Scriptora

scientific writing & illustrations
creative communication of complex content
teaching & presentation materials

Portfolio

Scriptora

A scientific mindset is not about complicated methods, big data, and AI in fast-paced environments - it is the ability to simplify to the essence. To enable and facilitate what truly drives advances: curiosity & inter-disciplinary knowledge sharing

Katja Maria Sahlgren Bendtsen
PhD, DVM
Founder & Scientific Writer
www.scriptora.dk

Scientific illustrations & figures

Factors in human exposure risk to aircraft emissions

Airport

Size and type
Location and infrastructure
Ground support vehicles
Use of APU, GAC, and ECS
Diurnal, weekly, seasonal, and annual patterns
Transit time for passengers

Engine

Engine and fuel type
Contamination of fuel
Engine wear
Lubrication oil
Engine lifetime
Engine modes and power

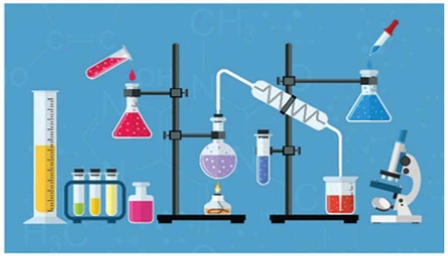
Aircraft

Aircraft type
- Military
- Transport
- Commercial

Aircraft age and use
Aircraft/engine combinations
Weight of aircraft

Physics and Chemistry

Volatile compounds
Non-volatile emissions/particles
Particle sizes
Metals
Carbon type and contents
Ambient air processes
Aging and mixing height



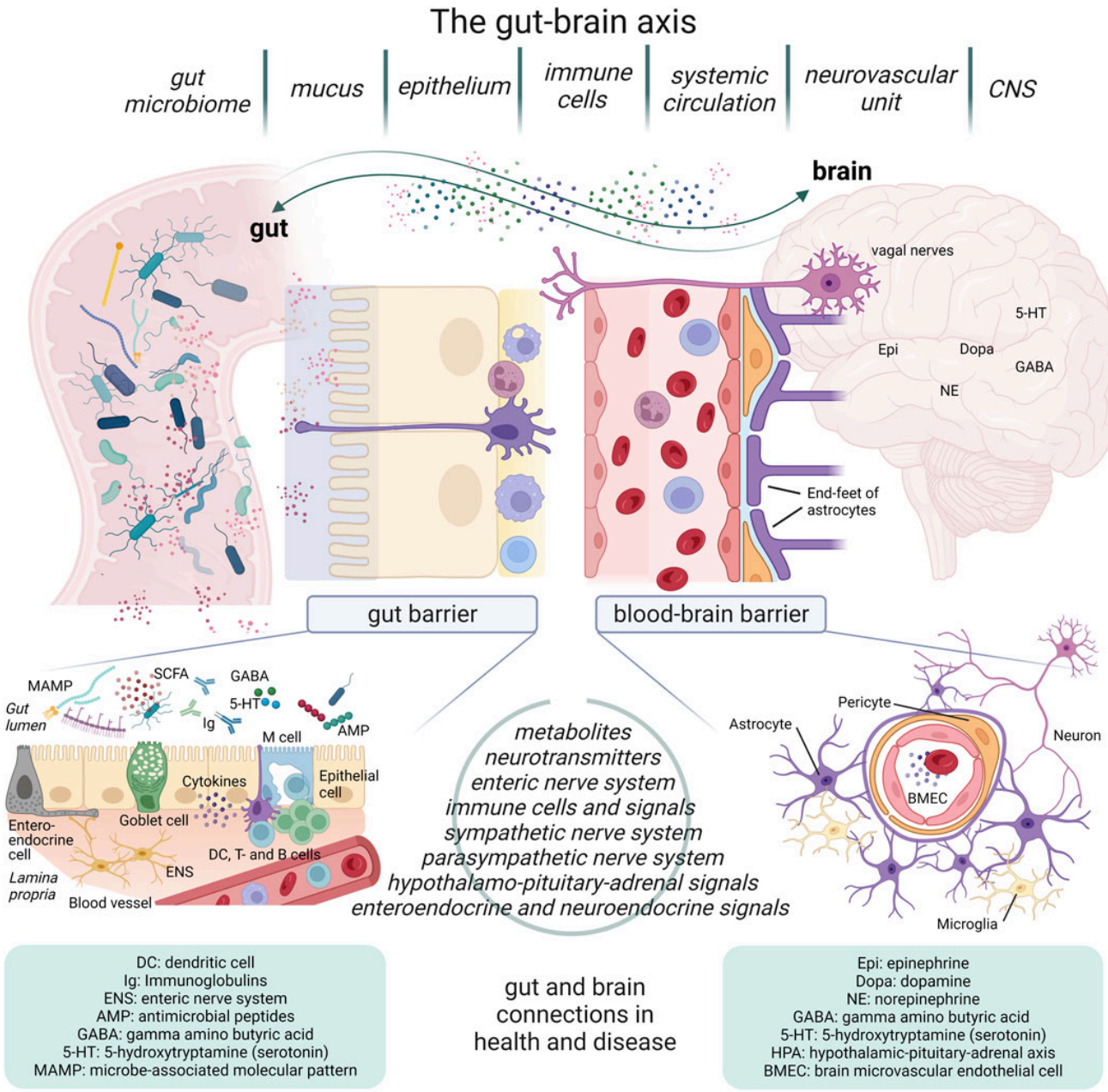
Occupation and health

Work schedule and job type
Job location
Health conditions and vulnerability
Background exposure
Lifestyle

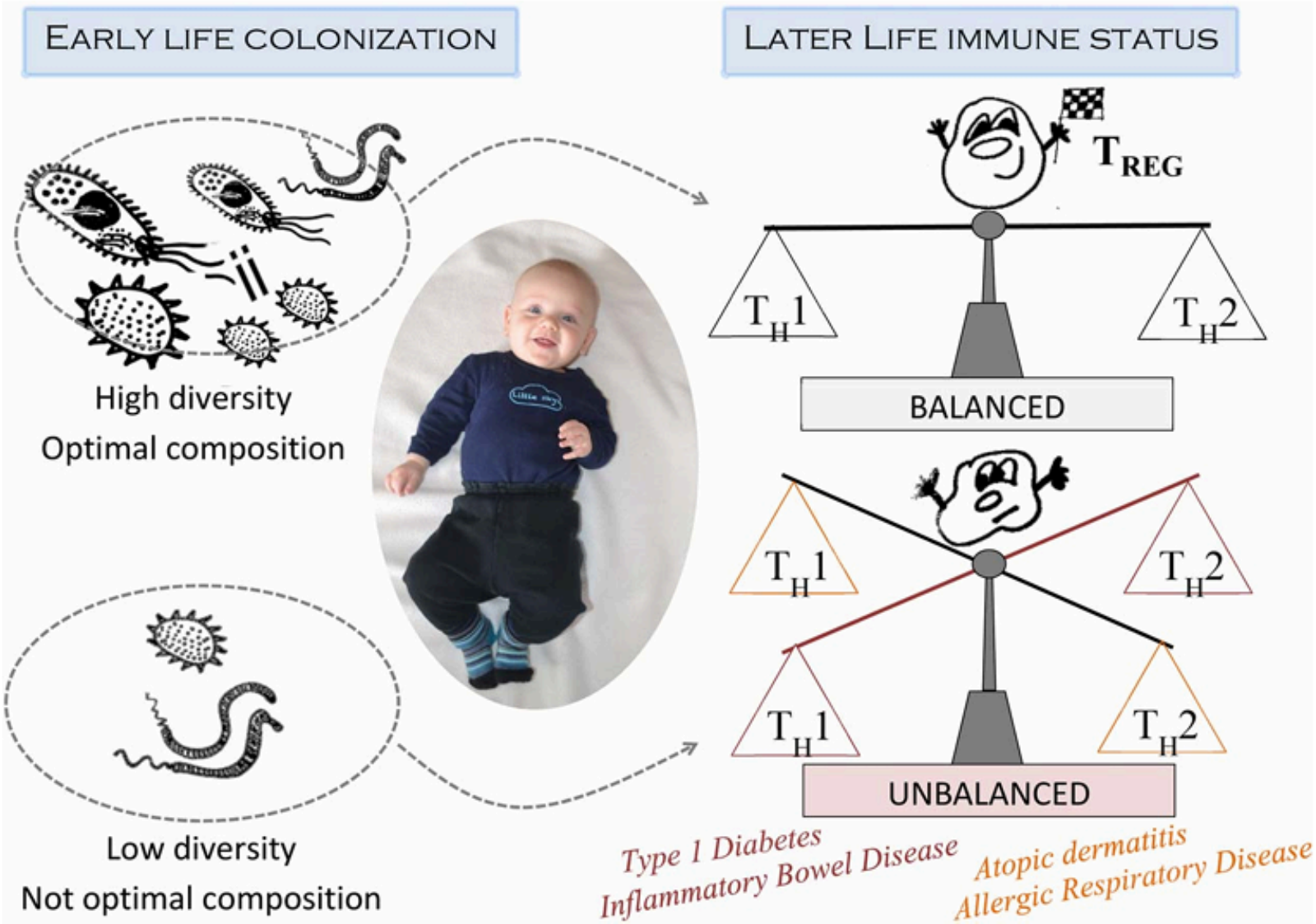
Environment and meteorology

Near-far weather conditions
Wind, humidity, and temperature
Season
Airport surroundings
Contributions from other sources

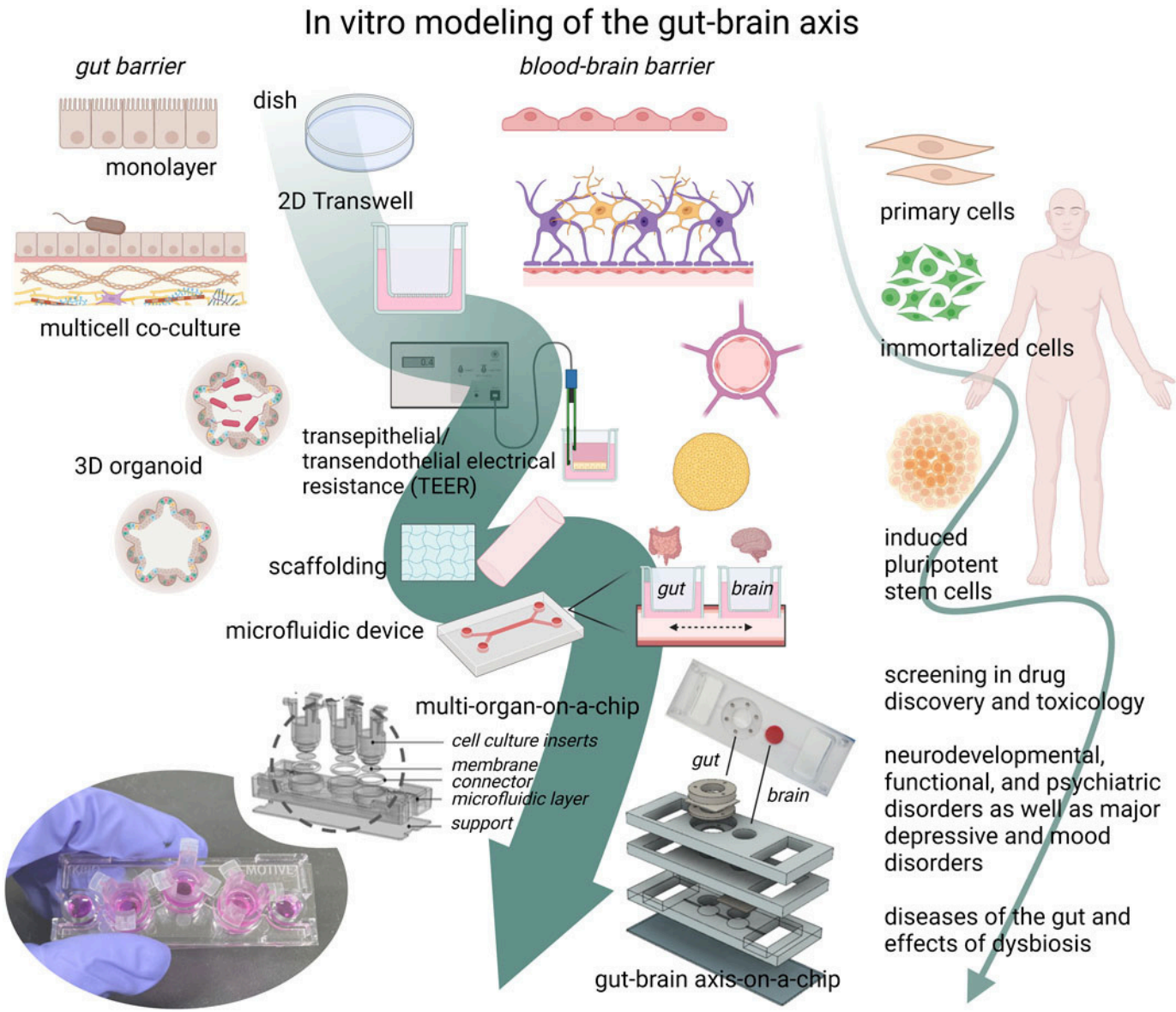
Bendtsen, K.M., Bengtsen, E., Saber, A.T. et al. A review of health effects associated with exposure to jet engine emissions in and around airports. Environ Health 20, 10 (2021). https://doi.org/10.1186/s12940-020-00690-y



Hall, V. & Bendtsen, K.M.S. Getting closer to modeling the gut-brain axis using induced pluripotent stem cells. Front. Cell Dev. Biol. , 31 March 2023, Sec. Stem Cell Research, Volume 11 - 2023 | https://doi.org/10.3389/fcell.2023.1146062

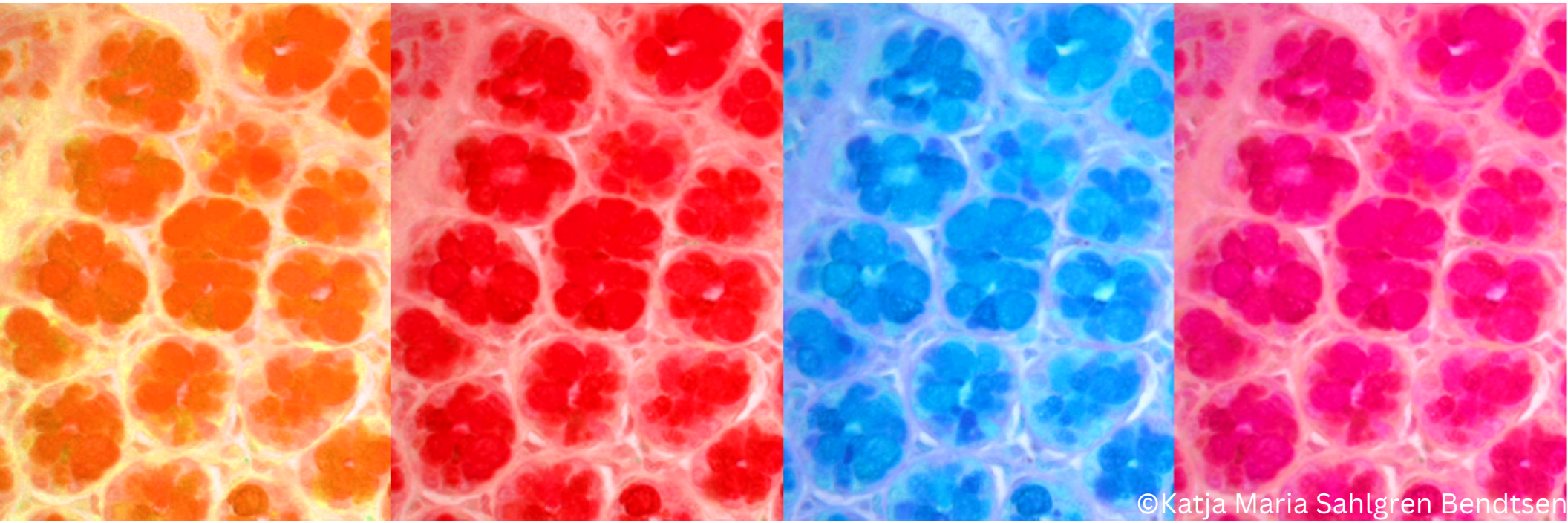


Bendtsen, K.M., Fisker L., Hansen A.K., Hansen, C.H.F., Nielsen, D.S. The Influence of the Young Microbiome on Inflammatory Diseases—Lessons from Animal Studies. Birth Defects Research (Part C) 105:278–295, 2015



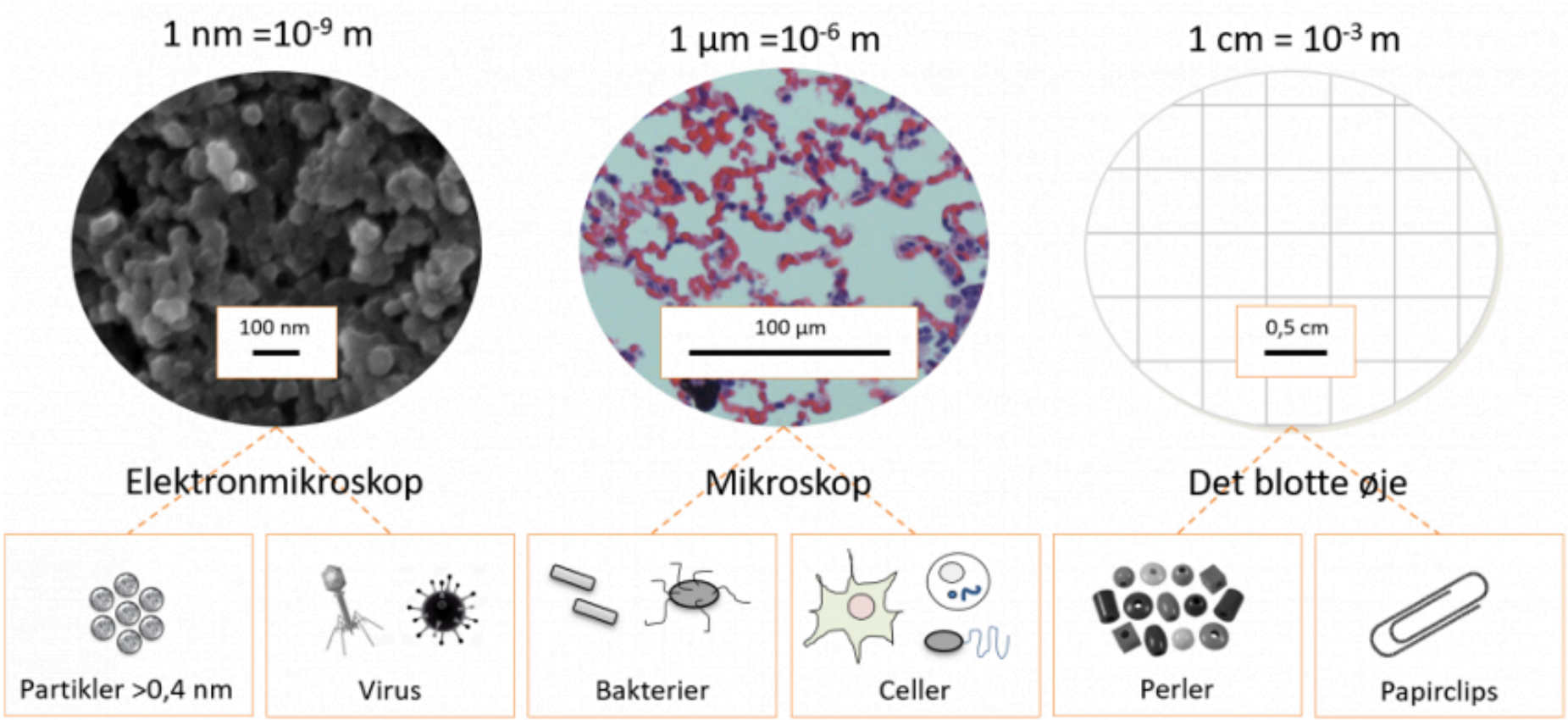
Hall, V. & Bendtsen, K.M.. Getting closer to modelling the gut-brain axis using pluripotent stem cells. Front. Cell Dev. Biol. , 31 March 2023

THE BEAUTY OF BIOLOGY



THE MUCUS FORMING CELLS OF THE COLON RESEMBLE SMALL FLOWERS IN THE MICROSCOPE

Bendtsen, K.M. 2016. Gut Barrier, Microbiota and Immune Environment in Early Life - Influence on Inflammatory Disease Models. PhD Thesis. University of Copenhagen.



MED DET BLOTTE ØJE KAN VI SE RET SMÅ TING SOM BITTESMÅ PERLER OG ENDDA STØVFNUG.
MEN DER SKAL ET MIKROSKOP TIL AT SE CELLER OG BAKTERIER I ET PLANTEBLAD ELLER I EN VÆVSPRØVE.

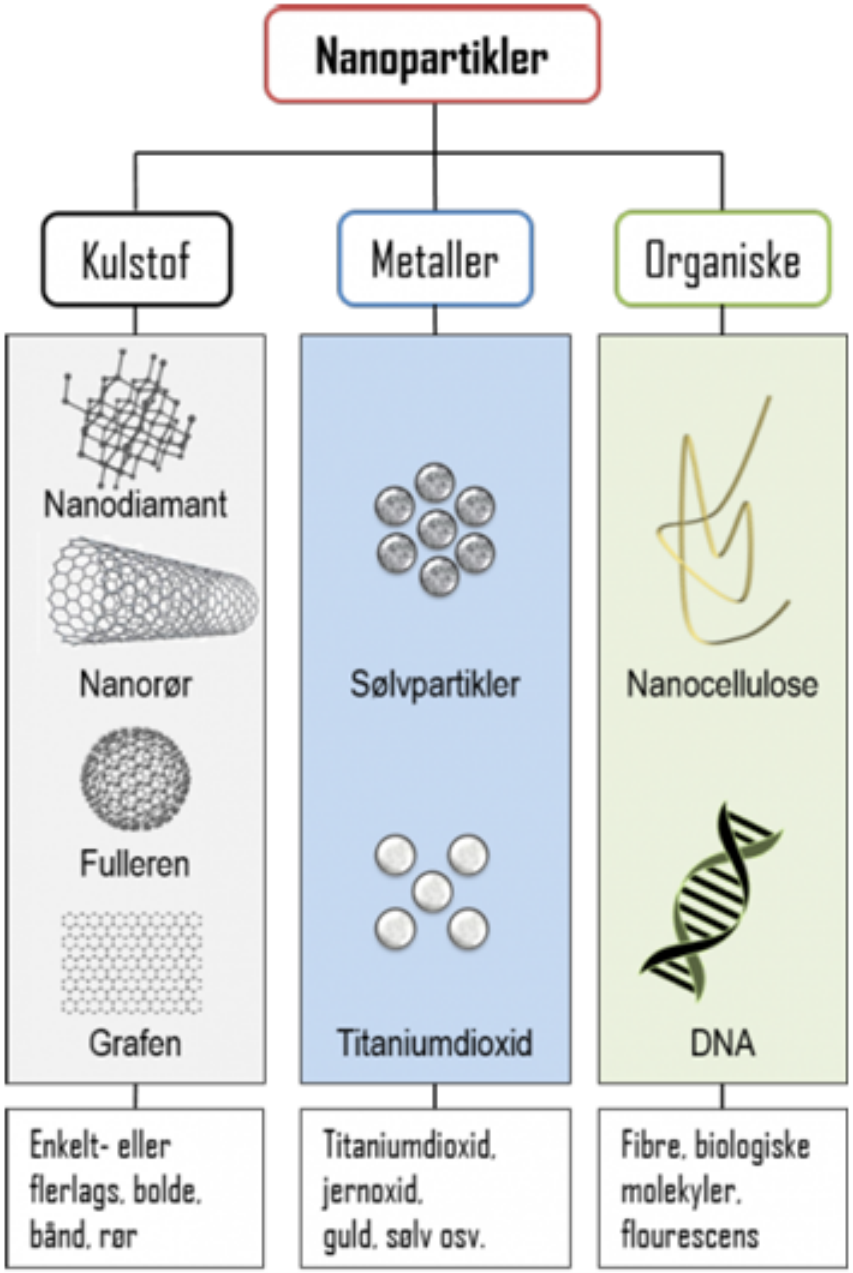
Bendtsen, K.M. & Sahlgren, N.M. Er nanopartikler vores venner eller fjender? Videnskab.dk 2019. https://videnskab.dk/teknologi-innovation/er-nanopartikler-vores-venner-eller-fjender

VIDENSKAB.DK

NANOMATERIALER OG -PARTIKLER KAN HAVE VIDT FORSKELLIG OPRINDELSE.

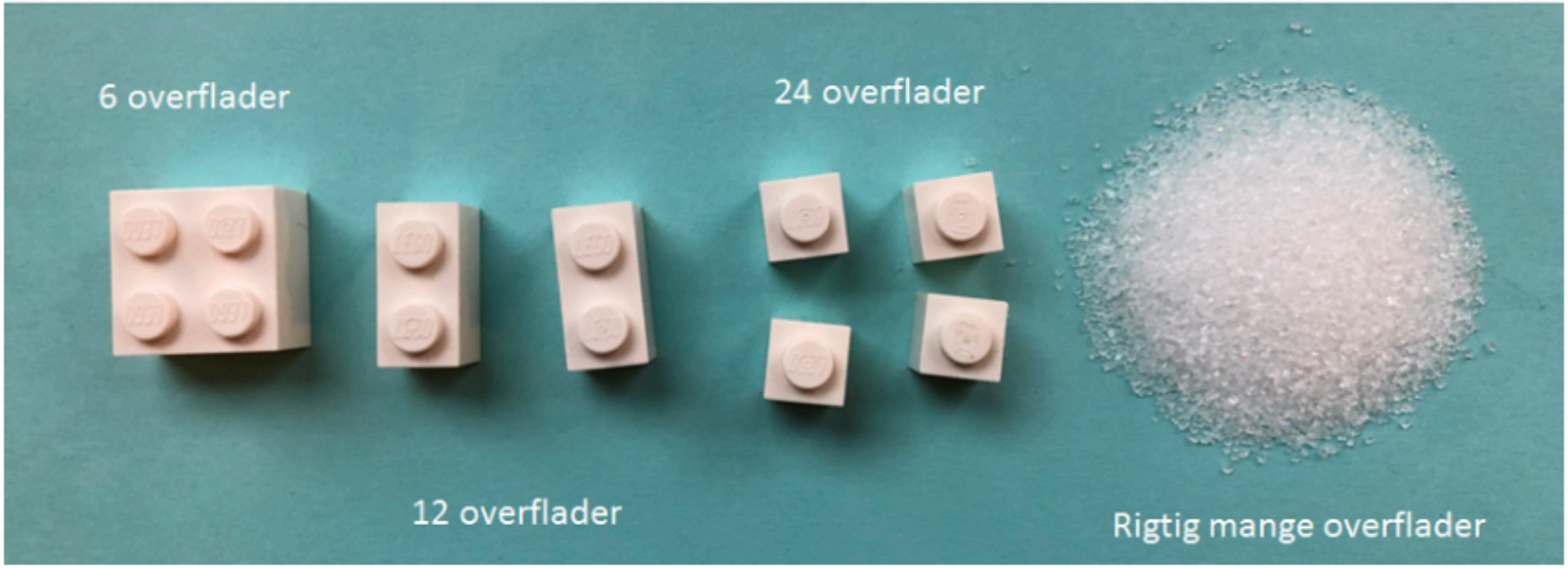
KULSTOFBASEREDE MATERIALER SOM GRAFEN OG NANORØR ER MÅSKE BLANDT DE MEST KENDTE NANOMATERIALER.

ALLE ORGANISKE MOLEKYLER SOM DNA OG PROTEINER ER I NANOSTØRRELSE OG KAN EKSEMPELVIS BRUGES I NANOMEDICIN.



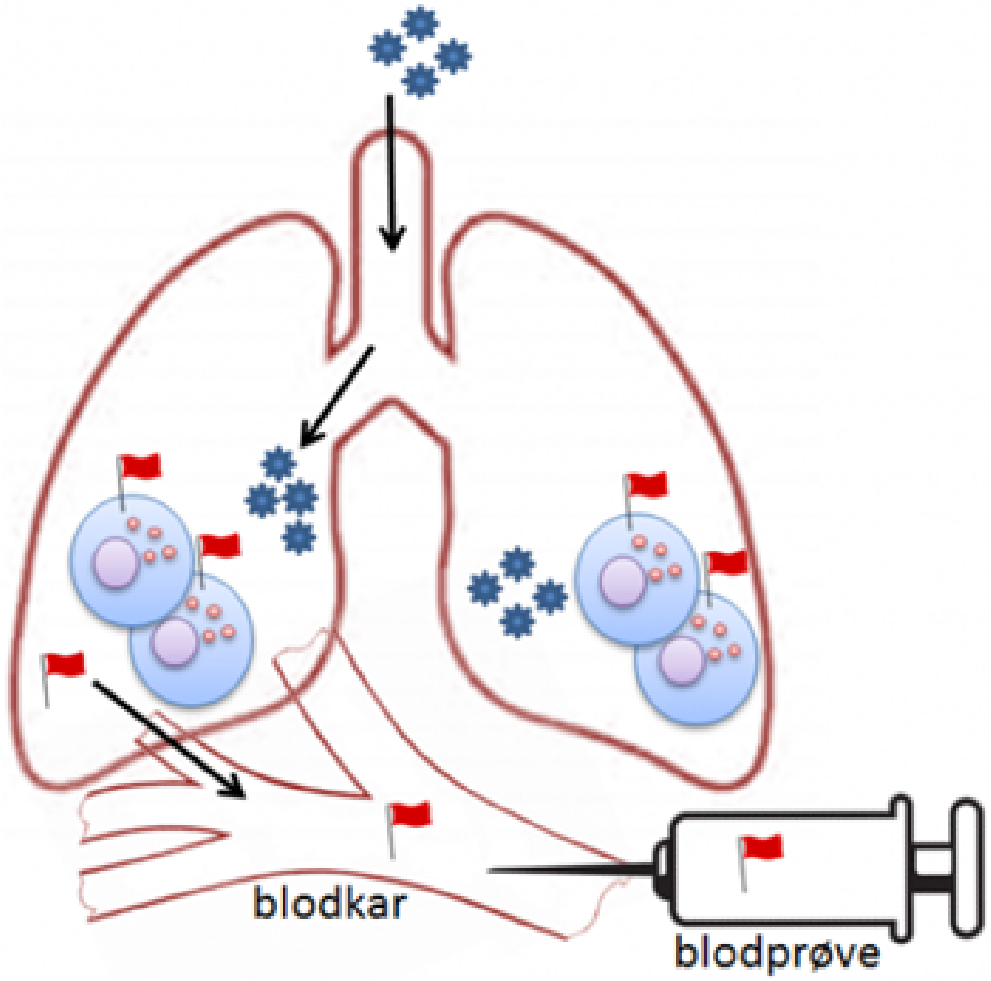
Bendtsen, K.M. & Sahlgren, N.M. Er nanopartikler vores venner eller fjender? Videnskab.dk 2019. https://videnskab.dk/teknologi-innovation/er-nanopartikler-vores-venner-eller-fjender

VIDENSKAB.DK



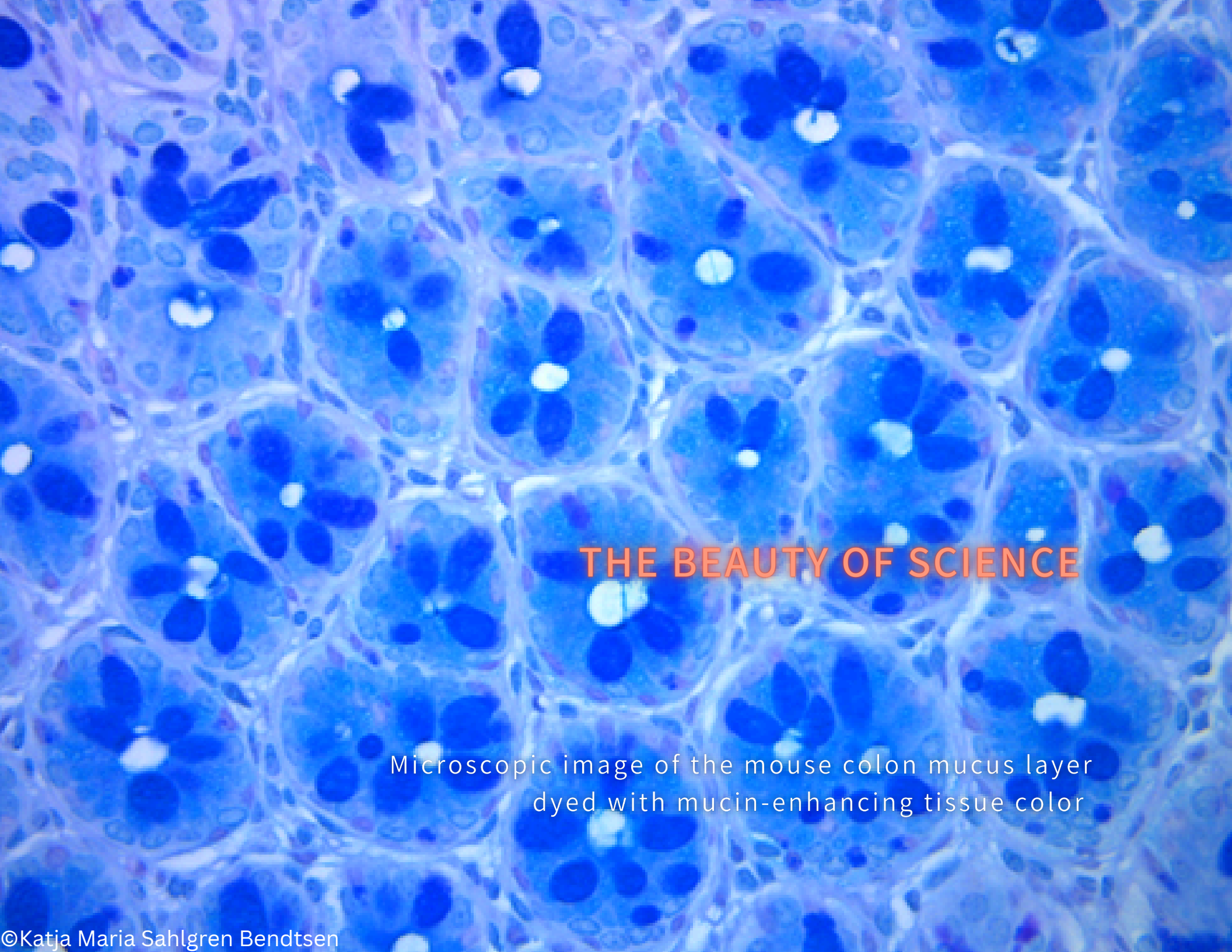
OVERFLADEAREALET STIGER I TAKT MED AT STØRRELSEN MINDSKES.
FOR NANOPARTIKLER BETYDER DET, AT DE FÅR ET KÆMPEMÆSSIGT OVERFLADEAREAL.
OVERFLADEKEMIEN ER DERFOR AFGØRENDE FOR DERES FARLIGHED.

Bendtsen, K.M. & Sahlgren, N.M. Hvor farlige er nanopartikler for vores lunger? Videnskab.dk 2019. https://videnskab.dk/krop-sundhed/hvor-farlige-er-nanopartikler-for-vores-lunger/



NANOPARTIKLER SOM HAVNER I LUNGERNE EFTER INDÅNDING KAN VÆRE SKADELIGE.
IMMUNSYSTEMETS CELLER REAGERER OG SENDER ET 'RØDT FLAG' I FORM AF EN BIOMARKØR UD I KROPPEN.
EN SÅDAN BIOMARKØR KAN VÆRE DEN SAMME, SOM MAN SER VED HJERTEKARSYGDOM ELLER KRÆFT.

Bendtsen, K.M. & Sahlgren, N.M. Hvor farlige er nanopartikler for vores lunger? Videnskab.dk 2019. https://videnskab.dk/krop-sundhed/hvor-farlige-er-nanopartikler-for-vores-lunger/

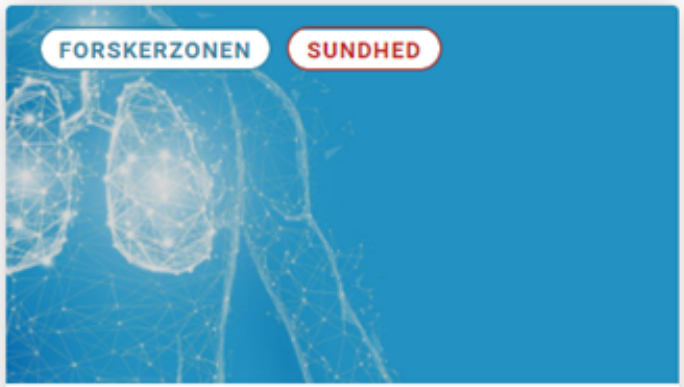


Microscopic image of the mouse colon mucus layer
dyed with mucin-enhancing tissue color

Er nanopartikler vores venner eller fjender?

Hvad er nanopartikler og -materialer egentlig for nogle (bittesmå) størrelser? Læs her, hvordan de både gør vores hverdag nemmere og farligere.

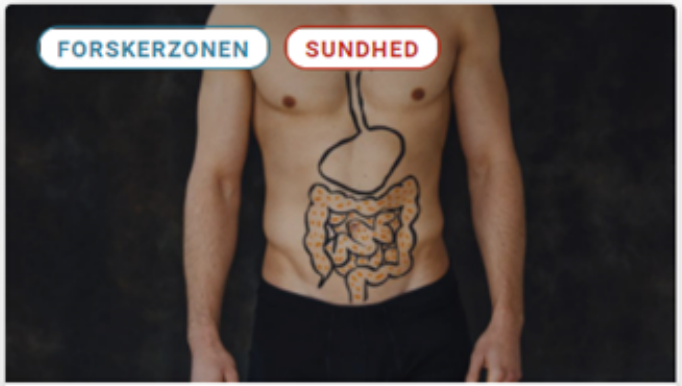
21 januar 2019 Nicklas Mønster Sahlgren m.fl.



Hvor farlige er nanopartikler for vores lunger?

Nanopartikler og -materialer kan påvirke vores krop – ikke mindst lungerne. Og netop derfor er det så vigtigt at forske i deres farlighed.

04 marts 2019 Nicklas Mønster Sahlgren m.fl.



Tarmbakterier er nøglen til et godt helbred

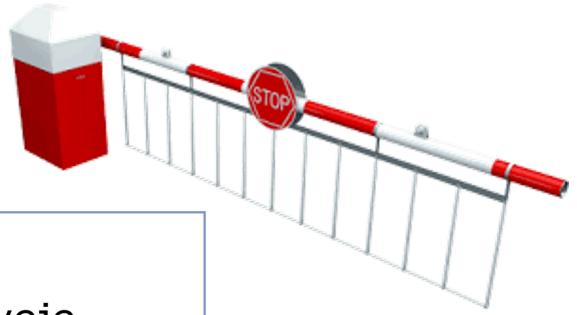
Det vrimler med nye forskningsresultater om tarmbakterier. Her får du et overblik over, hvorfor de er afgørende for din sundhed.

13 april 2018 Katja Maria Bangsgaard Bend...

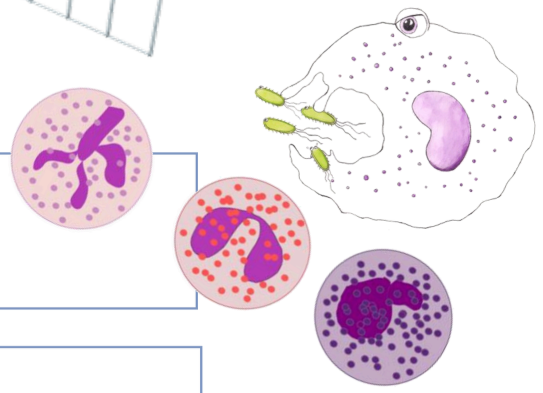
Teaching & presentation materials

SIMPELT OVERBLIK I POWERPOINT

Immunsystemet Overblik



Ydre barrierer	Huden Slimhinder i tarm og luftveje
Det innate system	*Uspecifikt* "Spisende" celler, inflammation og feber
Det adaptive system	*Specifikt* Antistoffer og målrettede immunceller



T-celler

Specifikke angreb

B-celler

Specifikke antistoffer

T_{REG}

Specifikke kontrolsignaler

De lymfoide organer Overblik

Primære organer *Dannelse og modning*

Thymus

Benmarven

Sekundære organer *Opbevaring, immunovervågning og mobilisering*

Lymfeknuder

Hemal nodes

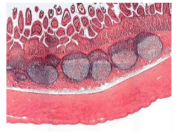
Diffust lymfevæv

MALT

Tonsiller

GALT

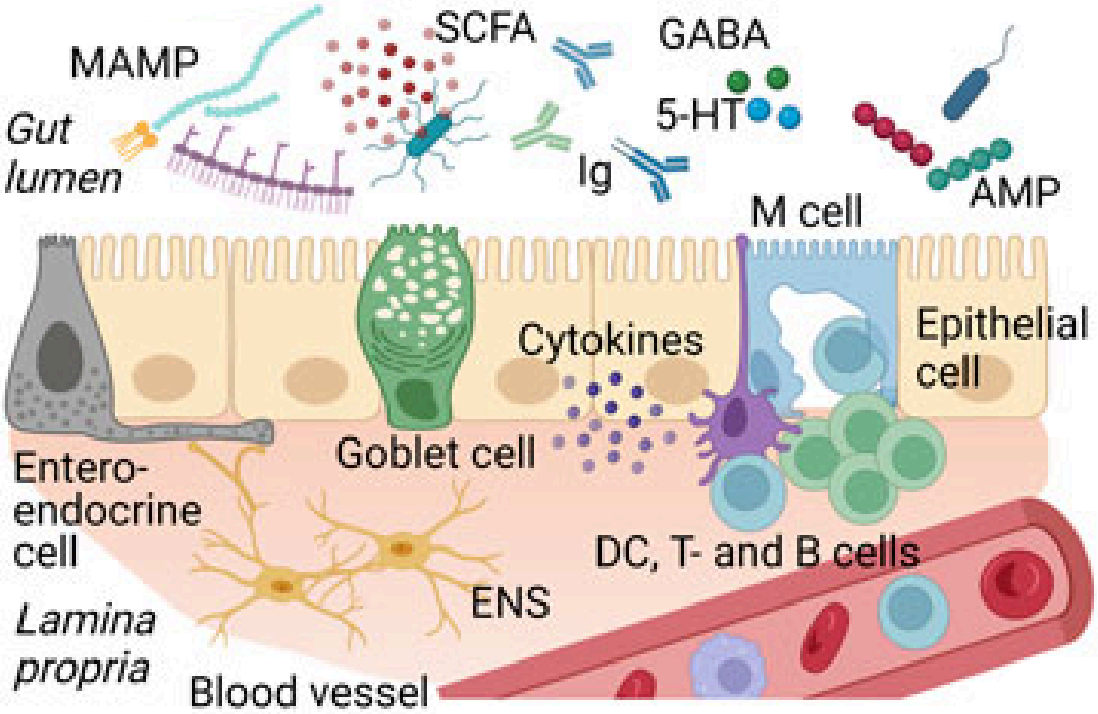
Peyerpletter



BALT m.fl

Milt

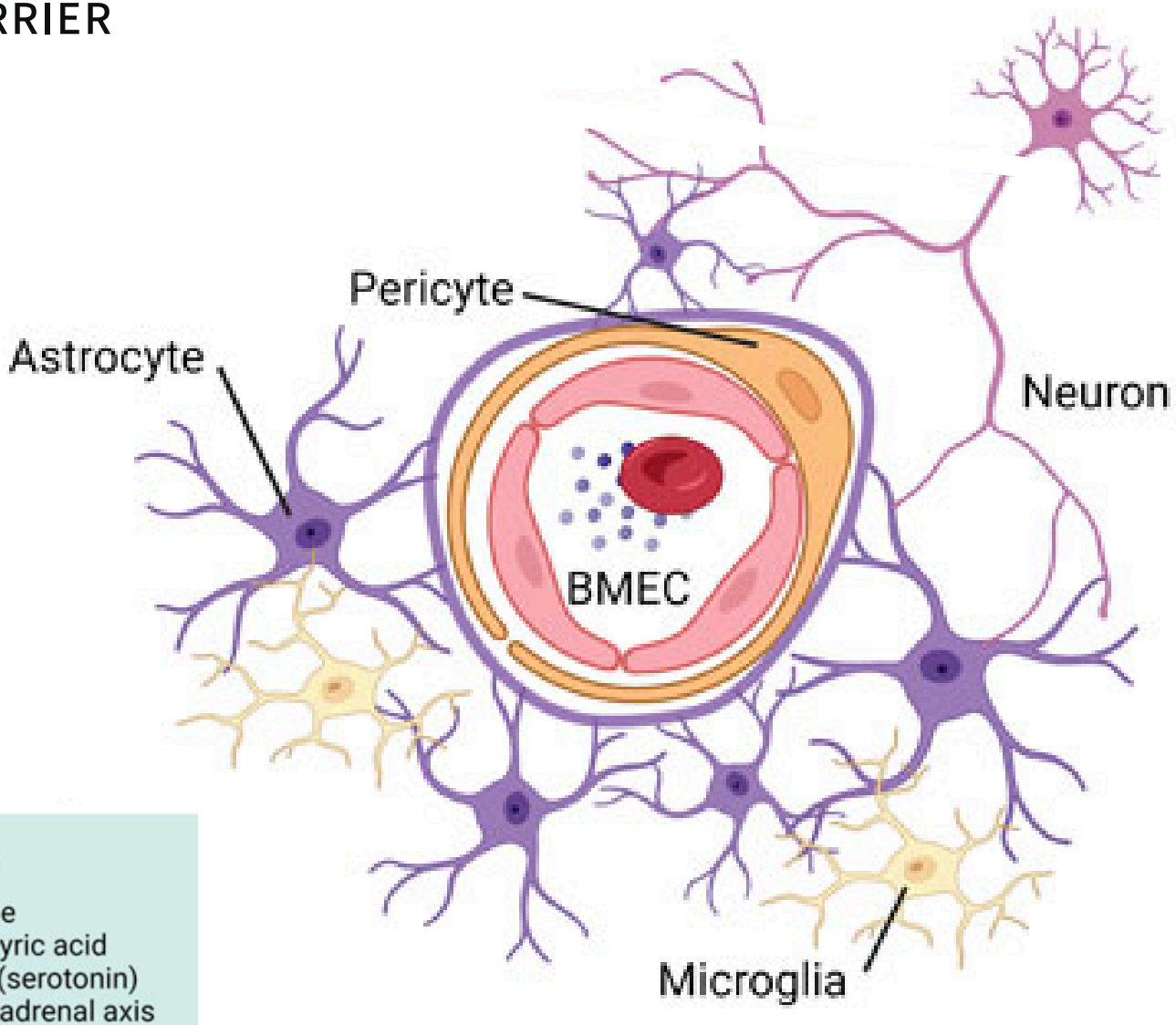
THE INTESTINAL BARRIER



DC: dendritic cell
Ig: Immunoglobulins
ENS: enteric nerve system
AMP: antimicrobial peptides
GABA: gamma amino butyric acid
5-HT: 5-hydroxytryptamine (serotonin)
MAMP: microbe-associated molecular pattern

Hall, V. & Bendtsen, K.M.S. Getting closer to modeling the gut-brain axis using induced pluripotent stem cells. Front. Cell Dev. Biol. , 31 March 2023, Sec. Stem Cell Research, Volume 11 - 2023 | https://doi.org/10.3389/fcell.2023.1146062

THE BLOOD-BRAIN BARRIER



Epi: epinephrine
Dopa: dopamine
NE: norepinephrine
GABA: gamma amino butyric acid
5-HT: 5-hydroxytryptamine (serotonin)
HPA: hypothalamic-pituitary-adrenal axis
BMEC: brain microvascular endothelial cell

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Photography by Noah Bangsgaard Bendtsen ©Turbo Media
Captured light

THE FEATHER & THE HUMMINGBIRD

OF THE SCRIPTORA LOGO

The lightness and beauty of the organic feather combines with the accuracy and resillience needed for beautiful penmanship - art of writing - both physically and figuratively applicable to scientific and creative writing

The hummingbird is a small, beautiful, and resilient species known for its particular flight mode and ability to hover - symbolizing focus, creativity, persistence, freedom, and flexibility

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