



# 14th International Congress | 10-14 May

*The International Society for the Study of Fatty Acids & Lipids (ISSFAL)  
In collaboration with American Oil Chemists' Society (AOCS)*

## PROGRAM (Subject to Change)

The times below are USA & Canada Eastern Time zone. For reference, in May 2021 this time zone is -4 GMT.

New York City -4 GMT | London +1 GMT | Paris +2 GMT | Dubai +4 GMT | Beijing + 8 GMT | Adelaide +9:30 GMT

### Monday, 10 May

08:00 - 08:45 (USA Eastern)  
14:00 - 14:45 Paris  
21:30 - 22:15 Adelaide

## 2021 Alexander Leaf Award

Susan E. Carlson, PhD

University of Kansas Medical Center | United States of America

“Nutrition and DHA: Themes in My Life and Career ”

08:45– 10:05 (USA Eastern)  
14:45 - 16:05 Paris  
22:15 - 23:20 Adelaide

## Maternal & Infant

**Chair:** Maria Makrides, SAHMRI, ISSFAL President | Australia

**Co-Chair:** Yan Qin, BASF | Singapore

08:50 / 14:50 / 22:20

Prenatal Omega-3 supplementation for the prevention of preterm birth - a double edged sword?

Karen Best  
SAHMRI, Univ. of Adelaide  
Australia

09:05 / 15:05 / 22:35

Long-chain polyunsaturated fatty acids and lipid peroxidation products in donor human milk in the U.K.: Results from the LIMIT two-centre cross sectional study

Simon Dyall  
University of Roehampton  
United Kingdom

09:20 / 15:20 / 22:50

Human milk fatty acid composition and maternal life-style-related time trends: a comparison between the two Ulm Birth Cohort Studies.

Linda Siziba  
University Medicine - Leipzig  
Germany

09:35 / 15:35 / 23:05

Maternal Red Blood Cell Long-chain Fatty Acid Status Is Associated with a Higher Risk of Premature Birth in Urban South Africa: The Nuped Study

Elizabeth Symington  
UNISA  
South Africa

09:50 / 15:50 / 23:20

Diet-induced fat accumulation during adulthood is not affected by early-life exposure to infant formula with added MFGM as a source of phospholipids

Lidewij Schipper  
Danone Nutricia Research  
Netherlands

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13:00 - 13:45 (USA Eastern)  
19:00 - 19:45 Paris  
02:30 - 03:15 Adelaide (Tuesday)

## Very Long Chain PUFA in Macular Degeneration: Learning from the Young to Treat the Old

Prof. Martin-Paul Agbaga

University of Oklahoma | United States of America

13:45 - 15:05 (USA Eastern)  
19:45 - 21:05 Paris  
03:15 - 04:20 Adelaide (Tuesday)

## Eicosanoids & Lipid Mediators

**Chair:** Saame 'Raz' Shaikh, Univ. of North Carolina |USA

**Co-Chair:** Abe Kasonga, Univ. of Pretoria | South Africa

13:50 / 19:50 / 03:20

Pro-resolving lipid mediator response may be modulated by recreational running

Linda Malan  
North-West University  
South Africa

14:05 / 20:05 / 03:35

New dose strategy for omega-3 fatty acids using body surface area and a novel omega-3 index, the EDD-index.

Linda Ljungblad  
Karolinska Institute  
Sweden

14:20 / 20:20 / 03:50

4-F4-neuroprostane and its potent biological action in cardiovascular diseases.

Jean-Marie Galano  
CNRS  
France

14:35 / 20:35 / 04:05

Resolvin E1 has therapeutic potential for improving glucose homeostasis in a host-genome dependent manner

Saame 'Raz' Shaikh  
Univ. of North Carolina  
USA

14:50 / 20:50 / 04:20

Oxidized lipids mediators within surgical incisions in humans – a clinical study.

Anthony Domenichiello  
Nat'l. Institute on Aging  
USA

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For more information: [www.issfalcongress.com](http://www.issfalcongress.com)

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**VIRTUAL**  
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Tuesday, 11 May

06:00 - 06:45 (USA Eastern)  
12:00 - 12:45 Paris  
19:30 - 20:15 Adelaide

**SFEL: La Médaille Chevreul**  
Prof. Robert Gibson  
SAHMRI | Australia

“Old and new adventures with fatty acids and their oxylipins:  
The road towards personalised clinical nutrition.”

06:45– 08:20 (USA Eastern)  
12:45 - 14:20 Paris  
20:15 - 21:50 Adelaide

**SFEL Sessions**  
Chairs: Phillipe Guesnet & Claire Bourlieu-Lacanal

06:50 / 12:50 / 20:20	07:10 / 13:10 / 20:40	07:30 / 13:30 / 21:00	This session supported in part by:
An overview of milk polar lipids physico-chemical attributes and nutritional interest	Milk sphingolipids: towards joint effects on lipid metabolism, intestinal health and gut microbiota	Impact of dairy components addition on metabolic and microbiota programming: where do we stand?	  Des Hommes pour mieux nourrir les Hommes
Claire Bourlieu-Lacanal INRAE France	Marie-Caroline Michalski INRAE France	Marion Lemaire INRAE France	

10:00 - 10:45 (USA Eastern)  
16:00 - 16:45 Paris  
23:30 - 00:15 Adelaide

Uncovering Fatty Acid and CVD Relationships using  
POCS: Prospective Observational Cohort Studies  
Dr. William Harris, PhD, FASN  
Fatty Acid Research Institute (FARI) | USA

10:45– 12:05 (USA Eastern)  
16:45 - 18:05 Paris  
00:15 - 01:35 Adelaide (Wed.)

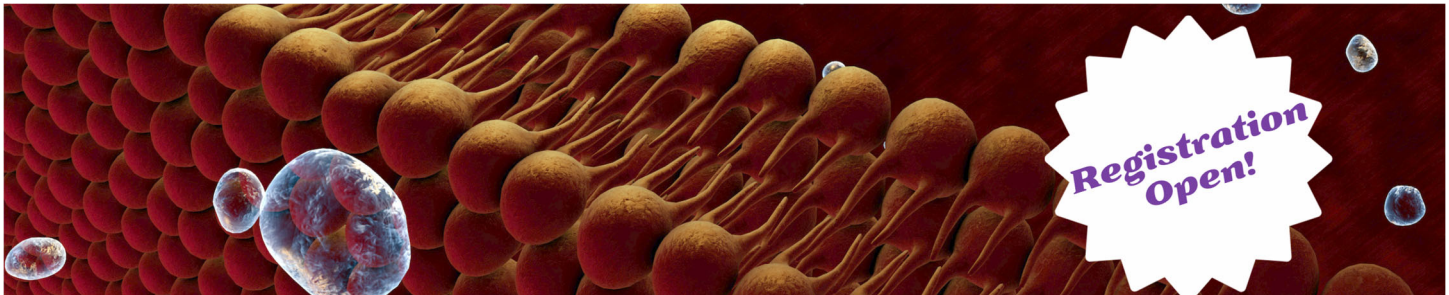
**Cardiovascular**  
Chair: Robert Block, Univ. of Rochester | USA

11:05 / 17:05 / 00:35	11:20 / 17:20 / 00:50	11:35 / 17:35 / 01:05	11:50 / 17:50 / 01:20
Omega-3 Fatty Acid Levels and Left Ventricular Diastolic Function in Patients with Heart Failure with Preserved Ejection Fraction: a Substudy from the Aldo-DHF Randomized Controlled Trial	Role of Eicosapentanaenoic acid (EPA) in Heart failure Prediction: The Multi-Ethnic Study of Atherosclerosis	Omega-3 fatty acids reduce oxidative stress in cultured, lipopolysaccharide-stimulated macrophages from patients with abdominal aortic aneurysm	Omega-3 Fatty Acids and Aspirin Interact in Primary Cardiovascular Disease Prevention
Clemens von Schack, M.D. Omegametrix Germany	Venugopal Mudgundi Univ. of Rochester USA	Fraser Russell Univ. of the Sunshine Coast Australia	Robert Block Univ. of Rochester USA

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**14TH INTERNATIONAL CONGRESS**  
**10-14 MAY 2021 | ONLINE**



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Wednesday, 12 May

08:00 - 08:45 (USA Eastern)  
14:00 - 14:45 Paris  
21:30 - 22:15 Adelaide

**Long Chain n-3 Fatty Acids in Pregnancy:  
Potential for Prevention of Pre-Term Birth**  
Prof. Sjurður Olsen  
Statens Serum Institut | Denmark

08:45 - 10:05 (USA Eastern)  
14:45 - 16:05 Paris  
22:15 - 23:35 Adelaide

**Nutrition**  
**Chair:** Jeannine Baumgartner, ETH | Switzerland  
**Co-Chair:** Anna Filip, Nencki Institute of Experimental Biology | Poland

08:50 / 14:50 / 22:20	09:05 / 15:05 / 22:35	09:20 / 15:20 / 22:50	09:35 / 15:35 / 23:05	09:50 / 15:50 / 23:20
Microencapsulated Tuna Oil Results in Higher Absorption of DHA in Toddlers	Assessing the effect of omega-3 docosapentaenoic (DPA) on inflammation, using the Caco-2 gut epithelium model	Conversion of dietary polyunsaturated fats between humans and rodents: A review of allometric scaling models	Krill oil reduced osteoarthritic knee pain in adults with mild to moderate knee osteoarthritis: A 6-month multicentre, randomized double-blind, placebo-controlled trial	The role of stearoyl-CoA desaturase 1 in the regulation of vascular smooth muscle cells phenotype and arterial remodeling
Samaneh Fard Nu-Mega Ingredients Australia	Luke Durkin Oxford-Brookes University United Kingdom	Jay Whelan Univ. of Tennessee United States	Welma Stonehouse CSIRO Australia	Anna Filip Nencki Inst. of Exptl. Biology Poland

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13:00 - 13:45 (USA Eastern)  
19:00 - 19:45 Paris  
02:30 - 03:15 Adelaide (Thursday)

**2021 Early Career Award**  
Prof. Ameer Taha  
University of California, Davis | USA

**“Metabolism, turnover and the role of oxidized linoleic acid metabolites in brain”**

13:45– 15:05 (USA Eastern)  
19:45 - 21:05 Paris  
03:15 - 04:20 Adelaide (Thursday)

**Obesity & Diabetes**  
**Chair:** Ken Stark, Univ. of Waterloo | Canada

13:50 / 19:50 / 03:20	14:05 / 20:05 / 03:35	14:20 / 20:20 / 03:50	14:35 / 20:35 / 04:05
Baseline omega-3 status is associated with nerve regeneration following 1-year of omega-3 nutrition therapy in patients with diabetic neuropathy	Plasma phospholipid fatty acid patterns are associated with adiposity and the metabolic syndrome in black South Africans: a cross-sectional study	Docosahexaenoic acid plus hydroxytyrosol supplementation prevents metabolic disturbance in white adipose tissue in mice fed a high-fat diet through PPAR-γ and Nrf2 up-regulation and SREBP-1c and NF-κB down-regulation	Erythrocyte n-6 polyunsaturated fatty acids, gut microbiota and incident type 2 diabetes: a prospective cohort study
Evan Lewis Univ. of Toronto Canada	Alice Ojwang Technical Univ. of Kenya Kenya	Rodrigo Valenzuela Univ. of Toronto Canada	Zelei Miao Westlake University China

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17:00 - 19:35 (USA Eastern)  
23:00 - 01:35 Paris  
06:30 - 09:05 Adelaide (Thursday)

AOCS/ISSFAL Joint Session on Nutrition

Chair: RJ Scott Lacombe, Univ. of Texas | USA  
Co-chair: Martha Belury, The Ohio State University | USA

“Clinical and pre-clinical studies of polyunsaturated fatty acids”

17:10 / 23:00 / 06:40	17:35 / 23:35 / 07:05	18:00 / 00:00 / 07:30	18:25 / 00:35 / 07:55	18:50 / 00:50 / 08:20	19:15 / 01:15 / 08:45
High-oleic Ready-to-use Therapeutic Food with or Without Docosahexaenoic Acid Supports Normal Growth and Recovery in Malnourished Malawian Children: A Randomized Controlled Trial	Associations of n-3 Fatty Acid Status During Early Pregnancy with Perinatal Depression at 12 Months Postpartum in Urban South Africa: The Nuped Study	Modeling the Impact of High Oleic Acid Oil Varieties on the Levels of Essential Fatty Acid Intake in Children	Modulation in Dietary Linoleic Acid Intake Results in Differential Transcriptomic Response to Ethanol Binge	Elucidating the Effects of Dihomo-γ-linolenic Acid (DGLA) and the Dgla-rich Green Microalga in a Zebrafish Model of Gut Inflammation	Dietary Alpha-linolenic Acid Is Necessary for the Increase in Eicosapentaenoic Acid Following Docosahexaenoic Acid Intake
RJ Scott Lacombe Univ. of Texas USA	Ester Osuna ETH Switzerland	Marth Belury The Ohio State Univ. USA	Chuck Chen NIAAA USA	Ekaterina Novichkova Ben Gurion University Israel	Adam Metherel Univ. of Toronto Canada

Thursday, 13 May

10:00 - 10:45 (USA Eastern)  
16:00 - 16:45 Paris  
23:30 - 00:15 Adelaide

Cataloging EPA and DHA Science:  
Introducing GOED’s Clinical Studies Database

Aldo Bernasconi, VP of Data Science, GOED | USA  
Moderator: Ellen Schutt, Executive Director, GOED | USA

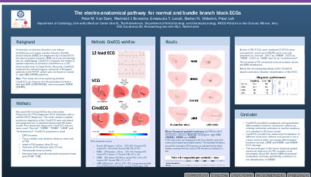
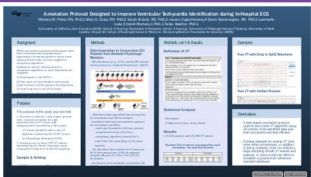
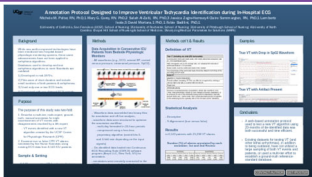
10:45 - 12:05 (USA Eastern)  
16:45 - 18:05 Paris  
00:15 - 02:35 Adelaide (Friday)

Lipid Metabolism

Chair: Richard Bazinet, Univ. of Toronto, ISSFAL Imm’d. Past President | Canada  
Co-chair: Zhen Wang, Wilmar International | China

10:50 / 16:50 / 00:20	11:05 / 17:05 / 00:35	11:20 / 17:20 / 00:50	11:35 / 17:35 / 01:05	11:50 / 17:50 / 01:20
Acute injection of DHA triglyceride emulsions after hypoxic-ischemic brain injury in mice increases EPA and EPA-derived pro-resolving mediators in brain and blood	Plasma unesterified eicosapentaenoic acid is converted to docosahexaenoic acid (DHA) in the liver and supplies the brain with DHA in the presence or absence of dietary DHA	Acyl-CoA synthetase 6 is required for brain docosahexaenoic acid retention and neuroprotection during aging	FADS2 Function Loss at the Major Cancer Hotspot 11q13 Locus Alters Fatty Acid Metabolism	Accretion and Pharmacokinetics of Di-Deuterated Linoleic Acid in Human Patients with a Neurodegenerative Disease
Denny Kollareth Columbia University USA	Adam Metherel Univ. of Toronto Canada	Jessica Ellis East Carolina University USA	Kumar Kothapalli Univ. of Texas USA	Genevieve James Univ. of Texas USA

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ALL POSTER PRESENTATIONS WILL BE AVAILABLE  
ONLINE FROM 15 APRIL THROUGH 14 MAY

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Friday, 14 May

06:00 - 06:45 (USA Eastern)  
12:00 - 12:45 Paris  
19:30 - 20:15 Adelaide

**N-3 Polyunsaturated Fats & The Resolution of Neuroinflammation**  
Prof. Sophie Laye  
National Institute of Agricultural Research (INRA) |France

06:45– 08:05 (USA Eastern)  
12:45 - 14:05 Paris  
20:15 - 21:35 Adelaide

**Neuroscience**  
**Chairs:** Adina Michael-Titus, Univ. of London | United Kingdom  
**Co-chair:** Julia Kelliher, Penn State University | USA

06:50 / 12:50 / 20:20	07:05 / 13:05 / 22:35	07:20 / 13:20 / 20:50	07:35 / 13:35 / 21:05	07:50 / 13:50 / 21:20
Effect of omega-3 LCPUFA supplementation on cognition in children and adolescents: an expanded systematic literature review with focus on DHA/EPA dose and omega-3 index.	Supplementation with oil rich in eicosapentaenoic acid, but not in docosahexaenoic acid, improves global cognitive function in healthy, young adults: A randomised controlled trial	A combined n-3 fatty acid and flavan-3-ol supplement does not improve cognition or brain structure in older age: The Cognitive Ageing, Nutrition and Neurogenesis (CANN) trial	A new perspective on roles of polyunsaturated fatty acids and carotenoids in exudative age-related macular degeneration	Ketones from MCT improve processing speed in MCI as a function of improved white matter energetics.
Inge van der Wurff Open University Netherlands	Philippa Jackson Northumbria University United Kingdom	Anne Marie Minihane Univ. of East Anglia United Kingdom	Jetty Chung-Yung Lee Univ. of Hong Kong Hong Kong SAR	Stephen Cunnane University of Sherbrooke Canada

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11:00– 11:45 (USA Eastern)  
17:00 - 17:45 Paris  
00:30 - 01:15 Adelaide (Saturday)

**Application of Lipidomics to the Identification of Bioactive Lipid Mediators**  
Prof. Valerie O'Donnell  
Cardiff University | Wales

11:45 - 13:05 (USA Eastern)  
17:45 - 19:05 Paris  
01:15 - 02:35 Adelaide (Saturday)

**Lipidomics & Novel Technologies**  
**Chairs:** Anna Nicolaou, Univ. of Manchester | United Kingdom  
**Co-Chair:** Klaudia Steckel, Univ. of Waterloo | Canada

11:50 / 17:50 / 01:20	12:05 / 18:05 / 01:35	12:20 / 18:20 / 01:50	12:35 / 18:35 / 02:05	12:50 / 18:50 / 02:20
Challenges in the development of dried spot methods for separating and measuring the level of free fatty acids in breast milk	Solvent-mediated (SM) covalent adduct chemical ionization (CACI-)MS/MS for identification of fatty acid methyl esters with unusual double bond positions on a Shimadzu triple quadrupole mass spectrometer	Determining the absorption and tissue incorporation kinetics of linoleic acid-derived 13-hydroxyoctadecadienoic acid in rats	Lipid particles as interfacial reservoirs of antioxidants in Pickering emulsions	Carbon Isotope Ratio Analysis Reveals that Lipogenesis is the Major Contributor to Brain Palmitic Acid and is Augmented in Mice fed Low Palmitic Acid Diets from Birth
Chang Gao SAHMRI, Univ. of Adelaide Australia	Donghao Wang Cornell University USA	Zhichao Zhang Univ. of California, Davis USA	Claire Berton-Carabin Wageningen University Netherlands	Mackenzie Smith Univ. of Toronto Canada

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## Closing Session

Prof. Richard Bazinet, ISSFAL Immediate Past President

## New Investigator Awards (Sponsored by BASF)

Svein-Olaf Hustvedt, BASF



## ISSFAL 2022 - Nantes, France (10-13 July)

Bernadette Delplanque, ISSFAL 2022 Congress Chair



*International Society for the  
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Special thanks to our generous Congress supporters.

### EDUCATIONAL GRANTS:



### Online Posters



### New Investigator Awards



### Congress Workshop



### Exhibitors:



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