



Journées CHEVREUL 2011

LIPIDS & BRAIN 2

Paris (FIAP Jean Monnet)
Monday 28 to Wednesday 30 March 2011

Scientific Committee

Bernadette Delplanque, Philippe Guesnet, Havard Bentsen,
Jean Marc Alessandri, Nicole Pages, Pierre Astorg.

The French Society for the Study of Lipids (SFEL, ex AFECG) is pleased to invite you to participate to the Journées Chevreul 2011 Lipids & Brain which will be held in Paris. This meeting is a follow-up to previous successful conferences held in Paris in 2007 (Journées Chevreul Lipids & Brain) and in Oslo in 2008 (the Brain Lipids Conference). It will be devoted to both fundamental and applied research on the metabolism and the biological effects of polyunsaturated fatty acids (PUFA) within the central nervous system and will address their bearing on brain health and disease.

There is a growing interest in omega-3 PUFA, the precursor (ALA: AlphaLinolenic Acid) or the Long-chains (LCn-3), since we know that docosahexaenoic acid (DHA, 22:6n3), the longest and most unsaturated fatty acid found in nervous membranes, is involved in the maintenance of normal neurophysiological function. Challenges in this field of research are depicting the different cellular processes modulated by DHA during growth and ageing (synaptogenesis, neurogenesis, neuronal apoptosis and inflammation) and to investigate the involved mechanisms. They are also understanding

the mechanisms of control of PUFA metabolism in the brain and at the blood-brain barrier level. Many clinical and epidemiological studies have been conducted to assess the implications of the intake of omega-3 PUFA, (precursor or LCn-3), during pregnancy and lactation (maternal nutrition) on brain infant development and its impact on the metabolism during childhood. Moreover the potential roles of DHA and eicosapentaenoic acid (EPA, 20:5n3) in the management of depression and age related neuronal diseases including pathologies of the retina have been the topic of several studies.

The next Journées Chevreul 2011 Lipids & Brain in Paris will provide an opportunity to extend our understanding on these fields of research and on the relationship between nutrition, PUFA and central nervous system functions. They will honor Professor Nicolas Bazan from the LSU Neuroscience Center of Excellence (New Orleans) for his research conducted on DHA and the Neuroprotectin D1 and their roles in many neurological diseases, such as Alzheimer disease and Stroke. We look forward to welcoming you to this exciting meeting.



MEDAILLE CHEVREUL : Dr Nicolas BAZAN

**DHA in stroke, Alzheimer's and blinding retinal degenerations:
coping with neuroinflammation and cell survival**

Monday, March 28

9h30 → Registration and Coffee

INTRODUCTION

10h15 → Cunnane Stephen, CA

SIGNALLING MECHANISMS AND METABOLISM OF N-3 PUFA IN THE BRAIN

Chair: Alessandri Jean-Marc, Cunnane Stephen

- 10h45** → Docosahexaenoic acid: metabolism and neurotrophic signaling mechanisms
Kim Hee-Yong, USA
- 11h15** → The role of omega-3 fatty acids in hippocampal neurogenesis
Dyall Simon, UK
- 11h45** → Valorisation and biodisponibility of polyunsaturated fatty acids
Linder Michel, FR
- 12h15** → Lunch / Poster Session
- 14h00** → Maintaining brain PUFA concentrations: uptake and rapid metabolism
Bazinet Richard, CA
- 14h30** → Graded dietary n-3 PUFA deprivation identifies how brain PUFA metabolism is regulated
Rapoport Stanley, USA
- 15h00** → Reversion of kainate-induced seizures in magnesium-deficient mice is improved by omega-3 diet (rapeseed oil)
Pages Nicole, FR
- 15h15** → Regulation of endocannabinoid signalling by dietary fatty acids: implications for brain function, obesity and the metabolic syndrome
Di Marzo Vincenzo, IT
- 15h45** → Coffee break / Poster Session

PUFA AND NEURODEVELOPMENT - FROM MATERNAL PREGNANCY AND LACTATION TO INFANT DEVELOPMENT

Chair: Guesnet Philippe, Delplanque Bernadette

- 16h15** → Post birth n-3 LCPUFA supplementation in women and children – Who benefits?
Gibson Robert, AU
- 16h45** → Early behaviour and development influenced by omega-6 and omega-3 status
Strandvik Birgitta, SE
- 17h15** → The role of omega-3 fatty acids in child development
Osendarp Saskia, NL
- 17h45** → Synergistic effect of omega-3 PUFA deprivation and early life maternal separation in rats placed in an uncontrollable adverse situation
Mathieu Géraldine, FR
- 18h00** → Poster Session

Tuesday, March 29

PUFA AND NEURODEVELOPMENT - FROM MATERNAL PREGNANCY AND LACTATION TO INFANT DEVELOPMENT

Chair: Guesnet Philippe, Delplanque Bernadette

- 9h00** → The role of n-3 LCPUFA in pregnancy.
Makrides Maria, AU
- 9h30** → Brain DHA levels of young rat are related to mother omega-3 status, and to ALA levels and fat matrix of the diet: impact of dairy products.
Delplanque Bernadette, FR
- 10h00** → Different omega-3 sources for maternal diet during pregnancy and DHA in the developing rat brain
Childs Caroline, UK
- 10h30** → Coffee break / Posters

**11h00 CHEVREUL MEDAL : PR BAZAN NICOLAS, USA
DHA IN STROKE, ALZHEIMER'S AND BLINDING RETINAL DEGENERATIONS: COPING WITH NEUROINFLAMMATION AND CELL SURVIVAL**

12h15 → Lunch / Poster Session

13h45 → AG SFEL

PUFA AND NEURODEVELOPMENT - FROM MATERNAL PREGNANCY AND LACTATION TO INFANT DEVELOPMENT

- 14h30** → Alteration of brain insulin and leptin signaling promotes energy homeostasis impairment and neurodegenerative diseases
Taouis Mohammed, FR
- 15h00** → Brain ciliary neurotrophic factor (CNTF) and hypothalamic control of energy balance.
Vacher Claire-Marie, FR

PUFA and Depression

Chair: Astorg Pierre, Bentsen Havard

- 15h15** → Relationship of n-3 and n-6 in risk of clinical depression: results from the Nurses' Health Study
Lucas Michel, USA
- 15h45** → The efficacy of omega-3 supplementation for major depression: a randomized controlled trial
Lesperance François, CA
- 16h15** → Coffee break / Poster Session
- 16h45** → EPA but not DHA appears to be responsible for the efficacy of omega-3 LC-PUFA supplementation in depression: evidence from a meta-analysis of randomized controlled trials
Martins Julian, UK
- 17h15** → Effects of PUFA supplementation evidenced by brain imaging
Puri Basant, UK
- 17h45** → Spadin, a Sortilin-derived peptide, targeting rodent TREK-1 channels: a new concept in the antidepressant drug design
Heurteaux Catherine, FR
- 18h00** → Poster Session
- 20h00** → **GALA DINER at Bel Canto Restaurant**

Wednesday, March 30

PUFA AND OCULAR PATHOLOGIES

Chair: Alessandri Jean-Marc, Pages Nicole

- 8h45** → Needs in omega-3 and ocular pathologies
Bretillon Lionel, FR
- 9h15** → Very Long Chains fatty acids (C35) in normal eye and ocular pathologies
Berdeaux Olivier, FR

PUFA AND NEUROPROTECTION

Chair: Alessandri Jean-Marc, Bentsen Havard

- 9h30** → Multi nutrient concept for enhancing synapse formation and function: science behind a medical food for Alzheimer's disease
Sijben John, NL
- 10h00** → Alpha-linolenic acid for stroke protection: from experimental studies on brain preconditioning to nutrition
Blondeau Nicolas, FR
- 10h30** → N-3 Polyunsaturated Fatty Acids (PUFA) deficiency aggravates the loss of the protective function of astrocytes in rat brain during aging.
Denis Isabelle, FR
- 10h45** → Coffee break / Poster Session
- 11h00** → Omega-3 fatty acids and acute neurological trauma
Michael-Titus Adina, UK
- 11h30** → Neuroinflammation, well-being and dietary Omega-3 fatty acids
LAYE Sophie, FR
- 12h00** → Schizophrenia, PUFA and glutathion
Solberg Dag and Bentsen Havard, NO
- 12h30** → Lunch / Poster Session

PUFA, Cholesterol and Alzheimer Disease

Chair: Astorg Pierre, Delplanque Bernadette

- 14h00** → Brain cholesterol in normal and pathological aging
Mulder Monique, NL
- 14h30** → Defective liver biosynthesis of DHA correlates with cognitive impairment in Alzheimer's disease
Astarita Giuseppe, USA
- 15h00** → Mediterranean diet and cognitive decline: what role for N-3 PUFA
Barberger-Gateau Pascale, FR

15h30 **Thesis Award**

15h45 **Conclusions**

Guesnet Philippe, FR



The **SFEL** (Société Française pour l'Etude des Lipides - French Society for the Study of Lipids) is now replacing **AFECG** (Association Française pour l'Etude des Corps Gras) created in 1943, and since the world of lipids has considerably changed, we felt the need to "refresh" our name, status and logo.

The members of SFEL are researchers from the private and public area (agronomy/agriculture, laboratories, agencies, professionals, consulting firms, press, administration, equipment, engineering ...).

Our goal is to bring people together: specialists & researchers in the production, processing and use of oils, fats and derivatives, in order to promote the acquisition and dissemination of knowledge in this field.

In a spirit of openness, the President of the association is alternately a representative of the academic sector and private sector. The executive board is composed of 15 members who meet several times a year.

We organize two congresses per year, the **Journées Chevreul**, one in spring and another one in the fall, with which attract generally up to 150 participants. The topics of these conferences are either technological, or more fundamental and can be organized in collaboration with other scientific associations (for example in December 2009 the 4emes Journées Internationales pour l'Etude des Lipides in Casablanca, organised with the Moroccan Lipid Society).

We are pleased to award one or two Chevreul Medals per year (Eugene Chevreul initiated the chemistry of fatty acids), one during the Journées Chevreul, and one during the EFL congress.

Moreover, with our French partners (CIRAD, CETIOM, ONIDOL, FNCG, ITERG) we participate to the publication of the OCL Journal (www.revue-ocl.fr).

I would like to take the opportunity to thanks all the past members & presidents of AFECG, specially **Michel PARMENTIER**. As everybody knows, he was one of the founder and the first President of EFL. All the AFECG-SFEL members are very proud that **the first Award of Fellow of Euro Fed Lipid** will be attributed to our friend Michel next November in Munich.

Anne LE GUILLOU
SFEL President



FIAP Jean Monnet - 30, rue Cabanis - 75014 PARIS

PUBLIC TRANSPORTATION

- 1. Metro line 6** - Exit at Denfert-Rochereau or Glaciere station.
- 2. From Roissy-Charles de Gaulle Airport:**
RER B : direction Robinson/Saint Remy-les-Chevreuses. Exit at Denfert-Rochereau Station (10 min walking) or take the metro line 6 direction Nation (see 1.)
- 3. From Orly Airport:** take Orlybus or Orlyval to Denfert-Rochereau, Exit at Denfert-Rochereau Station (10 min walking) or take the metro line 6 direction Nation (see 1.)

GALA DINER

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CONFERENCE REGISTRATION

Journées Chevreul 2011, PARIS, 28-30 March 2011

Please return the completed form (one per participant) to the following address

SFEL
118, avenue Achille Peretti
92200 NEUILLY-SUR-SEINE
France

Téléphone : + 33 1 46 37 20 25
Fax : + 33 1 46 37 15 60
E-mail : afecg@fncg.fr

www.afecg.org

Name :

Surname : Title :

Company or Institution :

Address :

Postal Code : City : Country :

Phone :

Fax :

E-mail :

Chevreul Conference 2011 registration fees

	(Before 31/01/2011)	(After 31/01/2011)
Private SFEL Member (updated membership 2011)	<input type="checkbox"/> 450 €	<input type="checkbox"/> 550 €
With membership SFEL 2011	<input type="checkbox"/> 510 €	<input type="checkbox"/> 610 €
Academic SFEL Member (updated membership 2011)	<input type="checkbox"/> 250 €	<input type="checkbox"/> 300 €
With membership SFEL 2011	<input type="checkbox"/> 310 €	<input type="checkbox"/> 360 €
SFEL Retired Member (updated membership 2011)	<input type="checkbox"/> 100 €	<input type="checkbox"/> 150 €
With membership SFEL 2011	<input type="checkbox"/> 130 €	<input type="checkbox"/> 180 €
Gala diner*	<input type="checkbox"/> 95 €	<input type="checkbox"/> 95 €
Student (with justification – meals not included)	<input type="checkbox"/> Free	<input type="checkbox"/> Free
Meals	<input type="checkbox"/> 75 €	<input type="checkbox"/> 75 €
TOTAL		

* Due to the limited number of places, reservations will be made on a first come - first served basis

Payment (registration forms must be accompanied by full payment):

The registration fees include entry to the Scientific Conference, the list of attendants, the book of abstracts, lunches and coffee breaks. For students, lunches are not included.

- ☐ I have enclosed a cheque with this form (order: SFEL)
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IMPORTANT : Please do not forget to mention the name or code member of the attendee