Antidiabetic pharmacology: a link between metabolic syndrome and neuro-oncology?
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Abstract
One of the main topics of the annual meeting of the American Society for Clinical Oncology in 2011 were the results presented on breast cancer chemotherapy and concomitant administration of the oral antidiabetic metformin. The overall agreement was that current evidence is just enough to dramatically change the clinical practice of oncology, and in our case, brain cancer treatment, and that further research is needed to address the relationship between diabetes, metabolism, insulin analogues and neoplasia. Still, it is very interesting to explore the potentially beneficial effects of metformin in glioma chemo/immunotherapy and wait for results in the clinic. In the current paper we present the cell and molecular aspects of the metabolic syndrome, metformin administration and cancer chemotherapy, with a special emphasis in neuro-oncology, since brain tumors are usually devastating diseases with an extremely high mortality within two years of diagnosis even when surgical, radiotherapeutic and chemotherapeutic interventions are applied.

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