MOLECULAR MEDICINE

One Less Hoop for Gene Therapy

The federal government quietly decided last week to relax its scrutiny of human gene therapy experiments. Harold Varmus, director of the National Institutes of Health (NIH), and David Kessler, commissioner of the Food and Drug Administration (FDA), both agreed to a change in the review process that should make it quicker and simpler to win approval for most gene-therapy protocols. The move, expected to be approved by NIH advisers this fall, suggests that human gene therapy has come of age after a stormy adolescence; now it will be treated much like any other human experimentation.

The change will remove a requirement that all gene-therapy protocols be subjected to public examination. At present, anyone planning to run a human gene therapy experiment must undergo two major reviews—a private evaluation at FDA and a public review before the Recombinant DNA Advisory Committee (RAC), a board that advises the NIH director. Originally created in 1974 to monitor all gene splicing, RAC has shed most responsibility for overseeing plant and animal experiments, and, since 1984, it has focused mainly on human gene therapy. According to the new plan, RAC will now stop working as a primary reviewer of human experiments as well. However, if FDA and RAC staffers see an important safety or policy issue—such as a plan to try a new gene transfer vector—they may ask researchers to appear before RAC.

The proposal to streamline the process came up and was quickly endorsed on 19 July during a meeting of a special task force on AIDS drug development, chaired by assistant secretary of health Philip Lee. Varmus and Kessler were present, as was panelist Dan Hoth, a former NIH research administrator now at Cell Genesys of Foster City, California. Hoth and another member of the special task force, Flossie Wong-Staal of the University of California, San Diego, had proposed cutting back on the use of RAC last spring. Lee brought their suggestion up last week, and Varmus and Kessler endorsed it. NIH and FDA staffers immediately set to work writing up an agreement, and RAC itself is expected to take a formal vote on the matter at its meeting on 12 September.

When gene therapy began in a blaze of publicity in the late 1980s, it was seen as a way to treat rare genetic disorders. But over the past few years, most protocols under review have aimed to treat terminal patients with common diseases such as cancer and AIDS. With the passage of time, some reviewers felt that the multilayer review process had become repetitive and increasingly trivial. So when Varmus and Kessler agreed to the change last week, there was little dissent—except from Andrew Kimbrell, attorney for Jeremy Rifkin, the well-known critic of bioengineering. Kimbrell says, "This is not the time for decreased reviews," arguing that the government should be doing more, not less, to follow up early experiments for possible late-developing hazards. Kimbrell says his employer, the Foundation for Economic Trends, is ready to sue to keep the review system on its present track.

Hoth says he suggested the change on behalf of researchers investigating gene therapy for AIDS because "we are now subjected to a four-layer review" by the government—a process which he claims can delay experiments for months and confuse applicants about whose advice they really must follow. Genetic experiments are now reviewed by a local ethics panel, a local biosafety panel, RAC, and FDA. Only the RAC proceedings are conducted in public, however, and only the RAC review would be eliminated. Hoth specifically objected to RAC's tendency to rehash issues in the informed consent documents approved earlier by local institutions.

While Hoth is no enemy of RAC—he says "we find it to be helpful" for airing broad concerns—others would be happy to see RAC disappear entirely. For example, former FDA official Henry Miller, a champion of the biotech industry and now a fellow at the Hoover Institution, a conservative think-tank in Palo Alto, California, would like to see RAC shut down and all of its actions filed away in the U.S. Archives, since he considers the whole process to be an anachronism. Miller says he tried to get Kessler to push for closure of RAC during the Bush Administration, but that he got nowhere. The current streamlining effort, Miller grumbles, is "purely cosmetic."

But RAC's executive director, Nelson Wivel, points out that the changes are far from trivial. From now on, gene therapists will be asked to fill out only one application. And they will learn within 15 working days after submitting it whether they will have to undergo a single FDA review or a dual FDA-RAC review. Wivel expects RAC will want to see only "the newest game in town...those cutting-edge experiments which haven't been done before." However, it may be a long time before RAC folds its tent, for Varmus says "we still need the RAC to provide public review of novel gene-therapy protocols" which are in an "early phase." He thinks "careful oversight" is needed, particularly as researchers start using new vectors to put genes into humans.

–Eliot Marshall

ENVIRONMENTAL PROTECTION AGENCY

Browner to Beef Up Outside Research

After 18 months of saying that the agency's decisions must be based on good science, Environmental Protection Agency (EPA) Administrator Carol Browner has unveiled a major overhaul of EPA science aimed at achieving that goal. Her plan would shift funds from applied to basic research, reduce the use of outside contractors, and reorganize the agency's in-house research laboratories.

Browner says the changes reflect her philosophy of "having the EPA move beyond tackling environmental problems crisis by crisis, incident by incident, and pollutant by pollutant." That approach, she says, has forced the agency to collect data in haste and then make split-second regulatory decisions. In an interview with *Science* early this week, Browner said, "There was a consensus across the agency that we needed to have a top-line, long-term research program in order to help us with the decisions we'll need to make 5 or 10 years down the line."

RICK KOZAK

Moving ahead. Browner's plans for EPA are called "long overdue."

For extramural scientists, the changes will mean a better shot at funding. Over the next 2 to 3 years, Browner hopes to raise EPA's budget for extramural basic research from $20 million to $100 million, increasing from 35% to 50% the portion of the Office of Research and Development's (ORD's) budget committed to long-term research. The proposed changes "are long overdue," says toxicologist Bailus Walker, dean of the University of Oklahoma's Health Sciences Center. "One of the major gaps in the EPA's efforts has been its commitment to academic research," says Walker.

EPA is also wrestling with how best to award those dollars. It may try a system of soliciting grants from individual scientists similar to that used by the National Institutes of