RCNP EXPERIMENT E335

PROPOSAL FOR EXPERIMENT AT RCNP

22 January 2009

TITLE:
Production of I-124 and other radioisotopes using RCNP cyclotron and labeling of functional molecules for biomedical imaging study.

SPOKESPERSON:

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EXPERIMENTAL GROUP:

Name	Institution	Title or Position
J. Hatazawa	Osaka University	Professor
A. Shinohara	Osaka University	Professor
K. Hatanaka	RCNP, Osaka University	Professor
K. Takahisa	RCNP, Osaka University	Assistant Professor
N. Takahashi	Osaka University	Assistant Professor
K. Nakai	Osaka University	Professor
H. Matsui	Tsukuba University	Associate Professor
K. Ogawa	Yamanashi University	Associate Professor
E. Shimosegawa	Osaka University	Associate Professor
M. Imaizumi	Osaka University	Lecturer
M. Tatsumi	Osaka University Hospital	Lecturer
Y. Kanai	Osaka University Hospital	Technologist stuff

RUNNING TIME:
4 days

BEAM LINE: AVF : K course.

BUDGET:
NONE

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Production of I-124 and other radioisotopes using RCNP cyclotron and labeling of functional molecules for biomedical imaging study.

SPOKESPERSON: Jun HATAZAWA

SUMMARY OF THE PROPOSAL

This study aimed to produce I-124, Fe-52, Zn-62, Cu-64, and other radioisotopes using RCNP cyclotron and beam target system of solid materials for labeling functional molecules such as peptides, proteins, nucleic acids, glycosides, anti-bodies, cytokines, and porphyrin-derivatives. The labeled products are transported to the imaging site in Suita Campus. Using positron emission tomography, in vivo distribution of these labeled compounds is studied in living rats, mice, dogs, and monkeys in the imaging facilities installed in the Osaka University Graduate School of Medicine.