

## EDITORIAL

“Sickness comes from lost integrity  
Sickness comes from lack of inner peace  
The unity of spirit, soul, body and mind  
Will make You happy and shine”  
(Taoist poem)

In the last years signal transduction therapy has become one of the most important area of modern drug research. It has become evident that, in most of our diseases, intra-or intercellular communication disorders are in the background of the complex pathomechanisms. Current Signal Transduction Therapy (CSTT) is aimed to provide a broad overview with in-depth reviews as well as original papers about signaling related molecular pathomechanisms and the potential therapeutic strategies. This is a new journal in the very successful Current series published by Bentham Science Publishers.

In the pathological states with signaling disorders a series of genomic changes can be the cause and the consequence of these cell-communication problems. In a healthy organism, normal cells fulfill their duties, do not send or receive false messages and are strongly controlled by the external messages of the communication network. On the other hand, for example, cancer cells generate a false, mimicked proliferation signal for themselves via oncogenes and other genomic changes. Whether this communication failure is the result of environmental factors and/or external messages (generating changes at the genomic level), or originates in the genetic program is still a question, and can be answered only on a case-by-case basis. However we have to consider that cells, like human beings, live in a well organized society and in a given ecosystem, which, to a certain extent, determines their receptivity and responsiveness in addition to the systemic response for the various carcinogenic agents and effects.

In the molecular pathomechanism of various diseases certain changes at the genomic level are critical steps, however the manifestation of these genomic changes and the system response depends very much on the communication state and responsibility of the system. The processes of cellular growth and differentiation as well as the maintenance of specialized functions show a remarkable degree of coordination and it has been clearly demonstrated that this involves intercellular communication, rather than relying entirely on intracellular programming. In the pathological state, the normally interdependent system controls are uncoupled and certain cellular functions or malfunctions are stimulated in such a way as to result in further damage-causing signals, or often in the growth of the malfunctioning cells. Proliferation of infected, damaged or malfunctioning cells is very often a key factor in the generation of the pathological state, not only in cancer and infectious diseases but also in inflammation or autoimmune-related diseases like arteriosclerosis, arthritis, or certain inflammation-related neurodegenerative diseases.

Disease manifestation starts when these malfunctioning or transformed cells diversify, and variants with altered properties arise in the population. To survive and function in a competitive environment, such variants must have selective growth and communicative properties and other competitive advantages over other cells. The surviving malfunctioning cells must have specific signal transduction pathways turned on, with these all the feedback effects and inhibitory actions of the micro environmental parameters cannot interfere. Since most of the recently identified validated target molecules of drug research are signal transduction related macromolecules, most of the pathomechanisms and drug research areas relate to signal transduction therapy.

We trust that CSTT will be a unique journal which could provide scientists with very useful information about molecular pathomechanisms, intra and intercellular signaling, target molecules, therapeutic strategies and drug discovery. For the first issue several well known experts of the field contribute very important papers and reviews about Signal Transduction Therapy achievements, modulating the kinome for molecular cancer therapy, rational drug design of kinase inhibitors, NF-KAPPA B signaling, signaling in *Helicobacter pylori* infection, cell death signal transduction pathways, and signaling disturbances in Alzheimer's disease.

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