

11 november 2016

# FederaDag 2016

**‘Health(y) Science; increasing value,  
reducing waste’**

**Henk J. Smid**

**Does health research need a medical doctor**

**YES**

# this week

**ASTHMA DRUG CAUTION** page 214 • **CCG PLANS REFERRAL CUTS** page 215



## Top cancer researcher is struck off

A leading researcher into innovative treatments for pancreatic cancer has been struck off the UK medical register for "gross and clear fabrication of research data."

Thorsten Hagemann, who worked at Bart's Cancer Institute in London, was found guilty of 24 instances of misleading and dishonest conduct between 2012 and 2014.

He was found to have falsified data in grant applications to the Pancreatic Cancer Research Fund and Cancer Research UK, in a paper published in *Nature*, in another paper which was submitted to *Nature Medicine* but rejected, and in a presentation to Cancer Research Technology.

Hagemann, who qualified in Germany in 1999, progressed rapidly in his career at Bart's, where he was both a researcher and a clinician treating patients with pancreatic cancer. He was appointed a professor in 2013 after gaining wide experience of overseeing research projects involving several assistants.

A medical practitioners' tribunal, sitting in Manchester, heard that he was one of very few academic clinicians researching treatments for pancreatic cancer.

Concerns about his work began to surface between 2012 and 2013 when one of his junior colleagues raised questions about

the source of data he had produced. This led to an internal investigation relating to two projects.

He initially denied wrongdoing but resigned with immediate effect when he was presented with evidence of scientific misconduct, including the falsification of an email exchange.

The tribunal heard that when he was asked if there was anything else the institute should know about, he replied, "No, that's all." But a comprehensive investigation found a further six allegations of scientific misconduct.

In the *Nature* paper, he was found to have included fabricated figures and made dishonest statements. The particular mice that he wrote about had not been bred at the time and he must have known this, the tribunal found.

Richard Davies, the tribunal chairman, said that Hagemann's behaviour "represented a pattern of conduct featuring a propensity to fabricate data, cover up what he had done, and then to act with an eye to self-preservation." Because of this, the tribunal concluded that he was "highly likely" to repeat his conduct.

Clare Dyer, *The BMJ*

Cite this as: *BMJ* 2016;354:g4352

**Thorsten Hagemann was highly likely to repeat his conduct, the tribunal concluded**

### LATEST ONLINE

- Choice of non-medical school to run radiology school was "ill conceived," says royal college
- Website aims to help public understand research studies
- Australian doctors condemn "horrific" treatment of children in detention



## From 2012 on

Science in Transition

Raising Public Awareness

ZonMw

Starting a debate within the scientific community

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## Science 2012: growing inconvenience

- Publication bias
- Fraud
- Data sharing
- Quality
- Societal impact
- Bibliometrics
- Mattheus – effect (priority setting in health research)

## Intermezzo 1

2014

Lancet articles:

Research: increasing value, reducing waste

Reference to a 2009 study: 85% waste



The BMJ [SUBSCRIBE NOW](#)

## Paul Glasziou and Iain Chalmers: Is 85% of health research really “wasted”?

14 Jan, 16 | by BMJ



Our estimate that 85% of all health research is being avoidably “wasted” [Chalmers & Glasziou, 2009] commonly elicits disbelief. Our own first reaction was similar: “that can’t be right?” Not only did 85% sound too much, but given that \$200 billion



per year is spent globally on health and medical research, it implied an annual waste of \$170 billion. That amount ranks somewhere between the GDPs of Kuwait and Hungary. It seems a problem worthy of serious analysis and attention. But how can we estimate the waste?

Let’s break up the 85% figure by its components. The easiest fraction to understand is the fraction wasted by failure to publish completed research. We know from follow up of registered clinical trials that about 50% are never published in full, a figure which varies little across countries, size of study, funding source, or phase of trial [Ross, 2012]. If the results of research are never made publicly accessible—to other researchers or to end-users—then they cannot contribute to knowledge. The time, effort, and funds involved in planning and conducting further research without access to this knowledge is incalculable.

Publication is one necessary, but insufficient, step in avoiding research waste. Published reports of research must also be sufficiently clear, complete, and accurate for others to interpret, use, or replicate the research correctly. But again, at least 50% of published reports do not meet these requirements [Glasziou, 2014]. Measured endpoints are often not reported, methods and analysis poorly explained, and interventions insufficiently described for others—researchers, health professionals and patients—to use. All these problems are avoidable, and hence represent a further “waste.”

## Waste

- No publications (50% of all registered clinical trials)
- Accurate publications (50% are not)
- Systematic examination prior to new research (50% not)



## Back to the main theme

### Process

- Discussion paper
- Invitational conferences
- Commitment.... or no objections

## Intermezzo 2

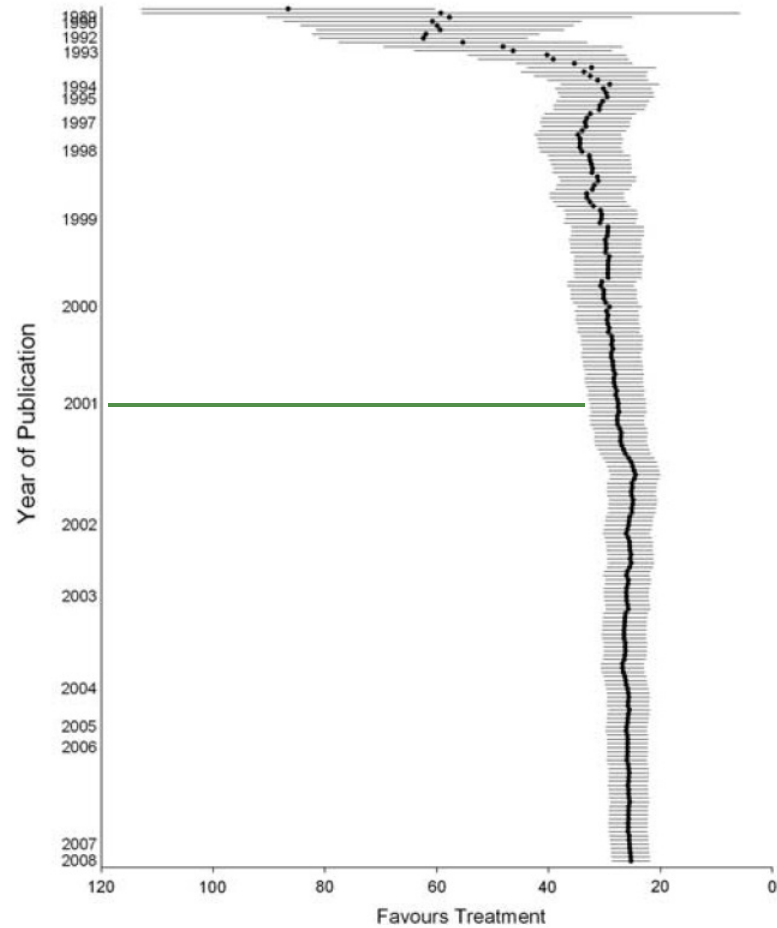
Specific example

Radboud University Medical Centre

Syrcle: Systematic Review Centre for Laboratory  
Animal Experimentation

Reducing waste in animal testing!

## New animal tests : yes or no?



Uit: Sena et al. 2010. J Cereb Blood Flow Metab

## It's in the air

Health Council of the Netherlands

Report about health research at the university medical centers, October 2016.

About:   Quality  
            Publication bias  
            Indicator dominance  
            Societal impact  
            Integrity



## Tasks of a research funder

- Initiate the debate
- Funding scientific research
- Review own procedures  
require data sharing
- Priority setting

# Programme

## Fostering Responsible Research Practices

### Four pillars

1. Open call for research proposals
2. Audit of practices
3. Understanding of project lifecycles in research
4. National survey of scientific integrity

## Call for project ideas

- 45 proposals
- 41 from universities
  - 2 from universities of applied sciences
  - 2 other institutions

Main emphasis by applicants on quality and integrity

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## National Survey on Research Integrity

- Web-based survey among **all active scientists** of Dutch Universities and UMCs
- Focus on **occurrence** and **determinants** of research misbehavior
- Attention to differences between **academic ranks** and **disciplinary fields**
- Validated questionnaires and **solid identity protection** of participants
- **Advanced methods**: randomized response technique + missingness by design
- Benchmarked results per institution to enable **constructive discussion**
- **Focus group interviews** and **invitational conferences** on survey results
- Recommendations for fostering **Responsible Research Practices**



## Pilot programme replication

Studies in the fields of health research and social sciences

- Reproduction (existing data)
- Replication (new data)
  - existing research protocol
  - new research protocol

