Short Safety Training Handout for A.I.Virtanen institute (AIVI) Biomedical Imaging Unit (BIU)

2020b

There are currently four experimental MRI systems (rooms 1104, 1130, 0301, 0315), a hyperpolarizer MRI system (0301), one PET (room 1131) and one SPECT/CT (room 1108/1) system in Bioteknia 1 building.

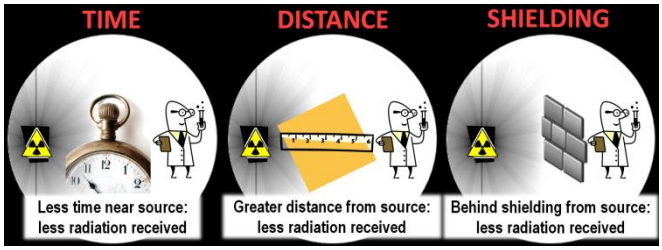
Animal and other issues

- Dress code: shoes/covers, coat, hair cover and gloves:
  avoid transferring allergens from lab to office space
- Remove gloves or wash/disinfect hands before operating computers
- Transport and store animals in covered cages or Scantainers
- Clean up after experiments and disinfect surfaces with Everbright or ethanol
- Eating and drinking are not allowed in the labs
- Minimize your exposure to anesthetics
- If you are pregnant it is not recommended to work with MRI, radiation or anesthetics
- If you are not sure or don't know if something is safe: **ASK** a member of the NMR group
- If there is something wrong, broken, you are out of something (gases,etc.), **INFORM** the NMR group
- *If you have been in contact with rodents (pets, etc.) there is 2 days quarantine!*

Magnet

- **The magnet is always on**, even during fires, power cuts, etc.
- Before entering the magnet room, **THINK & CHECK** what is in your hands and pockets
- Medical devices (pacemakers, insulin pumps): malfunction and motion. Metal objects in body (shrapnel, clips, dental devices, etc.)
- Ferromagnetic objects: keys, pens or scissors in pocket, tools, surgical knives, animal cages, electrical devices, belt buckets, wrist watches, eye glasses, etc. Hairpins!!!
- Electronics and magnetic memory strips: wallets, phones, memory sticks…
- Acoustic noise is normal with MRI
- In case of a quench: leave area immediately
- Quench button: check location, when to use, costs
- Check location of the non-magnetic fire extinguishers (location), power mains
- Check the oxygen meters before handling cryogens
- When handling cryogens use long sleeve lab coat, trousers and gloves

PET and SPECT/CT



- Radiation sources
- **Minimize** the exposure
- ALARA: As Low As Reasonably Achievable
- Dosimeter needed if working in PET or SPECT/CT lab

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