



The Sound of Science

The melodies stick in Kevin Ahern's head, sometimes for days. They're songs everybody knows, like "A Few of My Favorite Things," "Santa Claus is Coming to Town," and "Downtown." The inspiration for his lyrics comes in an instant.

"It's always a phrase that will resonate with something in a melody," says Ahern, a senior instructor in biochemistry at Oregon State University. "The best example was when I was teaching a class and I had the music from 'Supercalifragilisticexpialidocious' in my head. All of a sudden I thought, 'glucconeogenesis is really quite atrocious.'"

Bang. The rest just flows. And the result is *Metabolic Melodies*, more than 50 songs devoted to processes like glycolysis and the urea cycle. Ahern, also the university's HHMI summer undergraduate research coordinator, may break into any one of his songs at unexpected times to lighten up lectures. The response from his students, he says—even the ones who anticipate the Melodies—is priceless. "The look sweeps across the crowd, 'look, he's gone nuts.'"

During his first year of teaching in the mid-1990s Ahern heard about something

called *The Biochemists' Songbook*, by Harold Baum, a professor emeritus at King's College London. Ahern decided to treat his students at the end of the term with songs of his own.

"I wrote two songs that very first time and sang them to the class," he says. "I'll always remember their reaction. It kept me going, and each new term I wrote a new song."

His students love them; they tell him in their evaluations of his class. By now, Ahern has earned a reputation on campus for his Melodies, even though he admits to singing off-key. Some students are inspired to write their own Melodies. Some choreograph them. Some post their renditions to YouTube. His wife, Indira Rajagopal, a senior instructor in biology, co-writes some of the songs.

It's not just a campus thing, either. Ahern hears from students as far away as Newfoundland and Ukraine about the Melodies. He's received his most flattering feedback from a group of Croatian students, who recorded two of his songs—"We All Need Just a Little ATP" (to the tune of "Yellow

Submarine") and "B-DNA" (to the tune of "YMCA") and posted them to YouTube. "It felt really good," he says.

Ahern has received media attention for the Melodies as well, including BBC radio, *Nature Podcast*, and *Geek Pop*.

Although his Melodies cover the concepts that students learn in his class, Ahern doesn't necessarily see them as a teaching tool. Rather, he sees them as a way to diminish students' fear about a challenging subject.

"They see that biochemistry is not so daunting and scary, and the people who teach it aren't scary either. So if you cut through that barrier, they can laugh at something, relax, and learn more easily," he says.

Ahern makes his recorded *Metabolic Melodies* available to download for free at www.davincipress.com/metabmelodies.html. "I like getting the word out on the songs," he says. "Anything that furthers the cause is good."
—*Celene Carillo*

WEB EXTRA: To see video performances of some of Ahern's *Metabolic Melodies*, visit www.hhmi.org/bulletin/nov2010.