

which tend to coat or stick to the crystals, are digested by the lysosomes. With the proteins out of the way, the crystals are free to attach to the lysosomal membranes. At this point, direct interaction between the crystals and lysosomes takes place, presumably by hydrogen bonding to lysosomal membranes. The lysosomes are disrupted; the white cells are injured; lysosomal enzymes escape and cause tissue injury.

In other words, in their efforts to destroy urate crystals, white cells release enzymes that hurt the body.

Weissmann and Rita have also discovered that only lysosomes that are rich in cholesterol or testosterone are susceptible to the crystals. Lysosomes that are rich in estrogen resist the crystals. This finding might explain why persons who over-indulge in foods rich with cholesterol and why men, who have testosterone for a sex hormone, are far more susceptible to gout than are less-indulgent eaters and women, who have estrogen for a sex hormone.

Will his findings have implications for gout therapy? "Sure," says Weissmann. "They explain how colchicine, a standard gout remedy, prevents lysosomes from merging with the phagocytic vacuole in which the gouty crystal enters the cell." He foresees that his and Rita's discoveries "may also lead to new treatment for gout that can interfere with hydrogen bonding at the membrane." He plans to work toward such treatment.

Should Weissmann's and Rita's molecular explanation for gout continue to be substantiated, it will fortify the concept that there is a final common pathway, namely the release of lysosomal enzymes, in all acute arthritic disorders. These enzymes, which are released to protect the body, inadvertently harm the body. □

## Waste treatment funds: Courts get cry of foul

The latest round in the battle between President Nixon and the Congress over how much the Federal Government should spend to clean up the nation's waterways has gone to Nixon. But his opponents refuse to concede.

Blow by blow, the fight to date: Against the President's express wishes, Congress passed a group of amendments to the Federal Water Pollution Control Act that would allot \$11 billion in grants for construction of local sewage treatment systems over the next two years. Nixon vetoed the bill on grounds that it was inflationary. Congress passed the measure over the President's veto.

The next move was Nixon's and it came on Nov. 28 when Environmental Protection Agency Administrator Wil-

liam D. Ruckelshaus announced the allotment of Federal funds for construction of waste treatment plants for fiscal years 1973 and 1974. Ruckelshaus said Nixon had instructed him to allocate no more than \$2 billion for fiscal 1973 and \$3 billion for 1974—a total of \$6 billion less than the amount set by Congress.

The action, of course, brought cries of "foul" from several sectors. The day after Ruckelshaus' announcement, a private citizen, representing a Chicago environmentalist group, filed suit against EPA to restore the \$6 billion. Last week, the city of New York sued on grounds that the President's action was unconstitutional, and would seriously injure the city's cleanup efforts. And Sen. Edmund Muskie (D-Me.), a principal author of the bill, complained bitterly that the move was a direct challenge to Congress' power to pass legislation.

The New York suit was filed on behalf of the city and other municipal governments in the state. City Corporation Counsel Norman Redlich said that he knows of "no occasion in American history where the President has directed domestic action so explicitly in contravention of an act of Congress." In practical terms, Redlich estimated that the city would get \$552.9 million instead of the expected \$1.21 billion. Mayor John Lindsay said the city stood to lose at least \$265 million and that construction would be delayed on five sewage treatment projects: at Red Hook, Coney Island, Newtown Creek in Brooklyn, Owls Head in Queens and Oakwood Beach on Staten Island. He noted the irony that the Federal Government had sued New York just last July for not moving fast enough to clean up its adjacent waters.

Muskie, chairman of the Senate Subcommittee on Air and Water Pollution, charged that "the President has defied constitutional limitations of his powers." Both he and Lindsay expressed concern that states would now be unable to meet Federal water pollution standards.

The hub of the dispute is over a provision Congress wrote into the amendments as a concession to the Nixon Administration. The provision puts a ceiling on Federal spending: the authorizations are not to exceed \$18 billion over the next three years. Furthermore, the executive branch is not required to obligate all funds authorized by the law. But, says Muskie, Congress made it clear that though these funds need not be obligated, they must be allocated, and this the President failed to do. EPA responds that there is no such provision written into the law and that no minimum expenditure was set. In other words, it is merely a matter of how the law is interpreted. □

## A new design for work in America

Last year General Foods opened a Pet Food plant in Topeka, Kan. In designing it, management sought to solve problems of frequent shutdowns, costly recycling and low morale that plagued an existing plant making the same product. When the plant opened, workers were organized into relatively autonomous work groups with each group responsible for a production process. Pay was based on the number of jobs an employe could do, rather than on the job being done at a particular time.

A survey of job attitudes a few months after the plant opened indicated positive assessments by both team members and leaders. The plant was being operated by 70 workers instead of the 110 originally estimated by industrial engineers. Also, there were improved yields, minimized waste and avoidance of shutdowns.

This type of job redesign, says the Department of Health, Education and Welfare, can contribute not only to higher production but to increased physical and mental health of workers and to the quality of life in general. This is the conclusion of an HEW task force report, *Work in America*, issued this week. The report was commissioned last December by HEW Secretary Elliot L. Richardson. It was designed to examine health, education and welfare from the perspective of a fundamental social institution—work.

The task force, headed by anthropologist James O'Toole, reviewed the history and meaning of work, the problems of workers and some possible solutions.

The commission confirmed that significant numbers of workers are dissatisfied with the quality of their working lives. Among white-collar workers, for instance, only 43 percent would choose the same job if given another chance. Among blue-collar workers, only 24 percent would opt for a similar position. This discontent, the commission says, is the result of dull, repetitive, seemingly meaningless tasks, offering little challenge or autonomy. The result shows up in low production, poor quality products, high absenteeism and turnover rates, wildcat strikes and sabotage.

The task force describes the results of 34 experiments in redesigning jobs. From them, it concludes that all segments of society can gain from proper redesign of jobs. These and other suggestions of the report cannot be lightly accepted, says Richardson. They are provocative, he concludes, and deserve a large platform for debate and discussion. □