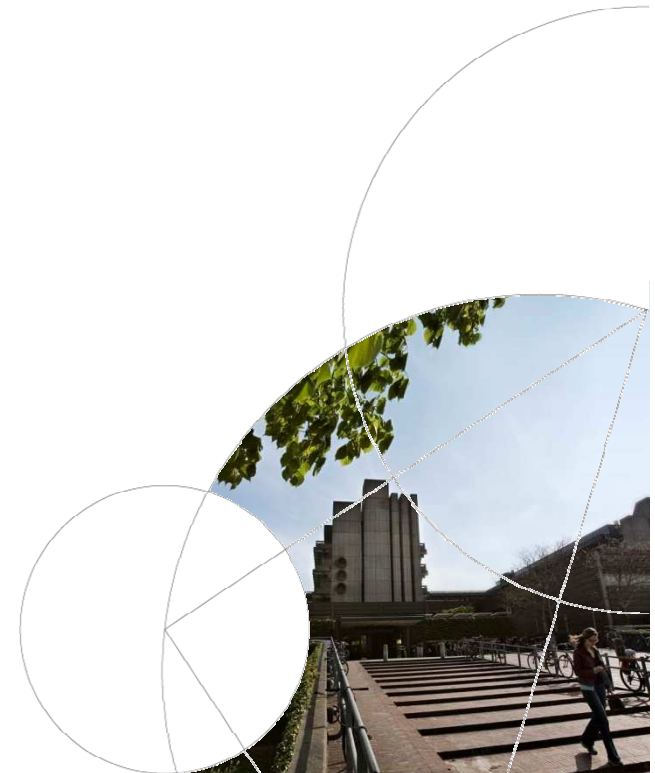




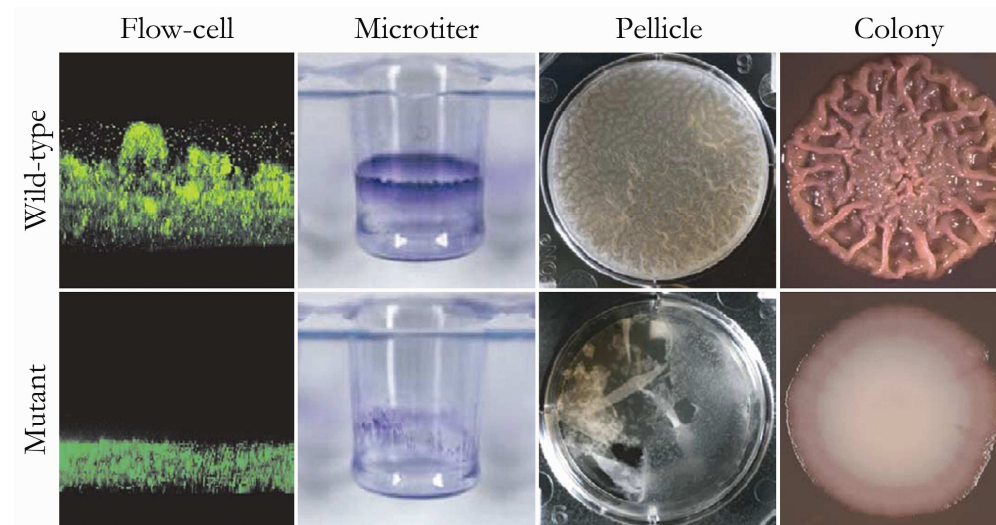
High throughput biofilm assay

Martin Nilsson
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Biofilm work group meeting - Marts 15th 2010



Techniques for studying laboratory biofilms



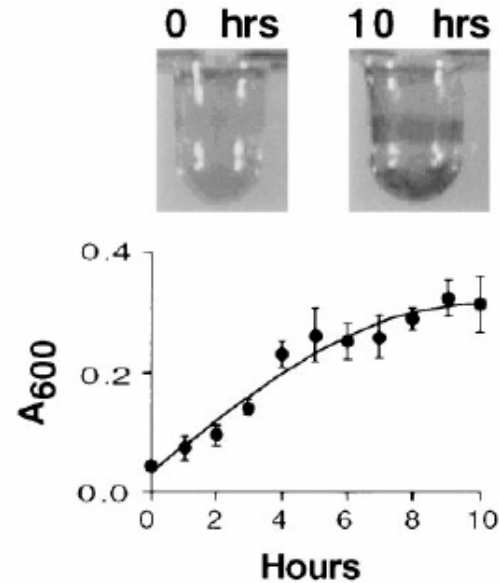
Crystal violet reference

Molecular Microbiology (1998) 28(3), 449–461

Initiation of biofilm formation in *Pseudomonas fluorescens* WCS365 proceeds via multiple, convergent signalling pathways: a genetic analysis

George A. O'Toole and Roberto Kolter*

Department of Microbiology and Molecular Genetics,
Harvard Medical School, 200 Longwood Avenue, Boston,
MA 02115, USA.



Crystal violet biofilm assay

- Bacteria are inoculated in a microtitre dish
- The wells are rinsed after incubation
- Biofilm cells are stained with a solution of Crystal violet.
- Washing procedure
- Quantified by solubilizing cv in ethanol and determining the absorbance by measuring at 600 nm



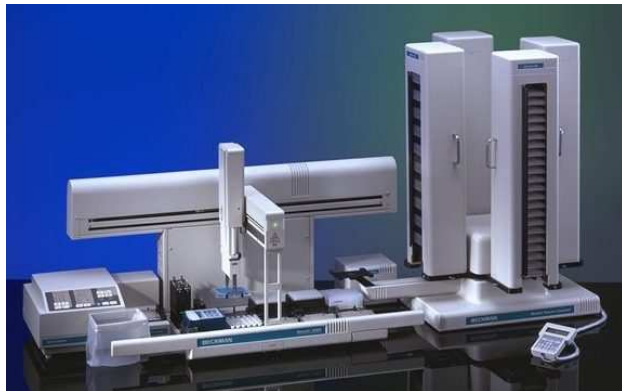
Avantages and disadvantages with CV-assay

- +
 - easy and cheap to set up
 - quntitatively
 - large scale possibilities
- - does not reflect enviromental conditions
 - risk of washing loosely attached cells away
 - lack of possibilites for biofilm structure studies

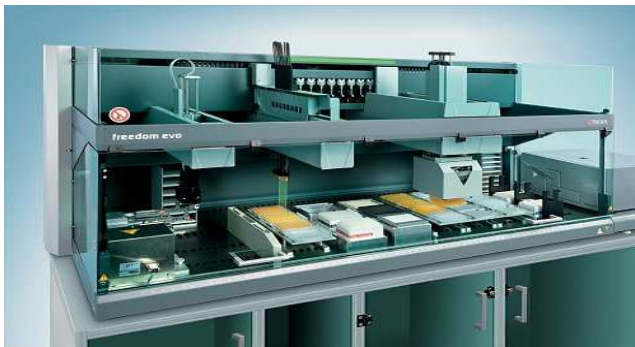




High through put equipment



Biomek 2000 (Beckman culter)



Freedom EVO® (Tecan)



Qpix 2 (Genetix)



Some issues - Shall I go high through put

Amount of clones to analys

Frequently analyses

Identify weak points in the flow system

Obtain matched high trough put – using several systems



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