

Microbubble Symposium:

Fabrication, Characterisation and Translational
Applications

29th & 30th June 2015



www.microbubbles.leeds.ac.uk

Weetwood Hall, Otley Road, Headingley, Leeds LS16 5PS



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Programme

Monday 29th June 2015

12:30 – 13:30		Registration
13:30 – 13:40	Stephen Evans	Welcome
Session 1: Microbubble Fabrication and Characterisation – Chair: Stephen Evans		
13:40 – 14:20	Catharina de Lange Davies	Focused ultrasound and microbubbles improve the delivery of encapsulated drugs to tumour tissue and brain tissue
14:20 – 14:35	Tim Segers	On the stability of monodisperse phospholipid-coated microbubbles formed by flow-focusing at high production rates
14:35 – 15:15	Natayla Rapoport	Phase-shift perfluorocarbon nanoemulsions as drug carriers and chemotherapeutic agents: insight through intravital imaging.
15:15 – 15:45		Tea break
15:45 – 16:25	Roberta Cavalli	Nanoscale bubbles: an alternative tool for anti-cancer drug delivery.
16:25 – 16:40	Tamsin Spelman	An armoured microbubble: eigenmodes and streaming flow
16:40 – 16:55	Michel Versluis	Resonant vaporization of perfluorocarbon phase-change agents with surface acoustic waves
16:55 – 17:10		Break
17:10 – 17:25	Marie Pierre Krafft	Trans-membrane fluorine-fluorine recognition: A new concept for immobilising fluorinated drugs and biomarkers in the shell of microbubbles
17:25 – 17:40	Gianluca Memoli	On the shell characteristics of lipid- and polymer-coated microbubbles
17:40 – 17:55	Sally Peyman	High-velocity fluidics for the production of highly concentrated nanobubbles for CEUS
18:30 – 19:30		Drinks and Posters
19:30 – 21:30		Symposium Dinner
21:30 - onwards		Informal discussions in the Stables pub



Tuesday 30th June 2015

Session 2: Microbubble Ultrasound Characterisation – Chair: Steven Freear

09:00 – 09:45	John Hossack	Microfluidics-origin microbubbles for an approach towards accelerated sonothrombolysis.
09:45 – 10:30	Alfred Yu	Unravelling the biophysical dynamics of sonoporation at single-cell level.
10:30 – 10:55		Tea / Coffee
10:55 – 11:15	Jason Raymond	Loss of gas from echogenic liposomes exposed to pulsed ultrasound
11:15 – 12:00	Ronald Roy	Bubble-mediated tissue imaging and therapy at the intersection of light and sound.
12:00 – 12:20	Klazina Kooiman	Lipid shell buckling during microbubble compression – a fluorescence high-speed camera study

12:20 – 13:30

Lunch

Session 3: Microbubble Translational Applications – Chair: Louise Coletta

13:30 – 14:05	Antony Higginson	Off piste clinical applications of microbubbles in everyday practice in a large DGH.
14:05 – 14:20	Tom Van Rooij	In vivo contrast-enhanced ultrasound imaging of the renal cortex during haemorrhagic shock
14:20 – 14:40	Fadil Khoyratty	Determining mucosal perfusion using trans-rectal contrast ultrasound: A novel approach
14:40 – 15:10		Tea / Coffee
15:10 – 15:30	Tim Devling	Contrast Enhanced Ultrasound Imaging Utilising a Novel Hybrid Optoacoustic Ultrasound System
15:30 – 16:05	Alexander Klibanov	Formulation strategies for targeted microbubbles in imaging and drug delivery: translational considerations
16:05 – 16:35	Ine De Cock	Mechanisms involved in ultrasound and microbubble mediated drug delivery.
16:35 – 17:00	Sir Alex Markham	Closing remarks

