

BRIEFS

Does Size Matter?

NAME T. Ryan Gregory, PhD
SCHOOL University of Guelph
SPECIALIZATION Genome Size

What's the genetic difference between a salamander and a human? About 20 times the length of a strand of DNA. Humans are vastly more complex creatures, so it makes sense that a Homo Sapien's genetic make up would need the extra space. But, paradoxically, it's the salamander that has us trumped. That's the enigma Ryan Gregory is studying. The recent University of Guelph Ph.D. grad and winner of the 2003 NSERC Howard Alper Post-Doc Prize is trying to figure out why the lengths of

A salamander's DNA strand runs 20 times longer than a human's

DNA strands often have no correlation to the complexity of the organism involved. His insight: DNA, has a lot of junk information. Only about 1.5 percent of any genetic strand actually contains active genes. The rest is empty space or the genetic equivalent of penis enlargement SPAM emails – that is, information to be ignored or discarded. But, the question remains: Why would one organism have more junk than another? This is the problem that Gregory is now tackling. Meanwhile, he has compiled the world's largest database of genome sizes. You can find it at www.genomesize.com

–Felix Vikhman

Take This Job...

NAME Cecilia Moore, MPA
SCHOOL Rotman School of Business
SPECIALIZATION Human Resources

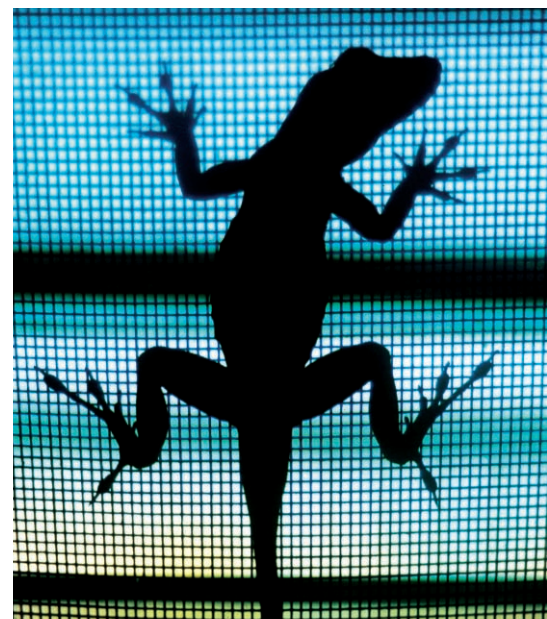
It's an old cliché: you'll catch more bees with honey than vinegar. But, it's a lesson many forget – to the detriment of their company's bottom line. U of T Ph.D. candidate and former human resources consultant Cecilia Moore has dubbed them "toxic bosses." "We are seeing the negative consequences from the way workplaces are organized," she explains. Longer work hours, especially for women, mean employees need more flexible and supportive work environments. Even at the best companies, a lone-wolf manager can poison the work atmosphere, and even cause health problems for underlings. "What are the returns to productivity of being in a supportive environment?" she asks. Moore, who has a MPA from Columbia in New York, advises employees working for toxic business: "Quit. It's not worth risking your health."

–Jenny Hall

Ceausescu's Orphans

NAME Karyn Audet MA
SCHOOL SFU
SPECIALIZATION Child Development

There are an estimated 43,000 Romanian children living in orphanages, mostly brutal and inhuman institutions where malnutrition and hypothermia are the norms. They form a lingering legacy of the failed social policies of Nicolas Ceausescu, one of the most brutal dictators of the 20th century. In the 80s, Ceausescu spurred a baby boom by banning contraception and abortions, and by giving families cash rewards for each child they had. But, in a country where housing and feeding a child was an imposition, it meant thousands of parents were leaving new-borns at the door steps of orphanages. It's a legacy that Simon Frasier University Ph.D. candidate Karyn Audet knows all too well. The social sciences researcher has become an expert on the fate of Romania's abandoned children. Audet has recently completed a study on the development of children in Romanian



orphanages. Her findings are heart breaking. Almost half of the orphans studied had severe development issues, both physically and psychologically. She says it's easy to gauge which children are the most affected: simply look at how long they were institutionalized. Whereas only five percent of Canadian adopted children demonstrate clinical psychological damage, in Romania 16 percent of orphans who are adopted after a few months are developmentally stilted. But, the number explodes to almost 60 percent for children who spent more than two years confined to the Romanian orphanage system. The most frequent afflictions, explains Audet, are attention disorders and hyperactivity. She says her research has large implications for the study of ADD and other related disorders here in North America. She says her findings show that ADD is more linked to environment than to genes, which should give doctors pause about prescribing Ritalin as a cure-all for the disorder.

–Felix Vikhman