**STORM data to be given to Kyle (10\_09\_2014):**

* **18\_06\_2014\_HelaS\_L\_KD\_SmchD1** *(External hard drive B)*

1 slide/condition, for each condition 15 pics

conditions: pSuper (mock control), pLVP041 (sh1-SmchD1), pLVP042 (sh2-SmchD1) in Hela S (short) and Hela L (long)

This is the same transfection and staining experiment as 19\_06\_2014,

* **19\_06\_2014\_HelaS\_L\_KD\_SmchD1** *(External hard drive B)*

1 slide/condition, for each condition 15 pics

conditions: pSuper (mock control), pLVP041 (sh1-SmchD1), pLVP042 (sh2-SmchD1) in Hela S (short) and Hela L (long)

* **30\_06\_2014\_HeLaS and L\_SMCHD1\_KD** *(External hard drive B)*

2 slide/condition (same transfection), for each condition 15 pics

conditions: pSuper (mock control), pLVP041 (sh1-SmchD1), pLVP042 (sh2-SmchD1) in Hela S (short) and Hela L (long)

* **11\_08\_2014\_HelaS\_L\_TRF2\_KD** *(External hard drive C)*

1 slide/condition, for each condition 15 pics

conditions: pSuper (mock control), pLVP041 (sh1-SmchD1), pLVP042 (sh2-SmchD1),TRF2-sh3 (TRF2 KD) in Hela S and Hela L.

🡪*filtered molecule lists need to be analyzed (until now only unfiltered analyzed!)*

* **20\_08\_2014\_HelaS\_L\_TRF2\_KD\_30000\_frames** (given on the 11.09)

1 slide/condition, for each condition 15 pics

conditions: pSuper (mock control), TRF2-sh3 (TRF2 KD) in Hela S and Hela L.

Here 30000 frames were taken instead of 10000 frames.

Mol lists are not filtered and filtered.

This is in part the same transfection experiment as: 11\_08\_2014\_HelaS\_L\_TRF2\_KD (here 10000 frames taken).

*🡪analyze filtered molecule lists*

* **13\_08\_2014\_HelaS\_L\_TRF2\_KD** *(External hard drive B)*

1 slide/condition, for each condition 15 pics

conditions: pSuper (mock control), pLVP041 (sh1-SmchD1), pLVP042 (sh2-SmchD1),TRF2-sh3 (TRF2 KD) in Hela S and Hela L.

🡪*filtered molecule lists need to be analyzed (until now only unfiltered analyzed!)*

* **18\_08\_2014\_HelaS\_L\_TRF2\_KD** *(External hard drive C)*

1 slide/condition, for each condition 15 pics

conditions: pSuper (mock control), TRF2-sh3 (TRF2 KD) in Hela S and Hela L.

Here I used the 405 nm laser as additional activation laser!!!!

Mol lists are not filtered and filtered.

This is in part the same transfection experiment as: 13\_08\_2014\_HelaS\_L\_TRF2\_KD (here no 405 laser was used in addition). The 18\_08\_2014 data needs to be compared to pSuper and TRF2-sh3 conditions of the 13\_08\_2014 data.

(question: does 405 nm activation laser change the results?)

*🡪analyze filtered molecule lists*

* **24\_08\_2014\_HeLaS\_SmchD1\_TRF2\_doubleKD\_FISH** (given on the 11.09)

1 slide/condition, for each condition 15 pics

conditions: pSuper (mock control), pLVP041 (sh1-SmchD1), pLVP042 (sh2-SmchD1), TRF2-sh3 (TRF2 KD), TRF2/041 (TRF2 and SmchD1 KD-sh1), TRF2/042 (TRF2 and SmchD1 KD-sh2) in Hela S

* **27\_08\_2014\_HelaS\_SmchD1\_Trf2\_doubleKD\_FISH** *(External hard drive B)*

1 slide/condition, for each condition 15 pics

conditions: pSuper (mock control), pLVP041 (sh1-SmchD1), pLVP042 (sh2-SmchD1), TRF2-sh3 (TRF2 KD), TRF2/041 (TRF2 and SmchD1 KD-sh1), TRF2/042 (TRF2 and SmchD1 KD-sh2) in Hela S

* **29\_08\_2014\_Hela\_L\_TRF1\_IF** *(External hard drive C)*

2 slides/ condition, 15 pictures/slide = 30 pictures for Hela L in TRF1 IF (immunofluorescence).

conditions: dilution of TRF1 antibody (488, LG) as 1/1000 and 1/2000; Mol lists are filtered.

This experiment needs to be compared to the FISH data of Hela L from experiment 12\_06\_2014\_HelaS\_L (question: are the telomere sizes and volume comparable between FISH and IF?)

* **08\_09\_2014\_HelaS\_L\_TRF1\_TRF2\_KD\_DAPI** *(External hard drive C)*

1 slide/condition, for each condition 8 pics

conditions: pSuper (mock control), TRF2-sh3 (TRF2 KD), TRF1-sh1 (TRF1 KD), TRF2/TRF1 (double KD TRF1/2) in Hela S and Hela L.

For this experiment 2 WF pictures were taken:

1. telomere Cy5
2. nucleus DAPI

to make sure that all the signals (telomeres) we get are in the nucleus.

Would need to be compared to the data from 09\_09\_2014 (no DAPI staining: questions: does DAPI staining influence the STORM acquisition?

* **09\_09\_2014\_HelaS\_L\_TRF1\_TRF2\_KD** (given next week)

1 slide/condition, for each condition 15 pics

conditions: pSuper (mock control), TRF2-sh3 (TRF2 KD), TRF1-sh1 (TRF1 KD), TRF2/TRF1 (double KD TRF1/2) in Hela S and Hela L.

Same transfection experiment as 08\_09\_2014, but not stained for DAPI.

**Final results:**

* *For comparison of telomere FISH and TRF1 IF (immunofluorescence):*

Compare Hela L data from:

12\_06\_2014\_HelaS\_L\_FISH (compare only Hela L)

with

29\_08\_2014\_Hela\_L\_TRF1\_IF

* *For setting up the method:*

1. Does 405 nm activation laser change the results:

compare Hela S and L data from:

13\_08\_2014\_HelaS\_L\_TRF2\_KD (only pSuper and TRF2 KD)

18\_08\_2014\_HelaS\_L\_TRF2\_KD

2. Does acquisition of 30000 frames change the results:

compare Hela S and L data from:

11\_08\_2014\_HelaS\_L\_TRF2\_KD (only pSuper and TRF2 KD)

11\_08\_2014\_HelaS\_L\_TRF2\_KD\_30000\_frames

* *For SmchD1 KD affect in Hela S and L:*

pool data from:

18\_06\_2014\_HelaS\_L\_KD\_SmchD1

19\_06\_2014\_HelaS\_L\_KD\_SmchD1

30\_06\_2014\_HeLaS and L\_SMCHD1\_KD

29\_07\_2014\_HelaS\_L\_SmchD1\_KD

30\_07\_2014\_HelaS\_L\_SmchD1\_KD

11\_08\_2014\_HelaS\_L\_TRF2\_KD (only pSuper, pLVP041, pLVP042)

13\_08\_2014\_HelaS\_L\_TRF2\_KD (only pSuper, pLVP041, pLVP042)

* *For TRF2 KD affect in Hela S and L:*

pool data from:

11\_08\_2014\_HelaS\_L\_TRF2\_KD (only pSuper and TRF2 KD)

13\_08\_2014\_HelaS\_L\_TRF2\_KD (only pSuper and TRF2 KD)

*for just TRF2 KD affect in Hela S, pool data from:*

11\_08\_2014\_HelaS\_L\_TRF2\_KD (only pSuper and TRF2 KD)

13\_08\_2014\_HelaS\_L\_TRF2\_KD (only pSuper and TRF2 KD)

24\_08\_2014\_HeLaS\_SmchD1\_TRF2\_doubleKD\_FISH (only pSuper and TRF2 KD)

27\_08\_2014\_HeLaS\_SmchD1\_TRF2\_doubleKD\_FISH (only pSuper and TRF2 KD)

* *For affect of SmchD1 in TRF2 KD in Hela S:*

pool data from:

24\_08\_2014\_HeLaS\_SmchD1\_TRF2\_doubleKD\_FISH

27\_08\_2014\_HeLaS\_SmchD1\_TRF2\_doubleKD\_FISH

* *Questions: Does KD of major shelterin components (TRF1, TRF2) affect telomere size/volume?*

Pool data from:

08\_09\_2014\_HelaS\_L\_TRF1\_TRF2\_KD\_DAPI

09\_09\_2014\_HelaS\_L\_TRF1\_TRF2\_KD