

# Workshop of the ISAAC NEWTON INSTITUT (Cambridge)

at Forschungszentrum Jülich and MOCA@RWTH Aachen; July 27th to 31st 2015

## Experiments

- 1 Monitoring EGF-dependent intracellular keratin dynamics (laser scanning confocal microscopy)
- 2 Parallel detection of focal adhesion and keratin network dynamics (multichannel life cell microscopy)
- 3 Cell matrix interactions in 3D scaffolds (two-photon microscopy)
- 4 Migration assays (Incucyte, Boyden Chamber)
- 5 Labelling of cytoskeletal networks and adhesion structures in fixed cells (ApoTome)
- 6 EGF-dependent migration of keratinocytes in 3D (light sheet microscopy)
- 7 Cell migration analysis using untransfected cells. Characterization of persistence length, structural component analysis, polarization and depolarization.
- 8 Analysis of focal adhesion and actin-cytoskeletal dynamics during cell migration using GFP-vinculin and RFP-life-act constructs
- 9 Traction force microscopy during cell migration
- 10 Rho-activation and localization/function analysis using TIRF (Leif Dehmelt)
- 11 Filopodia and lamellipodia dynamics including Z-stack analyses over time.
- 12 Actin and focal adhesion dynamics upon spreading including symmetry break and traction force analysis.

Every block will try to generate own data useful for further discussion in Cambridge.  
In case experimental subsets are not working out, for every block data can be provided.

## SCHEDULE

July																									
Sun	26	Transfer Cambridge -> Jülich-Aachen																							
		<b>AACHEN</b>						<b>JÜLICH</b>																	
		Experiment						Experiment																	
		1		2		3		4		5		6		7		8		9		10		11		12	
Mon	27	8.30 h	9.15 h	General Introduction																					
		9.15 h	10.30 h	Introduction to Experiments																					
		10.30 h	11.00 h	Coffee Break																					
		11.00 h	13.00 h	Group 1	Group 2	Group 3	Group 4	Group 5		Group 7	Group 8	Group 9	Group 10	Group 11*											
		13.00 h	14.00 h	Lunch																					
		14.00 h	16.00 h		Group 1	Group 2	Group 3	Group 4	Group 5			Group 7	Group 8	Group 9*	Group 10	Group 11									
		16.00 h	16.30 h	Coffee Break																					
		16.30 h	18.30 h	Group 5		Group 1	Group 2	Group 3	Group 4		Group 11		Group 7	Group 8	Group 9	Group 10*									
		Transfer Aachen-Jülich						Transfer Jülich-Aachen																	
Tue	28	8.30 h	10.30 h	Group 4	Group 5		Group 1	Group 2	Group 3*	Group 10	Group 11		Group 7	Group 8	Group 9										
		10.30 h	11.00 h	Coffee Break																					
		11.00 h	13.00 h	Group 3	Group 4	Group 5		Group 1*	Group 2	Group 9	Group 10	Group 11		Group 7	Group 8										
		13.00 h	14.00 h	Lunch																					
		14.00 h	16.00 h	Group 2	Group 3	Group 4	Group 5*		Group 1	Group 8	Group 9	Group 10	Group 11		Group 7										
		Transfer Aachen-Jülich						Transfer Jülich-Aachen																	
Wed	29	8.30 h	9.15 h	General Introduction																					
		9.15 h	10.30 h	Introduction to Experiments																					
		10.30 h	11.00 h	Coffee Break																					
		11.00 h	13.00 h	Group 7	Group 8	Group 9*	Group 10	Group 11		Group 1	Group 2	Group 3	Group 4	Group 5											
		13.00 h	14.00 h	Lunch																					
		14.00 h	16.00 h		Group 7*	Group 8	Group 9	Group 10	Group 11			Group 1	Group 2	Group 3	Group 4	Group 5									
		16.00 h	16.30 h	Coffee Break																					
		16.30 h	18.30 h	Group 11*		Group 7	Group 8	Group 9	Group 10	Group 5		Group 1	Group 2	Group 3	Group 4										
		Transfer Aachen-Jülich						Transfer Jülich-Aachen																	
Thu	30	8.30 h	10.30 h	Group 10	Group 11		Group 7	Group 8	Group 9	Group 4	Group 5*		Group 1	Group 2	Group 3										
		10.30 h	11.00 h	Coffee Break																					
		11.00 h	13.00 h	Group 9	Group 10	Group 11		Group 7	Group 8	Group 3*	Group 4	Group 5		Group 1	Group 2										
		13.00 h	14.00 h	Lunch																					
		14.00 h	16.00 h	Group 8	Group 9	Group 10	Group 11		Group 7	Group 2	Group 3	Group 4*	Group 5			Group 1									
		Transfer Jülich -> Aachen						Transfer Aachen -> Jülich																	
Fr	31	8.30 h	10.30 h	Reflection and Outlook: Experiments 1-4																					
		10.30 h	11.00 h	Coffee Break																					
		11.00 h	13.00 h	Reflection and Outlook: Experiments 5-8																					
		13.00 h	14.00 h	Lunch																					
		14.00 h	16.00 h	Reflection and Outlook: Experiments 9-12																					
		16.30 h	22.00 h	BBQ at MOCA																					
		Transfer Aachen -> Jülich						Transfer Jülich -> Aachen																	
Sa	1	Transfer Aachen/Jülich -> Cambridge 10 h																							

\* Live Streaming

Experiment	Room
1	320 (MOCA)
2	319 (MOCA)
3	Institut für Versuchstierkunde
4	330c (MOCA)
5	321 (MOCA)
6	319 (MOCA)

General Introduction and Introduction to Experiments  
Reflection and Outlook

Room 325 (MOCA)  
Lecture Hall (MT11 Room 130)