

## FOOD SCIENCE

### Color colon cancer away?

Curcumin is the pigment that gives turmeric — and any food to which this fragrant spice is added — its bright, yellow-orange hue. A new study now suggests that curcumin may also suppress the development of colon cancer.

Regions in which turmeric dresses up much of the traditional cuisine — especially Asia, where it colors curries — tend to have a low incidence of colon cancer, notes nutritional biochemist Bandaru S. Reddy of the American Health Foundation in Valhalla, N.Y. But what really caught the attention of his research team was the herb's medicinal reputation.

"It's been used since ancient times in India as a household remedy for the treatment of sprains and swellings," notes Robert McCaleb, president of the Herb Research Foundation in Boulder, Colo. Because aspirin and many other nonsteroidal anti-inflammatory drugs (NSAIDs) inhibit colon cancer in animals and some research links the use of such drugs to low rates of the cancer in humans (SN: 3/16/91, p.166), Reddy's team decided to evaluate how curcumin measures up.

After administering a powerful colon carcinogen to 66 rats, they added curcumin at the rate of 2,000 parts per million to the diet of 30 of them. At the end of a year, 81 percent of the rats eating regular chow had developed cancerous tumors, compared to 47 percent that dined on curcumin-treated fare. Curcumin-treated animals also developed smaller tumors.

Moreover, 38 percent of the tumors in rats eating normal diets proved invasive — almost twice the rate in rodents munching curcumin-colored food. Reddy and his colleagues report their findings in the Jan. 15 **CANCER RESEARCH**.

Reddy's group also showed that curcumin lowered concentrations of potent, hormonelike substances that play a role in inflammation, both in tumors and in regular colon tissue. So curcumin's mechanism "appears to involve some anti-inflammatory pathway," he says. Most promising, Reddy notes, curcumin exhibited none of the toxicity or side effects of NSAIDs administered at similarly effective doses.