Lecture 7
<table>
<thead>
<tr>
<th>5</th>
<th>Scientific misconduct</th>
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|   | • Research ethics as virtue ethics:  
|   |   → "Scientist" as a social role  
|   |   → Expectations  
|   |   → What is the "ideal scientist"?  
|   |   → Virtues of "good science". Scientific integrity.  
|   | • FFP definition: Fabrication of data, Falsification of results, Plagiarising of research.  
|   | • Reasons for fraud: Institutional pressure, conflicts of interest, pride, etc. |

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<tr>
<th>6</th>
<th>Publishing Issues</th>
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|   | • Doing science vs. writing science  
|   | • Publication of research  
|   | • Ethics of publishing  
|   |   • Writing science: trivial? Ethics of science communication.  
|   |   • Publishing practices:  
|   |     ○ Peer reviewing,  
|   |     ○ Impact factors,  
|   |     ○ Citation practices. |

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<th>7</th>
<th>Mentorship, Collaborations and sources of conflict</th>
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|   | • Chemistry as teamwork  
|   |   • Group hierarchies and harmony  
|   |   • Mentorship, PI-student relationship  
|   | • Collaborative Research, Interdisciplinary research |

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<thead>
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<th>8</th>
<th>Academic freedom, Intellectual property</th>
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|   | • Chemistry and politics (funding, impact on academic freedom, basic vs. applied research)  
|   | • Academia and industry  
|   | • Conflicts of Interest  
|   | • Intellectual Property |

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<th>9</th>
<th>Animal experiments</th>
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|   | • Animal rights?  
|   |   → Utilitarian vs. deontological positions  
|   |   → Means-ends relations  
|   | • "3R" regulations  
|   | • Legal issues |
Class 7 - Collaborations, Conflicts, Mentorship

Chemistry is - on several levels - teamwork, and as such embedded into a wide network of actors and stakeholders. This and the next class will focus on issues that arise in the context of collaborations and co-operations across these levels. We will see in this class what kind of conflicts can arise when chemists work with fellow chemists (including PI-student interaction), with other (natural) scientists, or with completely different scientists (social sciences, humanities).

Goal of this class

After this class you will be:

- a better mentor/superior, or a student/inferior with the ability to solve conflicts with convincing discourse skills and good arguments.
- a better collaborator with high scientific integrity, credibility and positive influence.
- an open-minded interdisciplinary bridge builder that can see beyond the narrow margin of your own professional expertise and competence.
Chemists share

- facilities
- devices
- services
- competences
- ideas
- visions

at
- symposia
- colloquia
- conferences
- bilateral communication
different fields of collaboration
- Social Sciences
- Philosophy
- Psychology

Examples:
- Technology assessment
- Consequences of global climate change
Link to Politics:

Examples from:
- Environmental Research
- Big Data
- Politically relevant regions

Examples: Russia, Columbia
Additional Aspect covered: Science Diplomacy

Science in Diplomacy:
Scientific results used for political decision-making.

Diplomacy for Science:
Support of Diplomacy in support of science.

Science for Diplomacy:
Science supports Diplomacy by constant interactions between scientists, even under difficult conditions.

Example: Interactions between FU Berlin and St. Petersburg University since 1968
Relation of Research to Funding

Start in funding
Minimum use of tax payer money

- Goals in technology
- Political goals
- Sustainability goals
Funding by industry

- Development of new products
- Product development
- Novel production technologies

**Central Goal**: Profit + Relation to scientific virtues
Motivation for Collaborations

- Structural reasons
- Financial reasons
- Political Support
- Procedural and epistemic reasons
- Share of knowledge (know-how, competences)
- Community of Purpose
Funding agencies

Changes in funding formats

Germany  DFG
BMBF
Collaboration and Teamwork

Required
- Trust
- Collegiality
- Accountability
- Responsibility

Conflict
Often due to misunderstanding in communication
- Role of initiators and coordinators
- Role of contracts
- Culture of collaborations

Examples
Mentorship

- Importance of Mentorship
- Role of Mentor
- Education in Mentorship
- Interests of Mentors and Mentees

- What is a good Mentor?
- What to do in case of conflicts?
Distinction
multi-disciplinarity
traceability
inter-disciplinarity
Not shown in lecture (from Jan Mehlich)
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Next lecture