

IN EVERY ISSUE

## Message from the Editor

BY DEBU TRIPATHY, MD

*A new chapter in the cancer tale.*

Every now and then, we cover a story that is highly technical, yet a sign of something to come that could be of great impact. Over the past year, CURE has covered stories big and small and has not flinched from tackling those that may be hard to explain, or murky by nature even to the experts.

This year has brought new drug approvals for treating breast cancer, lung cancer, and hematological malignancies, as well as approvals for various supportive care drugs. An increasing number of tests that involve a protein, a gene, or the profiles of multiple genes are revealing who should receive specific treatments. You can read about one of those significant discoveries in “[Bittersweet Gene](#)” by Heather L. Van Epps, PhD.

Some of the advances involve entire fields of biology that did not exist just one or two decades ago. Others are more personal but just as important—the impact of therapy and long-term survival on patients as well as help and encouragement for caregivers, family, and friends. I am proud of my colleagues at CURE, who collectively identify and create the individual stories and compose them as a cohesive series, collectively weaving a tapestry—a picture of cancer care that comes into further view with every issue and successive year. (Back issues are available in their entirety on the newly relaunched curetoday.com.) Our aim is to bring readers on a journey through the human and scientific storyline, challenging them to stay as current as possible and open to future possibilities in the light of hope and reality.

Our cover story, “[Medicine’s New Epicenter? Epigenetics](#)” by Laura Beil, is representative of a big tale that is just beginning to unfold. It is also illustrative of the ambitious task that is a trademark of our coverage, from the artwork that conveys the complicated essence of epigenetics to the story that places the topic in a relevant context for the patient.

The field of epigenetics is likely to usher in a series of key discoveries that are necessary follow-ups to the Human Genome Project, which was completed in

2003. Now that the project's task of sequencing every human gene is complete, the next phase is to understand how genes are turned on and carry out their instructions. This must occur with great precision in the right cell at the right time to allow a complex organism to form properly and function smoothly. The genome, therefore, has to be highly regulated, not only by the sequence of base pairs, but by other proteins and cell functions that regulate the expression of each gene, like the individual instruments of an orchestra.

This is what epigenetics is all about. Cancer cells modify how genes turn on and off, so understanding the details of epigenetics and how it drives the development and progression of cancer could lead to a generation of new diagnostic and treatment pathways that are different from the standard tests and chemotherapeutic, hormonal, and many biological treatments currently on the scene.

Still, epigenetics is a young discipline and will be best served not only by the hard work of basic scientists and clinical investigators, but via public awareness that translates into participation in clinical trials and support of research initiatives. Epigenetic drugs are already in the clinic for certain types of leukemias and lymphomas, and we expect epigenetics will rapidly improve the management of all types of cancer.