99mTc labeling white blood cells with a simple technique: Clinical application

Bianca Gutiêrrez,* Marcos Pêro Pellin,** Jacqueline de Rorô e Nieder,** José Luiz Medeiros de Amarante Jr.,***
Maria Gardênia Evangelista,** Sérgio Roberto Fernandes** and Mario Bernardo Filho***

*Departamento de Biofísica e Biocinética, Instituto de Biologia, Universidade do Estado do Rio de Janeiro
**Serviço de Medicina Nuclear, Hospital Naval Marechal Dias, RJ
***Pesquisa Básica, Instituto Nacional de Câncer, RJ

Several radionuclides and different methods have been employed as celllular labels to study inflammatory sites in man. Here we present the results obtained with white blood cells (WBC) labeled with 99mTc using a simple and low cost new technique (SnTec). WBC were incubated with 12 µg/ml of stannous chloride for 10 min at room temperature. Then 99mTc was added. After 10 min, the 99mTc-labeled WBC were washed and injected into the patient. Comparison studies with 99mTc-labeled WBC using the HMPAO technique were carried out in patients with suspected osteomyelitis. Since the results are similar with both methods, we suggest the use of SnTec to label WBC, in cases of inflammatory diseases.

Key words: white blood cells, 99mTc, SnTec, HMPAO, osteomyelitis