

Online CPC Research School Seminar Series

What are facts, what is fake: How to fight the dangerous infodemic about SARS-CoV-2/Covid-19

Facilitators: PD Dr. Claudia Staab-Weijnitz, Prof. Dr. Matthias Wjst, Prof. Silke Meiners

Scope: 4 lectures, 1 wrap-up à 30-45 min, 15-30 min discussion, given by CPC RS Faculty and Guests

6 lectures à 30 min, 30 min discussion, given by doctoral candidates (2 volunteers/lecture)

The current Covid-19 pandemic still poses tremendous challenges for all of us. Our social life is turned upside down, new official regulations and recommendations emerge on a weekly basis, and we are flooded by new scientific findings daily, some of them seemingly contradictory. Social media provide the perfect stage for self-proclaimed experts to disseminate misconceptions and trivializations of the pandemic. Even national leaders spread fake news. This “infodemic” of misinformation has been recognized as a major threat to human health, “just as dangerous as the virus itself” (WHO).

As scientists, it is our responsibility to inform ourselves using reliable sources and to provide a substantial counterweight to the countless posts of dubious “experts”, conspiracy theorists and extremists. We need to become not only ambassadors of good coronavirus science, but also ambassadors of the scientific process. Obviously, these are not straightforward tasks.

In this seminar series, we aim to

- discuss how to evaluate sources of information using youtube videos and preprints as an example
- examine key questions of the pandemic by discussing recent findings from world-wide epidemiology, public health aspects, clinical findings with focus of Covid-19-relevant lung research, virology and immunology
- provide recommendations on how to disseminate good science on social media or to journalists

The seminar will be organized as a biweekly online-only seminar and opened for participation by all doctoral candidates (MD/Ph.D.) of the CPC Research School as well as the RTG “Targets in Toxicology”. There will be an introductory lecture by the seminar facilitators. This will be followed by seminars given by Ph.D. or MD candidates in groups of two (for topics see below) and lectures by faculty on specific topics.

Presenters will get support, additional references and feedback on their slides by the facilitators beforehand. For this, presenters need to submit their slides and sources of information to the facilitators 6 days prior to the scheduled presentation and schedule a meeting for discussion and feedback.

Ph.D. candidates will receive ECTS which can be taken into account for “skills” or “methods” according to the rules clarified as follows:

- For regular participation (at least 8 out of 11 seminars) without a presentation of their own, Ph.D. candidates will get 0.5 ECTS.
- For regular participation including a presentation of their own, Ph.D. candidates will get 2.0 ECTS.

Topics and Dates: (Starts always @ 6 pm)

Thu, Oct 8, 2020	1. Introduction to the seminar series: The current Covid-19 pandemic (MW, CSW). Key scientific questions and challenges, how to assess credibility of sources, where to find reliable information and limitations (paywalls vs. open access). Why evidence-based medicine initially failed. How to communicate and disseminate reliable information.
Thu, Oct 22, 2020	2. Biology I: “The virus is man-made!” (Bikram Dasgupta, Christoph Deisenhofer, Jiakuan Zhao; Facil: MW, CSW) The origin of the virus. What about genetic lineage? Other coronaviruses. Molecular biology of virus entry and replication.
Thu, Nov 5, 2020	3. Lecture: Clinical presentation and standard of care (Thomas Voshaar, Universität Duisburg-Essen, Krankenhaus Bethanien.) Symptoms and complications. Death/Autopsy. Experiences from the clinics and how standard of care changed during the pandemic.
Thu, Nov 19, 2020	4. Biology II: “What cells does SARS-CoV2 target?” (Camila Melo Narvaez, Christian Schremmer; Facil: MW, SM) Host factors for infection. What’s the news?
Thu, Dec 3, 2020	5. Lecture: Introduction to Epidemiology (MW). Basics of infection epidemiology, important reference values, factors for mathematical modelling of infection spread.
Thu, Dec 17, 2020	6. Epidemiology I: “Whom to believe for political decision-making? Prevention strategies and consequences” (Miriam Kastlmeier, Yuqin Wang; Facil: MW, CSW). Three different countries (Germany, UK and Sweden) with three different prevention strategies; comparison of the infection courses; resulting follow-up problems; strategies for a second wave.
Thu, Jan 14, 2021	7. Epidemiology II: “How does the virus spread?” (Ceylan Onursal, Aydan Sardogan; Facil: MW, CSW) Super-spreading events. Droplets or aerosols? Children or adults?
Thu, Jan 28, 2021	8. Lecture: Aerogenic spread of SARS-CoV2 and thereof derived recommendations for face masks (Gerhard Scheuch, aerosol physicist)
Thu, Feb 11, 2021	9. Risk factors: “Only older people are affected!” (Ashesh Chakraborty, Haifeng Ye; Facil: MW, SM) What are vulnerable preconditions? The role of age, chronic lung diseases, chronic inflammation, smoking, blood groups....
Thu, Feb 25, 2021	10. Currently pursued strategies for prevention and treatment. (Zeynep Ertüz, Ayse Yazgili; Facil: MW, CSW) Non-pharmaceutical interventions (NPIs, e.g. Contact tracing and distancing). clinical trials, potential therapies, vaccination.
Thu, Mar 18, 2021	11. Wrap-up (all; Facil. MW, SM, CSW): What have we learnt?