



Editorial

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This issue of *Period Biol* compiles a set of studies ranging from original scientific articles to reviews in oncology. Some deal with genes (and functional disturbances caused by their mutations) known to be important in the generation of cancer, and other report on genes that might be involved in cancerogenesis. It is a collection of selected reader's digest for a wide variety of biologists, clinicians and others interested in the future of cancer research.

Among realizations resulting from sequencing the human genome was the fact that cancer is basically a genetic disease. We now know that cancer – in order to become a deadly disease – must accumulate at least six mutations dispersed across the six functionally linked groups of genes: proto-oncogenes, tumor-suppressor genes, processes like angiogenesis, cell immortalization, drug detoxification and cell invasiveness including metastasis. The number of candidate genes involved in all forms of cancer is over 400 and rising. However, further research would yield better understanding about their actions and their roles in various types of cancer.

It is also unknown how these cancer-causing genes might be connected with genes controlling the function of other tissues, organs and organic systems like for example the immune system or the neuro-endocrine and reproductive systems. And, lastly, the environmental influences, perhaps *via* epigenetic modification of yet unknown (number of) genes, might also be directly or indirectly implicated in the etiology of cancer.

Comparably, clinical relevance of outcomes of such basic research would be indispensable for more successful patient treatment and care. The research into these issues is predicted to pick up the pace in the future.

Therefore, there is a need to report more often on the novelties in this field of exploration. With this dedicated-to-oncology issue of *Period Biol* we aimed to introduce the arising new basic cancer research and prepare scientists as well as clinicians for novel advancing outcomes.

