Tentative Outline

Special Issue for Current Medicinal Chemistry

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Biological Approaches to Cancer and to Some Chronic Inflammatory and Degenerative Diseases

Aims & Scope:

The constant improvement in technology and in the comprehension of molecular biology has allowed to conceive a series of biological treatments of many inflammatory and chronic degenerative diseases. These treatments are usually used with canonical ones so that it is now possible to draw up new guidelines for integrated treatments related to human diseases. This special issue devoted to "Biological approaches to cancer and some chronic inflammatory and degenerative diseases" certainly moves within this direction and collects a series of nine review articles which strictly reflect recent advances. Seven articles (Nicolini, Biava, Ablin, Antonelli, Klener, Ventura, Bizzarri) are focused on treatment or prevention of cancer. The first two articles regarding cancer treatment after a careful updating of the issue deal with the use of an innovative and more general biological or immunological approach respectively. Also the rationale and some experimental clinical data mainly in metastatic endocrine-dependent breast cancer or advanced epatocarcinoma are reported. The third article is a review article on prostate cancer: it describes the serum and urine biomarkers related to prostate cancer which were identified following a careful search of scientific literature concerning the subject. Then prognostic and predictive value of each of them is described and the potential usefulness for therapy also is considered. At the end of this article the most important biological treatment of prostate cancer are described. The fourth article regards the use of sunitinib in thyroid cancer patients. This is quite interesting issue being a so called "target therapy" so far usually investigated in other types of cancers. However its efficacy in thyroid cancer patients no more responsive to radioiodine is currently under evaluation. A selected biological approach in protection of healthy cells at the prevention with two anti-oxidants namely ascorbic acid and glutathione represents the central issue of the paper by P. Klener et al. The sixth review articles records the possibility of tuning normal and pathological stem cells, like cancer stem cells to a normal phenotype, using different biological approaches, included the use of physical energies. The last article about cancer records some cases of complete regression of colon adenocarcinoma treated with Stem Cell Differentiation Stage Factors, a biological network of proteins and nucleic acids taken from Zebrafish embryo at different stages of cell differentiation. In the first of the remaining y articles, the role of virome in modulating inflammation in cancer and various degenerative diseases is illustrated and strong evidences that anelloviruses are useful and practical molecular marker to monitor inflammatory processes and immune system competence also is provided. At the end the last article reports a clinical trial in which the efficacy of the treatment with injectable collagen in comparison with trimecaine in patients with acute lumbar pain is reported.

Keywords: Cancer, Chronic Inflammation, Degenerative Diseases, Stem cell, Prognosis, Stroke, Bleeding risk, Atrial fibrillation ablation
Sub topics:

1. The immunotherapy in metastatic breast cancer.

2. Stem cell differentiation stage factors taken from zebrafish embryo and a model to explain malignancy.


5. Selected biological approaches in protection of healthy cells at the prevention and treatment of cancer.

6. Tuning normal and pathological stem cell fate with stem cell differentiation stage factors and physical energies.

7. Cases of complete regression of colon adenocarcinoma treated with stem cell differentiation stage factors taken from zebrafish embryo.

8. Virome and inflammation: a finely tuned balance with important consequences for host health.

9. Efficacy and tolerability of injectable collagen in comparison to trimecaine in patients with acute lumbar spine pain.

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