

SCIENCE FOR A BETTER TOMORROW

Dr. Ulrich Betz

Vice President Innovation

Follow me on Twitter: @ulrichbetz
www.linkedin.com/in/ulrichbetz/
E-mail: ulrich.betz@merckgroup.com



MERCK



science is at the heart

of everything we do

From advancing genome editing technologies and discovering unique ways to treat the most challenging diseases to enabling the intelligence of devices – Merck is everywhere.

MERCK

Merck – Dr. Ulrich Betz

MERCK FUTURE INSIGHT PRIZE

Realizing the dreams of a better tomorrow

<http://futureinsightprize.emdgroup.com>

The Future Insight Prize will be **awarded annually** from 2019 onwards for the next 35 years to

HONOR AND ENABLE OUTSTANDING ACHIEVEMENTS

in science & technology towards a **ground-breaking innovation** important for the future of humanity in the areas of health, nutrition and energy with a research grant of up to **1 MILLION €** sponsored by Merck.



HEALTH

Rapid protection from newly emerging infectious agent

2019

HEALTH

Multi-drug resistance breaker

2020

NUTRITION

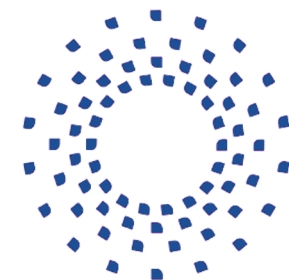
Technologies to feed a growing world population

2021

ENERGY

Photocatalytic fuel production from atmospheric CO₂

2022



**FUTURE
INSIGHT
PRIZE**



MERCK

PANDEMIC preparedness selected as first area of the future insight prize announced already in 2018

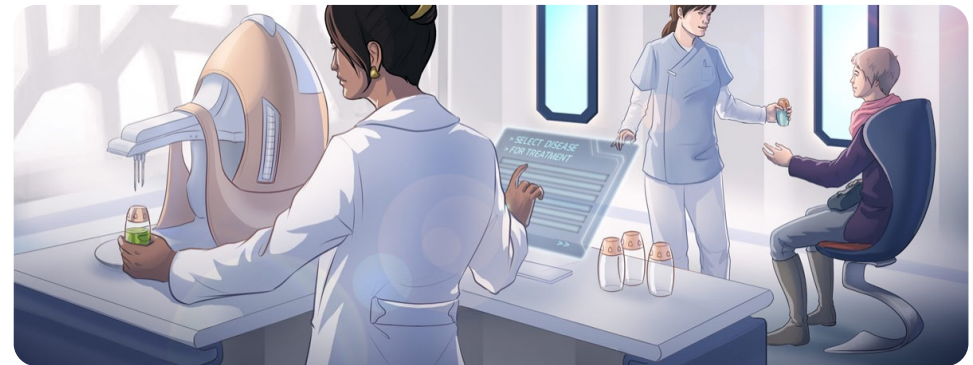
TARGET

The dream product starts with a clinical sample of a person infected with an unknown pathogen and produces an agent to **cure the infected person or to prevent infection of others** within a clinically relevant timeframe.



RATIONALE

Emergence of a new, potentially lethal infection that is easily transmitted from person to person is among the greatest threats to humanity. The risk is increasing due to global urbanization, ease and speed of travel, climate change and the possibility of bioterrorism. Using current technology, development of medical countermeasures would be too slow to prevent many millions, or even billions, of deaths.





**pardis
sabeti**

The Broad Institute
Inc.,

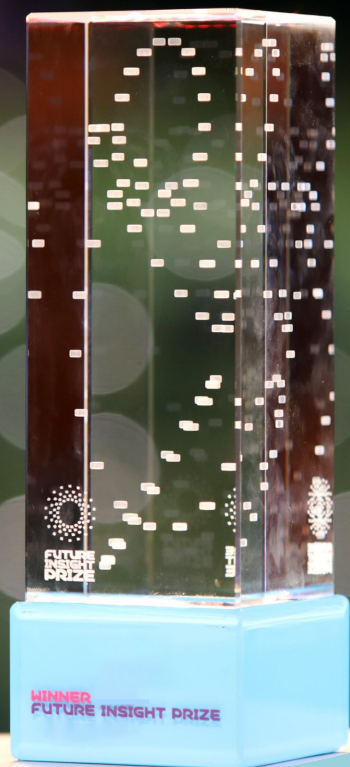
**JAMES
CROWE**

Vanderbilt University
Medical Center



Pandemic Preparedness

MERCK



Antimicrobial
Multi-drug
resistance

stephan A. sieber

Technical University of Munich

Merck – Dr. Ulrich Betz

MERCK

MERCK future insight prize 2021

for work contributing to enabling the dream product – FOOD GENERATOR

Target

- The dream product converts any non-edible biomass into readily edible fully nutritional food within one day without any biohazard.

Definition validated by
international advisory board

Rationale

- The projections show that feeding a world population of 9.1 billion people in 2050 would require raising overall food production by some 70 percent between 2005 and 2050. This will only be possible by applying unconventional highly innovative new technology.

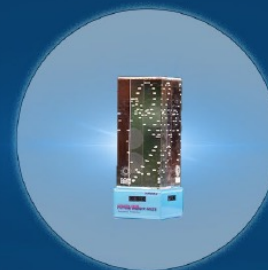
Merck – Dr. Ulrich Betz



MERCK

2021 FUTURE INSIGHT DAYS

July 12-14, 2021
Online



Future Insight™ Prize
Food generation for
a growing world
population



United by Science for a better tomorrow

Celebrating excellence in science and technology to solve
the challenges of today and enable the dreams of a better tomorrow.

The Future Insight™ Days 2021 feature the awarding of
the 1 Million Euro Merck Future Insight™ Prize
the Nature Spinoff Prize
the Johann Anton Merck Award.

Engaging keynote speakers, stimulating panel discussions, networking
with top scientists and innovators from all over the world.

Register free of charge at CuriousFutureInsight.org

Platinum Sponsor:

MERCK

Merck – Dr. Ulrich Betz



The Spinoff Prize
Life Sciences
Material Sciences
Digitalization



Johann Anton Merck Award
Oncology
Autoimmune Diseases





CURIOUS2022

FUTURE INSIGHT CONFERENCE

July 12-14, 2022

Darmstadt, FrankfurtRheinMain, Germany

<http://curious2022.com>

United by science for a better tomorrow

Hybrid event
on-site and
online
participation
possible



**Health, nutrition, synthetic biology,
materials, energy, digitalization, mobility,
human mind, bright future
– new ways of working together**

**13 Nobel laureates, >70 top speakers,
>1000 participants**

Partners:
nature
Science
AAAS

Platinum Sponsor:

MERCK



CURIOUS2022
FUTURE INSIGHT CONFERENCE

Submit your Abstract for presentation

Science for a better tomorrow
July 12-14, 2022

Darmstadt, FrankfurtRheinMain,
Germany and online

Hybrid event
on-site and
online
participation
possible



<http://curious2022.com>

Merck – Dr. Ulrich Betz

Platinum Sponsor:

MERCK



CURIOUS2022
FUTURE INSIGHT CONFERENCE

Get your ticket

Science for a better tomorrow

July 12-14, 2022

Darmstadt, FrankfurtRheinMain,
Germany and online

Hybrid event
on-site and
online
participation
possible

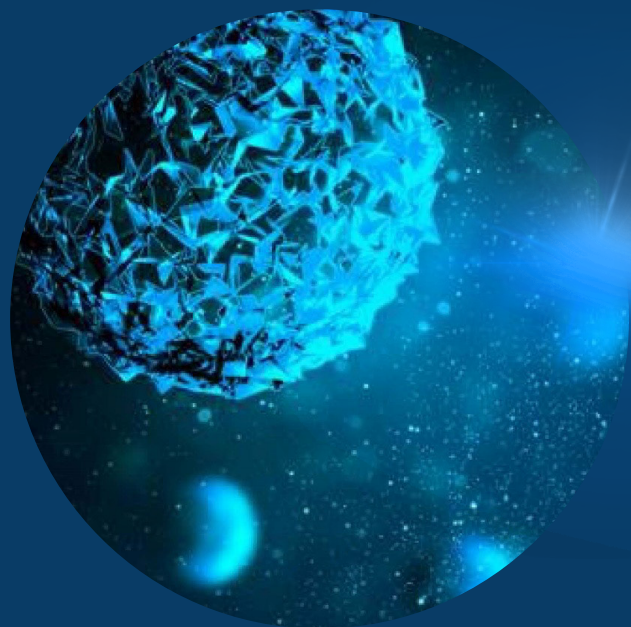


<http://curious2022.com>

Merck – Dr. Ulrich Betz

Platinum Sponsor:

MERCK



2021 RESEARCH Grants

Merck – Dr. Ulrich Betz

Researchgrants.merckgroup.com

Stimulating innovative research – Merck Research Grants

Merck intends to provide research grants of
100,000€ to 500,000€ per year for 3 years
in the following topic areas:

- ◆ **Drug discovery**
- ◆ **Sensors**
- ◆ **Delivery of nucleic acids**
- ◆ **Sustainability**
- ◆ **Digitalization**

Application process

- ◆ Submit abstract Jan 15th - Aug 31st 2021
- ◆ Selected applicants submit full proposal
- ◆ Deep dive workshops Nov. 2021
- ◆ Contracting, pay-out





2021
Research challenges

Variant calling from public RNAseq data
[Researchchallenges.merckgroup.com](https://researchchallenges.merckgroup.com)

Submissions deadline
30. April 2021



2021
Research challenges

Use of social media in drug development
researchchallenges.merckgroup.com

Submissions deadline
30. April 2021

2021 MERCK Research challenges

- Win research prize (e.g. 10k€)
- Open new avenues for partnering with Merck



DIGITALIZATION:

1) The best use case exploring potential nucleotide changes which may alter immune function



2) The best use of patient experience data mined from social media in support of drug development

researchchallenges.merckgroup.com

Deadline to sign-up: April 30, 2021

Make Science Not War

**A global call to action to invest more resources
in the advancement of science and technology
Sign at <http://make-science-not-war.org>**



Make Science Not War

VIDEO



DR. ULRICH BETZ

ulrich.betz@merckgroup.com

Twitter: @ulrichbetz

Linked-in: <http://www.linkedin.com/in/ulrichbetz>

YouTube: <https://www.youtube.com/channel/UCMO9JwwW6EbYmYUHw54xTYA>



www.merckgroup.com

MERCK