Dear Colleagues:

Spring is in the air, and Earth Day is just around the proverbial corner on April 22. So I’m devoting this issue to scientific and environmental initiatives and causes, with the hope that it will inspire you to act both locally here at UCSF as well as globally. Polar explorer Robert Swan said, “The greatest threat to our planet is the belief that someone else will save it.” This could hardly be more topical given the executive order that came out last week, which could lead to a dismantling of environmental regulations.

This month’s topics:

- Showing Up for Science: UCSF marching at home and in Washington
- Combating Climate Change: UCSF carbon neutral by 2025
- To Compost, Recycle, or Trash: UCSF zero waste by 2020

On a somewhat related subject, there was an article in the Chronicle of Higher Education, “U. of California Leader Advises Patience as the Trump Era Dawns” by Vimal Patel, that you might find interesting. It’s based on statements from UC President Janet Napolitano and her perspective on how to weather the unpredictable and unknown impact on higher education resulting from actions from Washington, D.C. Would you like to stay current on President Napolitano’s perspective? Sign up for her monthly newsletter.

Do you have a hot topic you’d like to see addressed in one of these newsletters? Please drop me a line at ExecutiveViceChancellor@ucsf.edu. You’re the source of my best items!

Sincerely,

Dan

Showing Up for Science: UCSF marching at home and in Washington

I can’t sugarcoat it; these are tough times for science. Despite overwhelming evidence, politicians and people with agendas push doubt about things like climate change and vaccines. Did someone say drastic NIH budget cuts? The proposed cuts were alarming, but because of widespread support in Congress for research, signs suggest that NIH funding will not be cut as severely as proposed. However, there is still much reason for concern about the final numbers. A lot of potential change is due to the decisions being made in our country’s
capital, and you might be well aware of articles such as this one in Nature by Sara Reardon, ? How the fallout from Trump?s travel ban is reshaping science [9]. ?

Typically, scientists like to stay out of politics, but we can?t stay silent any longer. We have to make our voices heard. Last September, 376 members of the National Academy of Sciences, including 30 Nobel laureates, came together to publish an open letter to draw attention to the serious risks of climate change [6]. ?Science is the best way to find out the truth about the natural world, but the nation doesn?t believe in experts anymore,? says Bruce Alberts, one of the signatories and also my eminent colleague. He also is the Chancellor?s Leadership Chair in Biochemistry and Biophysics for Science and Education and a former two-term president of the National Academy of Sciences. The rise of ?alternative facts,? Bruce says, ?has been building for a long time. The general distrust of experts is dangerous. The question is, ?how do we turn it around??? One way is to ramp up events that highlight the importance of both science and scientific judgments.

Here at UCSF several units (thank you!) have sponsored related events, such as:

- Research That Gets Results: A Symposium on Science-Driven Policy Change [7]

UCSF also is planning events relative to the April 22 March for Science [10]:

- ?Stand Up for Science? Teach-In [11], April 22, (8-10 a.m.) Mission Bay, The teach-in will be available via livestream. RSVP to attend this event [12].
- ?Stand Up for Science? Rally [11], April 22, (10-10:45 a.m.) Mission Bay, Connect with other members of the local life sciences community to speak out for our shared values of diversity and inclusion in advancing scientific discovery. RSVP to attend the rally [13].
- UCSF Advocacy Day [14], April 24. For those traveling to the Washington, D.C., for the April 22 march, you?re invited to meet with key members of the California Congressional delegation to advocate for biomedical research and other policies that are of critical importance to our community.
- 10th Annual Chancellor?s Diversity Leadership Forum [15], April 27, Join campus leadership for a panel discussion on fostering a culture of diversity and inclusion in science.

More than 30 satellite marches are listed for California [16] alone, including ones in San Francisco [17] as well as Oakland, San Jose, Santa Rosa and Livermore. Details are still being worked out, so stay alert for updates on the event website [10]. Gentle reminder: you may use your UCSF title to identify yourself and your profession, but you may not speak on behalf of, or represent, UCSF. For more information, please refer to guidance on brand logo usage [18] as well as political advocacy [19].

Did you read this article? ?Oroville Dam crisis could be sign of things to come [20]? A UCLA climatologist warns that the Sierra?s rising temperatures will likely mean more emergencies for California dams and reservoirs in the future. ? A week after the March for Science, the People?s Climate March will take place on April 29, also in Washington, DC. (I haven?t yet heard of plans for satellite marches, which were so effective with the Women?s March that
took place in January.)

Bruce Alberts and I enjoyed an event last month, ?Going Public: The Risks and Responsibilities of Sharing your Impactful Science? [21], at which several prominent UCSF scientists talked about their interactions in the public arena. Bruce was moved by Michael McCune?s tales of getting criticized for his discoveries in the early days of the AIDS crisis. ?You don?t want to give up, ever,? Bruce said. ?You don?t want to be passive, either. You want to make a difference.?

Also, last month, Bruce got together with another highly esteemed colleague, Carol Gross, who also was a signatory on the September letter, and while they lamented the ways people have lost faith in science, they also reiterated the ways science is improving people?s lives. Bruce and Carol brainstormed strategies to turn the tide in favor of science.

They both already have done an incredible amount of work to educate a new generation of scientists, which they see as essential. Bruce said scientists are needed now more than ever to help catalyze important work at local levels across the U.S. One could be monitoring how the level of arsenic in drinking water changes in the face of the relaxed standards expected from the Federal Government. Carol cited the example of the lead found in the water in Flint, Michigan, ?It wasn?t until they brought in the professors from Virginia Tech? that the roots of the problem were discovered, she said. ?It wasn?t the EPA that found it.? And, I?m glad to report that UCSF took it upon itself to conduct water testing in our own facilities [22].

Carol suggested training a new generation of citizen scientists, who would be motivated by issues happening in their own community. ?This could be a huge thing,? she said. ?These are things that middle school and high school students could do, if their teachers teach them how to do it.? Carol mentors many young scientists at UCSF. ?There?s a lot of pent-up energy of people wanting to do something,? she said. She would like to see UCSF give them a menu of options, perhaps at a Town Hall style meeting or a fair, or even an online clearinghouse where they could see different ways to put their scientific know-how to work. For instance, she said, ?a huge number of our graduate students come from less tolerant parts of the country.? Because those students know their own communities, they may be just the people to communicate and convince them of the importance of science. How can we help support their efforts? One answer is events like the Grad Slam [23], where the next generation of scientists practices the art of presenting their research in language that is approachable and compelling to nonscientists.

Chancellor Sam Hawgood wrote in early March [24] that UCSF is advocating in our nation?s capital. Keith Yamamoto, vice chancellor for science policy and strategy (who also signed the September 2016 letter), and Natalie Alpert, associate director and our federal government relations lead, are working together to actively represent UCSF in Washington, D.C. Natalie can provide tips and strategies for engaging with elected officials about your science while in D.C., or closer to home. For more information on how you can get involved in UCSF advocacy efforts, please email her at natalie.alpert@ucsf.edu [25]. She is planning the UCSF Advocacy Day [14] in Washington, D.C. on Monday, April 24. Again, if you will be in D.C. and would like to participate, please let her know!
Combating Climate Change: UCSF carbon neutral by 2025

Regular readers of *Expresso* know that I find myself *kvelling* with pride (if I may use a little Yiddish) at being part of the University of California. There are plenty of things to improve, but UC’s ambition and high standards remind us all to not only dream big but invest in fulfilling those dreams. If you read the previous story, Showing Up for Science, you learned about the September 20, 2016 open letter signed by 376 members of the National Academy of Sciences [6] who wanted “to draw attention to the serious risk of climate change.” When it comes to climate change, which is nothing less than an existential threat to life on earth, UC has again taken a leadership role, aiming to become the first major university system to become carbon neutral.

In 2013, UC President Janet Napolitano announced the ambitious goal of carbon neutrality by 2025 [26], and UCSF is working hard to do its part. Gail Lee, our sustainability director, says we’re making great progress, although we still have a long way to go. “It’s going to be a big challenge, but if UC, with its vast research and resources can’t do it, then who can??” Gail says. “We have to lead, because no one else is.” And, we are both positioned and qualified to do so.

We’ve already made great strides. UCSF Health has been established as a leader in sustainability, ranked in the top 25 in Practice Greenhealth’s annual awards [27] last year. The new UCSF Medical Center at Mission Bay meets the latest standards for sustainability and energy efficiency. This will be true of all new UCSF buildings coming online.

Gail emphasizes that climate change matters, particularly at a health sciences university like UCSF. The impacts on health include increased cases of asthma, respiratory illness, and cardiac disease, and these increasingly and disproportionately affect disadvantaged populations. “Some people need to see the link, so we explain how climate change makes air pollution worse, which affects asthma, or how extreme temperatures can increase the spread of infectious diseases because of the movement of mosquitoes into the Northern Hemisphere,?” she says.

In addition, she says, it’s a financial issue: If we can save energy and increase efficiency, we’ll save money. But more than that, as you know: “It’s not only a financial consequence, it’s a worldwide consequence,” Gail says. “If the work we do is not emulated elsewhere, we’re at the risk of runaway global warming. We can’t afford to wait.”

We can all play a part in combating climate change. Here are some ideas already being implemented at UCSF, both big and small, as well as those we’d like to see:

- Turn off the lights! This is possibly the simplest and most important thing to do. Don’t leave a room with energy wasting, whether it’s your lights, or your equipment, or your running water. “It’s easy to do, but it’s difficult to get people to do it,” Gail says. She suggests people “adopt” a piece of equipment, taking responsibility to make sure it’s off at the end of each day.
- Buy energy-efficient equipment such as freezers, and run them efficiently. Maybe you don’t need it so cold. Maybe it’s only half full, and you could share it with a scientist at another bench. Maybe you don’t need your own freezer and can share someone else’s. Do you have a freezer in your lab that’s more than 10 years old and inefficient?
If you have the resources, get a new one, and Gail’s team will give you a rebate!
- Gail also is giving away timers for hot and cold water dispensers. ?If you?re only there eight hours a day, why run it all weekend?? she says.
- If you have an idea for how a product could be more efficient, tell your supplier. ?When we demand something, vendors rise to the occasion,? Gail says. After asking Thermo-Fisher to make their -80 freezers 50% more energy efficient, it came to market in a year.

If you want a rebate, a timer, or just have a question or comment, please get in touch with Gail at gail.lee@ucsf.edu. You also should take a look at the UCSF Sustainability website, which has an annual report available for each of the past several years. (We have two reports for each year, one for the campus and one for the Medical Center.) You can chart the progress UCSF is making on its carbon footprint, and find a lot of other great information that will help you ? and all of us ? become greener. And, to honor a green champion ? staff, student, faculty or a team who deserves recognition for their sustainability efforts ? please nominate them for a 2017 Sustainability Award by April 30.

To Compost, Recycle, or Trash: UCSF zero waste by 2020

I have to admit that a moment of confusion can occur for me fairly regularly when I am face to face with distributing my trash into its appropriate container. I realize that the University of California system is trying to get to zero waste by 2020, an ambitious goal that will have us diverting everything that currently goes to landfill to a recycling or compost purpose instead. And, I also sense that the UCSF community gets it ? we understand how critical it is to accomplish this goal. But I?m not convinced I?m doing my full part!

To learn more, I sought the input of UCSF Recycling and Waste Reduction Coordinator Susan Bluestone, who said that we?ve already made substantial progress. When Susan started here in 1998 as our first-ever recycling staff person, our diversion rate was 7 percent, ?meaning 93 percent of what was tossed went into the landfill,? she says. Now we?re diverting 74 percent of our waste. ?It sounds fantastic,? she says, ?but the last 26 percent will be much harder. We?ve already got all the low-lying fruit.?

Looking into this further, I?ve learned that if you have the desire to do the right thing, it only takes a relatively small effort to sort your refuse. To make it even easier, Facilities Services has launched a new mobile-friendly website, zerowaste.ucsf.edu, which will tell you whether a particular item is recyclable, compostable, landfill, or requires special handling. Click the box marked ?test me? for a fun exercise to see if you know plastic plates are recyclable (R), pet fur can be composted (C), pens and pencils go in the garbage (G), and batteries and Pyrex require special handling (S). I found this exercise extremely informative ? I did terribly at first!
The main point is: take a few seconds to do it right. Maybe you have to walk across a room, or hang onto an item until you find the bin. Maybe you should look at those visual aids, or check your phone. It?s important. Remember: When trash goes to the landfill, it does not biodegrade. Instead, it emits methane that adds to global warming.

?It?s viable. It?s in your hands,? Susan says. ?If someone doesn?t have time to separate their discards, I will say they?re not concerned about climate change. It?s a way on a daily basis that we can have a positive impact.?

Let?s take a look at the simple act of eating. It?s easy to see the challenge when you?re in a place like Palio Caffe in the Millberry Union on Parnassus. They try their best to make sure your waste goes into the right bin, with visual aids showing coffee cups in compost, plastic clamshells in recycling, and candy wrappers in trash. And yet, a substantial number of us ignore the sign and mindlessly commingle our discards.

A few tidbits and rules that Susan notes apply only to San Francisco (check with your own jurisdiction if you live outside the city):

- A popular journal club staple ? pizza ? results in a lot of empty boxes. Some spots on campus now have a separate compost bin for them, since they take up so much space in a regular compost bin. Because of the grease, they cannot be recycled.
- Since compost goes back to the earth, that?s the bin that must not be contaminated.
- Cutlery that is labeled biodegradable cannot go to compost, unless it says it?s compostable. Compostable is a legal term and biodegradable has no meaning in this context.
- Every other month, the recycling team has an electronic waste collection that also accepts clean, tape-free, label-free block Styrofoam. So please don?t throw your Styrofoam in the landfill.
- Shredded paper should go in the compost bin, not the recycling bin. When it goes into recycling, it blows all over, making a mess for our custodians and the recycling facility. In the compost bin, however, it soaks up liquids and mutes odors, and it also has a lower carbon impact, since instead of getting shipped overseas for processing with other recycling, it goes to Vacaville for composting and on to Napa Valley wineries and local farms to meld with the soil.

Other things UCSF is doing are more complex, but have added benefits. For instance, Sustainability Director Gail Lee says that we?re taking sophisticated medical equipment out of the waste stream and saving money in the process. ?We used to throw away a $1,000 harmonic scalpel,? she says. ?Now we send it to a company to reprocess, buy it back at half price, and re-use it again. There?s a whole laundry list of products now. Last year we saved more than $1.2 million in overall costs by reprocessing.? She says we could save even more if we could establish an equivalent of UCSF Cores equipment sharing system so that labs could share chemicals. ?Don?t buy something you don?t need,? Gail suggests. ?If you need a liter of a certain chemical and the vendor only offers six, see if you can share the purchase with someone.?

Incorporating all of this into our daily routines makes zero waste an achievable goal and as Susan says, ?It?s our collective behavior that is going to get us there?, and I am now more
motivated to do my part than ever.

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Dan’s Tip of the Month

You may already know this, but I sure didn’t. Have you ever watched an elevator door open and been totally unsure whether it’s heading up or down, because you didn’t see the button light or arrow indicator change? Fear not? use your ears! It turns out that all elevator banks (that are working properly) use one ring (or beep or equivalent sound) to signal the car is going up and two to signal it’s going down? so you don’t even need to look for the light indicator! And here’s a bonus elevator tip: be on the lookout for a star symbol on the floor buttons, if it’s there it indicates the floor that exits the building. But if all this is sensory overload, consider taking the stairs if you can? better for the environment and your health anyway?

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