

# Fishy asthma cure raises big stink in India

Every year, on *Mrigasira Karti*—an auspicious day in the Hindu calendar—patients from all over India line up in the southern city of Hyderabad to swallow a two-inch-long fish stuffed with an herbal preparation of unknown composition. This year, too, an estimated quarter-million people on 8 June received the mysterious ‘cure’ for bronchial asthma.

The originators of the therapy, Harinath Goud and his family, claim the formula is a 150-year-old family secret inherited from a direct descendent of Charaka, one of the founders of the 2,500-year-old Ayurveda system of medicine. Goud, who administers the fish free of charge, promises a complete cure if patients take the fish for three consecutive years and follow a prescribed diet for 45 days after each dose. According to some experts, the bland diet may in part help relieve asthma symptoms.

All attempts to evaluate the therapy in a clinical trial have failed because Goud refuses to reveal its ingredients. The Indian Council of Medical Research has given up, saying that investigating a therapy already in practice is “outside our mandate.” But the Indian Medical Association (IMA) is now sharply criticizing the government of Andhra Pradesh, Hyderabad’s home state, for officially endorsing the controversial treatment.

“The therapy is unlawful and unethical and we demand a clinical trial to validate the treatment before the government can lend legitimacy to this practice,” says M.V. Ranga Reddy, president of the IMA’s chapter in Andhra Pradesh. The IMA is joined by the Andhra Pradesh chapter of the Indian Society of Chest Physicians, and by a non-profit advocacy organization that has threatened to file a public interest lawsuit if the government fails to investigate.

The controversy has tarnished the image of the state government, which has in recent years projected itself as India’s most scientifically enlightened. “We cannot suddenly question an alternate therapy that has been in practice for years but we will certainly carefully examine IMA’s demand,” says Chaya Ratan, the state’s health secretary. The fish therapy relies primarily on faith, Ratan notes. “I doubt if this faith will be shaken by a clinical trial, whatever its outcome.”

Nontraditional treatments will thrive “as long as the patient is a willing victim,” says Udaya Prakash, president of the American College of Chest Physicians and director of



**Open wide:** Indian asthmatics wait their turn to swallow a fish stuffed with unknown ingredients.

Courtesy of Anil P. Kumar

bronchoscopy at the Mayo Clinic in Rochester, Minnesota. “In the annals of medicine, you can find similar stories from almost all countries,” says Prakash. Only the government and physicians—by educating the public—can stop scientifically unproven therapies, he adds.

Far from critically evaluating the therapy, however, the Andhra Pradesh government provides transport, accommodation, food, electricity and water for the thousands who flock to Hyderabad; the fisheries department ensures an adequate supply of the fish species *Channa punctatus* and *C. orientalis*; and Andhra Pradesh’s chief minister Chandrababu Naidu—who is the first to

swallow the fish at the event—has donated six acres of government land to the Goud family for future health camps.

Indians turn to alternative remedies for ailments ranging from insanity to fractured bones. Although some such therapies have a place in the health system, says Vasantha Muthuswami, deputy director-general of the Indian Council of Medical Research, government patronage to an unproven therapy is at best questionable.

Fish fatty oils are known to possess some anti-inflammatory properties, but experts say a single dose is unlikely to provide any benefit beyond a placebo effect. Ajit Vigg, a leading chest specialist at Hyderabad’s Apollo hospital, followed nearly 100 recipients of the medicated fish for six months. “There is no evidence it works,” Vigg says. People only turn to the remedy because of a herd mentality, he adds. “It is nothing but quackery.”

Goud, who counts a former Indian president and a number of politicians and medical professionals among his ‘patients’, is unfazed by the criticism. “We cannot reveal the formula, nor participate in any trial, as we do not want any certificate from anyone—IMA or [the American College of Chest Physicians],” Goud told *Nature Medicine*. “The fact that thousands of patients from faraway places come to take the medicine year after year is proof that it works.”

*K.S. Jayaraman, Hyderabad*

## Europe’s new tests let rabbits rest easy

The European Commission is adopting new methods that will spare the lives of nearly 200,000 rabbits each year. Rather than sacrifice rabbits to evaluate intravenous medications, the commission plans to use six *in vitro* tests that use human blood cells.

All injected drugs must first be screened for pyrogens, or fever-inducing agents. To evaluate each batch of drugs, scientists currently inject them into rabbits and record any changes in body temperature. The test, in use for more than 60 years, claims the lives of millions of rabbits worldwide.

The only *in vitro* alternative thus far had been a test that relies on blood from the horseshoe crab, *Limulus polyphemus*. But the method detects only one class of endotoxin—the most important pyrogen from Gram-negative bacteria—and leaves patients at risk from other contaminants.

The new tests are based on the human fever response. Compared with rabbits, the new tests—standardized to ensure similar limits of detection and reproducibility—are less expensive, less laborious and more sensitive. “They fulfill the necessary conditions as substitutes for animal experimentation,” says European Research Commissioner Philippe Busquin.

*Xavier Bosch, Barcelona*

