



1ST ANNUAL MEETING

Helmholtz Virtual Institute

“Functional Nanomaterials for Multimodality Cancer Imaging”

(NanoTracking)

Dublin, October 14-16, 2012

HZDR

 **HELMHOLTZ**
ZENTRUM DRESDEN
ROSSENDORF

Invited Lectures by



Piotr Grodzinski

Director of the NCI Office of Cancer
Nanotechnology Research



Nils Cordes

Leader of the Molecular and
Cellular Radiobiology group at the
National Center for Radiation
Research in Oncology (OncoRay)

AGENDA

Sunday, 14-10-2012

Meeting Room: Seamount Suite, Radisson St. Helen's Hotel

16:00 – 17:30

Registration

17:30 – 18:00

Welcome addresses

Kenneth A. Dawson / Iseult Lynch

(Director of the Centre for BioNano Interactions)

Holger Stephan

(Spokesperson – Helmholtz Virtual Institute NanoTracking)

18:00 – 19:00

Invited lecture –

“Cancer Nanotechnology – from Innovation to Clinical Translation. View from the NCI Alliance for Nanotechnology in Cancer (NIH) in the United States”

Piotr Grodzinski

(NCI Office of Cancer NanoTechnology Research)

From 19:00

Get-together & dinner Talavera Restaurant (Radisson)

Monday, 15-10-2012

Ardmore House, UCD main campus, Belfield (building No.4 on map)

09:00 – 10:00

Invited lecture “EGFR targeting in radiation oncology”

Nils Cordes

(OncoRay - National Center for Radiation Research in Oncology)

10:00 – 10:30

Coffee break

10:30 – 12:30

Work package 1

Surface functionalization, radiolabeling, and *in vitro* / *in vivo* studies of modified NPs

Short introduction by PI (5 min)

Short talks (10 min each + 5 min discussion)

Holger Stephan – Introduction & Chair

Silke Fähnemann - Potential of bispidines for radiopharmaceutical applications

Manja Kubeil – Cyclampropionic acid derivatives -a versatile chelating system for multifunctionalization

Julia Hesse – Biofunctionalization of TACN ligands

Karina P. Garcia – Functionalization of USPIOs

Katrin Viehweger – EGF-receptor binding studies with native and new developed ligands

Kristof Zarschler – Single domain antibodies as alternative targeting moieties

Katja Zscheppang – Cellular uptake and protein interactions of nanoparticles

12:30 – 14:00

Lunch break

14:00 – 15:00

Work package 2

Development of Si-NPs for cancer imaging using dual + multimodal probes

Short introduction by PI (5 min)

Short talks (10 min each + 5 min discussion)

Luisa De Cola – Introduction & Chair

Nadia Licciadello – Preparation and characterization of capped silicon nanoparticles

Chien-Wei Hsu – Synthesis and functionalization of silicon nanoparticles

David Kennedy – Applications of carbohydrate-functionalized nanoparticles

15:00 – 15:30

Coffee break

15:30 – 17:00	Work package 3 Design and synthesis of copper-selective ligands with sites for functionalization Short introduction by PI (5 min) Short talks (10 min each + 5 min discussion)	Peter Comba – Introduction & Chair Henning Rudolf – Novel bispidine ligands Michael Morgen – Functionalization of bispidines Arina Rybina – Characterization of a fluorescent bispidine ligand Dominik Brox – Chemical reactions in high-resolution microscopy Bodo Martin – Property prediction based on atomic charges of transition metal complexes: water-octanol correlations
17:00 – 18:00	Introduction of SAC members 30 min each	Sylvia S. Jurisson Roger Alberto
From 19:00	Social event + Meeting Dinner (La Panto @ Radisson St. Helen's Hotel)	

Tuesday, 16-10-2012

Ardmore House, UCD main campus, Belfield (building No.4 on map)

09:00 – 10:35	Work package 4 Development of USPIOs and UCNPs for cancer imaging using dual and multimodal probes Short introduction by PI (5 min) Short talks (10 min each + 5 min discussion)	Leone Spiccia – Introduction & Chair Leone Spiccia – Functionalized nanoparticles as imaging agents for cancer William O'Malley – New reagents and strategies for the assembly of multi-modal imaging agents Lisa Barbaro – Nanoparticle-based agents for multimodal imaging of cancer
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<p>10:35 – 12:30</p>	<p>Work package 5 Establishment of the safety profile and bionanointeractions of the cancer imaging nanoparticles Short introduction by PI (5 min) Short talks (10 min each + 5 min discussion)</p>	<p>Iseult Lynch – Introduction & Chair Eugene Mahon – Challenges in labelling & targeting nanoparticles Anna Salvati – Importance of cell cycle for internal nanoparticle dose Kanlaya Prapainop – TrfR-targetted nanoparticles - assessment of targeting <i>in situ</i> Marco Monopoli – Adapting corona approaches for ultra-small particles</p>
<p>12:30 – 14:00</p>	<p>Lunch break</p>	
<p>14:00 – 15:00</p>	<p>Discussion of Initial Training Network “Probes for multimodal imaging and theranostics”</p>	<p>Dirk-Peter Herten</p>
<p>15:00 – 16:00</p>	<p>Meeting of Group leaders & SAC</p>	
<p>16:00 – 16:15</p>	<p>Closing remarks</p>	