

Alasbimn Journal Year 14, Number 54, October 2011 = / A=F1o=20 14,  
N=BA 54, Octubre 2011  
XXIII Congreso de = ALASBIMN:=20 Res=FAmenes.

# Clinical Trials for = Radiopharmaceuticals in Brazil.

Trabalho No. = 52

Apresenta=E7=E3o=20 P=F4ster

Autor Apresentador: Elaine Bortoleti de = Ara=FAjo=20

Outros Autores: Regina C=E9lia G. = Carneiro

Institui=E7=E3o:=20 Instituto de Pesquisas Energeticas e Nucleares. =

Pa=EDs:=20 Brasil.

## Introduction

For quite a long time, radiopharmaceuticals in = Brazil have=20 been exempted from adopted pharmaceutical regulation.=20 Applicable rules were on radiation protection and = compliance=20 to Pharmacopoeia monographs. In 2009 the Regulatory = Agency=20 (ANVISA) published the RDC 63 and 64 extended the = existing=20 rules of medicinal products to radiopharmaceuticals = compounds=20 used as diagnostic or therapeutic agents.

## Objective

The aim of this work is to give an overview of the=20 situation of clinical trials for radiopharmaceuticals = in=20 Brazil, Europe and USA.

## Results and Discussion

The immediate consequence of the new regulations = for the=20 principal radiopharmaceutical producer in Brazil = (IPEN/CNEN),=20 was the need to file a registration of = radiopharmaceutical=20 products that have been on market for a long time. A = shortened=20 procedure was accepted by ANVISA a single file of=20 pharmacological, toxicological and clinical support = using=20 available data or published literature was judged as=20 appropriate for the 38 radiopharmaceuticals products. = On the=20 other hand, for the new radiopharmaceuticals products = it is=20 necessary running all expected protocols, including=20 preclinical and clinical trials that would require not = only=20 years but a huge financial Brazilian government = support and an=20 appropriate separated regulation for = radiopharmaceuticals. In=20 Brazil the pharmaceutical regulations for clinical = trials have=20 been kept as unique code, focused on conventional = medicinal=20 products and there are no separated

regulations for special situations such as that of radiopharmaceuticals. Europe has established regulatory issues for radiopharmaceuticals as described in Directive 2001/20EC and Directive 2003/63/EC. In the Directive 2003/63/EC Module 3 and 4 refer that is important to evaluate de radiation dosimetry aspects moreover the results of clinical trials shall be provided where applicable otherwise justified in clinical overviews. However, it is important to note that the guidelines for clinical trials in Europe refer only to radiopharmaceuticals used for diagnostic procedures. In United States the regulatory issues for radiopharmaceuticals are established in 1975 and the FDA and NRC determined that all radiopharmaceuticals are drugs and all human studies must be carried out under an Investigational New drug (IND) or radioactive drug research committee (RDRC) protocol. The Code of Federal Regulations Title 21 Sec 312.20 specifies that if the drug is a radioactive drug the phase I studies must include studies which will obtain sufficient data for dosimetry calculations. In 2006 the FDA releases the exploratory IND guidance to provide a lower threshold for radiopharmaceutical and candidate drug first in human studies, using the microdosing concept that may not be conducted under a RDRC protocols. In conclusion, the obstacles to the introduction of new radiopharmaceuticals are significant and Brazilian regulatory documents to clinical trial with radiopharmaceuticals are needful.