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Simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer nano drugs complexes

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Abstract

In the current work, simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes are studied. A technique that helps to achieve representative biopsies and that would enable accurate and early in vivo diagnosis is needed. This tool should detect lesions in pre–malignant/early stages and assess large tissue areas in real–time to decrease sampling errors. Several techniques have been tested for biopsy guidance, such as optical coherence tomography (OCT), white light reflectance (WLR), simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes.

Introduction

The high mortality rate of gum cancer can be reduced by early and accurate diagnosis, adequate surgical treatment, and by simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes. The reference standard for gum cancer diagnosis is histopathologic assessment of biopsies or diagnostic excisions of suspicious tissue. After biopsy/excision the tissue specimen is fixed, micro–sectioned and routinely stained with hematoxylin and eosin (H&E). The pathologist makes a diagnosis based on microscopic examination of the H&E stained section. Because only small portions of the lesional tissue is biopsied or excised for histopathological examination, there is the risk of sampling error and the pathology report remains a subjective assessment with simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes [1-10].

Results and discussion

This article reviews recent developments in the attempt to develop diagnostic techniques for gum cancers and precancers based on simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes. The article summarizes some facts about gum cancer biology as it pertains to simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes. It reviews certain instrumentation considerations and finally surveys the application of simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes for diagnosis on intact tissues. The article concludes with our perspective on the current status of simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes for clinical applications and its future (Figures 1 and 2).

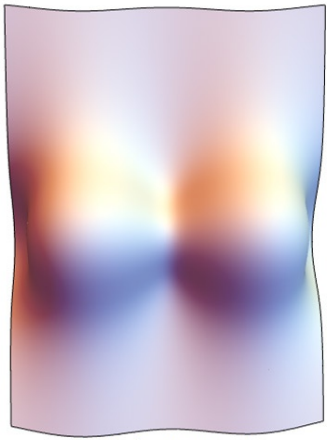

Figure 1. Simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes

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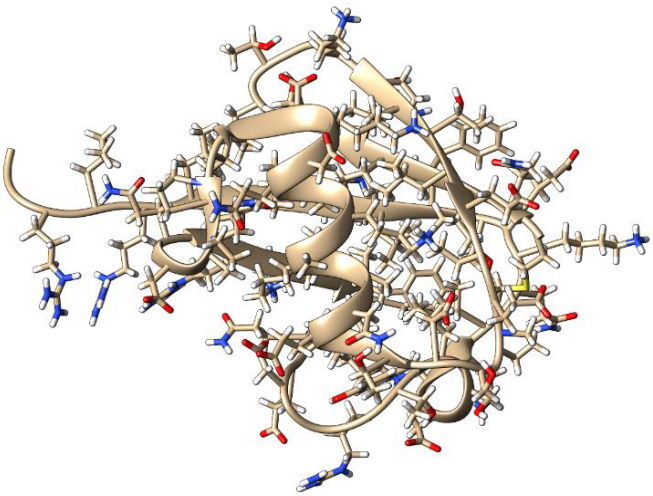

Figure 2. Modelling of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes

Conclusion

Oncological applications of simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes have been contemplated, pursued, and developed at academic level for at least 25 years. Published studies aim to detect pre–malignant lesions, detect gum cancer in less invasive stages, reduce the number of unnecessary biopsies and guide surgery towards the complete removal of the tumor with adequate tumor resection margins. This review summarizes actual clinical needs in oncology that can be addressed by spontaneous simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes and it provides an overview over the results that have been published between 2010 and 2020. An analysis is made of the current status of translation of these results into clinical practice. Despite many promising results, most of the applications addressed in scientific studies are still far from clinical adoption and commercialization. The main hurdles are identified, which need to be overcome to ensure that in the near future we will see the first simultaneous detection of intra– and inter–molecular paramagnetic relaxation enhancements in DNA/RNA of gum cancer cells–anti–cancer Nano drugs complexes–based solutions being used in routine oncologic diagnostic and surgical procedures.

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