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## Computational approach to the interaction of Li coming from neutron capture on biological cells via GEANT4

After the discovery of neutrons, G. L. Locher proposed the idea of using neutron capture for cancer treatment - Neutron Capture Therapy (NCT). This treatment method combines either a Boron ( $^{10}\text{B}$ ) or Gadolinium ( $^{157}\text{Gd}$ ) labeled drug and an epithermal neutron beam suitable for neutron capture to take place within the treated tissues. With a branching ratio of approximately 94%, the  $^{10}\text{B}$  nuclear reaction taking place inside the cell releases gamma rays of 0.478 MeV, alpha particles of 1.47 MeV and  $^7\text{Li}$  ions of 0.64 MeV. Using GEANT4, we present in this work a study of the effects of these final-state particles on biological cells.

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