27.03.20 REPORT

**Yvan Snozzi**

Cluster set up

**Pilar Marxer**

Network training, data augmentation, contrast stretching

**Toussain Cardot**

PSF estimation, images alignments

This week we set up the cluster repository for the networks training. We also finished a first training for the blur classifier, it reached 0.66 accuracy. We began to try contrast modification on the patches for pre-processing purposes; this could allow the separations between the cells to be more visible. We are currently trying to augment the size of the training data set using reflections and rotations. Papers on PSF estimation did not provide source code but we found a Matlab toolbox to estimate the kernel from a sharp to a blurred image. (<https://www.mathworks.com/matlabcentral/fileexchange/54944-calculate-blur-kernel-from-original-and-blurry-images>)

We aligned manually on Photoshop 2 images from the folder “/red staining” in order to have sharp and blurred versions of the same cornea region. We will then select patches at different distances from the focal point (to estimate different blur levels) in the 2 images to feed the blur kernel estimator. We also contacted the other team to compare our approaches.