

**bioAFMlab 04092007****From:** Federica Galli <[galli@physics.leidenuniv.nl](mailto:galli@physics.leidenuniv.nl)> (LION)**To:** [galli@physics.leidenuniv.nl](mailto:galli@physics.leidenuniv.nl)**Date:** 2007-09-10 10:25

Present: Yuana, Maarten, Tjerk, Anne France, Federica, Brian.

Yuana

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Showed AFM images (10 um x 10 um) of control (clean, no microparticles) and patient blood with microparticles.

The microparticles were isolated from fresh platelet poor plasma of a cancer patient. The majority has a diameter size between 50-100 nm.

Immobilization of this particle on amine modified mica is with CD41. The control of this experiment is IgG1 applied in the same concentration like CD41.

Yuana used "SPM Mediator" (written by J. van Noort) to infer microparticle size distribution. AFM has obviously better resolution than previously used flow cytometry (>200nm) and smaller microparticles could be measured (peak at ~50nm).

Maarten

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Showed recognition images on a S-layer (measured in Linz), where protein on tip binds (approach) and un-binds (detach) on the surface. The 1st appears regular (circular), the 2nd more stochastic. Suggestions for further data analysis are: 1. look at the amplitude change of the cantilever, 2. drift correction using the topography as drift template, 3. thresholding analysis 4. defining a binding-unbinding circle and analyzing binding and un-binding events with respect to it.

Please (especially Yuana & Maarten) send corrections/feedback to this report, when ready will be uploaded on the wiki.

Federica

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