



Welcome to the Winter 2011 issue of the sfAWIS newsletter!

I hope your holidays were restful and restorative. sfAWIS volunteers have spent the time between celebrations busily planning events for the new year. Expect continued social networking as well as additional structured talks over the next few months. I hope you enjoy them!

In this newsletter, you'll find a recap of our most recent sfAWIS event by contributor Jennifer M. Reed. She covered a presentation by Mary Ann Ireland concerning the power and possibility of moods. As with so many of our sfAWIS programs, we all learned a lot and had a great time.

Scientist, entrepreneur, and all-around superwoman Alice Rathjen is profiled in this issue. She founded and runs her own business but followed a path to her science passion through a background in ethics. Quite a career!

Contributor Kibibi Taylor gives us an introduction to sperm washing starting on page 3. She reviews a study concerning couples who want to reproduce when one is HIV-positive and the other is HIV-negative.

Finally, as always, this newsletter offers a calendar of events and suggests some great ways to get involved with sfAWIS.

Elena Strange, Editor

## The Power and Possibility of Moods

### An sfAWIS Event

*Jennifer M. Reed*

We all want to be in control of our future. We study hard in school and meet important deadlines at work to create potential for future success. At a recent sfAWIS event, Mary Ann Ireland from The Stratam Group highlighted an additional factor in determining success: moods. Mary Ann illustrated how moods can greatly affect opportunities and provided examples on how moods can be managed.

Mary Ann began by distinguishing moods from emotions. Understanding the differences is essential for determining the extent to which a particular feeling can be controlled. Emotions are defined as automatic responses to a particular situation. Their involuntary nature suggests inherent limits in the ability to regulate emotions. Fortunately, emotions tend to be transient in nature and are typically controlled through the passing of time.

**(Continued on next page.)**

Corporate Sponsors	sfAWIS Board	Committees	Contact
Agilent	Anita Joubel, President	Volunteering	sfAWIS
Bayer Corp.	Amy Borchard, Vice-President	Publicity	PO Box 6711
Genencor Corp.	Melissa Erickson, Treasurer	Newsletter	Albany, CA
Bio-Rad Labs	Melissa Erickson, Secretary	Website	94706-6711
E&K Scientific	Carolyn Malestic, Marketing	Programs	www.sfawis.com
OnAssignment		Membership	
Genentech			

## The Power and Possibility of Moods (Continued from p. 1)

Jennifer M. Reed

In contrast, moods tend to last for long periods of time and have enduring consequences. Why do you avoid those seemingly pessimistic colleagues and depressed acquaintances? From experience, you know interacting with these people leaves you feeling down. You've probably heard the phrase "moods are contagious." It's true—in fact, it has been scientifically proven! Scientists observed groups of people working together towards a particular goal. When a pessimistic jerk was purposely included in the team, the entire group left the activity with feelings of resignation.

After discussing the power of moods, Mary Ann provided us with ways to control moods to maximize opportunities for success. Developing empowering moods involves awareness, planning a course of action and following through with the action.

Throughout the seminar, we learned cues to identify both our personal moods and the moods of those around us. We participated in one exercise to demonstrate the power and implications of moods: We all stood up, Mary Ann stated a mood and then asked us to take a stance that embodied that mood. She first named "resentful." Almost automatically, my eyes began to narrow, my arms moved tightly to my waist and my chest tightened. I was slightly disturbed how quickly I personified the mood of resentment! But then I looked around the room and was surrounded by others appearing equally angry and completely shut down. I was surprised to notice how even contrived moods of resentment triggered a strong physical reaction. It quickly became apparent that working with any of the people around me would negatively impact my motivation and productivity. Fortunately, the exercise continued with more positive moods such as "ambitious" and the evening was not defined by a group of unhappy AWIS members.

Since moods often develop over time, effort must go into shifting a mood. The next step is acceptance. You must accept the current situation, and then determine what is important. Do you want to rise above the mood, challenge it and change it? If so, visualize a more constructive mood and imagine where prefer to be mentally.

The final step to shifting a mood is taking action. Speak with others about the mood and how you believe it is affecting productivity. Encourage yourself and others to engage in a more productive mood. Situate yourself to embody the mood you wish to

have. Finally, physically move your body. The exercise early in the seminar demonstrated how our stance conveys and reinforces our mood. By actualizing a more constructive mood, you will become a more positive person and orient yourself towards better opportunities.

## sfAWIS Perspectives

### Q&A with Alice Rathjen

*Alice Rathjen has brought an academic background in ethics and Geographical Information Systems into a career focused on genetics, DNA, and privacy. Currently, her energies are devoted toward running DNA Guide, which has been awarded a patent for managing personal genetic data. Including DNA Guide, Alice has founded or co-founded four businesses. Here, she tells us a little about her entrepreneurial life in science.*

#### **Can you tell us a little about your company, DNA Guide?**

DNA Guide provides personal genome management software for the lab, research/health services, environment, and home—specializing in the security and visualization of personal genetic data. Our initial target customer is biotech firms needing a customer interface to help monetize their laboratory processes. We'll then follow the genetic information food chain, deploying in entities utilizing personal genetic data as part of the deployment of personalized medicine. DNA Guide's ultimate goal is to provide a platform where personal genetic data is stored, with consumers managing access and third parties building applications that run on top of our platform that interact with an individual's DNA.

#### **An essential piece of entrepreneurship is securing funding. What's it like to do a big Venture Capital pitch? Do you get nervous?**

I have no fear in pitching VCs because I've already failed so miserably. Pitching Brook Byers at KPCB for Dominga in 2000 was like Dorothy going to Wizard of Oz—only he walked before the curtain fell. Pitching Tim O'Reilly at OATV last month was like being lost in a bad fun house—knowing four minutes into the presentation there was no prize at the end of the hour.

Pitching a VC is like bull riding. You know you'll probably be sore afterwards but the thrill of trying to steer something with that much power is intoxicating. These folks have tremendous resources to change the world. They're also extremely fragile and the same traits that enable women to start companies—terrify them. The truth is that most women have to succeed without access to capital.

**Your educational background is in ethics. How did you transition to genetics and GIS?**

My straight and narrow path as a scientist ended abruptly when I failed my first biology midterm in college. However, in my defense, that midterm was just days after my mom's funeral. She died from breast cancer, and looking back, the rest of my life has been spent trying to somehow make sense of that tragedy. Here I am, thirty years later working with eight breast cancer cell lines as part of the Illumina iDEA challenge still hoping to somehow fix things. Many of us in biotech are struggling with some sort of major loss related to cancer. My path was perhaps more convoluted than most, but the end result is nearly the same.

One of my best friends in high school and college, Bonnie Bassler, took the straight and narrow path towards being a scientist. Her mother also died of cancer while she was in college, but Bonnie turned her grief into a Ph.D. and later Ted Talk. My grief translated to a degree in Religion and Ethics, which gave me the skills to meander through various disciplines and dare to tackle large problems such as privacy and genetic data.

**Do you still see yourself as a scientist?**

I don't describe myself as a scientist but as a rogue life science entrepreneur. I have tremendous respect for those who have devoted their lives to research. My hope is that I can destroy some of the barriers that prevent them from doing their life's work.

**What are your future career plans?**

Ultimately, I'd like to collaborate with others to create a DNA Commons that would help facilitate direct connectivity between researchers devoted to solving a particular disease and those who believe a particular genetic trait runs in their families. I also have plans to work on a site to help eliminate the genetic variable in the study of disease so that we can better understand our priorities for cleaning up the environment. I'll be working in the DNA space for a long time.

## sfAWIS Science Review

### Assisted Reproduction for Serodiscordant Couples

*Kibibi Taylor*

In 2004, the European Society of Human Reproduction and Embryology conducted a two year program in which it sought to assist *serodiscordant* couples—a male HIV-positive partner and a female HIV-negative partner—produce offspring. The results of the program were published in *Human Reproduction* vol. 19 no. 11. This program is particularly interesting as it pertains to heterosexual couples living in Western countries in which living with HIV has become a chronic illness rather than a death sentence. Indeed, the lifespan of an HIV-positive male is expected to be normal, and so the desire to have children is a natural result of managing a chronic disease.

Previously, it has been thought that a male infected with HIV would be unable to reproduce. Scientific advances have made progress in this area, however, effectively eliminating the risk of virus transmission and allowing heterosexual serodiscordant couples to achieve conception.

Nevertheless, assisted reproduction is necessary for these couples. This program performed reproduction assistance in the form of sperm washing, a process that separates sperm from semen. Semen was placed on the top layer of a multi-layered liquid and the test tube was spun in a centrifuge. After it was spun, healthy sperm made their way to the very bottom layer of liquid in the test tube, while debris and dead sperm got caught in the top two layers. The healthy sperm were put through to swim-up, a process that only the most powerful sperm are able to complete successfully.

As the sperm were collected they were split into two samples, half submerged in liquid nitrogen and the other half frozen for later use.

In addition to sperm washing, ovarian stimulation was also necessary to enable these serodiscordant couples to reproduce. The program followed a procedure by which microinjection pipettes are utilized to pick up a single live sperm, tail first, so that it can be injected directly into the center of an oocyte (a young egg cell) while it is incubated and its fertilization assessed.

It appears that sperm washing in combination with ovarian stimulation is an effective way to assist serodiscordant couples to reproduce without the use of donor gametes while significantly reducing any transmission risk to the HIV-negative partner.

## sfAWIS and Other Community Events

<p><b>January 10, 2011</b> Down to a Science Packing for Mars 7:00–8:30 P.M. Books, Inc. San Francisco <a href="http://www.sciencecafesf.com">www.sciencecafesf.com</a></p>	<p><b>January 12, 2011</b> sfAWIS Event Growing Up with Biotechnology 6:30–8:30 P.M. Amgen, Inc. South San Francisco <a href="http://www.sfawis.com">www.sfawis.com</a></p>	<p><b>January 12, 2011</b> How-To Night Electric and Acoustic Guitars 7:00–9:00 P.M. Bazaar Cafe San Francisco <a href="http://www.julianagallin.com">www.julianagallin.com</a></p>
<p><b>January 26, 2011</b> PA AWIS Event Pragmatic Advice for Advancing Your Career 7:30–9:00 P.M. Xerox PARC Palo Alto <a href="http://www.pa-awis.org">www.pa-awis.org</a></p>	<p><b>January 27, 2011</b> A Neuroscientist's Quest: What Make Us Human 6:30–8:00 P.M. Silicon Valley Bank Santa Clara <a href="http://www.bayareascience.org">www.bayareascience.org</a></p>	<p><b>February 8, 2011</b> California Academy of Science Resilient Cities: Creating a Liveable World 7:00–9:00 P.M. San Francisco <a href="http://www.calacademy.org">www.calacademy.org</a></p>
<p><b>February 9, 2011</b> sfAWIS Chapter Social Networking 6:30–8:00 P.M. Bissap Baobab San Francisco <a href="http://www.sfawis.com">www.sfawis.com</a></p>	<p><b>February 15, 2011</b> California Academy of Science Humans: Are We Just Another Primate? 7:00–9:00 P.M. San Francisco <a href="http://www.calacademy.org">www.calacademy.org</a></p>	<p><b>February 22, 2011</b> The Carbon Hunters Frontline/World Film Series 7:00–9:00 P.M. UC Berkeley Chevron Auditorium Berkeley <a href="http://events.berkeley.edu">events.berkeley.edu</a></p>

## sfAWIS Involvement

### Join us!

Here are just a few ways you can be part of our continuing efforts to bring together Bay Area women scientists, engineers, and technologists for career development, inspiration, scientific and social innovation.

#### 1. Volunteer

Help recruit new members, design programs, manage event sponsorship, and much more. Contact [volunteer@sfawis.com](mailto:volunteer@sfawis.com) for more information.

#### 2. Join the sfAWIS Distribution List

sfAWIS invites members and non-members to join the sfAWIS listserve. You'll receive regular, low-traffic updates on sfAWIS and related events. To join, visit [www.sfawis.com/subscribe.html](http://www.sfawis.com/subscribe.html).

#### 3. Become a member

Women, men, scientists in industry and academia, professionals, teachers, students, and any who wish to support and promote women in science are welcome to join sfAWIS. Visit [www.sfawis.com](http://www.sfawis.com) to learn more.

#### 4. Submit an article

This newsletter appears quarterly, and we would love to hear from women in science throughout the Bay Area. Tell us about your job, your research, your life, and how you got there. Submissions on any topic are welcome! Please email [newsletter@sfawis.com](mailto:newsletter@sfawis.com).

#### 5. Follow us

sfAWIS is on Facebook, Twitter, and LinkedIn. Find us on [www.sfawis.com](http://www.sfawis.com).