Bego Gerber
Vice-President Steve Chambreau
Secretary Lois Ongley
Advisor Abul Hussam

Chief Operating Officer Vacant
Compliance Officer Frances Pai

Development Officer Julia Russell
External Communications Officer Nina Paquette
Internal Communications Officer Dhruti Shah
IT Leader Jay Raghu

Open Positions

Chemists Without Borders is currently seeking volunteers to fill the positions of Chief Operating Officer and Project Managers (for the Arsenic Project and for the Green Chemistry Project). Click here to see the job descriptions.

Special Thanks

Nicholas (Nick) Azad, President, Chemists Without Borders Chapter at Thompson Rivers University, took the initiative to organize and ensure the success of the fundraising event. He was well supported by Amanda Jones and Marisa Azad.

Dr. Andrew Guenthner, President, American Chemical Society – Mojave section for his section's generous support of the collaborative Arsenic Field Event and associated activities. Professor Corrine Lehr, from California Polytechnic University was an integral part of the team lending her expertise to careful standard preparation. Timothy Godiare took time form his Spring Break to come assist in the effort. We appreciate Dr. Stenger-Smith and his students' willingness to spend a Friday afternoon helping with our work.

The work in Bangladesh to date has been made possible by the generous support of the University of Bangladesh Board of Trustees, Beyond Benign, and the Ongley family. We gratefully acknowledge. Professor Dr. Golam Ali Fakir, Vice Chancellor of Bangladesh University who welcomed the Chemists Without Borders team wholeheartedly. Architect Sadar Masud Karim, Head of the Department of Architecture and Dr. Kohinur Begum, Head of the Department of Pharmacy, and the faculty members of their departments were gracious and helpful at all times. Mr. Ali and Mr. Nipu accompanied Pokrandt and Ongley through Dhaka. Mr. Housain was an excellent tour guide! Mr. Taif saw to all the team's needs at the University and even offered to "hang out"!.

Funding

Chemists Without Borders in a 501(c) (3) not for profit organization incorporated in the State of California. It is funded by donations and grants. You may help us in our efforts as there are several ways to donate to Chemists Without Borders. Please donate via Paypal or send a check directly to Bego Gerber, President, Chemists Without Borders, 745 S. Bernardo Avenue #A121, Sunnyvale, CA 94087. In addition, should you have contacts at foundations or other institutions that might be interested in supporting Chemists Without Borders, please send us a contact name and phone number.

Chemists Without Borders
Humanitarian Solutions Worldwide

Chemists Without Borders is a public benefit, non-profit, international humanitarian organization designed to alleviate human suffering through the use of proven chemical technologies and related skills.

Our primary goals include, but are not limited to, providing affordable medicines and vaccines to those who need them most, supplying clean water in developing countries, facilitating sustainable energy technologies, supporting green chemistry education, and providing emergency disaster relief.

Chemists Without Borders alleviates human suffering in developing countries by:

Mobilizing global resources and expertise, knowledge and creativity
Developing self-reliance operating models
Organizing around sharable processes and activities
Partnering through social entrepreneurs and humanitarian organizations