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# English Summary

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## CANCER THERAPY WITH PRO-TON IRRADIATION

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Proton therapy is a new modality in cancer treatment, offering much greater precision than photon radiation therapy. Proton deposit nearly all of their energy at the end of their path, therefore deposit nearly all of their energy on target. Proton treatment provides greater selectivity in destroying cancer cells, reduces damages to surrounding healthy tissues, and greatly reduces side effects traditionally associated with radiation treatment. This is especially important when the tumor is close to vital sensitive organs. Biological effect of radiation and controlled dose distribution of proton, as well as the benefit of its application are reviewed.

*Cermin Dunia Kedokt, 1999; 122: 17-20*  
**Rs**

## TERATOGENICITY OF EMILIA SONCHIFOLIA (L.) DC RESIDUE FRACTION EXTRACT

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Teratogenicity and toxicity assessment of *Emilia sonchifolia* (L.) DC residue fraction extract has been conducted by in-ovo method on quail eggs. The four day embryos of quail were infected via yolk with 0,05 ml tested agent dissolved in sterile physiologic saline. Incubation was continued until the 13th day and on the 14th day the embryos were drawn. Half of embryos were fixated with Bouin solution and the rest with red Alizarin solution. There is no teratogenic malformation on the doses of 0.005 - 5.000 mg/death percentages ages corresponding with the doses given.

*Cermin Dunia Kedokt, 1999; 122: 27-8*  
**Aa**

## IMMUNOGLOBULIN'S Fc BINDING PROTEINS: THEIR IMPORTANCE IN BIOMEDICAL FIELDS

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Immunoglobulin's Fc binding proteins consists of protein A from *Staphylococcus aureus* and protein G from group C and G streptococci. They have many functions in biomedical fields such as serological diagnostic, immunochemical/histochemical techniques and others.

This paper tries to explain those proteins and their importance, and proposes an idea in isolating and characterizing these proteins using Indonesia's microbials. Indonesia's isolates will hopefully have similar capabilities to produce proteins comparable with reference isolates abroad.

*Cermin Dunia Kedokt, 1999; 122: 33-5*  
**Ihu, Altr**

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*So rare is the union of beauty and modesty*  
*(Juvenal)*