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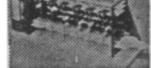


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## PHARMACOLOGY

# Kava Drug a Sleeper

The soporific potion that South Sea island maidens used to make by chewing up and spitting out the roots of the kava plant seems to be an advanced kind of sleeping drug—possibly a useful addition to the drug arsenal of the Western World—prepared in a different way, of course.

No extensive clinical trials have tested the drug's effect on humans. But Dr. Hans J. Meyer, professor of pharmacology at the University of Freiburg in Germany, reported last week that in a series of tests on animals, kava induced muscular weakness without dulling or clouding the brain.

He said he thinks sleep is induced by this muscular weakness, making kava more reminiscent of real physiological sleep than any other existing drug, natural or synthetic. Dr. Meyer made the report to an international conference on plant-derived mind-altering drugs held in San Francisco. He said the active compounds in kava have a specific depressant effect on the brain stem, but not the higher nerve centers, leaving animals relaxed but alert.

Actually the active principles in kava have been something of a mystery. The Western World first discovered kava (Piper methysticum) when Cap-

tain Cook traveled the South Seas. Two botanists on his ship carried back descriptions of the plant and in the early part of the 20th century its active compounds were isolated. But the studies became embroiled in contradictions which have persisted to this day.

Dr. Meyer told the conference that on the basis of his research, all the effects of kava are due to six active "pyrones." When taken in moderate doses these "relatively harmless" compounds will relax muscles and induce sleep. Taken to excess they will bring on temporary paralysis. They also may induce scaly skin; however, the link between kava and skin changes is not proved, said Dr. Meyer.

One other drug with a chemical structure like that in kava was synthesized in 1947, Dr. Meyer noted, but the drug, mephesisin, is no longer in use because of its serious side effects.

Kava can still be found in the South Seas, although it is not the drug it used to be. Instead of stewing in the mouths of maidens, the kava roots are ground to a powder to make a much less potent drug. Dr. Meyer explained that the kava compounds are not soluble in water, and that probably saliva broke them down enough to be used by the body.

## NUTRITION

# FPC Gets OK at Last

After saying "no" for six years, the Food and Drug Administration last week finally said "yes" to fish protein concentrate, a pale gray, odorless powder rich in protein (SN: 12/3/66). Made from ground-up whole fish—heads, tails and intestines included—fish protein concentrate is seen as one effective and economical way of alleviating malnutrition among the world's starving millions.

President Johnson has ordered Interior Secretary Udall to proceed "on an urgent basis" with development of methods of converting the fish concentrate into a usable commodity. The President asked Congress in his 1968 budget for \$1 million to construct a fish flour plant and \$700,000 for research and operating costs authorized by Congress—pending FDA action—last year.

FDA's approval covers production methods developed by Interior's Bureau of Commercial Fisheries and by the VioBin Corporation, Monticello, Ill. FPC is officially considered a food

additive, not a separate food.

According to FDA's regulations governing its production, fish bone either must be cut out or removed by screening. High fluoride content of the concentrate was one reason FDA withheld approval for marketing. Removal of bone will take care of the required reduction of fluoride levels which neither VioBin nor the Bureau of Commercial Fisheries were able to achieve by any other means.

FDA's regulations on fish protein concentrate are not limited simply to standards for safety and wholesomeness. FDA is also taking up its role as guardian of the public's money as well as its health in limiting the concentrate's market to consumers who will buy it in one pound packages only. In other words, major bread or cereal companies will not be permitted to buy FPC wholesale, add it to their products, and then sell them as doubly enriched and doubly expensive protein foods in this country where protein-deficiency is not a significant health problem.