

SCIENTIFIC NEWS

Editorial. Misinformation in healthcare, a collective challenge

Health misinformation is now a systemic societal problem. Its rapid spread, its impact on behaviour and its ability to undermine trust in institutions have led to political awareness, illustrated in September 2025 by the Health Minister's decision to commission an independent task force to propose appropriate responses.

While misinformation is often associated with conspiracy theories, it also has its roots in more subtle causes, particularly scientific inaccuracy. Simplified messages, which are easier to convey and understand, can be perceived as contradictory when they lack nuance. Thus, stating that 'vaccines are safe and effective' necessarily requires clarification: variations depending on the severity of the disease, differences between populations, possible side effects. The shift from a general statement to scientific nuance creates a space of uncertainty, conducive to mistrust and the circulation of misleading information.

However, this situation presents healthcare professionals with specific responsibilities. Doctors must support their patients by maintaining a relationship of trust. Researchers must report on the complexity of results without exaggerating them. Institutions must provide clear information without obscuring the uncertainty inherent in current knowledge. Any excessive simplification increases the risk of distortion and paves the way for misinterpretation.

Recognising and explaining uncertainty is no longer an option: it is a necessary condition for scientific credibility. The fight against misinformation cannot be limited to the opposition between evidence and falsehoods; it requires greater rigour in scientific communication. But health is not isolated: misinformation affects a multitude of areas, notably the ecology which is a striking example of this.

Jean Christophe Lega (Department of Statistics and Modelling for Health Sciences)

Migration and senescence: life choices shape ageing in the greater flamingo

Why do some individuals age more slowly than others ? A study conducted over more than 40 years in the Camargue highlights the link between migratory strategy and ageing in the greater flamingo (*Phoenicopterus roseus*). 'Resident' individuals, which do not migrate, have greater reproductive success early in life but undergo more rapid senescence. Conversely, migrants, although more exposed to early mortality, show a slower decline in their vital performance with age. This study reveals, for the first time on this scale, the differentiated impact of migration on longevity within the same species. '*Migrants pay an initial cost, but then age more slowly.*' according to Hugo Cayuela, co-author of the study. These results open up new perspectives on the influence of mobility behaviours on the evolution of life strategies, including in humans.

Click [here](#) to read the article

Auteurs : Hugo Cayuela (Department of Evolutionary Ecology) et al. Source : PNAS

Cluefish: a new tool for analysing transcriptomic data series

How do we interpret molecular responses along a gradient of experimental conditions ? Classical functional enrichment methods in transcriptomics identify overrepresented biological pathways among a set of selected genes. These methods are well-suited for binary comparisons (treated vs. control), but struggle when analysing data series, such as those from dose-response experiments, where the effect is measured at different concentrations of a compound. To overcome this limitation, Ellis Franklin developed Cluefish, an open-source, semi-automated R workflow. Its originality lies in its data-driven approach: it builds clusters from protein-protein interaction networks that serve as anchors to identify specific biological functions, while innovative features like cluster merging and recovery of isolated genes enable a more complete and unbiased exploration. Applied to three toxicological datasets across different organisms and coupled with DRomics, Cluefish identified dose-sensitive biological functions overlooked by the standard approach. Notably, in zebrafish exposed to dibutyl phthalate, it revealed that retinoid signalling disruption occurs at the lowest doses, making it the most sensitive biological pathway during development.

Click [here](#) to read the article

Auteurs : Ellis Franklin (Department of Evolutionary Ecology) et al. Source : NAR Genomics & Bioinformatics

Science Festival: the LBBE opens its doors on October 10th and 11th

As part of Science Festival, the LBBE is opening its doors on 10 and 11 October. Friday 10 October will be dedicated to welcoming secondary school pupils, who are invited to discover ecology and evolution through lectures, workshops and games. On Saturday 11 October, these activities will be open to the general public. The open doors programme is available [here](#).

