Head and Neck Cancer: Recent Findings and New Targets

Head and neck squamous carcinoma (HNSCC) is the sixth most common malignant cancer in the world and it is characterized by a poor prognosis. In fact, the estimated survival rate is 5 years from diagnosis.

The prognosis of the disease is significantly related to the stage in which the disease is diagnosed. Moreover, the therapies are too invasive and not very efficient, disfiguring and debilitating the survivor’s quality of life which is much compromised.

Nowadays, there is not a reliable and non-invasive method for early diagnosis of oral squamous cell carcinoma and the simple visual examination of the oral cavity is characterized by low sensitivity and specificity, also because the early stages of oral carcinogenesis are not associated with clear clinical abnormalities in a significant number of patients.

The current issue of “Current Topics in Medicinal Chemistry (CTMC)” is aimed at reviewing the actual knowledge regarding the HNSCC in order to cover this field with a broad series of papers. The first review was prepared by an Italian team led by Fatima Ardito, Giovanni Di Gioia, Mario Roberto Pellegrino and Lorenzo Lo Muzio. The authors describe the role of genistein as a potential anticancer agent against HNSCC. The second contribution is from Linda L. Eastham, Candace M. Howard, Premalatha Balachandran, David S. Pasco, and Pier Paolo Claudio. In this case, the authors review the role of dietary phytocchemicals as an alternative approach to prevent HNSCC. The third review, led by Riccardo Concu and Maria Natalia Dias-Soeiro Cordeiro, deals with the role of the Cetuximab in the treatment of HNSCC. The fourth contribution concerns the Aurora kinase inhibitors in head and neck cancer; this work was prepared by a Chinese-Japanese team led by Guangying Qi, Jing Liu, Sisi Mi, Takaaki Tsunematsu, Shengjian Jin, Wenhua Shao, Tian Liu, Naozumi Ishimaru, Bo Tang and Yasusei Kudo. Moving on, Nicola Sgaramella and Karin Nylander review covers the topic of searching for new targets and treatments in the battle against squamous cell carcinoma of the head and neck. Concu and Cordeiro present an innovative paper dealing with the development of a new QSAR model aimed at the identification of new inhibitors for the epidermal growth factor receptor. Finally, Ardito et al. present a new in vitro study of the inhibition activity of the curcumin against squamous cell carcinoma of tongue.

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