Propositions accompanying the thesis

UNDERSTANDING RESPONSE TO RITUXIMAB TREATMENT IN RHEUMATOID ARTHRITIS THROUGH IMMUNE FINGERPRINTING OF T AND B CELLS

Sabrina Pollastro

1. B cells in the site of active inflammation, i.e. the synovium, are less effected by rituximab treatment in rheumatoid arthritis. *(Chapter 2)*

2. It is the rituximab induced B cell-repopulation, rather than the B cell-depletion itself, which has a beneficial effect on disease activity. *(Chapter 3)*

3. Up to now it is still unclear whether disease relapse after rituximab treatment is triggered by the re-appearance of pre-treatment B cells or by newly formed pathogenic ones. *This thesis*

4. Given that basically all biologics have the potential to elicit an immune response, skewing such responses toward a more tolerogenic phenotype could be the best strategy to reduce clinically relevant immunogenicity. *This thesis*

5. TCR and BCR repertoire analysis has a great potential for immunological research beyond providing a "sterile" catalogue of the ongoing (and past) immune responses within an individual. *This thesis*

6. Treatment approaches which aim to eliminate the autoreactive B cells, rather than interfere with the mechanisms which made them pathogenic, i.e. breach of tolerance, may not be curative. *Sabrina Pollastro*

7. In the future, AIRR sequencing combined with more advanced artificial intelligence approach could make it possible to define and predict the immune status of an individual by its TCR/BCR repertoire. *Sabrina Pollastro*

8. I can do things you cannot, you can do things I cannot; together we can do great things. *Mother Teresa*

9. Above all, don't fear difficult moments. The best comes from them. *Rita Levi Montalcini*