



# Séance académique Academische zitting

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27 mai/mei 2026

# Projets de recherche/Onderzoeksprojecten 2026–2028

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## → Projets interuniversitaires/Interuniversitaire projecten

- **Prof. dr. Winnok De Vos (UAntwerpen), prof. dr. Wim Annaert (KU Leuven), prof. dr. Sylvain Gabriele (UMONS)**  
The fade within. Loss of nuclear envelope integrity as a driver of neurodegeneration
- **Prof. dr. Bieke Broux (UHasselt), prof. dr. Roosmarijn Vandenbroucke (UGent-VIB)**  
The gatekeeper of the brain: choroid plexus inflammasome activation as the initial trigger of immune cell influx
- **Prof. dr. Sarah Weckhuysen (UAntwerpen), prof. dr. Pedro Gonçalves (KU Leuven-VIB)**  
Integrating iPSC Co-Cultures and Network Modeling to Discover Convergent Therapies in Genetic DEEs
- **Prof. dr. Esther Wolfs (UHasselt), prof. dr. Vincent Timmerman (UAntwerpen)**  
Generating a multicellular "Organ-in-a-Dish" model to study Charcot-Marie-Tooth disease
- **Prof. Koen Poesen (KU Leuven), prof. Veerle Somers (UHasselt)**  
Immune profiling of chronic inflammatory demyelinating poly-neuropathy

## → Projets universitaires/Universitaire projecten

- **Prof. dr. Ilse Smolders (VUB)**  
Chemogenetic modulation of microglia to inhibit hyperexcitability and modify pathological hallmarks of temporal lobe epilepsy
- **Prof. dr. De Strooper Bart (KU Leuven-VIB)**  
A Humanized Co-Transplantation Model to Study Microglial Pathways to Neuronal Death in Alzheimer's Disease
- **Prof. dr. Vanderhaeghen Pierre, prof. Bonin Vincent (KU Leuven-VIB)**  
Linking human-specific mechanisms of synaptic development to neural circuit deficits of SYNGAP1 haploinsufficiency in human cortical neurons in vivo
- **Prof. dr. Krysko Dmitri (†), dr. Elena Catanzaro (UGent)**  
Development of personalized immunotherapy for glioma using ferroptodid-armed dendritic cell vaccines
- **Prof. dr. Vanhollebeke Benoît (ULB)**  
Blood-Brain Barrier development

→ **Projets de jeunes chercheurs/Projecten jonge onderzoekers**  
**UAntwerpen**

- **Dr. Nguyen Duc Nam**

Breaking the Geometry of Cross-Dementia Landscape for Early Diagnosis and Drug Target Identification

- **Prof. dr. Bertoglio Daniele**

Investigating Msh3 modulation as a novel therapeutic strategy for the treatment of Huntington' Disease

- **Dr. Sokolova Dimitra (VIB)**

Targeting Microglial MHCII and Regulatory T Cells to Modulate Alzheimer's disease Progression

- **Dr. Vicente Cristina**

Dissecting the transcriptional regulatory landscape of TMEM106B

**UGent**

- **Dr. Scarioni Marta**

Mapping signature features and neuroanatomical correlates of hallucinations and delusions in neurodegenerative cognitive disorders

- **Prof. dr. Tarnaud Thomas**

Cell-type selectivity of transcranial focused ultrasound for epilepsy treatment

- **Dr. Van Hoecke Lien**

The skull bone marrow: a novel player and therapeutic target in the brain-immune axis during meningitis

**UHasselt**

- **Dr. Loix Melanie**

Clocking in foamy microglia to curb and reverse inflammatory demyelination

- **Dr. Vanherle Sam**

Targeting transforming growth factor beta 3-driven phospholipid synthesis to enhance oligodendrocyte differentiation in multiple sclerosis

**KU Leuven**

- **Dr. Nachman Eliana (VIB)**

Synaptic Homeostasis and Autophagy Regulation in the Etiology of Parkinsonism

- **Dr. Marneffe Catherine**

CALM-GBM: Circuit control by Astrocytes Located in Microenvironment of Glioblastoma

- **Dr. Verbinnen Iris**

Identifying disease-critical neural cell types and pathways to guide new treatment approaches for Houge-Janssens syndrome type 2 (HJSZ)

**UCLouvain**

- **Dr. Everard Gauthier**

taVNS with iVR for stroke rehabilitation

- **Dr. Masrori Pegah**

Biomarker Research into Dysregulated Immunity in ALS (ALS-BRIDGE)

**ULB**

- **Dr. Desiderio Simon**

Uncovering the molecular basis of somatosensory neuron diversification

**ULiège**

- **Dr. Pinson Anneline**

Implication of GnRH in the neocortical developmental alterations induced by endocrine disrupting chemicals



QUEEN MUSIC  
ELISABETH CHAPEL

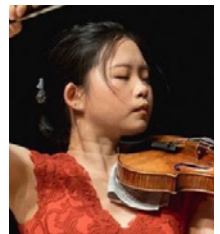
De **Muziekkapel Koningin Elisabeth** is een prestigieuze, internationale instelling voor hoger muziekonderwijs gevestigd in **Waterloo, België**. De kapel werd opgericht op initiatief van **Koningin Elisabeth** en violist **Eugène Ysaÿe**, en werd officieel ingehuldigd op 12 juli 1939. Het geldt wereldwijd als een van de meest vooraanstaande opleidingscentra voor uitzonderlijk muzikaal talent  
<https://musicchapel.org/nl/>

**La Chapelle Musicale Reine Elisabeth** est un centre d'excellence de renommée internationale dédié à la formation supérieure de jeunes musiciens de très haut niveau. Située à Waterloo, en Belgique, cette institution unique propose un système de compagnonnage où de jeunes artistes partagent leur quotidien et leur art avec des maîtres de musique confirmés.  
<https://musicchapel.org/fr/>

→ **Les artistes en résidence/De artiesten in residentie**

- **Haerim Oh**

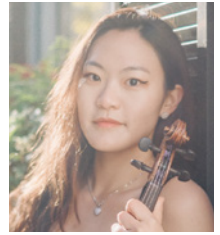
La violoniste sud-coréenne Haerim Oh a étudié au New England Conservatory et au Curtis Institute of Music. Lauréate des concours Munetsugu Angel Violin Competition, Ysaye International Music Competition, Chicago Violin Competition et Ewha Music Competition, elle s'est produite en tant que soliste avec le Bucheon Symphony Orchestra et le NEC Symphony. Elle est également musicienne de chambre.



De Zuid-Koreaanse violiste Haerim Oh studeerde aan het New England Conservatory en het Curtis Institute of Music. Als prijswinnares van de Munetsugu Angel Violin Competition, Ysaye International Music Competition, Chicago Violin Competition en Ewha Music Competition trad zij op als soliste met het Bucheon Symphony Orchestra en het NEC Symphony. Ze is ook actief als kamer

### - **Esther Yang**

Esther Yang est lauréate de nombreux concours internationaux, notamment demi-finaliste au Premio Paganini et au Windsor International String Competition, ainsi que troisième prix du Ysaÿe International Music Competition. Elle s'est produite dans de grandes salles telles que Carnegie Hall, Alice Tully Hall et Jordan Hall, et collabore régulièrement avec des orchestres et des musiciens de chambre de premier plan.



Esther Yang is laureate van talrijke internationale wedstrijden, waaronder halvefinaliste van het Premio Paganini en de Windsor International String Competition, en winnares van de derde prijs op de Ysaÿe International Music Competition. Ze trad op in gerenommeerde zalen zoals Carnegie Hall, Alice Tully Hall en Jordan Hall, en werkt regelmatig samen met toonaangevende orkesten en kamermuzikanten.

### - **Valère Brunon**

Lauréat du troisième prix du Queen Elisabeth Competition 2025, Valère Brunon séduit par son toucher lyrique et passionné. Diplômé du Royal Conservatory of Liège et de la Hochschule für Musik und Tanz Köln dans la classe de Florence Millet, il est lauréat de nombreux concours internationaux (Épinal, Brême, Viotti, etc.). Il enchante les publics du monde entier et se produit avec des orchestres renommés. Il a déjà publié deux enregistrements.



Laureaat van de derde prijs van de Queen Elisabeth Competition 2025, Valère Brunon weet te bekoren met zijn lyrische en gepassioneerde toucher. Hij studeerde af aan het Royal Conservatory of Liège en de Hochschule für Musik und Tanz Köln in de klas van Florence Millet. Als winnaar van talrijke internationale wedstrijden (Épinal, Bremen, Viotti, enz.) betovert hij publiek over de hele wereld en treedt hij op met gerenommeerde orkesten. Hij heeft reeds twee opnames uitgebracht.

# Programme/Programma

15:00

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→ **Présentation/Presentatie**

Madame/Mevrouw Pascale Mertens & Prof. ém. Jean-Marie Maloteaux, directeur scientifique/wetenschappelijk directeur

→ **Introduction/Inleiding**

Monsieur/de Heer Hein Deprez président du conseil d'administration de la F.M.R.E./voorzitter van de raad van bestuur van de G.S.K.E.

→ **Présentation des équipes de recherche 2026–2028 par/  
Voorstelling van de onderzoeksploegen 2026–2028 door**

Prof. ém. Jean-Marie Maloteaux, directeur scientifique/wetenschappelijk directeur & madame/mevrouw Pascale Mertens

→ **Remise des crédits à la recherche/Uitreiking van de  
onderzoekskredieten**

S.A.R. la Princesse Astrid/H.K.H. Prinses Astrid & monsieur/de Heer Hein Deprez, président du conseil d'administration/voorzitter van de raad van bestuur

→ **Présentation et remise des prix scientifiques de la F.M.R.E. 2026/  
Voorstelling en uitreiking van de wetenschappelijke prijzen  
G.S.K.E. 2026**

- **UCB Neuroscience Award 2026**

- Prof. dr. Albertini Giulia, PhD (KU Leuven-VIB)
- Présentation & remise/Voorstelling & overhandiging - S.A.R. la Princesse Astrid/H.K.H. Prinses Astrid, Mr Luc Uylenbroeck, Head of External Innovation & Operations & de Heer Hein Deprez

- **Viscountess Valine de Spoelberch Prize 2026**

- Prof. dr. De Schepper Sebastiaan, PhD (UAntwerpen-VIB), représenté/vertegenwoordigd dr. Dimitra Sokolova
- Présentation & remise/Voorstelling & overhandiging - S.A.R. la Princesse Astrid/H.K.H. Prinses Astrid & madame/mevrouw Elisabeth Speeckaert

- **Janine & Jacques Delruelle Fund Prize 2026**

- Dr. Reinhard Katja, PhD (KU Leuven-VIB)
- Présentation & remise/Voorstelling & overhandiging - S.A.R. la Princesse Astrid/H.K.H. Prinses Astrid & madame/mevrouw Julie Delruelle

- **Ernest Solvay Prize 2026**

- Dr. Mattioni Stefania, PhD (UGent)
- Présentation & remise/Voorstelling & overhandiging - S.A.R.

la Princesse Astrid/H.K.H. Prinses Astrid & madame/mevrouw Marie Solvay

- **The Marc Hurard Prize 2026**

- Dr. Dopp Joana, PhD (KU Leuven-VIB) représenté/vertegenwoordigd prof. Sha Liu
- Présentation & remise/Voorstelling & overhandiging - S.A.R. la Princesse Astrid/H.K.H. Prinses Astrid & de Heer Hein Deprez



→ **Introduction/inleiding**

- Grégor Chapelle, CEO

→ **Intermède musical par les artistes en résidence/  
Muzikaal intermezzo door de artiesten in residentie**

- Haerim Oh, violon & Esther Yang, violon  
Isaÿe: Sonate pour deux violons  
Finale. Allegro vivo e con fuoco

→ **Célébration/Viering 100 jaar**

- Introduction/Inleiding
- Prof. ém. Jean-Marie Maloteaux, directeur scientifique/  
wetenschappelijk directeur



→ **Documentaire**

*Link: sera mentionné sur le site après la session académique/zal vermeld worden op de site na de academische zitting/will be mentioned on the site after the academic session*

→ **Intermède musical par les artistes en résidence/  
Muzikaal intermezzo door de artiesten in residentie**

- Haerim Oh, violon, Valère Burnon, piano  
C. Saint-Saëns: Samson, "Printemps qui commence" (Dalila),  
arr. pour violon et piano par C. Saint-Saëns

→ **En résumé/Samenvattend**

- Prof. dr. A.J.M. Boon, MD, PhD, FEAN, Professor of Neurology

→ **Conclusion/Besluit**

- Monsieur/de Heer Hein Deprez président du conseil  
d'administration de la F.M.R.E./Voorzitter van de raad van bestuur  
van de G.S.K.E.

# Prix scientifiques 2026 de la F.M.R.E. Wetenschappelijke prijzen 2026 van de G.S.K.E.

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→ UCB Neuroscience Award 2026 – € 125.000



Lauréat/Laureate: prof. dr. Albertini Giulia, PhD  
(KU Leuven-VIB)



## **The Alzheimer's therapeutic Lecanemab attenuates A $\beta$ pathology by inducing an amyloid-clearing program in microglia**

Recently, therapeutic anti-amyloid antibodies have demonstrated the ability to remove amyloid plaques and slow disease progression in Alzheimer's disease patients, marking an important milestone in the field. However, the mechanisms underlying both their efficacy and associated side effects remain poorly understood. In this study, we investigated how the clinically approved anti-amyloid antibody lecanemab interacts with human microglia, the brain's resident immune cells, using a unique in vivo model with transplanted human microglia. We demonstrate that effective plaque clearance requires active microglial engagement mediated by a specific antibody fragment. Single-cell and spatial transcriptomic analyses reveal that antibody treatment induces a specialized microglial program associated with phagocytosis and lysosomal activation. Together, these findings provide critical insight into the mechanisms of anti-amyloid immunotherapies and highlight new avenues for the development of safer and more effective treatments for Alzheimer's disease.

→ Viscountess Valine de Spoelberch Prize 2026 – € 50.000

Lauréat/Laureaat: prof. dr. De Schepper  
Sebastiaan, PhD (UAntwerpen-VIB)



## **Intestinal macrophages modulate synucleinopathy along the gut–brain axis**

Parkinson's disease (PD) is increasingly recognized as a disorder that can involve the whole body, not only the brain. In this work, we investigated how aggregated  $\alpha$ -synuclein, the pathological hallmark of PD, may spread from the gut to

the brain and how the immune system contributes to this process. Using patient-derived  $\alpha$ -synuclein fibrils and in vivo models of gut-to-brain propagation of synucleinopathy, we found that intestinal macrophages take up pathological  $\alpha$ -synuclein in the gut wall. These macrophages then interact with infiltrating T cells, that on their hand migrate to the brain through the brain borders. In the brain, they contribute to the accumulation of pathological  $\alpha$ -synuclein in vulnerable regions and promote the loss of dopamine-producing neurons, a defining feature of PD. We show that this immune response is not simply a consequence of disease but actively contributes to disease progression. Preventing immune trafficking from gut to brain reduced  $\alpha$ -synuclein spreading and neurodegeneration. Together, our findings support a "gut-first" concept of PD, in which immune responses in the gut help drive pathology toward the brain, and highlight peripheral immune pathways as potential biomarkers and therapeutic targets for early intervention.

→ **Janine & Jacques Delruelle Fund Prize 2026 – € 30.000**

Lauréat/Laureate: Dr. Reinhard Katja, PhD  
(KU Leuven-VIB)



**The neural basis of species-specific defensive behaviour in *Peromyscus* mice**

Evading danger, such as approaching predators, is critical for survival. Even closely related species may present different defensive strategies to avoid predators.

Understanding how neural circuits can mediate these species-specific differences in behavior provides insights into the evolution of the brain. In this study, Katja Reinhard, together with Felix Baier, found that two sister-species of deer mice (*Peromyscus*) exhibit opposite reactions to an approaching predator: *P. maniculatus* escapes while *P. polionotus* freezes. We found that these differences arise from distinct escape thresholds through alterations in a midbrain nucleus, the dorsal periaqueductal gray (dPAG). Immediate early gene assays and in-vivo electrophysiological recordings demonstrated that in *P. maniculatus* but not in *P. polionotus*, activity in the dPAG correlates with escape. Furthermore, optogenetic activation of the dPAG elicited escape behavior only in *P. maniculatus*. Taken together, we traced species-specific escape behavior to evolutionary changes in a central brain node.

→ **Ernest Solvay Prize 2026 – € 25.000**



Progress beyond



Lauréat/Laureate: Dr. Mattioni Stefania, PhD  
(UGent)



**Impact of a transient neonatal visual deprivation on the development of the ventral occipito-temporal cortex in humans**

***Early visual experience plays an important role in shaping the developing human brain.***

In this research, we studied adults who were born with dense cataracts and experienced blindness during the first weeks or months of life before their sight was restored. Using brain imaging and artificial intelligence models, we investigated how this brief early deprivation affected the development of the visual system. We found that the primary visual cortex, responsible for processing fine visual details, remained permanently altered. Surprisingly, however, higher visual regions involved in recognizing faces, objects, houses, and words developed in a largely typical way. These findings challenge the traditional idea that early visual experience is equally necessary for all parts of the visual brain. Instead, they reveal that some brain systems are more resilient and adaptable than previously believed, highlighting the remarkable plasticity of the human brain after an early sensory deprivation.

→ **The Marc Hurard Prize 2026 – € 15.000**

Lauréat/Laureate: Dr. Dopp Joana, PhD  
(KU Leuven-VIB)



**Single-cell transcriptomics reveals that glial cells integrate homeostatic and circadian processes to drive sleep-wake cycles**

This study presents a single-cell transcriptomic atlas of the adult *Drosophila* brain across sleep-wake states to uncover how the circadian clock and sleep homeostat impact specific cell populations. Findings reveal that transcriptomic changes tied to sleep and circadian rhythms vary significantly by cell identity. While core clock genes are localized to clock neurons and glia, most cell populations

correlate predominantly with either the circadian rhythm or the sleep drive. Glial cells, however, uniquely respond to both processes simultaneously and display the largest transcriptomic variation. The sleep-wake cycle and sleep drive directly affect key clock gene regulators within these glia. Furthermore, disrupting circadian clock genes specifically in glia impairs the homeostatic sleep rebound following sleep deprivation. This demonstrates that the glial molecular clock is strictly required for normal sleep homeostasis, establishing a new model where glia serve as the direct integration site for both processes to govern overall sleep-wake dynamics.



**Pour consulter le dossier de presse, scannez ce code QR.**

**Om het persdossier te raadplegen, scan deze OR code.**