

Patrick Munk

4 New Projects

Funding for 4 new projects granted 2024Q4

- Novo Nordisk Data Science Emerging Investigator (11 M DKK)
- Sundhedsdonationer (2.5 M DKK)
- NordForsk AMR Network (500 K DKK)
- Carlsberg Mindelegat (200K DKK)

MULTIBIOMINE (NNF)

- Multi-Microbiome approaches for genomic mining of hidden antimicrobials and drug resistance (MULTIBIOMINE)

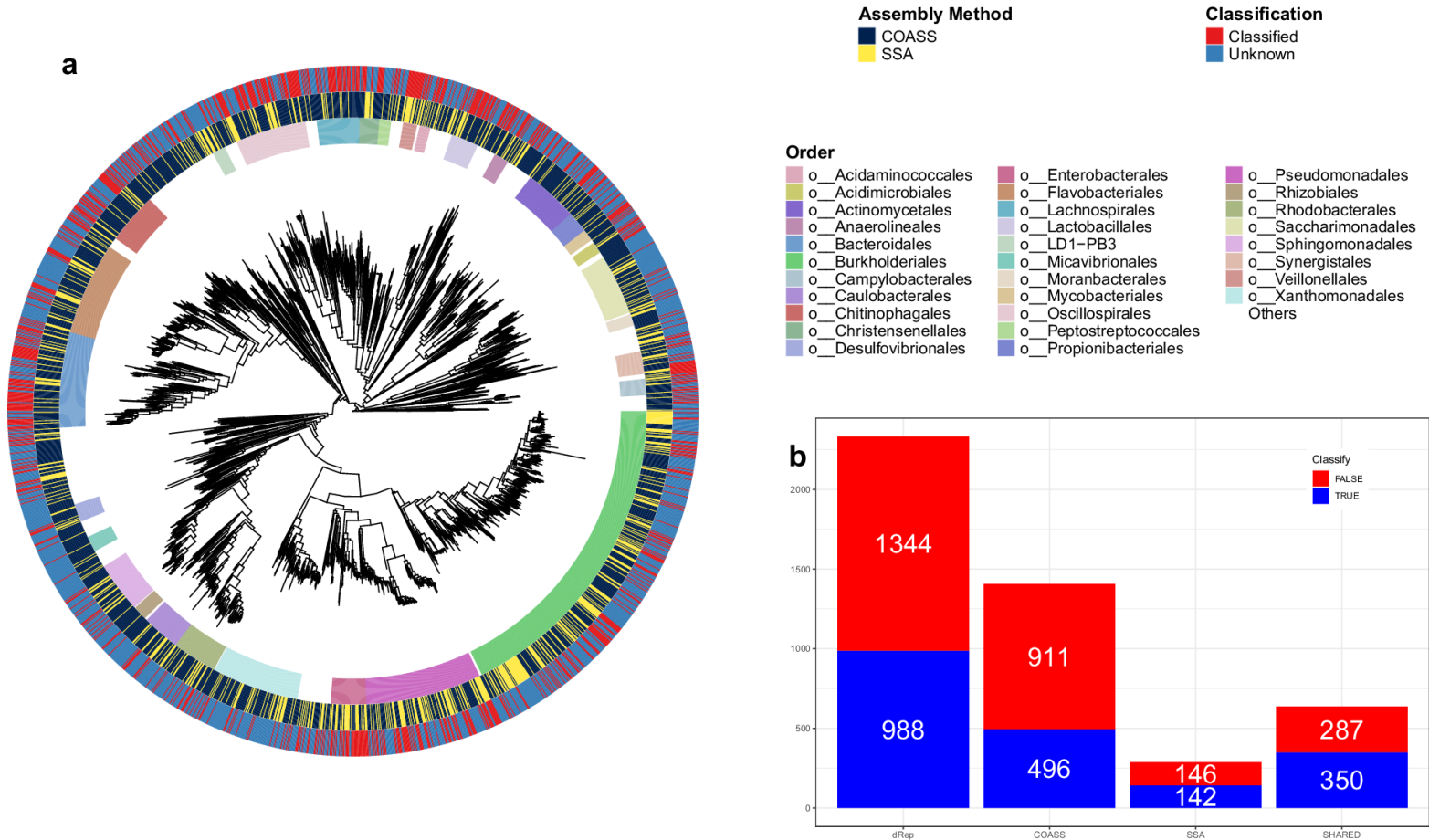
Research questions:

1. Can we utilize data patterns across many microbiome datasets to alleviate the current metagenomic issues of low sensitivity and fragmentation?
1. Can we learn and predict which samples should be analyzed and how we find novel genes of a specific function?

novo
nordisk
fonden

Co-assembly identifies a lot of novel genomes

- Genomes from 1300+ new species recovered
- New things are mostly found when we co-assemble / go deeper



Becsei et al (2024) Nature communications

National AMR Awareness Campaign (Sundhedsdonationer)

Objectives

1. Engage young people in the fight against AMR
2. Educate adults on AMR to increase the quality and quantity of public debate on the issue
3. Increase knowledge of AMR and how antibiotics work in the elderly

Sundhedsdonationer project partners

Videnskab.dk: The research communication website is recognized for its excellent communication skills and has a broad contact base in both youth environments and among researchers who enjoy communication. The contact person is research editor Anders Høeg Lammers. Videnskab.dk will contribute with:

- Interviews with researchers and the preparation of popular science articles
- Podcasts and animated and explanatory explainer videos for platforms like YouTube
- Popular science articles

Kompas Kommunikation: The communication agency Kompas is specialized in strategic, creative, and digital communication within health and medicine for 20 years. The contact person is partner and director Camille Aulkær Andersen. Kompas Kommunikation will contribute with:

- Target group analysis, e.g., quantitative and qualitative studies, including focus groups
- Assistance with communication strategy and communication plan, including clarification of messages, activities, and channels, etc.
- Content production such as advertisements, events, copywriting, press, etc.
- Evaluation and impact measurement as well as reporting

MadeClear: The production company MadeClear has extensive experience in research communication and already collaborates with both Patrick Munk and Kompas Kommunikation in other contexts. Partner and film producer Silas Addington is the contact person. MadeClear will contribute with:

- Film production, including planning, production, pre- and post-production

Sundhedsdonationer campaign content

Youth

- 3 YouTube videos in collaboration with young Danish science influencers
- 3 animated explainer videos
- 1 segment/theme on UltraNyt in collaboration with DR
- 1 project website with digital teaching materials/posters for classroom download, information, and all other project materials

Adults

- 5 banner ads on social and digital media with links to activities
- 3 presentations at public meetings, e.g., BLOOM Science Festival and Folkemødet
- 2 seasons of 'Book a Scientist' presentations on AMR offered during Science Week
- 8 articles written for Videnskab.dk by journalists and researchers
- 4 videos in a miniseries and 1 longer video
- 5 podcast episodes about antibiotic resistance with skilled science communicators

Seniors

- Proposals for articles in relevant patient associations, e.g., Arthritis Association, Lung Association, Cancer Society, etc.
- 1 poster and 1 brochure with informational material for waiting rooms and nursing homes
- Radio segments and press releases for local radio stations
- 2 seasons of 'Book a Scientist' presentations during Science Week

Nordic consortium to Monitor & Research AMR / NoMoReAMR (NordForsk)

Name/ Country	One Health Area	Gender	Professor Level	Expertise
Patrick Munk/ DK	Animal/ Environment	♂	Assist.	microbiome, resistome, animal cohorts, metagenomics, bioinformatics
Veronika K. Pettersen/ NO	Human /Environment	♀	Assoc.	human cohorts, gut microbiome modulations to limit AMR, gut and environmental resistome
Yngvild Wasteson/ NO	Food/ Animal	♀	Full	food safety and infection biology, veterinary medicine
Johan Bengtsson-Palme/ SE	Environment/ Human	♂	Assist.	microbiome, environmental AMR monitoring, AMR emergence
Salla Sariola/ FI	Social	♀	Full	sociology, AMR transmission
Leo Lahti/ FI	Human/ Animal	♂	Full	data science, epidemiology, research software, microbiome bioinformatics

Nordic quality

- The Nordics have a <750% higher density of public bacterial genomic datasets compared to the rest of the world (2,96 sequence datasets / 1000 humans compared to 0,38 / 1000 globally).
- We also have Electronic Medical Records and a lot of other relevant digital register data
- High level of trust in the populations means reliable data
- We have a high degree of digital competence

Can we integrate AMR-relevant One Health data across the Nordics for research and monitoring?

- We will have 3 x 4 day workshops in 2025
- We will have 2 x writing camps in 2026
- We will involve relevant One Health stakeholders
- Kickoff meeting is at DTU and in Videnskabernes Selskab in April 2025



The world of microbes is for everyone: microbiome videos for young and neurodivergent people (Carlsberg)

**CARLSBERG
FONDET**

The world of microbes is for everyone

madeclear

Video producers / Science explainers



Forskerspirer
Sabine Færge

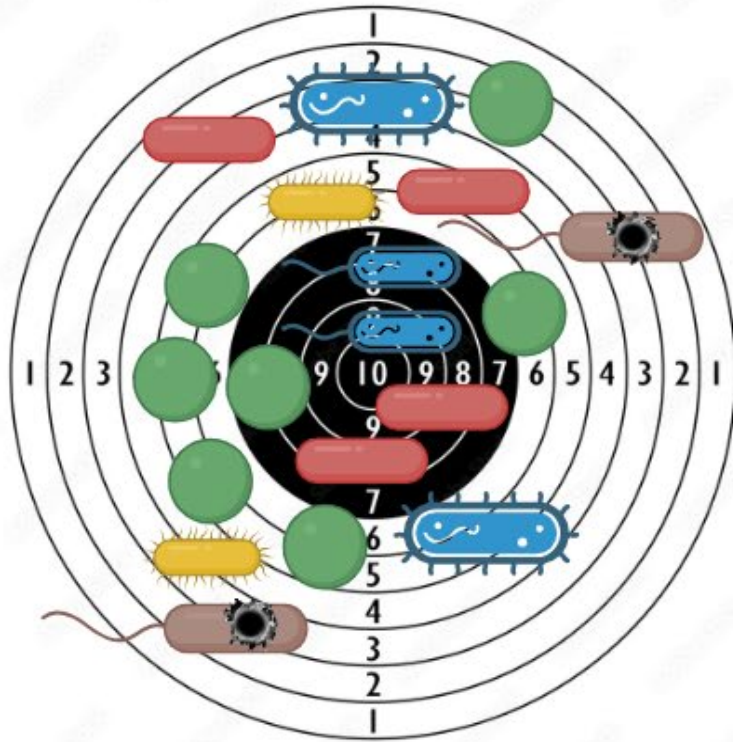


Science Influencer
Lasse Winther

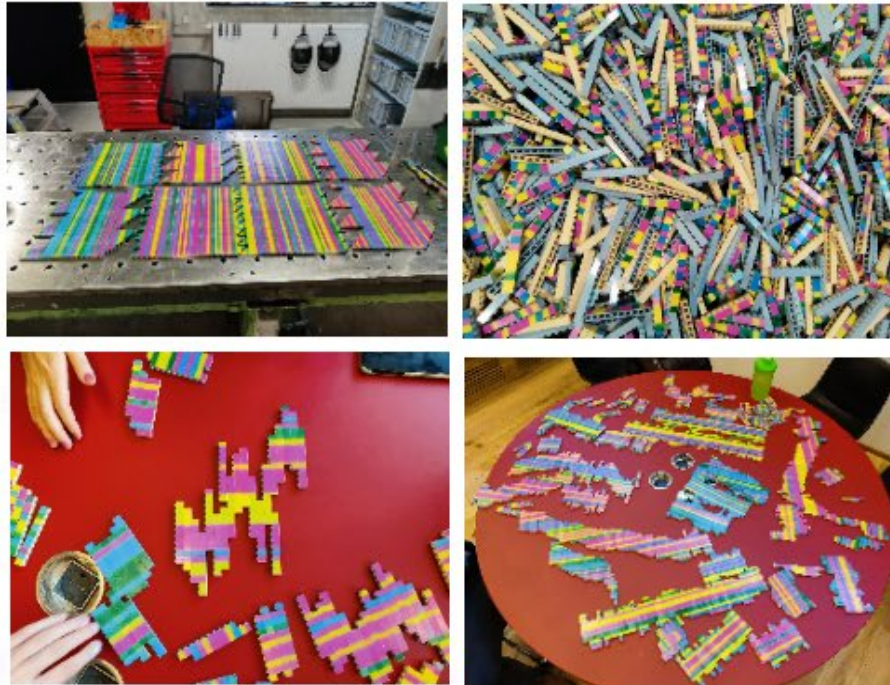


3 videos by madeclear and 10 by Lasse under themes

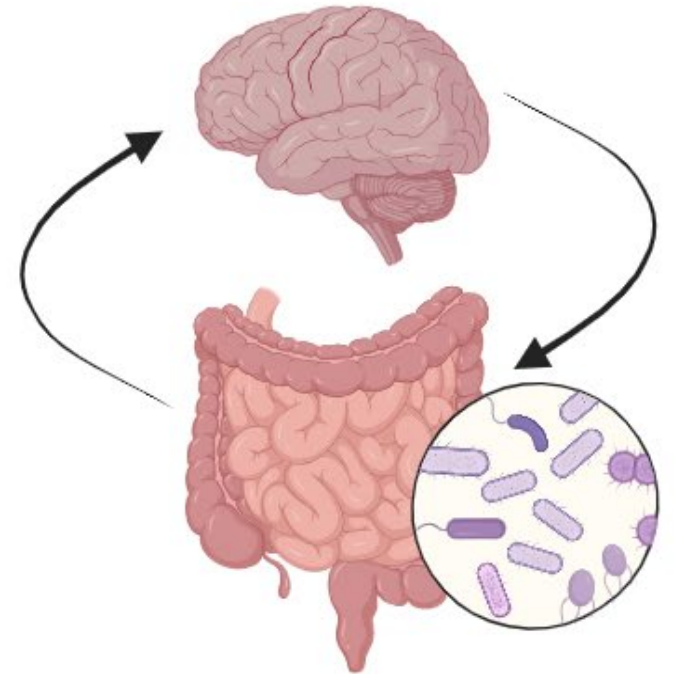
Bakteriers våben og forsvar



Mikrobiomer af LEGO



Mikrobiomet og hjernen



Thank you for
listening!

DTU



Questions?
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