

GRADUATE JOURNAL

The sound of science

As an undergraduate, my first summer research was done in a quiet, sunny lab with classical music drifting in from the postdoc's office. As I walked into my first lab as a new graduate student, I was stunned to hear that the senior graduate student tuned in to soft rock. We younger students forged a plan: the first person to arrive could choose the radio station for the day, so we took turns sacrificing sleep to liberate ourselves from the tyranny of easy listening.

The situation eased when we split into two new laboratories. The young students in our new lab realized we now had control over our musical milieu. We pitched in for a cheap CD player and began our collection of morning, afternoon and late-night listening, including Canadian music to educate our exchange students.

My current lab chorale ranges from Finnish Internet radio, Brazilian love songs, silent CDs played on computers connected to headphones, and local rock stations, to the occasional pair of postdoc voices raised in chorus with the *Les Misérables* soundtrack. With research group members from all over the world, I expect nothing less than this cornucopia of fortuitous musical education. ■

Sidney Omelon is a PhD student in bone biomaterials at the Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, Canada.

Rensselaer Polytechnic Institute

The area around Rensselaer Polytechnic Institute in Troy, New York, is known for forging steel, not biomolecules. But this month, scientists and engineers started moving into a \$100-million biotechnology facility. Its founders hope that the building will become a biotech hub for upstate New York.

The centre, which received \$22.5 million from the state of New York, will contain four research constellations: biocatalysis and metabolic engineering, tissue engineering and regenerative medicine, systems biology, and biocomputation and bioinformatics. It will house 400 scientists in groups led by 50–60 principal investigators.

In her inaugural address as president of the institute five years ago, physicist

Shirley Jackson described biotechnology as “a field whose impact is so great, so full of promise, so well-suited to Rensselaer, that we simply must drive our stake into the ground of this new frontier.

“Why not create a biotechnology institute for Rensselaer that would encompass fundamental research, industrial partnerships, technological innovation and undergraduate and graduate education?”

Today she adds: “There was a need to bring engineering ability to bear on the life sciences,” noting, for example, the importance of modelling and imaging technologies.

Last month, the facility that Jackson envisioned, the Center for Biotechnology and Interdisciplinary Studies, opened. Elias Zerhouni, director of the National Institutes of Health, and Bruce Alberts, president of the National Academy

of Sciences, were among those in attendance.

Since becoming chair of the biology department two years ago, centre co-director Robert Palazzo has recruited seven faculty members, and is still searching. There is stiff competition for good people in systems biology, tissue engineering and regenerative medicine, he says.

Different disciplines will mingle and collaborate in an open lab space. “The goal here is to enhance serendipity,” says Palazzo. The labs will have no walls: biologists, physicists and chemical engineers will be working side by side.

The set-up will test researchers' willingness to share data. “If we get to the point where we covet information, or we hide information for our personal gain, then maybe we don't belong in that building,” Palazzo says. ■

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♦ www.rpi.edu/research/biotech

MOVERS

David Lane, executive director, Institute of Molecular and Cell Biology, Singapore



Following his first postdoc at the Imperial Cancer Research Fund in London, David Lane earned a rare freedom. He was offered a lectureship at Imperial College London, but was allowed a leave of absence to do another fellowship first at Cold Spring Harbor Laboratory in New York, on the understanding that he would return to Imperial after two years.

Almost 30 years later, Lane finds himself in a similar position. He is leaving the University of Dundee, UK, for two

years, to head the Institute of Molecular and Cell Biology in Singapore's ‘Biopolis’ — an ambitious attempt by the Singapore government to build life sciences from the ground up.

The first time he went away with no worries about his return, good things happened. The freedom in New York “allowed me to be quite bold and take on things I wanted to”, Lane says. As a result, he was the first person at Cold Spring Harbor to make monoclonal antibodies — a key tool that would later fuel the biotech boom. And that independence, fostered early by his PhD adviser Avron Mitchison at University College London, set the pattern for his career. “Avron never put his name on anything I wrote,” says Lane, “he just let me get on with it.”

That ethos of independence allowed Lane to return to London with experience when he was 27. He already had his own grants, and so had funding

freedom. That allowed him to apply immunochemistry to identify and characterize proteins. As a result, he made key findings on the machinery of *p53*, a tumour-suppressor gene, and he has studied the gene and protein for much of his career.

Lane says that more young scientists should experience the freedom he had early in his career. “I think everybody needs it,” he says. But he says young scientists also can't expect someone to hand them autonomy on a platter — they shouldn't “wait for people to tell them what to do”, he notes.

Although Singapore has a reputation for top-down control, Lane says he expects to experience autonomy when he moves to the island nation in January. And the fact that he will return to his job in Britain in two years' time will allow him to be typically bold in pursuing it. ■

CV **1990-2004:** Personal chair in molecular oncology, University of Dundee, UK
1985-90: Senior staff scientist, Imperial Cancer Research Fund
1977-85: Lecturer, Imperial College London
1978-80: Robertson research fellow, Cold Spring Harbor Laboratory, New York
1976-77: Postdoc, Imperial Cancer Research Fund, London