ENDOWED

CLINICAL RESEARCH CHAIR

IN

KETOTHERAPEUTICS

FOR

BRAIN DISORDERS

KETOTHERAPEUTICS: Treating disease using *ketones* – two small molecules derived from fats and that are important for optimal brain function.

CURRENT FUNDING : $ 1.1 MILLION
FUNDING OBJECTIVE : $ 5 MILLION

Faculty of Medicine and Health Sciences

UDS Université de Sherbrooke

Chairholder: STEPHEN CUNNANE, Ph.D.

- Professor, Dept. of Medicine and researcher at the Sherbrooke University's Research Center on Aging since 2003. www.recherche-cerveau-Sherbrooke.ca
- Expert in brain energy metabolism during aging.
- Developed the world's 1st treatment for the early stage of Alzheimer disease (based on ketones: www.brainxpert.com
- Holds the world's 1st academic research chair in ketotherapeutics.
- B.Sc. Bishop's University | Ph.D. McGill University| Post-doc. Aberdeen and London, UK.

ACADEMIC ACCOMPLISHMENTS

- *Senior Canada Research Chair* in brain energy metabolism (2003-2010).
- *University Research Chair* in brain energy metabolism (2012-2019).
- 350 peer-reviewed publications with 23,000 citations, an H-index of 79 and an i10-index of 286 (Google Scholar); 5 books; 2 patents.
- 2020 review on ketotherapeutics ranked in top 1% of all *Nature Reviews Drug Discovery* publications.
- Elected to the *French National Academy of Medicine*; 5th Canadian.
- *Chevreul Medal*, French Society for Research on Lipids (2017).
- 9 of his 44 students have gone on to academic appointments in Canada (4), USA (2), Europe (2) and Asia (1).

SCIENTIFIC CONTRIBUTIONS

- Developed the concept of ketones to rescue the *'brain energy gap'* in Alzheimer disease.
- First to demonstrate that ketones improve cognitive performance early in Alzheimer disease because they *correct declining brain fuel supply*.
- First to assess whether a *ketogenic supplement increases the benefit* of exercise in Parkinson disease.
- Developed the 1st method to measure brain *glucose and ketone* metabolism by PET imaging.
- Solid track record of clinical trials testing dietary supplements that require regulatory approval.

UdS Université de Sherbrooke

Clinical Research Chair in ketotherapeutics for brain disorders – Prof. Cunnane

THE CHAIR'S OBJECTIVES

- Validate a new generation of ketone treatment for *Alzheimer and Parkinson disease.*
- Determine whether ketones can improve brain energy metabolism in *psychiatric disorders.*
- Assess a new ketogenic supplement plus a reduced carbohydrate diet to improve *quality of life* in nursing home residents.

LONG-TERM VISION

- This research chair is *endowed* – projects on ketones will be financed from a permanent endowment. Long-term commitment by the University of Sherbrooke.
- *Recruit a 2nd world-class researcher* to grow our leadership role in ketotherapeutics.
- *Train and inspire young doctors* and *graduate students* for research careers in ketotherapeutics.

ENDOWED CHAIR TARGET : $ 5 million Current funding : $ 1.1 million

PLEASE CONTRIBUTE TO OUR CUTTING EDGE RESEARCH WITH KETONES: IT WILL IMPROVE THE TREATMENT OF BRAIN DISORDERS

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