

# **STATENS SERUM INSTITUT'S COURSE ON GOOD SCIENTIFIC PRACTICE: WHY, HOW, WHAT ?**

**Nils Axelsen, MD, D.Med.Sc  
Ombudsman for Research Integrity  
Statens Serum Institut  
Copenhagen, Denmark  
na@ssi.dk**

# **WHY DID I TAKE THE INITIATIVE TO TEACH ?**

- Only a few people at my institution know the definition of scientific dishonesty, how damaging dishonesty can be, and how thoroughly allegations are investigated**
- Only few the existence of the Danish guidelines for Good Scientific Practice (GSP/RCR), and almost none, even the brightest researchers had read and learned the guidelines**
- So far no formal systematic training in GSP exists in Denmark, even if the Danish Committees on Scientific has written about it for many years**

**THUS THERE IS LARGE UNMET NEED AT MY INSTITUTION AND GENERALLY IN DENMARK**

## **HOW DID I START ?**

- I made a solid platform as ombudsman, with a jobdescription comprising responsibility for training all the institutions researchers in GSP/RCR for demonstrating 'proof of principle'**
- Secured a strong back up from our CEO**

## **WHAT IS MY BACKGROUND FOR THIS ?**

- A long life in medical research, including various leading positons**
- Co-founder and member of the Danish Committees for Scientific Dishonesty (1993-2005)**
- Membership of some large grant giving commisions and foundations**

# THE TARGETS AND THE AIM OF THE COURSE

- The first targets are all the young researchers, ph.d. students and young postdocs
- The next target is mentors/department heads. As I secretly thought my so far 70 young pupils have made the mentors/leaders a little anxious and they now ask when I am ready to teach them
- The goal is firm integration of GSP/RCR in the daily work, with the mentors/leaders having an enlightened responsibility, so that GSP/RCR is not just only words for window dressing
- A further goal is to speed up the universities by this example

# THE FORMAT

- **Seminars for 8-10 trainees, 5 sessions over 14 days**
- **I am present at all sessions**
- **Most topics are presented by the trainees based on material handed over at first session**
- **For each session/topic I call on one or two seasoned prominent university professors. Their is easy, They shall only discuss the presentations with the trainees and provide their own extensive experience,**
- **Importantly the CEO participates in an hour in each course**

# TOPICS

- **The history of scientific dishonesty/misconduct**
  - **Stories about a handful key cases**
  - **The turmoil:** reactions in the scientific community, political reactions, OSI/ORI, Danish experiences and in other countries, public trust in science and other walks of life
- **The world of science**
  - What constitutes a good scientific paper ?
  - The role of science in modern society
  - The growth of number of researchers, publications, journals, authors, funding. Big science, EU's role. Denmark's role (1%) and its ambitions and options in this (realistic) turbulent picture. Our institutes' role

- **FULL REPORTS FROM TWO CASES OF SUSPECTED SCIENTIFIC DISHONESTY**
  - The Sudbø case
  - A case of wrongful allegation
  - The cases vividly illustrates the need for GSP/RCR
- **PSYCHOPATHY**
  - Not for presentation by the trainees. Is handled very carefully, requires psychiatric insight, but is relevant. Up til 10% of the population has psychopathic traits (without being psychopats)
- **THE LARGE GRAY ZONE**
  - Based on data from Melissa Anderson et al
- **THE DANISH GUIDELINES ON GSP**
  - They are rather detailed, and discussed thoroughly

- **DRAMATIC PLAY ABOUT AUTHORSHIP (Macrina)**
  - Very useful and highly entertaining as background for a detailed discussion about the Vancouver Rules
  - Povl Riis, co-author of these rules participates
- **THE TEN MOST IMPORTANT THINGS TO KNOW ABOUT RESEARCH ETHICS (Pimple)**

And finally

- **HOW TO**
  - Use the ombudsman
  - Implement GSP/RCR in daily life
  - Be updated



## **DOES IT WORK ?**

- Yes, it has so far been a major eyeopener for my pupils
- They appreciate very much the small setting, and the opportunity to talk with the famous professors who are sharp, wise, funny, and show humility
- The CEO's participation is good and relevant
- The trainees spontaneously say that they feel much more equipped for life in science than before, and they think this course should be mandatory for all ph.ds
- The many data from the medical science world taught by seasoned medical scientists are relevant and a good introduction to spotting and handling relevant ethical problems in the trade
- The ombudsman and his mission is made visible

## **WHAT DO I NEED ?**

**- A strong network of wise RCR-teaching colleagues**