perhaps also feelings that make them anticipate the arrival of a drug.

In the current study, Dewey, Brodie, and their colleagues have shown that GVG can block the dopamine rush produced by nicotine. The researchers found that whereas nicotine injections double the dopamine levels in the reward centers of the brains of control rats, GVG given 2.5 hours before the nicotine could completely block the dopamine rise. And in positron emission studies that infer dopamine levels by detecting how much of a radioactive tracer can bind to dopamine receptors—low binding indicates high endogenous dopamine—the scientists saw something similar in baboons.

To find out whether this change in brain chemistry has behavioral effects, team member Charles Ashby, a neuropharmacologist at St. John's University in Jamaica, New York, tested GVG's effects on a rat behavior called conditioned place preference, which is thought to reflect what happens in humans when particular environmental stimuli elicit drug cravings. First, Ashby and his colleagues gave rats repeated nicotine injections while they were in either of two connected boxes, one striped and the other plain, teaching them to associate nicotine with one of the boxes. Then, they let rats choose between the boxes after receiving a dose of either a control solution or GVG.

As expected, control rats stayed in the box where they had received nicotine, but the rats given GVG displayed no preference, suggesting that GVG erased their attraction to places associated with the drug. "We think GVG stabilizes dopamine levels such that animals don't get the dopamine rush when they go to the chamber associated with the drug," says Dewey. In humans, by extension, the treatment might dampen the intense drug cravings ex-smokers feel when they experience something—a sip of coffee, for example—that reminds them of cigarettes.

And GVG may help combat cocaine cravings as well. This past August, Dewey, Brodie, Ashby, and their colleagues showed that GVG can prevent a cocaine-induced burst of dopamine in baboon brains. They further demonstrated that the drug blocks conditioned place preference in rats that have learned to prefer environments associated with cocaine injections.

Of course, nobody can say whether GVG can help people stop smoking, or using cocaine, until it is tested in human smokers and cocaine users, something just now being considered by doctors at medical centers equipped to conduct such trials. And human tests may be delayed by concerns about the peripheral vision defects GVG causes in some epilepsy patients, which is why the U.S. Food and Drug Administration has not approved it. The much lower GVG doses needed to combat nicotine cravings may not cause these problems, however. Indeed, says Dewey, if further testing pans out, "we might be able to help people on any of a number of addictive drugs."

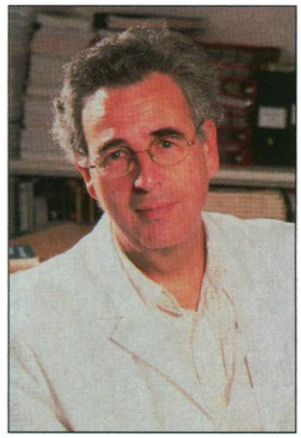
–INGRID WICKELGREN

AIDS RESEARCH

New Czar Aims to Sharpen France's Effort

PARIS—France is second only to the United States in spending on AIDS research, but in recent years the payoff has seemed disproportionately modest. Although French clinicians have conducted major studies to evaluate anti-HIV drugs developed elsewhere, France has created few new therapies of its own (*Science*, 16 January, p. 312). But French officials are hoping that will change soon. At a press conference earlier this week, France's new AIDS czar, immunologist Michel Kazatchkine, unveiled plans to harness basic AIDS research more tightly to eventual therapeutic goals, as well as to beef up the nation's AIDS vaccine effort.

Kazatchkine—who in October replaced virologist Jean-Paul Lévy as director of the National Agency for AIDS Research (ANRS)—was joined at the press conference by Claude Allègre, France's minister of research, and Bernard Kouchner, the health minister. Both Allègre and Kouchner said that their presence was intended in part to scotch rumors, circulating over the past year, that the ANRS would be disbanded and its activities absorbed into other research agencies once Lévy stepped down. "We are not going to pull back or make a lesser effort in AIDS research," said Kouchner.



Focus on therapies. French AIDS czar Michel Kazatchkine.

However, beginning next year, that effort will be much more tightly focused. For example, although about 25% of the ANRS's 1999 budget of $42 million will be spent on basic HIV research, half of that sum will now be reserved for "coordinated actions" designed to lead to new therapies. The other half of the basic research allotment will be awarded to researchers on the basis of grant proposals, although these will now be much more stringently judged than in past years. "The barrier for funding these projects will be raised higher," Kazatchkine told *Science* in an earlier interview. "Basic [AIDS] research should not just bring one more piece to the puzzle but have the goal of identifying new targets for therapy."

Vaccine research will also receive a boost next year, up 18% from the roughly $6.4 million spent in 1998. Kazatchkine says that one key goal will be to involve new industrial partners in vaccine development. At the moment, only the Lyons-based pharmaceutical company Pasteur Mérieux Connaught (PMC) is working with ANRS on vaccines. "If PMC has been so dominant, it is because not many other [companies] have come in," Kazatchkine says. Indeed, at the press conference, both Allègre and Kouchner decried the general reluctance of French companies to get involved in HIV research. "There is a black hole there," said Kouchner. "The international companies developing new [anti-HIV] drugs are not French."

The new plans to focus more heavily on therapeutic goals drew mixed reviews from researchers who spoke to *Science*. "The way one develops a vaccine or finds a drug is not by going basic but through the most rigorous application of basic knowledge to research that is goal-oriented," says virologist Marc Girard of the Pasteur Institute in Paris. And Françoise Brun-Vézinet, a virologist at the Bichat-Claude Bernard Hospital in Paris and a member of ANRS's scientific advisory council, says that focusing more effort on clinical AIDS research makes sense because "this is what has worked best" at the ANRS. Moreover, Brun-Vézinet adds, fundamental HIV research can still be accommodated in France's other research organizations, such as the giant biomedical agency INSERM.

But some question whether it makes sense to limit the focus of ANRS's research to specific targets. An AIDS researcher who asked not to be identified says, "So far the other 'coordinated actions' of ANRS have not been impressive, and the vaccine effort has been groping in the dark. Raising the barrier is a good idea, but it should be on everything, not just basic research."

Despite the assurances from Allègre and Kouchner that the ANRS will continue to exist, the agency's mandate expires at the end of 2000, at which time the government will have to decide whether to renew it. That gives Kazatchkine 2 years to prove that French AIDS research can produce results. "I told the ministers it was absolutely premature to close down the ANRS," Kazatchkine says. "If they asked me to take over, I guess they agreed."

–MICHAEL BALTER

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