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Sixth International AFM BioMed Conference on AFM in life sciences and medicine, December 13 to 17, 2014, San Diego, California

The 6th edition of the Atomic Force Microscopy (AFM) BioMed Conference was organized by the Institute of Engineering in Medicine, University of California, San Diego (UC San Diego), California, and the Life Science Division of The French Alternative Energies and Atomic Energy Commission (CEA), France. The conference was held in the Meeting Room of the Sanford consortium for Regenerative Medicine on December 13 to 17, 2014, and was chaired by Prof Adam J. Engler.

Founded in June 2006, after a first seminal French-speaking conference held on the same topics in Nîmes in June 2004, the AFM BioMed Conference brings researchers and students around the world to discuss the latest scientific results of AFM in life science and medicine (Casuso *et al.*, 2011; Parot *et al.*, 2007). The AFM BioMed organized its first international meeting in Barcelona, Spain in spring 2007 (Pellequer *et al.*, 2007) followed, every 18 months, by a meeting in Monterey, California, in fall 2008 (Kumar *et al.*, 2009); in Crveni otok (Red Island) near the Adriatic City of Rovinj, Croatia in spring 2010 (Svetlicic *et al.*, 2011); in Paris in summer 2011 (Scheuring *et al.*, 2012); and in Shanghai in spring 2013 (Hu *et al.*, 2014).

Members of the scientific committee for the 6th edition of the meeting include past and present organizer chairmen Jun Hu (Shanghai Institute of Applied Physics, Shanghai, China), Sanjay Kumar (University of California, Berkeley, California), Daniel Navajas (Universitat de Barcelona, Barcelona, Spain), Simon Scheuring (Institut national de la santé et de la recherche médicale U1006, Marseille, France), and Vesna Svetlicic (Ruđer Bošković Institute, Zagreb, Croatia); the original founders of the conference Pierre Parot (CEA/Direction des Sciences du Vivant [DSV], Marcoule, France) and Jean-Luc Pellequer (CEA/DSV); and the three invited chairmen Clemens Franz (Karlsruhe Institute of Technology, Karlsruhe, Germany), James Gimzewski (University of California, Los Angeles, California), and Robert Ros (Arizona State University, Tempe, Arizona). Local organizers included Bruker Nano's Sophie McCormick and Sara Tichenor and Institute for Engineering in Medicine staff members Mrs Justina Houston, Mr Kenneth Tomory, and Ms Jocelyn Lopez. Partners of the event include the French Alternative Energies and Atomic Energy Commission (CEA/DSV), Sanford Consortium for Regenerative Medicine and Institute of Engineering in Medicine at UC San Diego, and the Journal of Molecular Recognition. Financial contribution from Bruker Nano and Wiley is gratefully acknowledged.

The meeting welcomed 140 students, faculty, and Bruker Nano staff from 20 countries to the Sanford Consortium for Regenerative Medicine on the campus of UC San Diego. Over

the 5-day event, the technical program featured 7 invited talks from internationally renowned speakers, 64 oral presentations, and 39 poster presentations. Both oral and poster presentations were separated into 4 tracks including imaging, forces and biomechanics, biomedical applications, and integrative AFM developments. Within these sessions, we were treated to invited lectures by James De Yoreo (Pacific Northwestern National Lab, Richland, Washington), Hongbin Li (University of British Columbia, Vancouver, Canada), Hans Oberleithner (Münster University, Münster, Germany), and Tilman Schäffer (University of Tübingen, Tübingen, Germany).

The meeting also hosted 2 preconference training workshops by Bruker Nano. The meeting was highlighted by a banquet at the UC San Diego's Birch Aquarium overlooking the Pacific Ocean. Guests were treated to the aquarium's expansive kelp forest display and other California sealife. Bruker Nano also sponsored a reception at Stone Brewing Company's World Bistro to launch their new BioScope Resolve AFM.

As a result of the science presented at the meeting, we are pleased to include the following manuscripts in this issue of the *Journal of Molecular Recognition*:

- Jordi H. Borrell, M. Teresa Montero, Antoni Morros, and Òscar Domènech.

Unspecific membrane protein-lipid recognition: combination of AFM imaging, force spectroscopy, DSC and FRET measurements (pp 679-686). DOI: 10.1002/jmr.2483 (edited by J.L. Pellequer)

- Joost te Riet, Inge Reinieren-Beeren, Carl G. Figdor, and Alessandra Cambi.

AFM force spectroscopy reveals how subtle structural differences affect the interaction strength between *Candida albicans* and DC-SIGN (pp 687-698). DOI: 10.1002/jmr.2481 (edited by J.L. Pellequer)

- Silvia Seghezze, Silvia Dante, Alberto Diaspro, and Claudio Canale.

High resolution nanomechanical characterization of multi-domain model membranes by fast force volume (pp 742-750). DOI: 10.1002/jmr.2490 (edited by J.L. Pellequer)

- Shu-wen W. Chen, Jean-Marie Teulon, Christian Godon, and Jean-Luc Pellequer.

Atomic force microscope, molecular imaging, and analysis (pp 51-55). DOI: 10.1002/jmr.2491 (edited by H. Hoerber)

- Hermann Schillers, Izhar Medalsy, Shuiqing Hu, Andrea L. Slade, and James E. Shaw.

PeakForce Tapping resolves individual microvilli on living cells (pp 95-101). DOI: 10.1002/jmr.2510 (edited by J.L. Pellequer)

- Jianfeng He, Jiabin Wang, Jun Hu, Jieli Sun, Daniel Mark Czajkowsky, and Zhifeng Shao.

Single molecule atomic force microscopy of aerolysin pore complexes reveals unexpected star-shaped topography (pp 174-181). DOI: 10.1002/jmr.2517 (edited by J.L. Pellequer)

We wish to thank all the contributors to this volume and more particularly the 15 reviewers that participated in the rigorous peer review selection of submitted manuscripts. We congratulate the 7th AFM BioMed Conference that was chaired by Prof

Susana Sousa and hosted by the Instituto de Engenharia Biomedica, Porto, Portugal. The conference took place at the Biblioteca Municipal Almeida Garrett from April 11 to 15, 2016 (<http://www.afmbiomed.org/afm-biomed-porto-2016.aspx>). We are looking forward to seeing you in the next conference in Krakow in Fall 2017.

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- Scheuring S, Parot P, Pellequer JL. 2012. AFM BioMed Conference: Paris, France, August 2011. *J. Mol. Recognit.* **25**: 239-240.
- Svetlicic V, Parot P, Pellequer JL. 2011. AFM BioMed Conference: Red Island Croatia, May 2010. *J. Mol. Recognit.* **24**: i-iv.