

## **From 'one size fits all' to machine-learning based prediction of methotrexate treatment response in rheumatoid arthritis**

1. Baseline global DNA hydroxymethylation in whole blood leukocytes does not play a role in response to MTX in rheumatoid arthritis patients – *this thesis*
2. A combination of predictors is required to predict MTX treatment response in RA – *this thesis*
3. Multiple prediction models are required to directly select the right drug for every RA patient replacing the current trial-and-error strategy – *this thesis*
4. A prediction model does not have to be 100% accurate to provide better treatment decisions than a clinician – *this thesis*
5. Machine-learning compasses more than just algorithms and this approach has several advantages over classical statistics. – *this thesis*

*Not related to this thesis*

6. "The good thing about science is that it's true whether or not you believe in it."  
– Neil deGrasse Tyson
7. "Those who have knowledge, don't predict. Those who predict, don't have knowledge." – Lao Tzu, 6th Century BC Chinese Poet
8. "Machine learning should by default become part of scientific education as add on to statistical courses." – Helen Gosselt
9. "Leaving data unshared is an impediment to the scientists of the future."  
– *Nat Commun* **9**, 2817 (2018).
10. "Algorithms aren't biased, we are!" – Rahul Bhargava
11. If you're offered a seat on a rocket ship don't ask what seat. Just get on."  
– Sheryl Sandberg