COLLEGE TER BEOORDELING VAN GENEESMIDDELEN

Experience from National Regulatory Agency

One decade of Regulatory Science collaboration in the Netherlands

Marjon Pasmooij

Science Office, Medicines Evaluation Board

GOEDE MEDICIJNEN GOED GEBRUIKT

Founding Father and Mother

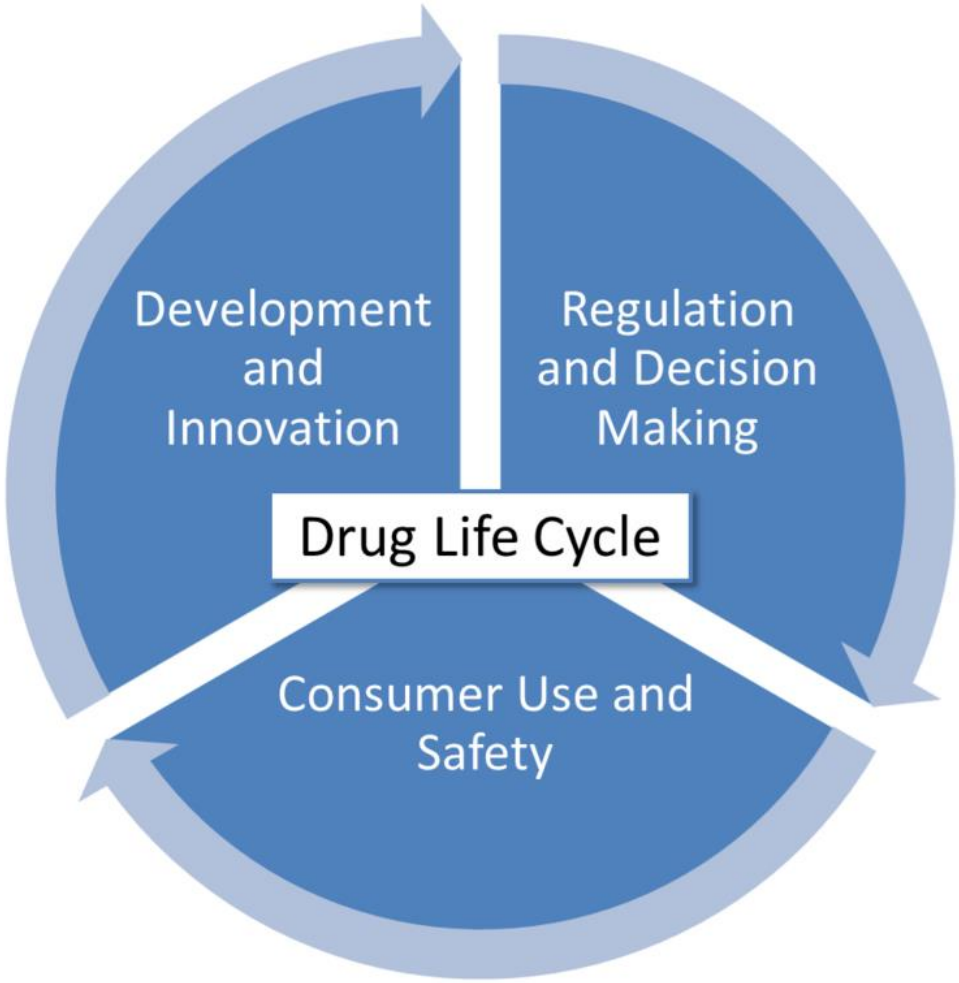
Prof. Bert Leufkens
Chair of the MEB, 2007-2017

How it all started in 2011...

X

Dr. Christine Gispen
Head of the Science Office, 2011-2018

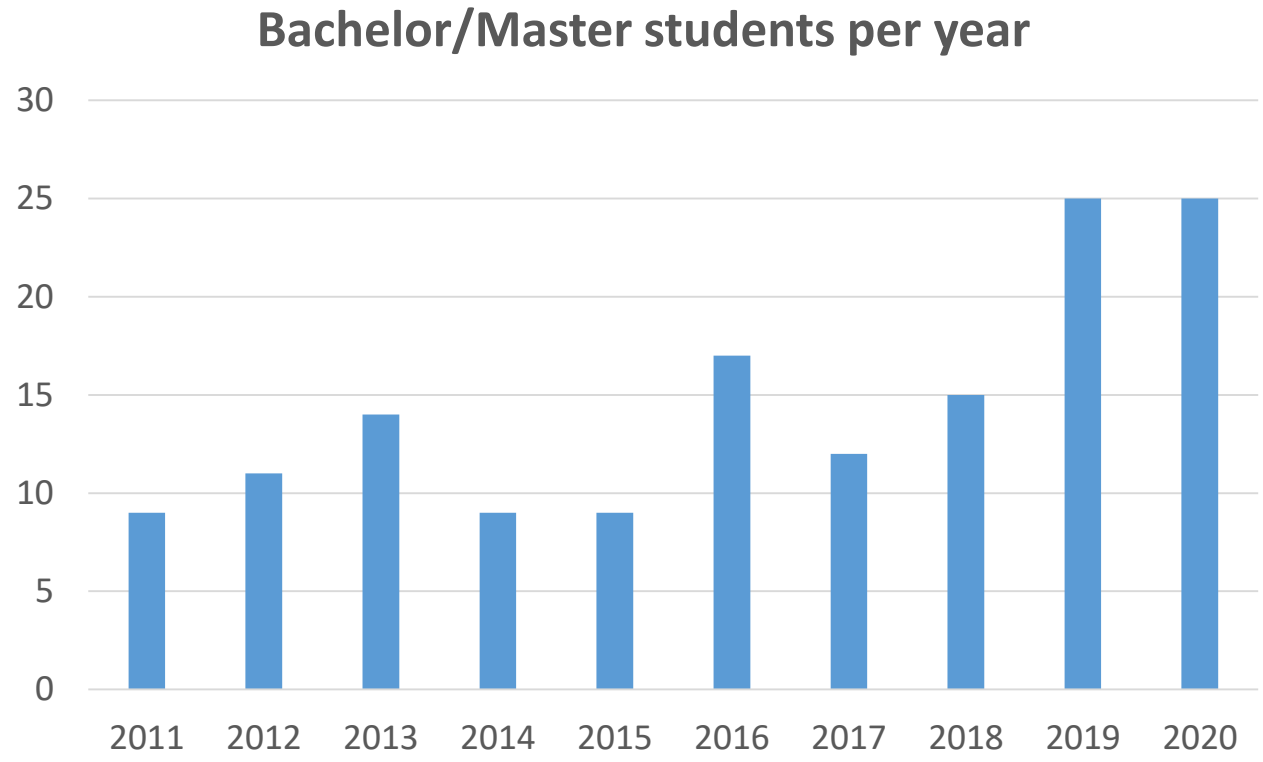
Drug Development Life Cycle



Regulatory Science Programme

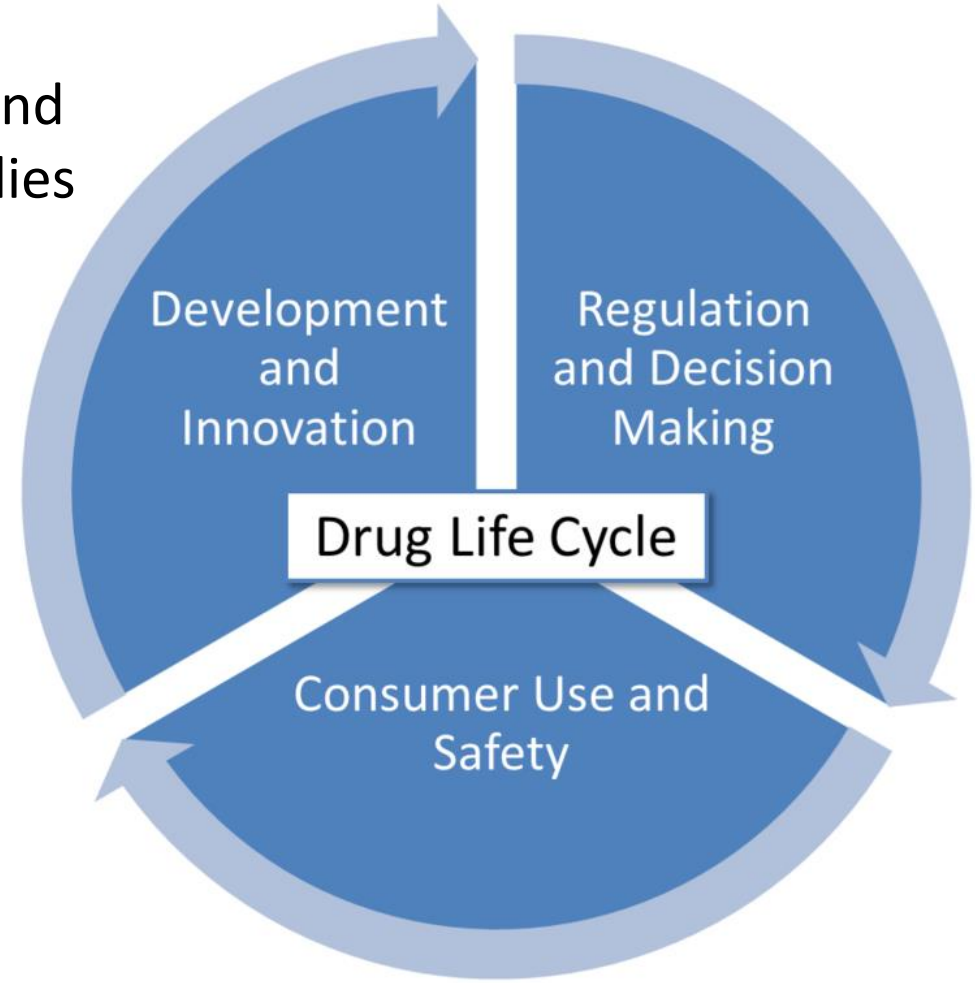
Research Activities

- Bachelor/Master-students
- PhD-students
- Participation in IMI/Horizon-2020-projects: RADAR-AD, STARS, VAC2VAC, Conception, EU-ToxRisk, Trials@home
- Publications



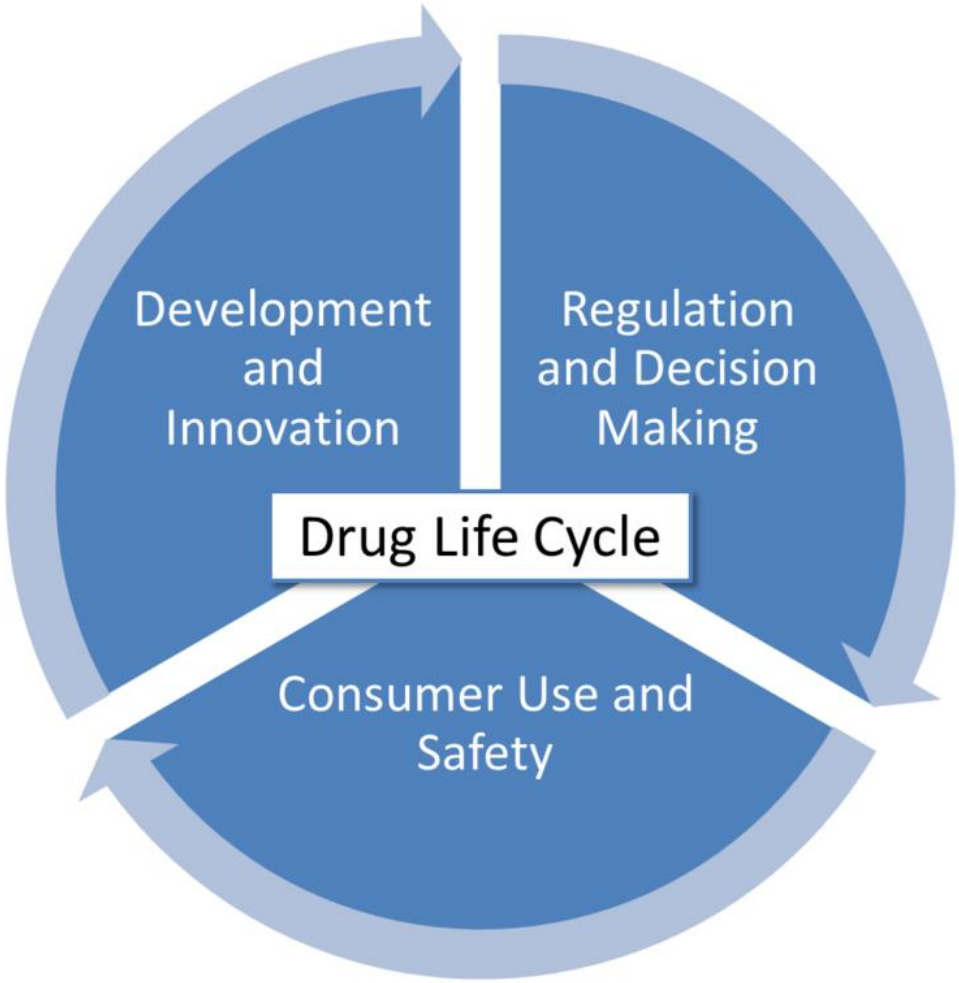
Topic PhD projects

Replacement, reduction and refinement of animal studies



https://www.regulatoryscience.nl/editions/2019/08/promovendi

Topic PhD projects



Registries

Personalised Medicine

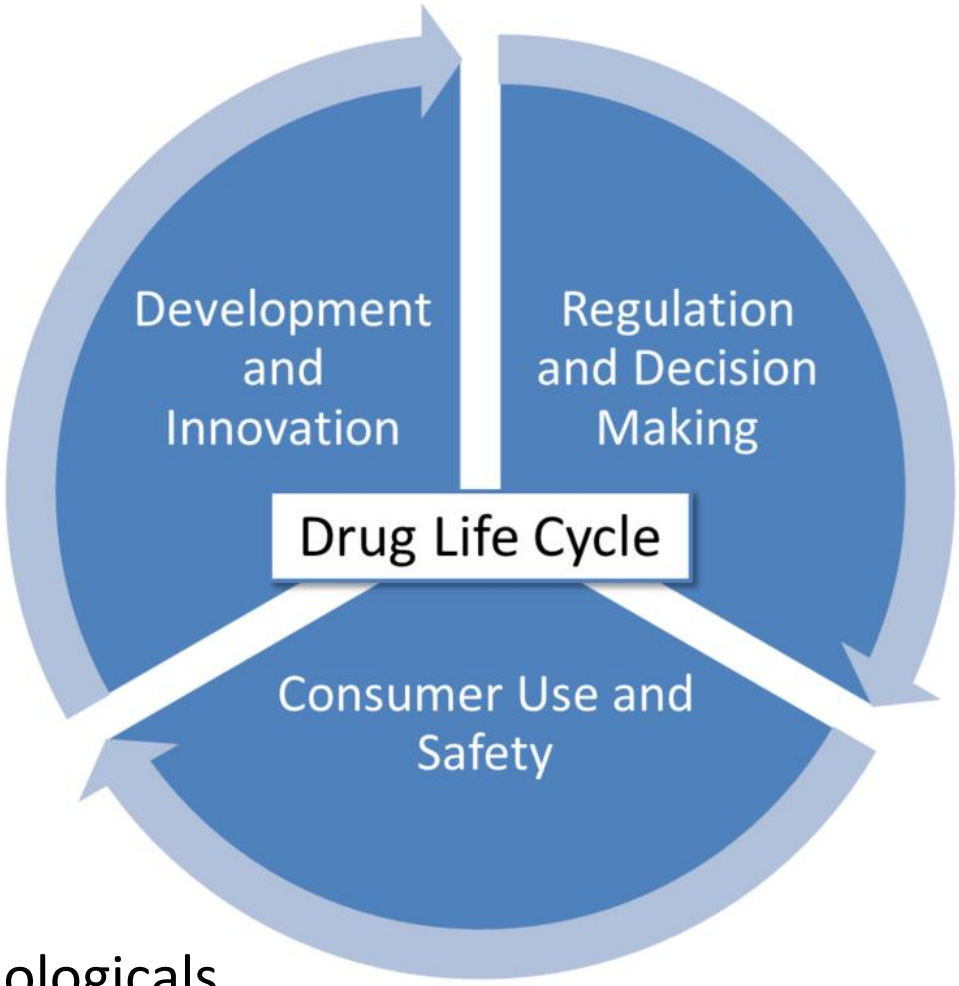
Estimands

Generics

Early approval

https://www.regulatoryscience.nl/editions/2019/08/promovendi

Topic PhD projects



Risk communication

Medicines Shortages

Medication errors

Pharmacovigilance of biologicals

https://www.regulatoryscience.nl/editions/2019/08/promovendi

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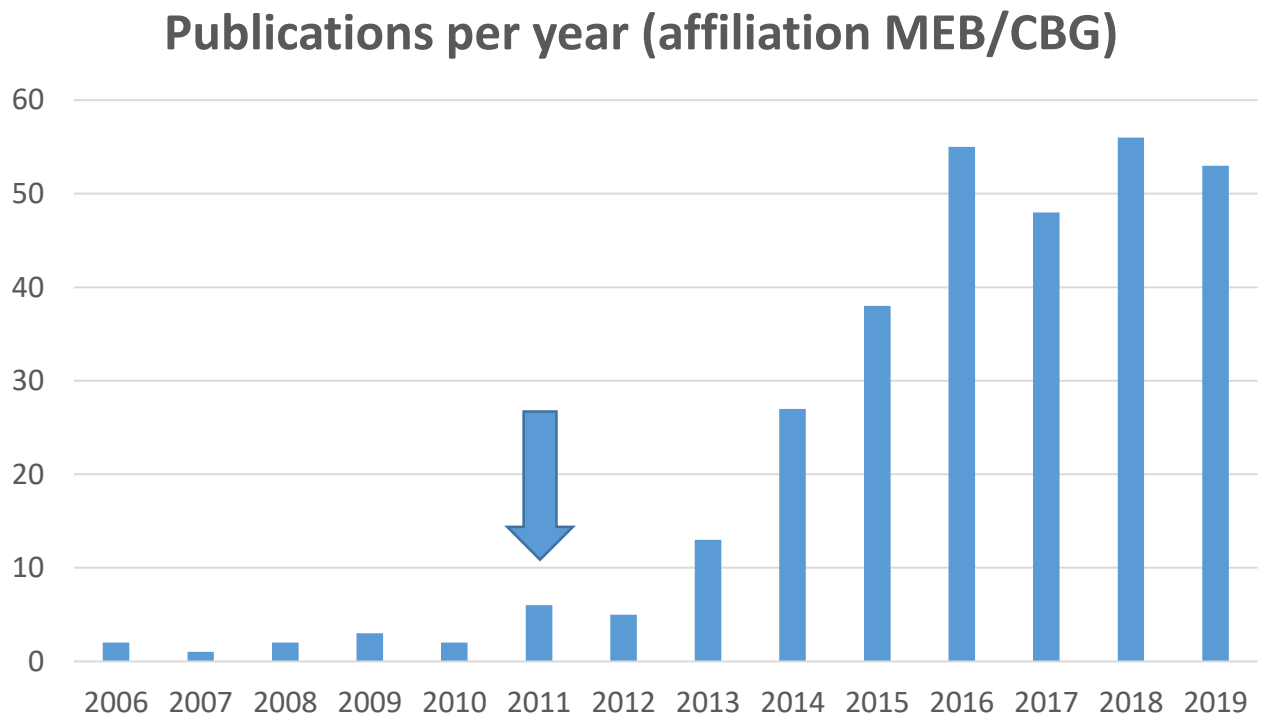


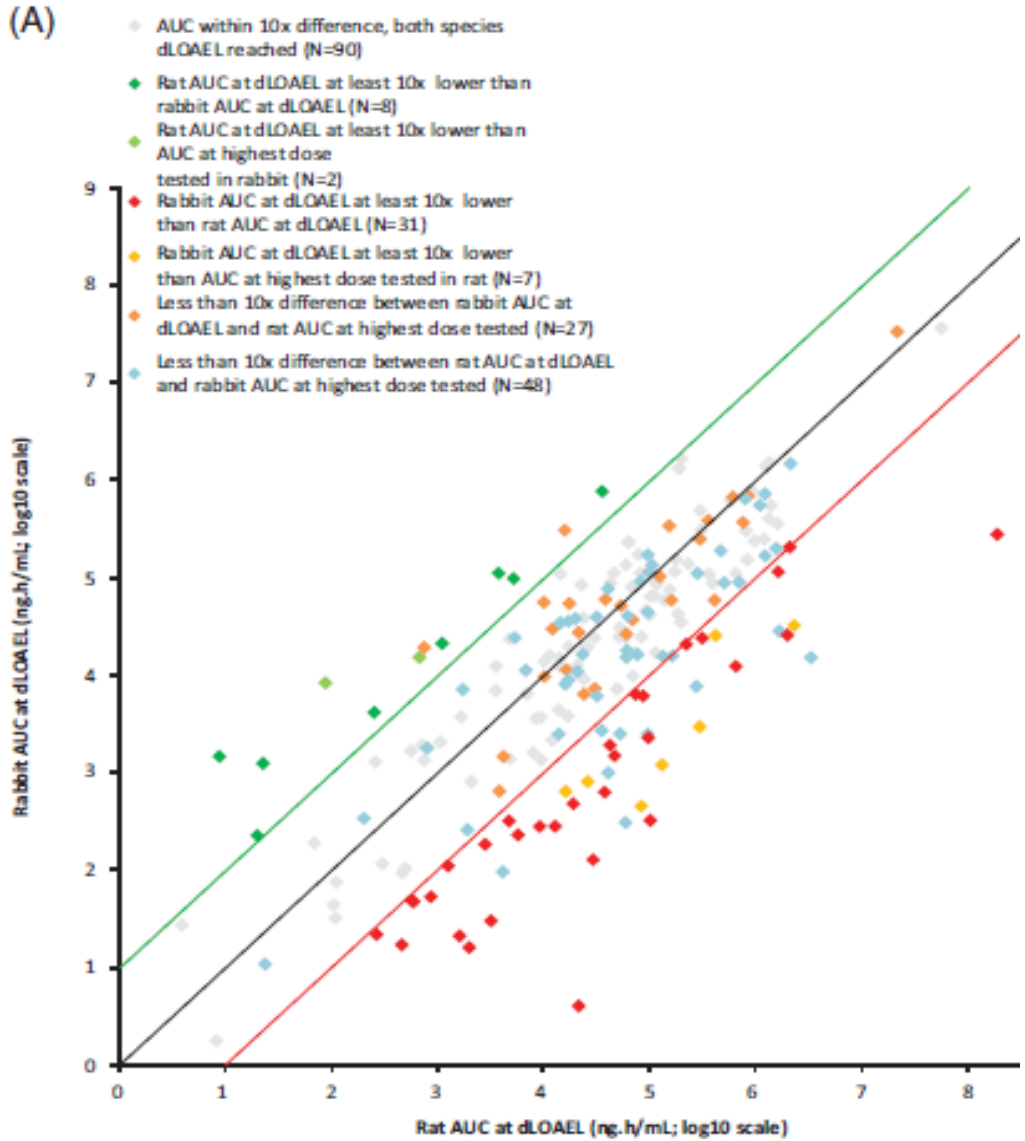
Regulatory Science Programme

Collaboration partners

- 8 Dutch Universities and University of Copenhagen (CORS)
- EMA, HMA, ICMRA, and other national agencies
- Governmental Partners (ZIN, CCMO, LAREB, RIVM, IGJ)
- Different Registries
- Regulatory Science Network Netherlands

ICH S5: Rat and rabbit developmental toxicity testing. Do we need both?

- Since thalidomide, 2 species reproductive toxicity testing is required (rat+rabbit).
- Are both species needed?
- **From phase 1 onwards, ICH S5** requires a EFD DRF, later embryofetal development in both species
- Analysis of ~380 pharmaceuticals with rat and rabbit data (including failed products)
- Rat and rabbit are relatively equal in sensitivity (NOAEL, LOAEL and HED).
- Also severity incidence is similar



Theunissen et al. Crit Rev Toxicol. 2016 Nov;46(10):900-910
Theunissen et al. Crit Rev Toxicol. 2017 May; 47(5):402-414

ICH S5: Rat and rabbit developmental toxicity testing. Do we need both?

- If they are comparable, you should be able to use just one species
- New ICH S5R3 revision proposes exactly that!
- **1 species DRF + (advanced) in vitro studies are sufficient before phase 3 + safety measures in phase 1/2**

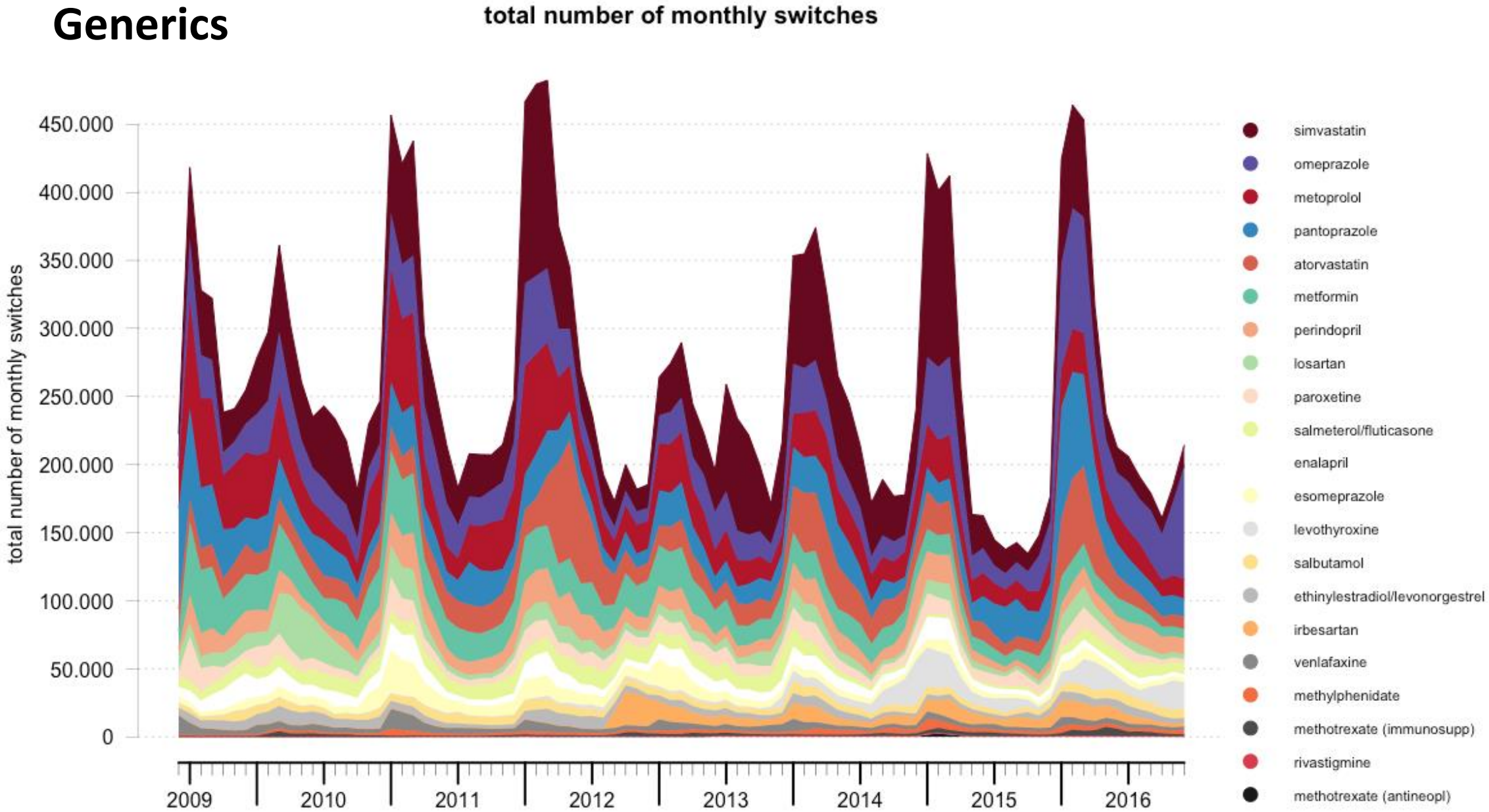
deVolkskrant

Hundreds of thousands less laboratory animals are needed

- Differences in NOAELs or LOAELs in developmental rat/rabbit toxicity studies… could just as well be caused by study replication errors, and not necessarily by differences in species sensitivity

Braakhuis et al. RTP 2019 Oct;107:104410

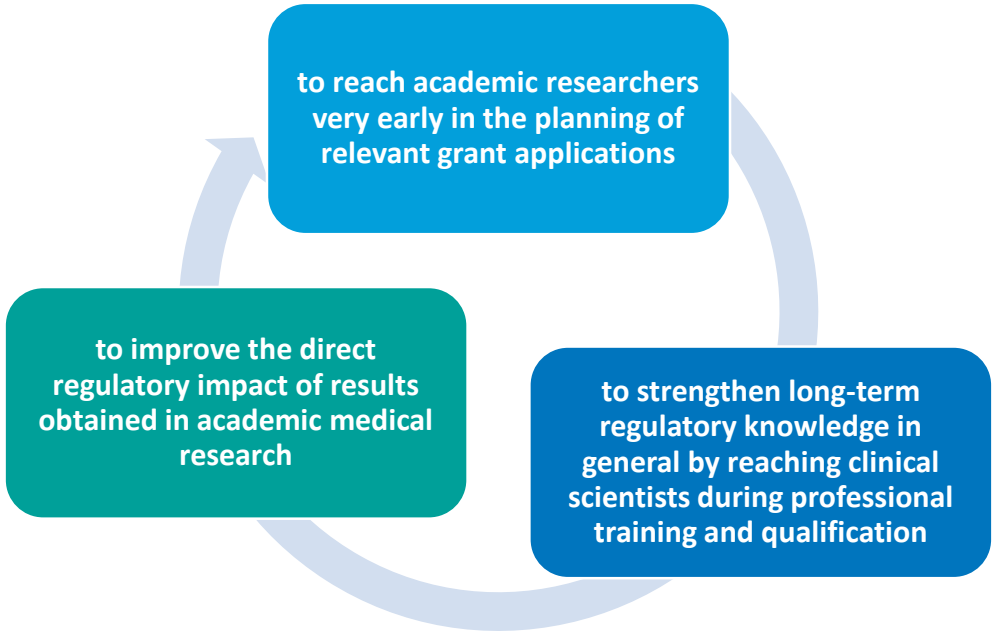
Generics

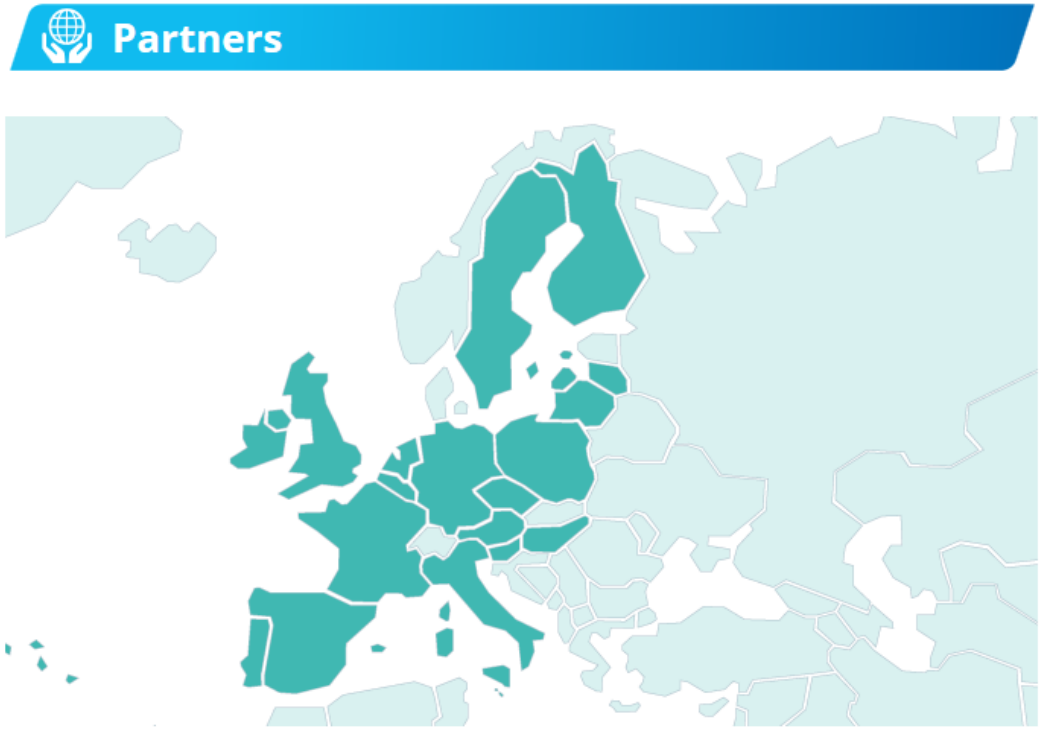


Glerum, P.J., Maliepaard, M., de Valk, V. *et al.* Drug switching in the Netherlands: a cohort study of 20 active substances. *BMC Health Serv Res* **20,** 650 (2020).

STARS: Strengthening training of academia in regulatory sciences & supporting regulatory Scientific Advice

- Consortium of 18 European countries represented via their NCA
- 4 associate countries
- EMA





STARS partner countries © DLR

feature

Strengthening regulatory science in academia: STARS, an EU initiative to bridge the translational gap

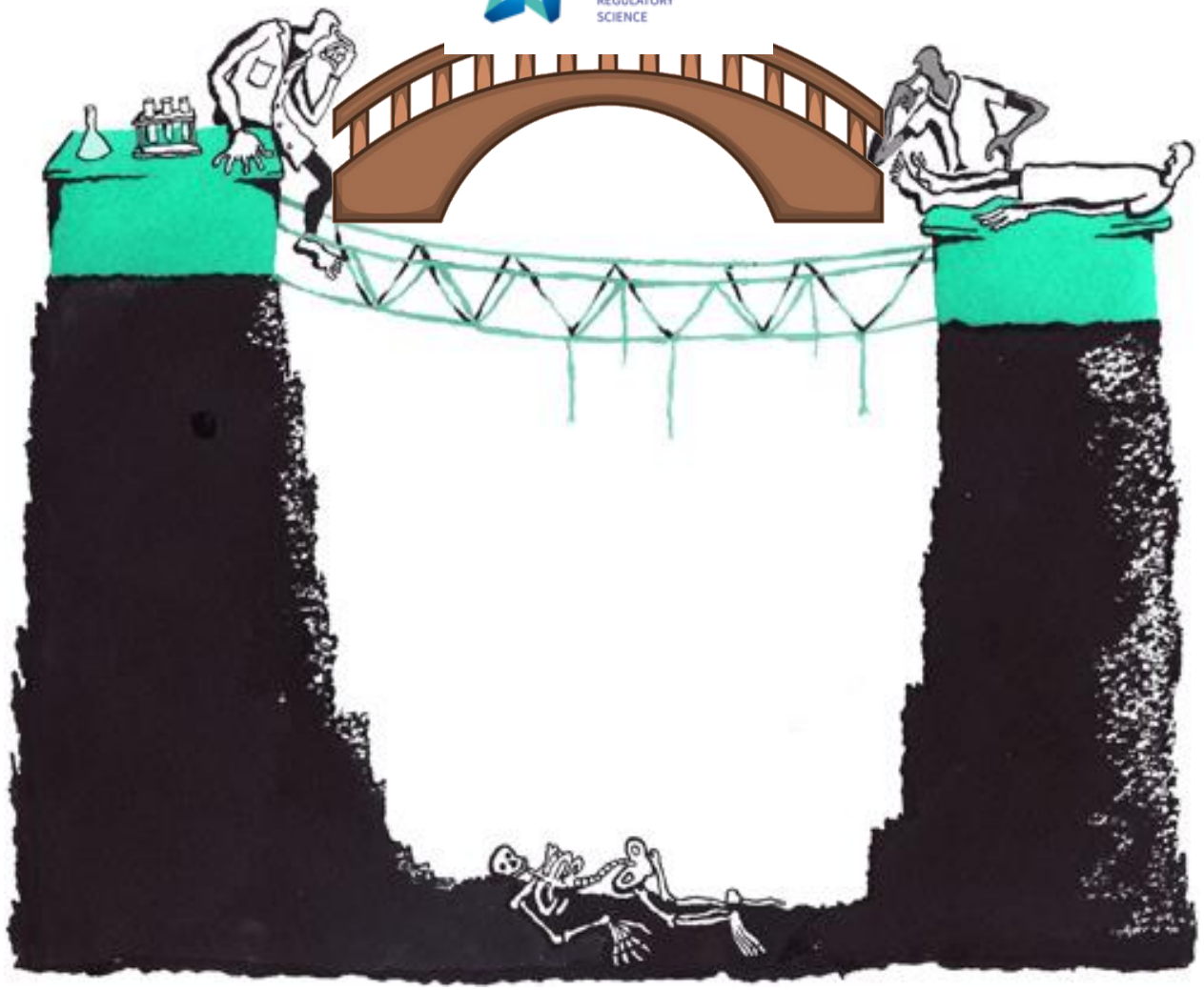
Viktoriia Starokozhko[1,2], Marko Kallio[3], Åsa Kumlin Howell[4], Anna Mäkinen Salmi[4], Gunilla Andrew-Nielsen[4], M. Goldammer[5], Manja Burggraf[6], Wiebke Löbker[7], Anne Böhmer[7], Eleonora Agricola[8], Corinne S. de Vries[9], Anna M.G. Pasmooij[1] and Peter G.M. Mol[1,2]
, p.mol@cbg-meb.nl, p.g.m.mol@umcg.nl on behalf of the STARS consortium

Abstract

Truly disruptive medicine innovation and new treatment paradigms tend to start in non-commercial research institutions. However, the lack of mutual understanding between medicine developers and regulators when it comes to medicine development significantly delays or even prevents the access of patients to these innovations. Here, we outline what regulatory-related barriers hamper the translational development of novel products or new treatment paradigms initiated in academia, and propose key steps towards improved regulatory dialogue among academia, funding bodies and regulatory authorities. Moreover, we briefly describe how the STARS (Strengthening Training of Academia in Regulatory Science) project aims to reach out to medicine innovators in academia to bridge the regulatory knowledge gap and enhance this dialogue to facilitate the implementation of academic research findings in clinical practice.

Starokozhko et al., 2020, Drug Discov Today

STARS
STRENGTHENING REGULATORY SCIENCE



MEB Strategic Business Plan 2020 - 2024

- Science Policy 2020-2024, excepted to be published in 2021

- Replacement, reduction and refinement of Animal Studies (3R's)
- Advanced Therapeutic Medicinal Products (ATMP's)
- Data-driven assessment
- Personalised medicine & biomarkers
- Medical devices
- Generics
- Proper use in clinical practice
- Safety and efficacy after registration

CBG MEB

COLLEGE TER BEOORDELING VAN GENEESMIDDELEN

GOEDE MEDICIJNEN GOED GEBRUIKT

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