

# LETTER FROM THE EDITOR

In a quiet, sterile Japanese laboratory in 1987, Yoshizumi Ishino and his team discovered a strange genetic sequencing result that would forever change biology. A sequence of palindromic nucleotides repeated itself, like a section of DNA mistakenly copy-pasted too many times. Intrigued, yet unable to explain this, they quickly documented the anomaly and moved on.

These repeats, later coined 'clustered regularly interspaced short palindromic repeats' (CRISPR), reveal a clever bacterial immune system that defends against viruses by cutting up their genetic information. In recent decades, CRISPR has been harnessed by humans to enhance crops, alter harmful species through gene drives, and even edit human genes to treat conditions like sickle cell disease. More uses have been envisioned, but ethical debates continue over CRISPR's potential consequences.

Cascades are all around us. Stumbling upon this inherently simple DNA sequence triggered a cascade in biology and beyond, reminding us how even the smallest discoveries can have far-reaching consequences. Other cascades are more deliberate, like grassroots political movements hoping to inspire change, or big technology companies hoping to dominate by developing new AI-powered features. All cascades, whether unintentional or engineered, illustrate the profound cause-and-effect dynamics that shape our world and remind us to thoroughly consider the implications of advancements before proceeding.

This issue of NU Sci reflects cascades of curiosity and human progress. We investigate long-term impacts of COVID-19 on adolescent psychology plus a new solution to antibiotic resistance. Mysteries in space are explored alongside the effects of powerful mobile apps like DoorDash and Spotify. We also examine the intertwined relationship between the human and natural worlds, as well as contributors to the climate crisis and innovative ways to mitigate their effects.

I thank our writers, designers, photographers, and the web and software, marketing, and outreach teams that make this possible. To our readers, I hope these pages inspire you to recognize cascades in your lives, helping you pinpoint seemingly small moments that have had a much greater reach than you expected.



*Dessy Dusichka*

Dessy Dusichka  
Editor-in-Chief

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