Professor Nicolas Voelcker

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Developer of next-generation diagnostic and therapeutic platforms, combining expertise in nanomedicine, biomarker discovery and disease modelling to advance precision healthcare and translational medicine.

Brief Biography

- Recognised bioengineer developing diagnostic and therapeutic technologies for major disease challenges.
- Expertise spanning nanomedicine, molecular diagnostics, biomarker discovery and targeted therapeutic delivery.
- Leads multidisciplinary teams integrating bioengineering, materials science, molecular biology and medicine.
- h-index 87 and inventor on 50+ patent families with a strong track record translating innovation towards clinical and commercial outcomes.
- Extensive consortium experience across cancer, neurological disease, regenerative medicine, diagnostics and biomedical engineering.

Core Expertise

• Precision medicine • Biomarker-enabled diagnostics • Disease stratification • Nanomedicine • Targeted therapeutic delivery • Molecular diagnostics • Biosensors • Cell engineering • Regenerative medicine • Translational bioengineering.

Relevant Projects and Experience

- Developed targeted nanomedicine platforms for difficult-to-treat cancers including glioblastoma, breast cancer and osteosarcoma.
- Pioneered blood-brain barrier models and targeted delivery systems supporting neurological disease research and therapeutic development.
- Developed enabling technologies for cell engineering, regenerative medicine and next-generation cell therapies.
- Leads research integrating biosensors, biomarkers and diagnostic platforms to support precision medicine and disease stratification.
- Extensive experience translating multidisciplinary research into clinically relevant diagnostic and therapeutic solutions.

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Horizon Europe Calls of Interest

HORIZON-HLTH-2027-02-DISEASE-01-two-stage

Areas of Contribution

Interested in contributing to work packages involving:
Precision medicine • Biomarker discovery • Disease stratification • Advanced diagnostics • Therapeutic delivery • Nanomedicine • Cell engineering • Regenerative medicine • Disease modelling • Translational validation • Clinical implementation

Potential Consortium Roles

- Precision Medicine and Biomarker Lead
- Diagnostics and Disease Stratification Lead
- Nanomedicine and Therapeutic Delivery Lead
- Disease Modelling and Translational Technologies Lead
- Cell Engineering and Regenerative Medicine Lead

Key Words

• Precision Medicine • Biomarker Discovery • Disease Stratification • Nanomedicine • Molecular Diagnostics • Biosensors • Targeted Therapeutics • Cell Engineering • Regenerative Medicine • Translational Bioengineering