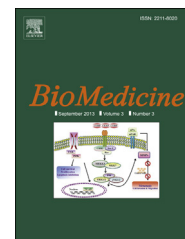




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Editorial

Development of natural antitumor agents

Six articles in this issue cover topics of natural anticancer plants or agents, and auxiliary diagnosis for assessing diabetic and pregnant progression. Such research offers advanced biomedical information.

Medicinal plants and their extracts or active compounds have attracted more attention recently, because these plants or potent agents may prove valuable for disease prevention or therapy. Evidence obtained from animal or cell studies indicate that some plants and their components possess pharmacological(-like) activity, including anticancer, anti-inflammatory and immune-modulatory effects. For example, *Phellinus linteus* is a medicinal mushroom and *Rheum palmatum* is a herb, and both have been used in traditional Oriental medicine for ages. An invited review article is included in this issue, which covers studies related to the biological and chemical properties of *P. linteus* from 1999 to 2011. The review also organizes these facts to highlight the pharmacological properties and mechanisms of small-molecular-weight components isolated from this plant. Antimigratory and anti-invasive activities of *R. palmatum* crude extract in U-2 OS human osteosarcoma cell lines suggest that *R. palmatum* has a beneficial effect in bone cancer therapy. This crude extract inhibits the production of matrix metalloproteinase while suppressing focal adhesion kinase, mitogen-activated protein kinase, protein kinase C, and nuclear factor kappa B pathways by downregulating several crucial targets in this bone-cancer cell line. Such studies yield novel findings to extend our understanding regarding the use of these medicinal plants for further research and application.

Polyamine derivatives are considered potential antitumor agents. A clinical study reports supplementation of polyamine for patients with metastatic castration-resistant prostate cancer, which improves their quality of life and pain control. This study indicates that supplementation of polyamine at certain doses is safe and tolerable. Therefore, application of polyamine or its derivatives for patients with cancer seems feasible and promising.

The *BioMedicine* journal also targets studies on rare or common diseases with rare etiology. Insulin exocytosis in pancreatic islet β cells requires normal adenosine triphosphate (ATP)-sensitive potassium channels (K_{ATP} channels) and Ca^{2+} channels for regulating ion exchange. Any abnormality in these channels causes failure in ion exchange and β -cell apoptosis. Although Ca^{2+} store depletion in these cells might be rare, it definitely cannot be ignored for diabetic diagnosis and therapy. One article evaluates the impact of the Ca^{2+} channel on insulin secretion. Electromyography (EMG) record has been widely used as an important tool for diagnosis of neurological and neuromuscular problems. One animal study in this issue used EMG to examine electrical activity synchronization for uterus during pregnancy, unearthing key data. Gastroparesis usually occurs in diabetics, but a clinical case report described the condition with a rare etiology that occurred at a medical center in central Taiwan. This brief report indicates that early and prompt diagnosis for a disease with rare etiology is essential for saving a patient's life.

All efforts in diagnosis and therapy for cancer, diabetes, and other diseases are always encouraged. The *journal* covers all aspects of medical research. It is a good choice for scholars to submit, share, and update advanced research findings. We look forward to obtaining and publishing evermore articles with high quality.

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Available online 8 July 2013

2211-8020/\$ – see front matter

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<http://dx.doi.org/10.1016/j.biomed.2013.06.001>