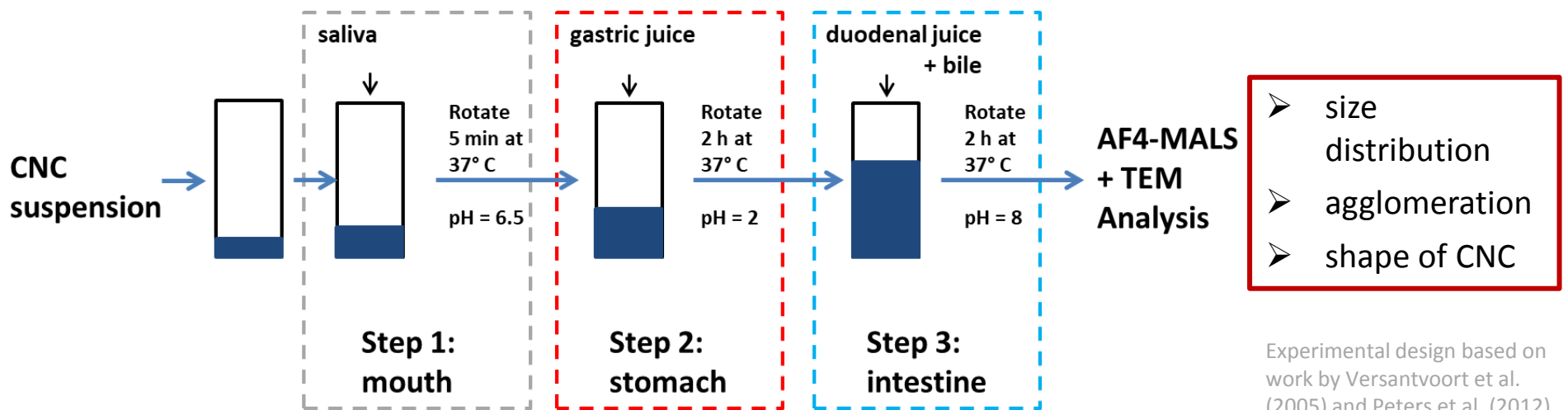
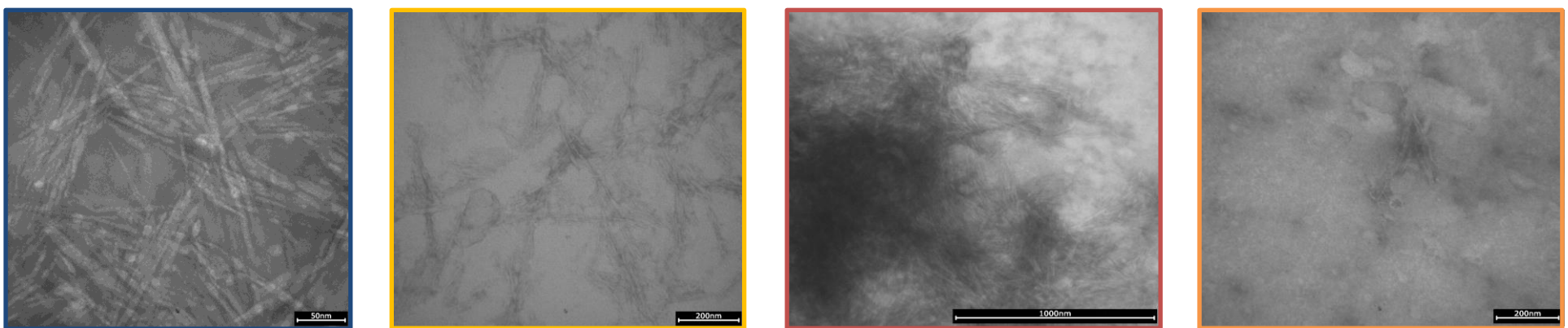


Investigation of the behavior of cellulose nanocrystals (CNC) in simulated human gastro-intestinal fluids

R. Drexel, S. Dähnhardt-Pfeiffer, C. Herrmann, C. Metzger, H. Briesen, F. Meier



What happens after oral uptake?

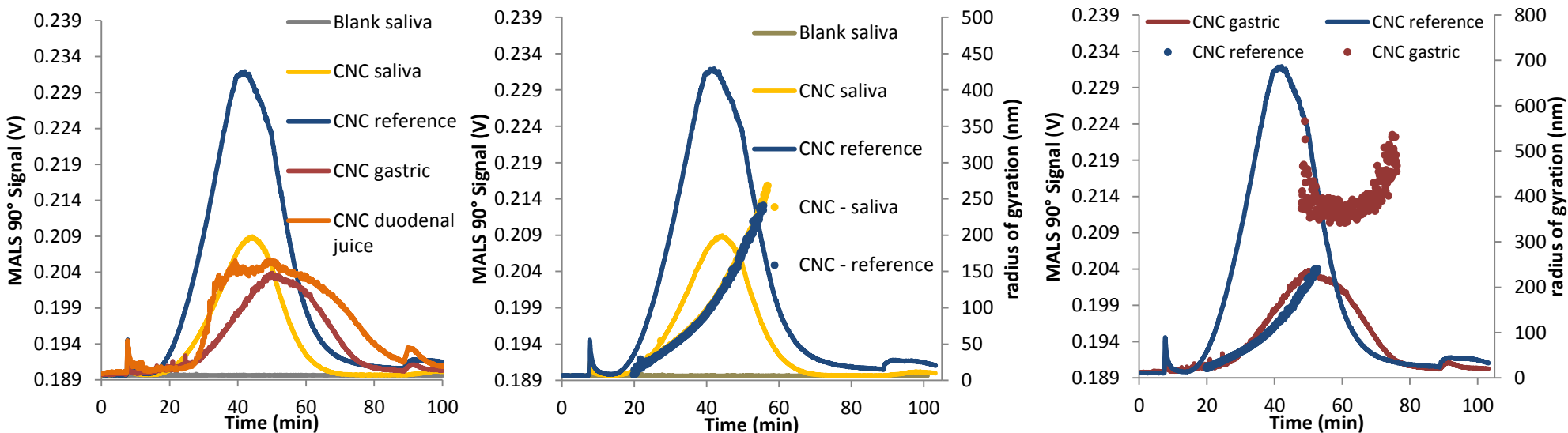


Native

Saliva

Gastric juice

Duodenal juice + bile



- TEM and MALS analysis confirmed rod-like morphology of CNC
- Comparable size distribution in saliva
- Strong agglomeration in gastric juice and especially in duodenal juice
- No significant enzymatic digestion of CNC observable (over the experimental duration)
- TEM results in excellent agreement with AF4 and MALS results

Outlook

- Toxicological studies