

Editor's Corner

Introductory Comments

Andrew C. Von Eschenbach

Director, National Cancer Institute

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Andrew C. Von Eschenbach, M.D.

I consider it a great privilege to introduce this special review edition of *Cancer Biology & Therapy* on models of anti-cancer therapy. The provocative topics in this issue represent some of the most promising observations and strategies in the field today. The authors themselves are more than pioneers; they embody a new era in healing potential—a potential driven by the unique position that the state of oncology has assumed at the dawn of the 21st Century.

Where the primary strategy for treating cancer was once to 'seek and destroy,' we are now increasing efforts to 'target and control' cancer by modulating and altering the behavior of the disease while preserving healthy cells. Yet even as we refine traditional treatments and enhance our ability to detect cancer earlier, the stark reality of today is that most of us will live to face cancer or see at least one close family member or friend struggle with the disease.

Within this reality, new scientific discoveries—including those outlined in this journal—provide a beacon of hope that our understanding of the genetic, molecular, cellular, and environmental determinants of cancer will soon yield a multitude of new opportunities for novel interventions to detect, treat, and prevent this disease.

Just as important, a dramatic paradigm shift is now occurring in research labs and clinics across the country. This shift finds clinicians and scientists working in close collaboration to create a seamless continuum in which relevant clinical observations of disease in patients and populations are taken to the laboratory for investigation of underlying mechanisms while discoveries in the lab are translated into strategies to halt, reverse or prevent disease. Some of the important lessons outlined here already are being embraced—including the recognition that cancer is not just a disorder of the genetic machinery of a cell, but rather, a process determined also by the interaction of the cancer cell with its environment. Cancer exists within a backdrop of a micro- and macro-environment that is unique to the host. Understanding the patient must be just as essential as understanding the tumor.

The future is rich with the promise of more discovery. As director of the National Cancer Institute, I envision an overall cancer research strategy as follows: We must continue to nurture our current efforts to unlock the individual elements involved in malignant transformation. We must further our understanding of the interaction of the cancer cell and its unique micro- and macro-environment. And we must embark upon novel and innovative ventures to integrate the individual pieces of the jigsaw puzzle into a comprehensive understanding of cancer.

It is clear that such an agenda calls for development of individual excellence and its integration into a team effort. Individual excellence will demand extraordinary sophistication and understanding of progressively narrower fields of endeavor. Team effort will require even better methods of communication, cross-fertilization, and the collaborative synthesis of vast amount of information into knowledge and understanding. In addition, scientists will be more and more dependent upon sophisticated, high-priced technology and will need to value and nurture colleagues who develop and operate these tools. Furthermore, seamless integration of laboratory discovery and clinical observations will be necessary to accelerate discovery. Bench to bedside must become a circular rather than a linear process.

Current and future cancer patients who desperately await the promise of new hope will benefit from the tremendous work and effort reflected in this journal. And with continued collaboration, I'm confident that our shared purpose will lead to more effective strategies of cancer treatment and, ultimately, to lives saved.