

BELGIAN BRAIN COUNCIL



IN THIS ISSUE

Belgian National Brain Plan

How does Coronavirus infect cells?

Ethics of Artificial Intelligence

BBC & ADHD-Care

THE BELGIAN NATIONAL BRAIN PLAN: MYTH OR REALITY?

BY GIANNI FRANCO, VICE-PRESIDENT OF BBC

The main goal of the Belgian Brain Council is to federate in order to concentrate our strengths and expertise to preserve and improve the well-being of people with brain diseases through a broadly multidisciplinary movement aiming at: informing and educating, optimising progress and improving funding for research, with the goal of improving patient's care.

With this in mind, and at the initiative of our founding president, Jean Schoenen, a "task force" has been working on a "National Brain Plan" for around 5 to 6 years.

Recently, our General Secretary, Roland Pochet, continued his consultations on a European plan by highlighting 10 priorities, five of which are main ones and remain in synergy with the various actions carried out by several of our members over the last 15 years:

- to encourage and optimise multidisciplinary approaches for the best prevention and detection, and the most effective and humanising home care,
- to encourage the implementation of policies based on the collection of data showing the real needs and expectations on the field,
- to promote education, innovative technologies, and facilitate dialogue between research centres and the field.

Under the impetus of our president, Laurence Ris, the development of this "National Brain Plan" proposal continues, taking into account the various impacts linked to the Covid pandemic and the climatic tragedies that we have recently had to face. In this psychologically fragile context, we have made the first contacts with Brieuc Van Damme, General Director of Health Care INAMI-RIZIV, whose services were recently able to set up a better reimbursement of psychotherapeutic care, and we have reiterated to him our wish for a better reimbursement also of assessments and care for cognitive disorders. Finally, a contact has also been made with the office of Thomas Dermine, Secretary of State for Recovery and Strategic Investments in charge of Science Policy, who is coordinating the "National Recovery and Resilience Plan" for Belgium, in which we propose to be involved, in synergy.

We are surely interested in any other useful participatory suggestion from you. As it has been for more than 15 years, the path of the Belgian Brain Council continues to be shaped by our own steps, together.

Contact: gianni.franco@skynet.be

Click here to see the animation!

HOW CORONAVIRUS INFECTS CELLS – AND WHY DELTA IS SO DANGEROUS

BY ROLAND POCHET BASED ON THE NATURE ARTICLE FROM JULY 28TH, 2021¹

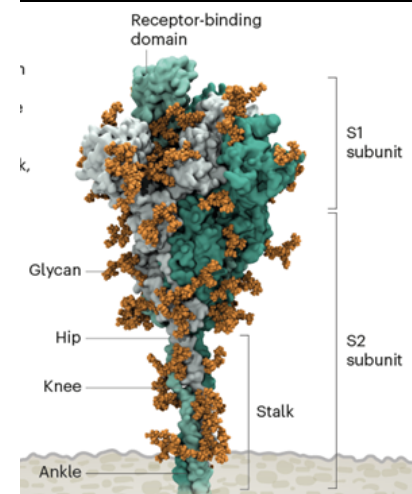
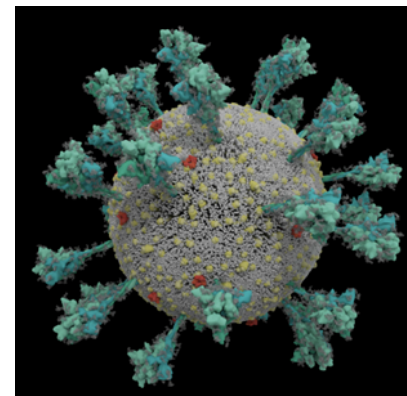
Research into the structure of the SARS-CoV-2 virus provides insight into how the virus infects our cells. Key elements of the SARS-CoV-2 virus are:

- Masked spines (about 40/virus) emerging from the virus body.

This SARS-CoV-2 *spine* complex or spike is coated with sugar molecules, or glycans, which hide it from the immune system.

- Each spike has an RBD (Receptor Binding Protein) sequence that can recognise a receptor present in abundance on cells of the airways (lung) and the brain called the ACE2 receptor. This spike can articulate from 3 anchor points which gives it flexibility (see animation). This allows it to float, swing, rotate and scan the surface of the target cell more easily, and also to bind to a human cell in many cases.

This flexibility is a feature specific to SARS-CoV-2 that does not exist in the influenza virus, nor in SARS-CoV-1 (severe acute respiratory syndrome). The worrying variants of SARS-CoV-2 have mutations in the S1 subunit of the spine protein (RBD site). The S2 subunit allows viral fusion with the host cell membrane. The Alpha variant includes ten changes (mutations) in the spike protein sequence, which result in RBDs being more emergent and facilitating interaction with ACE2 in human cells and penetration into the cells. The Delta variant, which is currently spreading worldwide, has multiple mutations in the S1 subunit, including three in the RBD domain that result in enhanced ability of the RBD to bind to ACE2 but also a lower affinity to neutralising antibodies which could explain their higher transmissibility and virulence and escape the immune system. Understanding how variations in peaks affect the transmissibility of the virus and its susceptibility to neutralisation is therefore essential in preparing for the continued evolution of the virus.



EU, BBC AND ETHICS OF ARTIFICIAL INTELLIGENCE

BY JOSEPH STEIN

On July 7th, Horizon Europe organised a training session on the main changes to the ethical evaluation process, the identification of serious and complex issues in EU-funded projects and the consideration of the ethics of artificial intelligence (AI). Roland Pochet was invited to attend.

Reminder:

- AI is defined as the science and engineering of machines with capabilities considered as intelligent.

Intelligence: reasoning, problem solving, understanding ideas, using languages, planning, learning, and complex perception and behaviour.

- Expected growth of the AI market: from \$58 billion in 2021 to \$310 billion in 2026.

EU approach: Ethics Design, the guidelines

- EU wants to distinguish itself from the US and China by developing ethical and reliable AI (rather than leaving it to the market or to undemocratic and illiberal government control).
- Applying moderate regulation of AI.
- EU has published ethical guidelines (High Level Expert Group on AI) and plans new regulations and policies.
- Industry and other stakeholders are involved in the discussion on guidelines and regulations.

¹ Nature 595, 640-644 (2021)

BBC & ADHD-CARE

BBC is one of 5 partners in the Erasmus+ programme called ADHD-CARE: *Exchanging Good Practices for people with Attention Deficit Hyperactivity Disorder (ADHD) and their caregivers*. ADHD-CARE: Exchanging Good Practices for people with Attention Deficit Hyperactivity Disorder (ADHD) and their caregivers (see <http://sbc.ac.rs/adhd-care/>).

In this framework, the Greek partner: Aristotle University of Thessaloniki organised a meeting, where in collaboration with the cognitive training programme of the health and social care ecosystem Sustainable Memory Care (LLM Care), the partners were able to test themselves how to create valuable learning experiences. This programme provides a comprehensive solution that has a direct impact on improving the quality of life of individuals, including older people and other vulnerable groups. **Chantel Fouche**, Secretary General of **ADHD, ASC & LD Belgium**, BBC member and Roland Pochet were present (see photo).



From left to right:

1. Panagiotis Bamidis (Chair Aristotle University of Thessaloniki)
2. Vanja Mandic (Serbian Brain Council)
3. Erato Sarri (Open University of Cyprus)
4. Andrej Vorenic (Serbian Brain Council)
5. Nikos Schetakis (EPIONI)
6. Fokion Dimitriadis (EPIONI)
7. Maria Gravani (Open University of Cyprus)
8. Evangelia Romanopoulou (Aristotle University of Thessaloniki)
9. Margaret Walker (European Psychiatric Association)
10. Silia Petronikolaou (Aristotle University of Thessaloniki)
11. Niki Pandria (Aristotle University of Thessaloniki)
12. Ioanna Dratsiou (Aristotle University of Thessaloniki)
13. Roland Pochet (Belgian Brain Council)
14. Chantel Fouche (ADHD Belgium)



One-third of patients cured of Covid-19 suffer from neurological or psychiatric disorders. Anxiety, depression, and insomnia are frequently observed.

A recent study conducted an in-depth analysis of the responses of 3,762 participants from 56 countries with confirmed COVID-19 with an illness of more than 28 days. Responses were collected between 6 September 2020 and 25 November 2020. The analysis considered 66 symptoms spanning 7 months. The impact on life, work and return to basic health was measured.

It was found that 86% of the participants experienced relapses, mainly triggered by exercise, physical or mental activity, and stress. 87% of the non-recovered respondents were suffering from fatigue at the time of the survey, compared to 45% of the recovered respondents.

These recent data will be discussed at our WEBINAR on 11 September by the following speakers (see below). Videos of patient testimonials will be included.



Patrice Boyer, Univ.
Paris-Diderot



Isabelle Glowacz, Uliège



Marie-Anne Vanderhasselt,
UGent



Sabine Corachan, LUSS



Eline Bruneel, VPP



Paul Boon, Ugent



Paul Verbanck, ULB

This 90 min webinar **Impact of COVID-19 on brain diseases and mental health** has been awarded a **1.5-point accreditation** by RIZIV (thanks to our vice-president Dr. Gianni Franco for this effort) and is also aimed at patients and the general public who will have the opportunity to express themselves. This webinar will be moderated by Vanessa Costanzo, a former journalist at RTL who will lead **the Q&A session**.

Participation is free, but registration is required:
<https://fr.braincouncil.be/events-1>

This webinar is sponsored by the following companies
and we thank them for their support!



abbvie



Membership of the Executive Committee for the period 2021-2022

President: **Professor Laurence RIS**

General Secretary: **Professor Roland Pochet**

Vice-Presidents: **Professor Chris Bervoets, Doctor Gianni Franco, Baron Charles van der Straten-Waillet**

Treasurer: **Baron Charles van der Straten-Waillet**

Secretary: **Madame Lia Le Roy**

Honorary Presidents: **Professor Jean Schoenen, Rufin Vogels, Dirk Van Roost, Philippe Lenders**

If you are interested in our activities, support the BBC and become an individual member!

**BECOME A MEMBER
DEVENEZ MEMBRE
LID WORDEN**

30€ at BE87 7512 0194 0094 with name + email

BBC account: BE87 7512 0194 0094

News from our members



KU Leuven Brein Instituut
nodigt u uit voor de gratis,
online lezing op maandag 13
september van 18-19 uur:

'Goed leven met een kwetsbaar brein'

Prof. Dr. Manu Keirse, klinisch psycholoog

Registreer door de code te scannen of
mail ann.vanderjeugd@kuleuven.be



Les bonnes attitudes pour éviter les chutes

MARDI 28/09/2021
de 14h à 16h

Chaussée de Vleurgat 109 - 1050 Ixelles

Conférence du Docteur Jean-Emile Vanderheyden, neurologue
Les approches éducatives et pluridisciplinaires des chutes pour les personnes ayant la maladie de Parkinson.
Les chutes: pourquoi? Comment les éviter? Comment les analyser?
Toute chute mérite analyse pour les éviter à l'avenir.
Démonstration avec du matériel et présence de Solival.

Inscription obligatoire! Nombre de places limité
Possibilité d'assister à la conférence en ligne.

ENTRÉE GRATUITE | TOUT PUBLIC

Contact : Cécile Grégoire — 049453.10.46
info@actionparkinson.be
www.actionparkinson.be



Tool for our members to use in any promotional action: Evidence on the exceptionally high burden of brain disorders:
https://braincouncil.be/en/burden-of-brain-diseases_evidence

Save the date!

**Saturday,
September 11th**

**BBC
WEBINAR
COVID long**

**Monday, September
13th**

**Living well with
a vulnerable
brain (in NL)**

**Saturday,
September 25th**

**Fibromyalgie
(in FR)**

**Tuesday,
September 28th**

**Parkinson
conference: The
right attitudes to
avoid falls**

Friday, October 8th

**Deadline for
BPS Award
5.000€**

**Friday, November
19th**

**BASS Autumn
meeting**

**Thursday,
December 4th**

BPS congress

**Thursday,
December 4th**

**BPS Autumn
Meeting on
Back Pain**

