

## 3<sup>rd</sup> International Conference and Exhibition on **Probiotics, Functional & Baby Foods**

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## The vital role of probiotics in radiotherapy

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**P**robiotics are live microorganisms that have health benefits. The use of probiotics to preservation of normal bowel function during radiotherapy has shown promising results. In addition to trophic effects on the gastrointestinal tract, probiotics have much potential include toxin neutralization, antagonistic activity, synergistic activity and stimulation of immune system. Preventive effects on the induction of nuclear factor-kappa B (NF-κB), expression of tumor necrosis factor-α (TNF-α) and other pro-inflammatory cytokines, production of antioxidant enzymes such as superoxide dismutase (SOD) and catalase (CAT) and therefore free radical scavenging underlie those potentials. In regard to these preventive and stimulative effects, we proposed to use probiotics makes it as an appropriate radioprotectors in radiotherapy. The radical scavenging and immunostimulation of probiotics to make them more beneficial as radioprotectors. Genetic improvement of probiotics for developing suitable radioprotectors with lower toxicity, lower side effects, more radical scavenging and more immunostimulatory effects can be done in future to enhance radiotherapy efficiency. The secondary cancer preventive role of probiotics in this area can be important particularly in children and other radiosensitive peoples.

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