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Cockroach milk, buried underpants and how to blow your nose – these are the Ig Nobel Prizes 2026

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The famed and outrageous science awards are back; but this year, miss the mark.

This year's Ig Nobel Prizes contain much of the familiar absurdity and genuinely thoughtful and engaging research efforts – how to optimally blow your nose, getting thousands of people involved in science using underpants, using mosquito proboscides as 3D printing nozzles – but one paper leaves a rather bad taste.

We'll get straight into it with the paper we find troublesome, alongside the Ig Nobel Prize's response, and let you make your mind up, before sharing the research that genuinely does "make you laugh, and then think."

Ethical questions ignored in Biology Prize: "For gently stepping on various parts of various venomous snakes – repeatedly at various temperatures at various times of day – to try to learn what does and what does not induce a venomous snake to bite a human."

The title explains this in a nutshell really. And if it raises a few eyebrows, then you are not alone. The paper was **retracted** in 2025, with the retraction stating that: "The Animal Ethics Committee of Butantan Institute confirmed that the approval granted to the Authors for their research on snakes (*Bothrops jararaca*) did not include newborn snakes or the use of the 'soft stepping' method."

This method, detailed in the original paper [1], included the use of a safety boot to "softly [step], on the head, mid-body, and tail [of the pit viper *Bothrops jararaca*] (ten times in each region) randomly at 3-s intervals." As you would expect, bite probability was most likely if the head was stepped on, then the mid body, then the tail. The authors found variations in bite probability dependant on the size, time of day, body temperature and sex of the snake.

With 20,000 envenomations from pit vipers in Brazil each year, clearly there is an issue here that needs addressing; however, it is difficult to see the practical applications of this study. Are the people of Brazil now safer in the knowledge that if they step on the tail of a small male pit viper at 3pm while it is at X body temperature they are more or less likely to be bitten? With the paper retracted due to ethical concerns, which it should be noted all the authors disagree with, this seems a bit of a

puzzling choice from the Ig Nobel Prize committee and hopefully won't be the kind of paper that makes an appearance in future iterations of the award.

In response to our query about the inclusion of this paper, Kees Moeliker, European Bureau Chief for Improbable Research, responded that:

"We were aware of the retraction, but it was irrelevant to the Ig Nobel Prizes, and had no effect or influence on that. The study perfectly fitted our 'first laugh, then think' criteria.

The Ig Nobel Board of Governors does not comment as to which Prize-winning achievements might be deemed 'good' and which bad', or which might be 'important' or 'trivial', 'useful' or 'useless'. As with most things in life, that is entirely a matter for each individual to judge.

Many people have their own ideas about what should win an Ig Nobel Prize and what should not, but we stick to 'first laugh, then think'. Retracted or not retracted, the snake-stepping work of João Miguel Alves-Nunes *et al.* still fully qualifies."

3D-printing with a vampiric twist

When most of us look at mosquitoes, we see a blood-sucking pest hell-bent on making our lives an itching, scratching misery. It takes a special kind of person to look past the threat of bites and disease, and instead see an ingenious solution to current 3D-printing problems, but that's exactly what the winners of this year's Ig Nobel Technology Prize have done.

You see, mosquito feeding tubes, aka proboscides, have unique geometry, structure and mechanics that, somewhat improbably, suit them for use as ultra-fine, high-resolution 3D-printing nozzles. Toward the tail end of last year, researchers from McGill University (Montreal, Canada) **repurposed the blood-sucking organs** and used them to print complex structures such as honeycomb, a maple leaf and bioscaffolds encapsulating cancer cells and red blood cells. As unhinged as it sounds, the innovation, which the team calls 'necroprinting', could pave the way for more sustainable solutions in manufacturing and biomedical engineering [2].

By enabling line widths as fine as 20 μm , a little smaller than a white blood cell, the wacky nature-inspired upgrade surpasses commercially available printing nozzles by around 100%. Plus, these dispense tips tend to be made of nonbiodegradable materials, such as metals and plastics, making mozy nozzles a much more environmentally friendly option.

Have you been blowing your nose wrong?

When I woke up this morning, I wasn't expecting to spend my day questioning whether I've been blowing my nose wrong my entire life, but thanks to this year's Medicine Prize, here we are. The prize was presented posthumously to the late Tokuji Unno for his 1977 study 'How to blow the nose – an aerodynamic study of the nose blowing', which absolutely does what it says on the tin. In Unno's own words, "to give good instructions to those who do not understand how to blow the nose." For anyone just as baffled as I was, I've summarized below.

Unno repeatedly **recorded** expiratory velocity, volume and time of nose blowing through each nostril, also taking note of pressure changes in the external auditory canal. Over the course of 60 trials, he revealed that the velocity in the more blocked side is increased by closing the nostril of the more open side, and that the faster the expiratory thrust of a nose blow, the more efficiently it pushes out secretions in the nasal cavity. He also demonstrated that associated pressure changes in the auditory canal do not usually cause acute ear infection [3].

Essentially, a successful nose blow can function like a cough or a sneeze, eliminating secretions from the upper airways as well as the lower airways with its speed and thoracic compression. The upshot? "A big and long nose blow is therefore recommended to prevent upper and lower respiratory tract diseases," Unno concluded. A good thing to remember next time you have the sniffles.

Now, excuse me while I continue my existential crisis.

On the origin of 'oral–oral contact with some movement', aka kissing

Where literature and art have engaged in passionate discussions about kissing and its symbolism, evolutionary biology has been avoiding the topic, sort of sitting in the corner and feeling a bit awkward. Now, people are asking the question that started it all: What is the evolutionary history of kissing? We can't seem to figure it out; it doesn't appear to aid survival or reproductive success, yet the chance of disease transfer is high, so it poses an interesting evolutionary problem.

Previous studies have failed to investigate the evolutionary history of kissing, the correction of which has earned the team behind this vital work the 2026 Ig Nobel Biomechanics Prize.

The team – hailing from the **University of Oxford**, **University College London** (both UK) and **Florida Institute of Technology** (FL, USA) – have taken a **comparative approach** to investigating kissing across Afro-Eurasian monkeys and apes, creating a definition and framework that can be used for future kissing research endeavors.

They began by constructing a profoundly unromantic definition for 'kissing' that can be applied across taxa, describing kissing as "non-agonistic interactions involving directed, intraspecific, oral-oral contact with some movement of the lips/mouthparts and no food transfer." A targeted scoping literature review to collect kissing data, in addition to life history variables such as diet, food sharing, premastication and mating, ensued.

They then ran an analysis of 10,000 molecular phylogenies from the 10kTrees Project V3.0 before using a multiscale function within a Bayesian Markov chain Monte Carlo framework to reconstruct the evolutionary history of kissing [4]. Their findings suggest that kissing is phylogenetically conserved within large apes, and although more research is needed to definitively explain why kissing evolved, they noted a potential association between kissing and postcopulatory sexual selection.

Think about that next time you osculate.

Surveying soil health and engendering public engagement in science... with underpants

This Swiss **research project** used an unorthodox approach to galvanize 'citizen scientists' to take part in a study of soil health [5]. Underpants served as the ideal every day and cheap garment for their study, providing an obvious humorous hook with which to catch attention and coming with an in-built elastic skeleton to hold the remnants of the decomposed undies together, making it easier to retrieve and compare them.

The project, named "Proof by underpants", co-ordinated the burial of 2000 pairs of underpants, alongside teabags, in over 1000 locations throughout Switzerland and then, 2 months later, their retrieval. Participants also collected soil samples for chemical and physical analyses and provided site information and management data. Photos were provided of the decomposed underpants on exhumation before the underpants were sent to the research station for central analysis alongside soil samples.

The outreach for this project made quite a splash, receiving news coverage in 27 countries in almost every continent, which led to additional participation from citizens of **several other countries**, mostly in Europe. To my count this includes 11 additional countries rather than "in more than 25 countries" as the description for this award suggests at the time of publication, which may have been confused with the number of countries in which it received news coverage.

The results of the initial study of 1000 locations in Switzerland [6] were revealed late last month. Interestingly, private gardens displayed the most decomposition after 2 months, at 58% decomposition, while lawns showed the lowest, with only 40%.

High energy cockroach milk–protean crystals

Nuke proof, prolific and now, apparently, highly energy efficient. Another feather in the cap of the mighty cockroach. Well, not all of them – this Ig Nobel Chemistry Prize winning research [7] was conducted in the only species of cockroach that display viviparity (the process of giving birth to live young nourished directly by the mother) *Diploptera punctata*. The work capitalizes on recent developments that have enabled the investigation of *in vivo*-grown crystal structures.

D. punctata embryos have evolved to use the limited yolk that they are formed with to rapidly develop pharyngeal muscles and a simple gut enabling them to consume protein-rich milk produced by the mother's brood sack, resulting in the formation of protein crystals in the midgut.

Led by Subramanian Ramaswamy ([Institute of Stem Cell Biology and Regenerative Medicine](#), Bangalore, India) and Leonard Chavas ([High Energy Accelerator Research Organization](#), Tsukuba, Japan), this [international research collaboration](#) set out to characterize the milk-protein crystals that sustain the developing cockroach embryos.

They extracted crystals from the midgut, dissolving them before conducting analysis with SDS-PAGE to find significant heterogeneity. Free-flow electrophoresis (FFE) of crystals also resolved multiple peaks. Subsequent MALDI-TOF MS of both FFE-separated and dissolved crystals, in addition to further analyses, was used to characterize these crystals, revealing that these crystals accounted for roughly three times as much energy as an equivalent mass of milk from other viviparous animals like cows, providing a relatively whopping 3.7×10^{-5} J of energy per crystal.

SOURCE

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