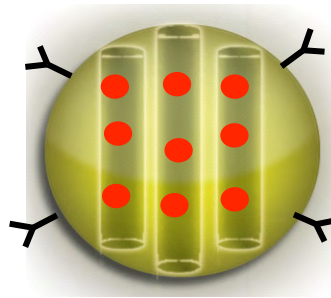# Boron containing nanoparticles and animal model

Nanotechnology

Cancer Targeting
Boron containing
MSN nanoparticles

● B10 compound

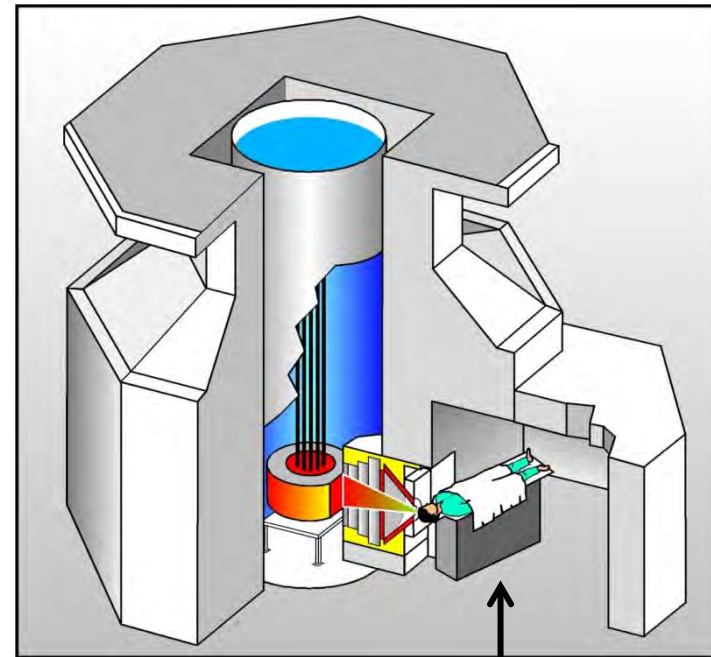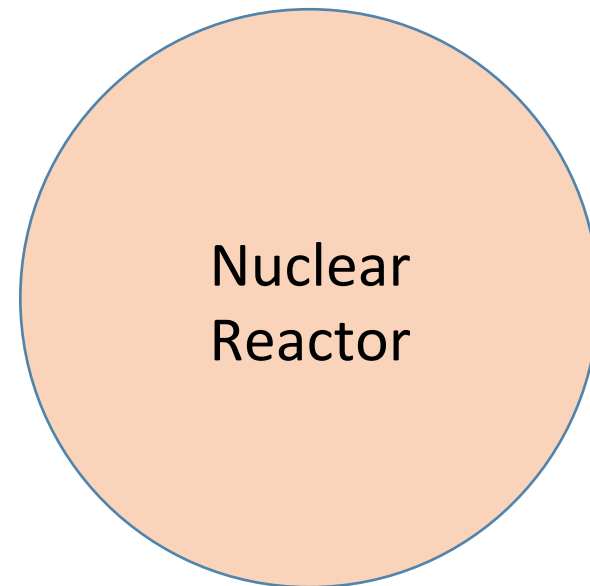Y Targeting
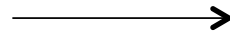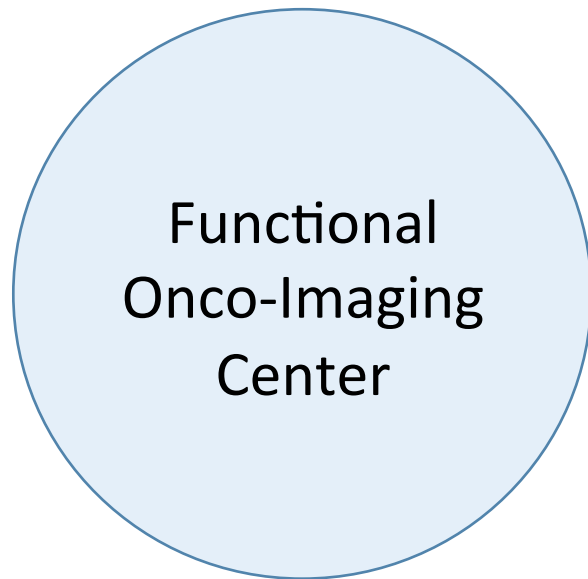
Boron accumulation
Tumor vs Normal

2:1	Currently
>20:1	Nanoparticle BNCT

Animal model

Chicken egg tumor model as
an animal model for BNCT

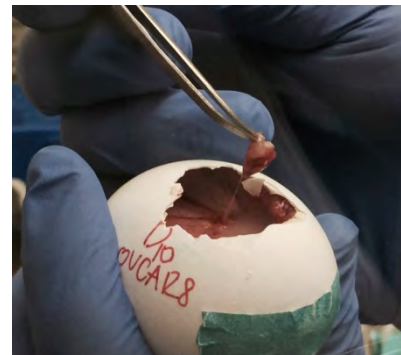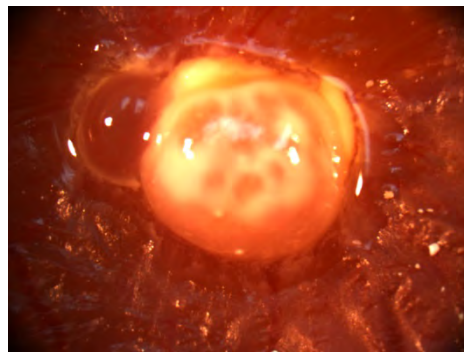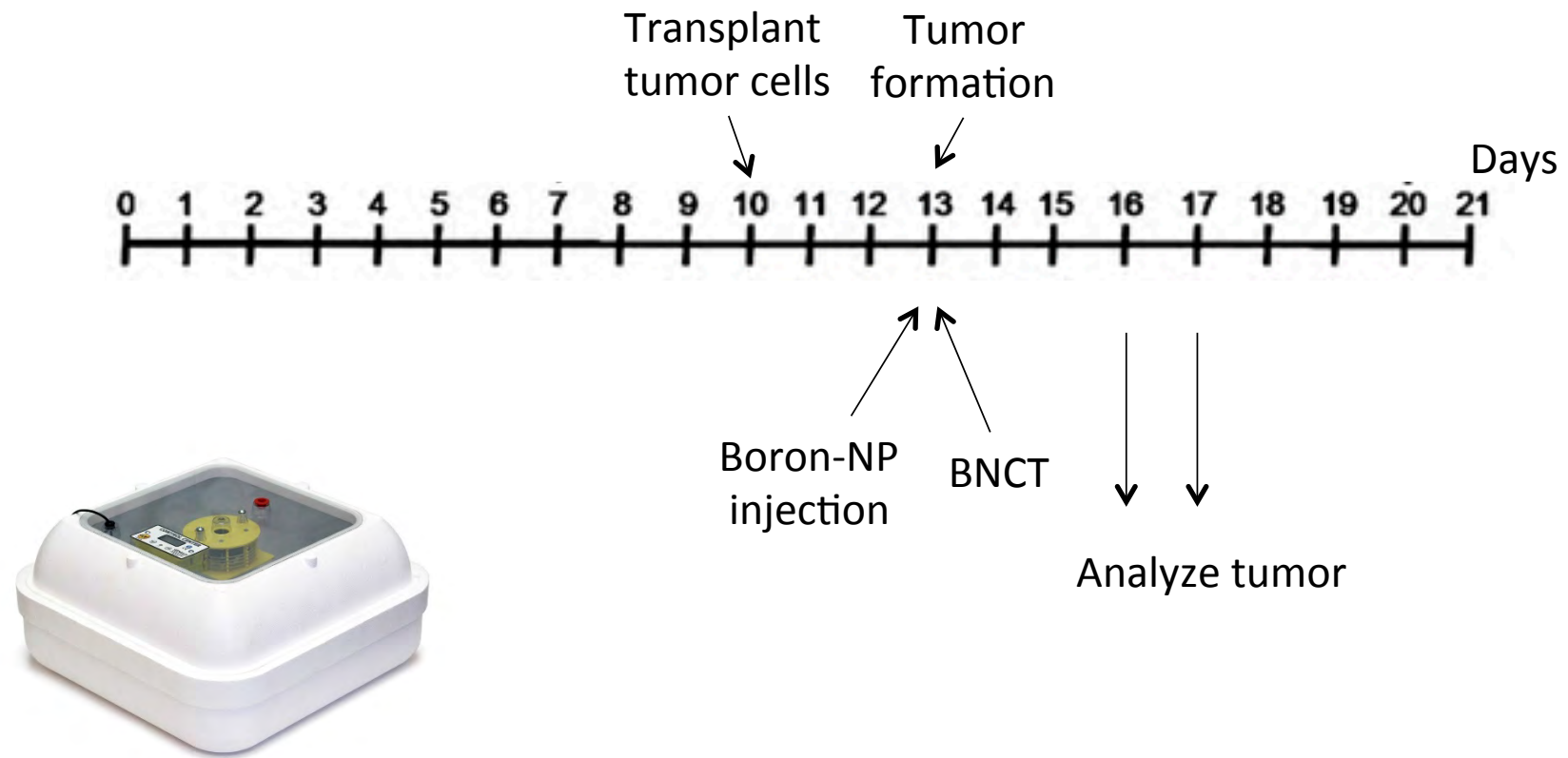Functional Onco-Imaging Center

Chicken eggs incubated.
Tumor formed in the eggs.
10B-NPs injected.

Gultekin Gulsen

Nuclear Reactor

Chicken eggs irradiated.
Further incubation.
Tumor cut out and analyzed.

AJ Shaka

Transplant tumor cells (Day 10)

Tumor formation (Day 13)

Boron-NP injection

BNCT

Days

Analyze tumor

Boron containing nanoparticles

1. We will use mesoporous silica nanoparticles
2. Load Boron compounds into the nanoparticle
3. Adding tumor targeting will generate NP2.
4. Bothe NP1 and NP2 will be used.

BSH

BPA

Mesoporous silica nanoparticles

Loading Boron compounds

NP1

Tumor targeting

NP2