

Ancient remedy, modern proof: How Pantnagar is putting ‘Cowpathy’ to the scientific test

University researchers are testing centuries-old cow-product remedies against modern laboratory standards, and finding real immune and antimicrobial activity worth taking seriously

For centuries, Ayurvedic tradition has treated Panchgavya, the five products of the cow: milk, curd, ghee, urine, and dung as having therapeutic value. For just as long, that claim has sat outside the reach of modern clinical evidence, resting on tradition rather than trials.

At G.B. Pant University of Agriculture and Technology, Pantnagar, a research programme spanning more than two decades has been trying to close that gap by testing Panchgavya-derived products against the same antimicrobial, immunomodulatory, and therapeutic standards which are used to evaluate any modern compound. The university has emerged as one of India's pioneering institutions in this field, publishing more than 100 research papers and review articles and filing three patents along the way.

The scientist behind the term

The word “Cowpathy” itself traces back to Prof. R.S. Chauhan, former Head of the Department of Veterinary Pathology at GBPUAT's College of Veterinary and Animal Sciences, who began working on the subject in the late 1990s and is credited with introducing and scientifically promoting the term in veterinary and biomedical research. His research has centered on immunomodulation by demonstrating through peer-reviewed studies that Ark, distilled cow urine, exhibits anti-cancer properties and can act as a natural bio-enhancer for antibiotics and vaccines. The scope of that work earned him the title “The Cowpathy Man,” later the subject of a biographical book covering his career, publications, and animal welfare advocacy.

A hill breed's unexpected scientific role

Much of Pantnagar's Cowpathy research has focused on indigenous, or Desi, cattle, beginning with Sahiwal, Gir, and Gangatiri breeds, and more recently the Badri cow, the first registered cattle breed from the hills of Uttarakhand. In 2022, a National Agricultural Science Fund supported project led by Dr. Chauhan and Dr. Aman Kamboj began examining the immunomodulatory activity of Badri cow urine distillate, administering it to experimental rats to measure its biological effects.

According to Dr. Kamboj, the project's Principal Investigator, the Pantnagar research team was the first to prepare an immunological and biochemical profile of the Badri cow. Some of the substantial findings include a marked immunomodulatory effect from Badri urine, which is

supported by evidence in experimental rats, along with the presence of macro- and microminerals, including gold and silver, vitamins, enzymes, and antioxidants.

From lab bench to capsule

The research hasn't stayed confined to laboratory papers. Basic and applied work on Cowpathy at Pantnagar has already produced a functional immunomodulatory product in capsule form, alongside the more than 100 papers and three patents the programme has generated to date.

Why this matters beyond the cowshed

The stakes extend past animal health. As antimicrobial resistance continues to threaten global public health, researchers worldwide are searching for alternatives that might reduce dependence on conventional antibiotics. Scientific reviews in the field suggest that certain bioactive compounds in cow-derived products warrant further investigation as potential antimicrobial agents, while cautioning, consistently, that promising laboratory findings still require rigorous experimental and clinical validation before any therapeutic conclusions can be drawn.

What comes next

GBPUAT's broader research ecosystem, coordinated through its Directorate of Research, continues to support interdisciplinary work spanning agriculture, veterinary science, biotechnology, and environmental sustainability. As interest in indigenous cattle and Panchgavya research grows nationally, the university's contribution has been to insist that renewed interest be matched by rigor - peer-reviewed research and reproducible evidence, to stand in for proof.