



Post-translational modifications modulate STAT3 cellular distribution

DIALLO M., LETRA-VILELA R., MARTINS-ALVES D. and HERRERA F.

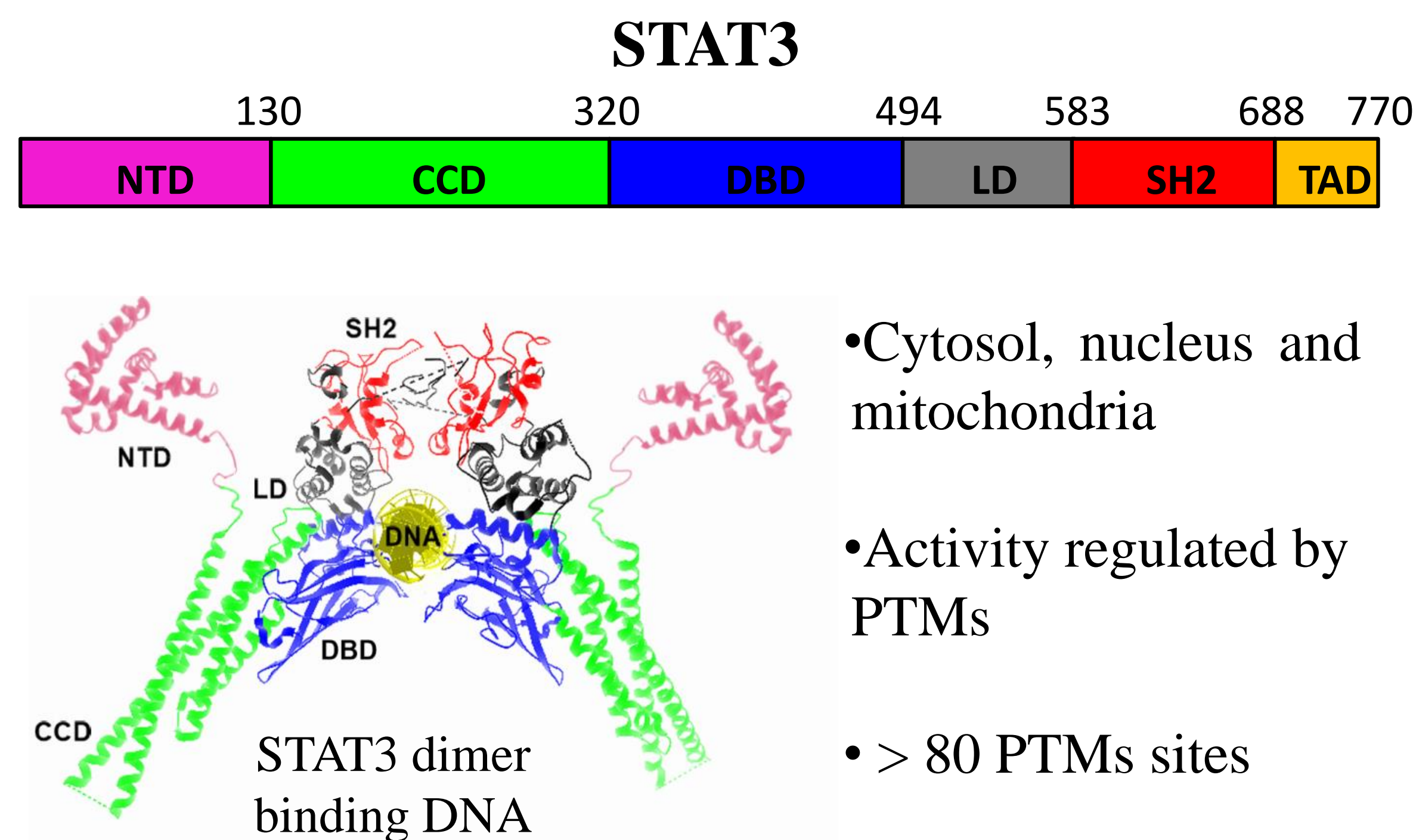
Cell Structure and Dynamics Laboratory, Edifício C8, Laboratório 8.1.54

R&D UNIT: BioISI (CSD)

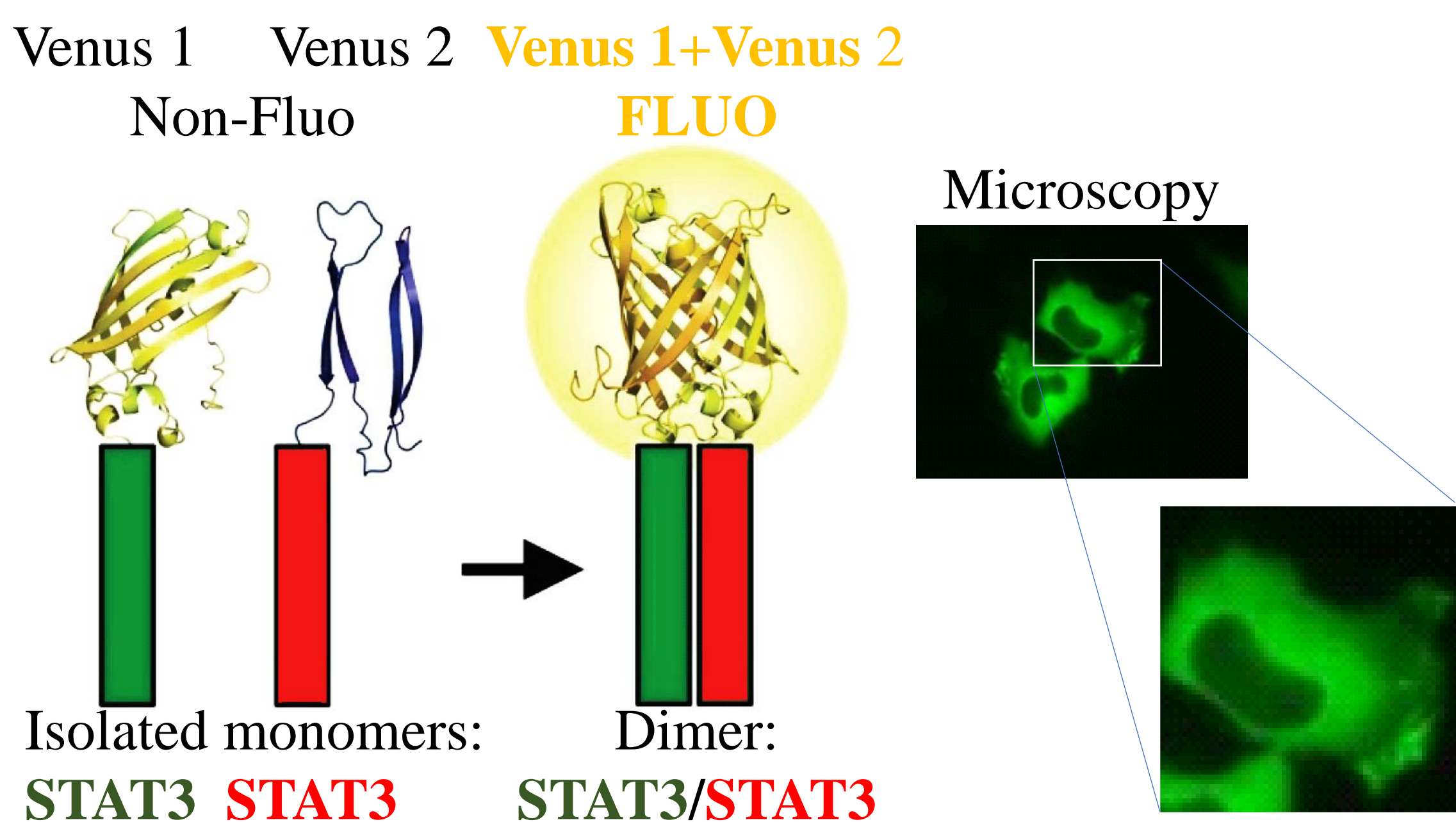
CONTACT: mdiallo@fc.ul.pt



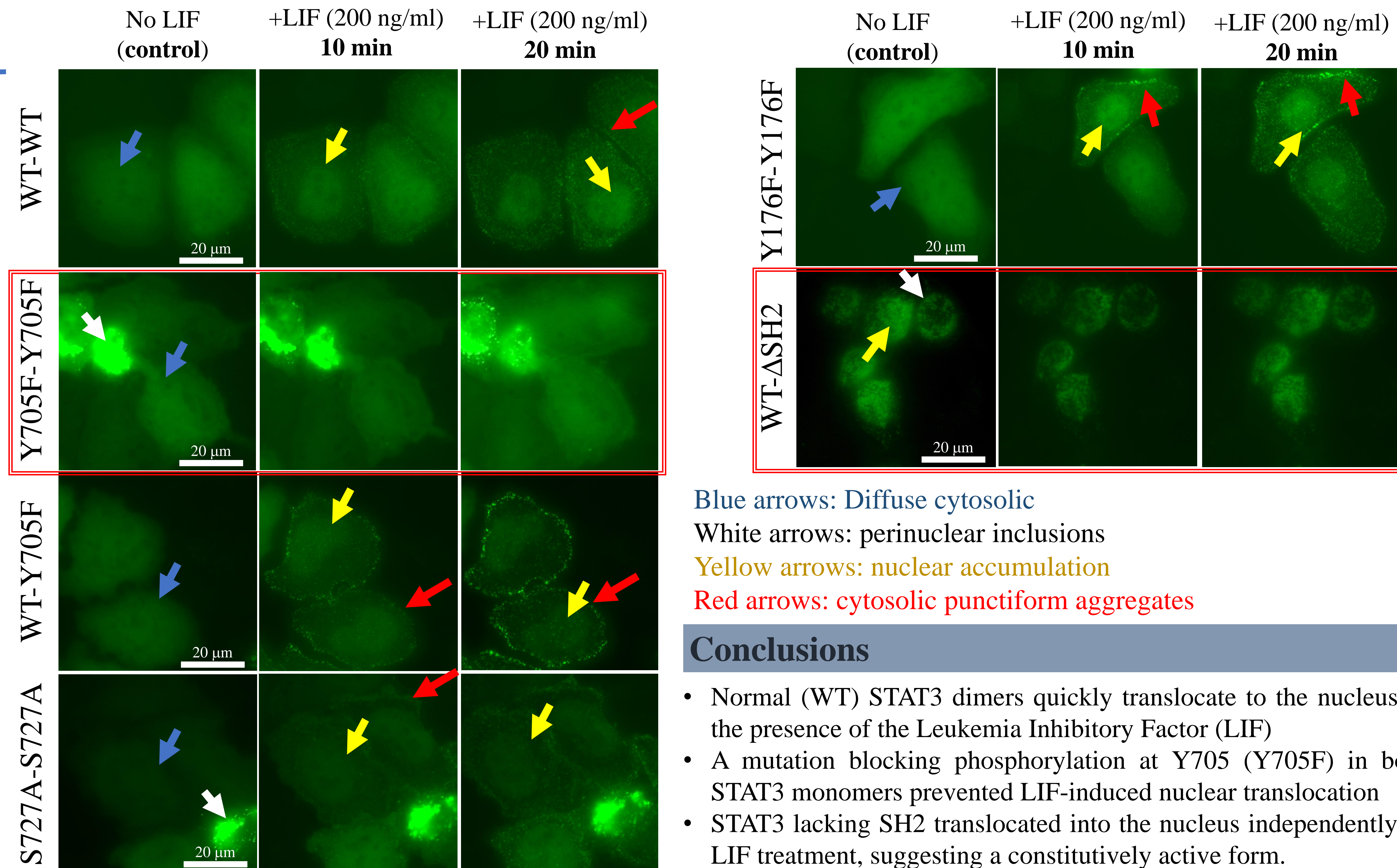
Background



Bimolecular Fluorescence Complementation



Time-lapse of STAT3 PTM-inactivating mutants in living HeLa cells



Conclusions

- Normal (WT) STAT3 dimers quickly translocate to the nucleus in the presence of the Leukemia Inhibitory Factor (LIF)
- A mutation blocking phosphorylation at Y705 (Y705F) in both STAT3 monomers prevented LIF-induced nuclear translocation
- STAT3 lacking SH2 translocated into the nucleus independently of LIF treatment, suggesting a constitutively active form.