

MOVERS

Frank Torti, chief scientist, US Food and Drug Administration



1993–present: Director, Comprehensive Cancer Center, and Chair, Department of Cancer Biology, Wake Forest University School of Medicine, Winston-Salem, North Carolina

1986–93: Associate professor, Stanford University Medical Center, Stanford, and Chief, Oncology Section, VA Medical Center, Palo Alto, California

Frank Torti is excited about taking on what promises to be an onerous job. As the first chief scientist at the US Food and Drug Administration (FDA), he is eager to help the embattled organization use the latest research and technology to create more rigorous and efficient regulatory controls for approving new drugs. "I think I can help them break new scientific ground," he says.

After earning a biology degree from Johns Hopkins University in Baltimore, Maryland, Torti pursued an MD at Harvard Medical School. An interest in the molecular biochemistry of nutrition then led him to do a Master's in public health at Harvard. But, motivated in part by his parents' battle against cancer, he eventually accepted a fellowship in oncology at Stanford University.

Torti went on to create one of the first clinics treating genital and urinary cancer to bring together radiation therapists, medical oncologists and surgeons. And he developed chemotherapy regimens for bladder and prostate cancers that became standards of care. As executive director of the Northern California Oncology Group, Torti also learned the inner workings of trial design and patient recruitment.

But he missed the laboratory and so made an unusual move, temporarily resigning his faculty position to become a visiting scholar in Stanford's pharmacology department. There, he discovered basic molecular mechanisms underlying the regulation of proteins involved in iron metabolism, and how these are modified by cancer.

Torti jumped at the chance to lead both Wake Forest's Comprehensive Cancer Center and its basic science department in cancer biology. There, his success in building clinical trials and training programmes brought widespread recognition, and his basic-science research led to a prestigious National Institutes of Health MERIT award. "Frank brought Wake Forest's Cancer Center from the backwater to be a major player," says colleague Steve Akman. He predicts that Torti will help the FDA to recapture lost esteem by recruiting top talent and organizing the agency's responsibilities among its constituencies.

Torti says he wants to act as an advocate for the science community. He also wants to integrate cross-cutting themes — such as nanoscience and toxicogenomics — throughout the agency. And he plans to develop a top-notch fellowship training programme, hoping to make the agency more attractive to bright young scientists interested in translating basic science into clinical practice. ■

Virginia Gewin

NETWORKS & SUPPORT

Upping student numbers and diversity

Attracting undergraduates to science is an ongoing challenge, particularly for small liberal-arts institutions that lack access to federal research dollars. But once they engage students, smaller schools focused on teaching create a surprisingly strong source of scientists for graduate schools. In April, the Howard Hughes Medical Institute (HHMI), a non-profit philanthropic biomedical organization, announced a grant of \$60 million to be split between 48 such undergraduate institutions to create innovative ways to engage students in the biological sciences.

Although this funding programme has been in place since 1988, Peter Bruns, HHMI vice-president for grants and special programmes, says that the focus this year has been on diversity. Bruns says that the HHMI specifically sought to capture a mix of ethnic, gender and academic backgrounds in this year's awardees. More than one-quarter were first-time HHMI grantees. And to bolster the number of historically black colleges receiving HHMI monies, which has declined in recent years, the institute held a pre-competition workshop to review proposal particulars. Five historically black colleges were funded.

One of those was North Carolina Central University (NCCU) in Durham. At present, only 5% of NCCU's

students major in science. With HHMI funds, NCCU will craft summer lab-based research programmes for middle and high schools, and link them to its existing undergraduate research and mentoring opportunities. "We will pave a 10-plus-year path from middle school to college and graduate professional schools," says Gail Hollowell, the university's HHMI programme co-director.

In a bid to reverse a recent 20% to 15% dip in science majors, Drew University in Madison, New Jersey, is using its HHMI funds to capitalize on regional assets that introduce students to real-world scientific challenges. It has devised 'science and society' seminar courses and symposia featuring executives from Wyeth Pharmaceuticals.

Bruns says that the HHMI funding has an added bonus: awardees comprise a *de facto* network. Meetings of HHMI programme directors from different schools are often the genesis for additional grants. For example, Davidson College in North Carolina received additional HHMI funds to put in place a full-service microarray data-analysis infrastructure — allowing fellow undergraduate colleges to conduct high-tech experiments at lower cost. ■

Virginia Gewin

POSTDOC JOURNAL

An impassive observation

This morning I watched a monkey named Bubba viciously attack fellow unit member Meena. She screamed in fear and fled to the bulk of her erstwhile lover, who just cowered, pretending to shield her. Meena did sink her teeth into Bubba, but she came off second best, with blood dripping from her arm. Nobody in the unit had come to her aid. I noted the events on my palmtop, a seemingly cool, detached observer. And I wished Bubba a slow, painful death by leopard mauling.

We are trained never to anthropomorphize when interpreting animals' behaviour. We are trained to be unbiased and unemotional in our reporting. I agree with this. But I wonder, are we hiding one of our human strengths? I throw myself into my work physically, mentally and emotionally. I think it's the emotional investment that makes me a meticulous scientist; after all, it is my fondness for the animals that leads me to search for hours to find them. And I find myself driven to scrutinize the subtle and overt actions of my study subjects.

Many biologists know their subjects as individuals, not just numbers on a data sheet. This enhances their ability to understand and interpret those subjects' interactions. As a young scientist I get the impression that we have to hide this. I don't want to plead for 'emotional' reporting in peer-reviewed journals. But I do want to acknowledge that we can be both emotionally involved and objective. And this is a good thing. ■

Aliza le Roux is a postdoctoral fellow in animal behaviour at the University of Michigan.