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## Macrophage-mediated phagocytosis of bacteria adhering on biomaterial surfaces

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## Stellingen

Behorend bij het proefschrift

“Macrophage-mediated Phagocytosis of Bacteria Adhering on Biomaterial Surfaces”

Joana Filipa da Silva Domingues

28<sup>th</sup> May, 2014

1. Biomaterial-associated infections occur on both permanent implants and temporary devices.
2. Smartly patterning the surface of a tissue-contacting biomedical device is useful for promoting healing and reducing the risk of biomaterial-associated infections. *This thesis*
3. Interactions between bacteria, biomaterial and immune cells are important factors interfering with the pathogenesis of a biomaterial-associated infection. *This thesis*
4. *In vitro*, phagocytosis critically depends on the combination of the phagocytic cell line and the bacterial strain involved. *This thesis*
5. *In vitro*, phagocytosis rates at the level of a specific staphylococcal strain can be explained with a surface thermodynamic approach. *This thesis*
6. Macrophage-mediated bacterial clearance is about three times more effective on the multi-component cross-linked PEG-based coatings than on the common biomaterials. *This thesis*
7. Experience can be obtained by our successes and failures, but also by learning from others.
8. There is an urgent need of new biomaterials that prevent bacterial infections while promoting tissue integration.
9. One usually forgets that we are forever responsible for what we decided to publish.
10. In meeting other cultures, one becomes a more tolerant and enriched individual.
11. *Ad astra per aspera* (Through adversity to the stars).