WG4: Blood Cells and Cell lines

1. Talks – lab/interest introductions 3x; + 1 tall cells

2. Cryopreservation of blood cells 2x

+ Discussion

3. Future Tasks:

- Review on studies on mitochondrial function in primary vs immortalised cell lines and how to use them to study diseases and pharmacological targeting of mitochondrial function??
- Future work on blood cells (Elisa Calabria et al)
- Keep considering the collection of data and protocols

- Other suggestions

WG 4 - Blood cells and cultured cells

TG 4.1 - Blood cells

- PBMCs: the indications for sample collection and purification of the cells have been set. During the meeting it emerged that the tubes used for blood sample collection depending on the purpose of the experiment (EDTA-treated or heparin-treated vacuette)

Next steps:

- Publications: for PBMCs we can start finalizing the preparation of a methodological article.

WG 4 - Blood cells and cultured cells

PLTs:

- Protocols for cells preparation have been collected and an “harmonized” version will soon be shared with the MITOEAGLE community.

Cryopreservation:

- Cryopreservation is felt as an important implementation that we need to standardize and optimize (both for PBMCs and PLTs). The groups actually active on this topic will focus on the quality control of cell purification, on the effects of DMSO treatment on mitochondrial function, and on the extension of the time of cryopreservation. However it appears that the goal is not that far.

WG4: Blood Cells
Cryopreservation

- Discussion:
- Media for preservation (Cryosure; BSA – Dextran – DMSO; serum versus plasma; permeabilized vs non permeabilised)
- Purity of the prep
- Updated protocols will be circulated (Slavomir Mihalak, Zuzana Sumbalova)
- More work in cryopreservation: Controls with DMSO, enhance purity, enhance time of cryopreservation

WG4: Cell lines

- Brainstorming on how to integrate the diverse experience within the group

- disease or end-point related (e.g. metabolic disease, Complex I mutation…)

- Protocols for purification of primary cells

(ex: muscle cells/ species differences)

- How to address mitochondrial function using cell lines in different culture conditions and with challenge protocols (substrate switches)

WG4:

Task 1

Please provide details of experience, current work/interest, data that can be made available to the group (published/unpublished)

Name	**cell type experience** **preparation protocols/ mitochondrial function**	**current interest**	**Own published data & protocols (ref)**	**un-published data & protocols that can be made available(attach as pdf)**