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Dear Reader,

I am pleased to introduce the first issue in Berkeley Scientific's 18th volume. Twice each year, Berkeley Scientific publishes undergraduate research, interviews with distinguished Cal faculty, and feature articles spanning diverse scientific disciplines.

This semester, we chose to explore stress in different realms of scientific thought. How does one clearly define stress? In the human body, stress takes on the form of various chemicals and stress-inducing hormones, thereby altering the body's physiology. Preethi Kandhalu explores the biological mechanisms of stress on page [14] and Jenna Koopman provides a cautionary description on the dangers stress can have on fertility on page [17]. On pages [55] and [65], Integrative Biology Professors George Bentley and Michael Shapira talk about their research and how it pertains to biological mechanisms of stress.

However, stress is not limited to the biological systems. Engineers depend heavily on creating safe structures in which extreme levels of physical stress are applied. Structural failures result in perilous consequences, as witnessed by the devastating building collapse in Savar, Bangladesh earlier this year. On page [6], Aditya Limaye sheds light on the current technology surrounding carbon nanotubes and its properties that make it a suitable candidate for 21st century infrastructure. Tensile strength is not limited to large physical objects, however—on page [46], read Alex Power's entertaining article on how spider silk is perhaps strong enough to withstand an oncoming train.

With new scientific information filling new textbooks annually, how do we decide what particular ideas to stress? On a more philosophical level, Jahlela Hasle writes about the "language of science" and its inevitable evolution over the years on page [29]. We invite you to join us in exploring the many ways in which stress factors in our lives, from the social to the biological, to the mechanical, to the linguistic. Go Bears!

Sincerely,
Prashant Bhat
Editor-in-Chief

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