

## Curriculum Vitae

**Pr Philippe Legrand**

**Décembre 2022**

### Etat civil :

Legrand Philippe  
Né le 18 juin 1958

### Académie d'Agriculture de France :

Elu membre correspondant en Décembre 2022  
Section VIII, Alimentation Humaine

### Situation actuelle et titre :

Professeur de Biochimie Nutrition Humaine à l'Institut Agro à Rennes, Laboratoire NuMeCan (Nutrition Métabolisme Cancer, Agro-INSERM)  
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### Formation Diplomes :

- Ingénieur ENSIA et Diplôme d'Etudes Approfondies (DEA) en Sciences Alimentaires Université de Paris VI (1982)
- Doctorat d'Etat ès Sciences, Physiologie de la Nutrition, Université Paris VI (1987)

### Carrière, fonctions exercées :

- Assistant de Biochimie à l'ENSA de Rennes (1982)
- Maître-Assistant à l'ENSA de Rennes (1987)
- Détachement à l'Université Cornell (USA) (1988-89)
- Maître de Conférences à l'ENSA de Rennes (1992)
- Professeur de Biochimie à l'ENSA de Rennes (1995)
- Directeur du laboratoire de Biochimie de l'ENSA de Rennes (1997- 2019)
- Directeur du laboratoire INRA associé (USC 2012, Dpt Alim-H) (1997-2019)

### Domaines d'Expertise :

Biochimie, Nutrition Humaine, Physiologie, Lipidologie, Acides gras, Recommandations Nutritionnelles

### Mots clés :

Nutrition, lipides, biochimie

Distinction et prix :

- Médaille Chevreul 2017

Fonction actuelle :

Professeur de Biochimie Nutrition Humaine à l'Institut Agro à Rennes, Laboratoire NuMeCan (Nutrition Métabolisme Cancer, Agro-INSERM)

Sélection de publications :

- 1 Durand G., Pascal G., Legrand P. et Gounelle De Pontanel H., 1985, Effets comparés d'huiles végétales et d'huiles de poisson sur la cholestérolémie du rat. Relations entre la composition en acides gras des lipides de la ration, celle des lipides sériques et la cholestérolémie. *Med. et Nutr.*, XXI, 391-406.
- 2 Legrand P. and Bensadoun A., 1991, Stearyl-coA desaturase activity in cultured rat hepatocytes. *Biochim. Biophys. Acta.*, 1086, 89-94.
- 3 Legrand P., Catheline D., Fichot M.C. and Lemarchal P., 1997, Inhibiting delta-9-desaturase activity impairs triacylglycerol secretion in cultured chicken hepatocytes. *J. Nutr.*, 127, 249-256.
- 4 D'Andréa S., Guillou H., Jan S., Catheline D., Thibault J.N., Bouriel M., Rioux V., and Legrand P., 2002, The same delta 6-desaturase not only acts on 18- but also on 24- carbon fatty acids in very-long-chain polyunsaturated fatty acid biosynthesis. *Biochem. J.*, 364, 49-55.
- 5 Legrand P., Catheline D., Rioux V., and Durand G., 2002, Lauric acid is desaturated to C12 :1 n-3 by hepatocytes and rat liver homogenates. *Lipids*, 37, 569-572.
- 6 Guillou H., Rioux V., Catheline D., Thibault J.N., Bouriel M., Jan S., D'Andréa S., and Legrand P., 2003, Conversion of palmitic acid (C16:0) to hexadecenoic acid (C16:1 n-10) by a rat delta 6-desaturase, *J. Lipid Res.*, 44, 450-454.
- 7 P. Legrand, B. Schmitt, J. Mourot, D. Catheline, G. Chesneau, M. Mireaux, N. Kerhoas, P. Weill, The consumption of food products from linseed-fed animals maintains erythrocyte omega-3 fatty acids in obese humans, *Lipids* 45 (2010) 11-19.
- 8 B. Choque, D. Catheline, B. Delplanque, P. Guesnet, P. Legrand (2015) Dietary Linoleic acid requirements in the presence of alpha-linolenic acid are lower than the historical 2% of energy intake value, study in rats. *Br J Nutr* 113, 1056-1068.
- 9 Andrieu S, Guyonnet S, Coley N, Cantet C, Bonnefoy M, Bordes S, Bories L, Cufi MN, Dantoine T, Dartigues JF, Desclaux F, Gabelle A, Gasnier Y, Pesce A, Sudres K, Touchon J, Robert P, Rouaud O, Legrand P, Payoux P, Caubere JP, Weiner MW, Carrié I, Ousset PJ, Vellas B, (2017) Effect of long-term n-3 polyunsaturated fatty acid supplementation with or without multidomain intervention on cognitive function in elderly adults with memory complaints (MAPT): a randomised, placebo-controlled trial. *Lancet Neurol*, 2017, 16(5), 377-389.
- 10 Drouin G, Catheline D, Guillocheau E, Gueret P, Baudry C, Le Ruyet P, Rioux V and Legrand P, (2019), Comparative effects of n-3 docosapentaenoic acid (DPA), DHA and EPA on plasmalipid parameters, oxidative status and fatty acid tissue composition in rats. *J Nutr Biochem*, 63, 186-196.

- 11 Marchix J, Catheline D, Duby C, Boulier-Monthean N, Boissel F, Pedrono F and P Legrand (2020) Interactive effects of maternal and weaning high linoleic acid intake on hepatic lipid metabolism, oxylipins profile and hepatic steatosis in offspring. *J. Nutr. Biochem.* 75, 108241.

Short « Bio » :

PhD in Nutritional Biochemistry from University of Paris in 1987 and post-doc at Cornell University (USA) in the Division of Nutritional Sciences. He is Professor and chairman of the laboratory of Biochemistry and Human Nutrition in the Agronomic University of Rennes (Agrocampus). For more than 30 years, he performs research on fundamental aspects of fatty acid synthesis and metabolism. More precisely, he worked on the role of fatty acid desaturases showing the importance of stearic acid desaturase, showing that the conversion of poly-unsaturated n-6 and n-3 fatty acid shared the same desaturases, leading to the recommendations on the required n-6/n-3 balance in human diet. He works also since 15 years on saturated fatty acids, showing their nutritional interest and the necessary evolution to distinguish between short / middle chain / long chain saturated fatty acids. He is chairman since 1998 of the French guidelines committees for the fatty acid dietary recommendations, in the Food Safety Agency (ANSES) where he proposed a new approach for considering lipids in general, and more precisely saturated fatty acids. Author of more than 300 publications on Lipids, he recently received the CHEVREUL Medal award in Uppsala (Sweden) for his research production in the field of lipids in Nutrition. He is member of the International Society for the Study of fatty acids and Lipids (ISSFAL), member of the board of the French Nutrition Society SFN and worked several times as expert for European institutions.