Curriculum Vitae

Name: Marie Françoise ROLLAND-CACHERA

Chercheur honoraire Université Paris 13, Sorbonne Paris Cité, Equipe de Recherche en Epidémiologie Nutritionnelle (EREN), Centre d'Epidémiologie et Biostatistiques Paris Nord, Inserm (U1153), Inra (U1125), Cnam, Université Paris 5, Université Paris 7, Bobigny, France (Directeur Pr Serge Hercberg).

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Positions
- 2011-2014: Honorary Researcher, at University Paris 13, Sorbonne Paris Cité, UREN (Nutritional Epidemiology Research Unit); Inserm (U557); Inra (U1125) and Cnam, Bobigny, France
- 2000-2011: Researcher at the National Institute of Health and Medical Research (INSERM), Head of the Childhood obesity group of the INSERM Unit 557 “Nutritional Epidemiology”,
- 1991-1999: Researcher at the INSERM 290 Unit
- 1989-1990: MRC scholarship: Institute of Child Health London
- 1974-1989: Researcher in the Nutrition Department at INSERM

Education
1978: Doctorate in Biological Sciences (PhD). Specialty: Nutrition (University Paris VII)
1971: Diplôme d'Etudes Approfondies in Nutrition (Master of Science). Specialty: Cellular Nutrition (University Paris VI)
1970: Maîtrise de Sciences en Physiologie (University Paris VI).

Grants
Medical Research Council 1990; INSERM 1993 for the French longitudinal study; Nutrition in adolescents 1999 (Contrat INSERM/INRA n° 4M404D); Benjamin Delessert Institute Grant for the « ELANCE study » 2005.

Awards
RONAC (Rôle Nutritionnel des Aliments Céréaliers) 1981, Nutrasweet 1999, Benjamin Delessert 2004

Professional Service

I. Participation in International Research Projects
- European Childhood Obesity Group (ECOG): Prevalence of childhood obesity in various countries.
- Childhood Obesity: Early Programming by Infant Nutrition. Project Number: QLK1-2001-00389. Program “Quality of Life and Management of Living Resources”
- Early Nutrition Programming Project. Program Food Quality and Safety Priority of the Sixth Framework for Research and Technical Development (FOOD-CT-2005-007036).

II. Consulting
- World health organization (WHO), consulting for: Physical Status: the use and interpretation of Anthropometry (WHO Technical Report on the Assessment of Nutritional status 1995)

- International Obesity Task Force (IOTF), consulting for the international definition of Childhood Obesity (1997).
- Working group for the Recommendations for the Diagnosis, Prevention and Treatment of Obesity in France (1998)
- Executive Committee of the International Association for Human Auxology
- INSERM collective Expertise for Childhood Obesity (2000)
- High French Committee of Health report HAS 2000
- The National Agency for the Accreditation in Health Assessment (ANAES), 2001
- INSERM working group for Health Education for Adolescents, 2003
- National Technical Group of orientation of the Loi de Programmation de Santé Publique (2003).
- Working group for the Health Ministry for the Programme National Nutrition Santé (PNNS)
- International Life Science Institute (ILSI): Workshop: Nutrition in children and Adolescents in Europe: what is the scientific basis? 2003
- INSERM Scientific Commission (CSS3 Nutrition)
- Proposals for preserving the health of children and adolescents, INSERM, 2003
- International Life Sciences Institute (ILSI). ILSI Europe Task Force on weight management in Public Health. Brussels 2003.
- The National Agency for the Accreditation in Health Assessment (ANAES), 2004, Care for Childhood Obesity
- Working group Conseil National de l'Alimentation (CNA): Actions for Preventing infant and child obesity. May 2004
- Working group:"Weight status development and nutrition » for the French Health booklet Direction générale de la Santé (DGS), Ministry of Health and Social protection, 2004-2005.
- Working group (WHO) for the new WHO child growth standards, Messagne, Italy, 2007
- WHO Regional Office for Europe: Lifestyle strategies for Primary Care for the prevention of overweight and obesity; Geneva
- Working group of the M de Onis, C Garza, AW Onyango and comité de nutrition de la société française de pédiatrie for the use of the WHO standards in France
- Agence d'évaluation de la recherche et de l'enseignement supérieur (AERES), Evaluation de l'EA 2694 janvier 2009, Lille (Faculté de Médecine, Pôle formation à Loos)
- Research Group on Obesity at the CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico), Brazil 2004-2007.
-The French Programme National Nutrition Santé (PNNS) for the Ministery of Health
-Expertise (ANAES): « Prise en charge de l'Obésité de l'Enfant », Direction Générale de la Santé (DGS).
- Working group of the ELFE 20 y follow-up cohort project (from 2006).
- Woking group for the use of the new WHO standards for in France (Inserm CESP : U1018) initiated by the Direction Générale de la Santé (depuis 2011).
- Member of the scientific Advisory Board (SAB) for the interdisciplinary research initiative Governing Obesity (GO) Copenhague, Danemark, 2014-2018

III. Participation in Peer Review

Acta Paediatr, Am J Clin Nutr, Am J Hum Biol, Ann Hum Biol (Editorial Board), Archives de Pédiatrie, BMC Pediatrics, Eur J Clin Nutr, Int J Obesity, J Pediatr Gastroenterol Nutr, Obes Research, J Paediatr, Br Nutr J, Int J Pediatr Obesity, J Pediatr

IV. Membership in Professional Societies

European Childhood Obesity group (ECOG)
Association Française d'Etudes et de Recherches sur l'obésité (AFERO)
Institut Français pour la Nutrition (IFN)
European Anthropological Association (EAA)
Association Française pour la nutrition (AFN)
Association des Epidémiologistes de langue Française (ADELF)

V. Committee Leadership Positions and Activities

Vice president of the European Childhood Obesity Group (ECOG) from 2008-2011.
Congress organisation and scientific committees in 12 meetings: Journées d'Obesité Infantile (JOI):
Member of the Executive Committee of the International Association for Human Auxology
Member of the Scientific Advisory Board in Governing Obesity (Dennemark).

VI. International Scientific Collaborations

Medical Research Council, Cambridge (Pr TJ Cole), Institute of Child Health, London (Pr Michael Preece), Hospital San Rafaele, Milan, (Dr P Brambilla), Universidad Autonoma, Madrid (Pr Consuelo Prado), University School of Medicine, Ohio (Pr C Chumlea), Universidade Federal de Santa Catalina, Brazil (Pr. MA Altenburg de Assis), Laboratoire Alnuts, (Pr Merkancha, Constantine, Algeria), Collaboration with Belgium, Italy, Poland, Spain in the Early Programming by Infant Nutrition European project.

Teaching Experience and Student Supervision

Teaching:

- Master 2 Nutrition Humaine et Santé Publique, Université. Paris 13, Bobigny.
- Institut Supérieur de l'Alimentation (ISA), Société Scientifique d'Hygiène alimentaire, formation professionnelle continue, Epidémiologie Nutrition
- Formation des professionnels de la santé : Education Nutritionnelle, CNAM
- Master in Medicine and Dietetics
- Universidad National Autonoma de Mexico. Epidemiologia de la obesidad infantil
- Séminaire international croissance et alimentation de l'enfant. Laboratoire Alnuts, Campus Tidjani Haddam, Université Mentouri, Constantine.
- Formation Continue CIIA. Centre de Recherche INRA – Jouy-en-Josas
- Teaching to pediatricians in Argentina (Roche Laboratories) 2000.
- Ecole Polytechnique Lassalle Beauvais
- Master Sciences de la Vie et de la Santé (Public Health). ISPED - Université Victor Segalen Bordeaux 2
- Master 2 Nutrition et gestion alimentaire, Faculté des Sciences, Université Libanaise, Beyrouth Lebanon

Student supervision: DEA, Masters, Doctoral Thesis, Jury Habilitation à diriger des recherches (HDR), Post-Doctorate.

Research interests and experience

My main field of research is the epidemiology of childhood obesity: assessment (body composition), determinants, treatment and prevention.
I started investigating the problem of childhood obesity in the early eighties. In 1982, I validated the use of the Body Mass Index (BMI) in children and published the first BMI growth charts (Am J Clin Nutr, 1982). I participated in the WHO document, WHO (1995) on Physical status, initiating the use of BMI charts to assess weight categories in children.
In 1984, I developed the concept of "Adiposity rebound" (Am J Clin Nutr, 1984) as an indicator predicting the future risk of obesity, which is widely used nowadays.
In 1989-1990, I worked in collaboration with Pr TJ Cole at the Institute of Child Health (London), and built growth charts using the LMS method (Eur J Clin Nutr, 1991).
Based on the Jelliffe formula, in collaboration with the research team of Pr Chiumello in Milan, I validated a new, simpler and more accurate index of Arm Fat and Muscle Areas for children (Am J Clin Nutr, 1997) also applicable in adults (Int J Obes, 2005).
I investigated the effect of various dietary treatments in obese adolescents, showing no advantage of high protein diets. The secondary objective was to examine the factors associated with success and failure of treatment. An early adiposity rebound and maternal obesity were associated with relapse.
In 1985, I initiated the ELANCE longitudinal study (20 years follow up), to identify the factors responsible for an early adiposity rebound and found an association between excess protein intake and an early adiposity rebound. The analysis up to adult age showed that early fat restrictions were associated with high body fat and high serum leptin concentration at adult age suggesting early programming of leptin resistance. The results of this study demonstrated the nutrient imbalance of the infant diet (high protein low fat) and stimulated a large number of studies in this area.

I am presently involved in a number of epidemiological studies on the prevalence of childhood obesity in France and other countries (Europe, Brazil, Algeria). I am responsible for the anthropometric aspects in various studies, in France and Europe, such as the EU Childhood Obesity Program (CHOP).

The originality of my research is to investigate the association between environmental factors (nutrition, physical activity) and body composition and health, on the basis of long follow-up including a large variety of parameters.

VIIII. Publications
76 publications in peer review journals (http://www.ncbi.nlm.nih.gov/pubmed?term=rolland-cachera)

List of main publications:

Rolland-Cachera MF, Sempé M, Guilloud-Bataille M, Patois E Péquignot-Guggenbuhl F, Fautrad V. Adiposity indices in children. ***Am J Clin Nutr*** 1982, 36:178-84.

Rolland-Cachera MF, Deheeger M, Bellisle F, Sempé M, Guilloud-Bataille M., Patois, E. Adiposity rebound in children: a simple indicator for predicting obesity. ***Am J Clin Nutr*** 1984 39:129-35

Rolland-Cachera MF and Bellisle F. No correlation between adiposity and food intake. Why are working class children fatter? ***Am J Clin Nutr*** 1986, 44:779-787.

Rolland-Cachera MF, Deheeger M, Guilloud-Bataille M, Avons P, Patois E, Sempé M. Tracking the development of adiposity from one month of age to adulthood. ***Annals of Human Biology*** 1987;14:219-29.

Rolland-Cachera MF, Bellisle F, Péquignot F, Guilloud-Bataille M, Vinit F. Adiposity and food intake in young children: the environmental challenge to individual susceptibility. ***British Medical Journal***, 1988,276, 1037-38.

Bellisle F, Rolland-Cachera MF, Deheeger M, Guilloud-Bataille M. Obesity and Food Intake in children: Evidence for a Rôle of Metabolic and Behavioral Daily Rhythms. ***Appetite*** 1988,11:111-118.

Rolland-Cachera MF, Bellisle F, Sempé M. The prediction in boys and girls of the Weight/Height2 index and various skinfolds in adults: a two-decade follow-up study. ***Int J Obesity*** 1989, 13:305-11.

Rolland-Cachera MF, Bellisle F, Péquignot, Deheeger M, Sempé M. Influence of body fat distribution during childhood on body fat distribution in adulthood. ***Int J Obesity*** 1990,14:473-481.

Rolland-Cachera MF, Bellisle F, Tichet J, Guilloud-Bataille M, Vol S, Péquignot G. Relationship between adiposity and food intake:an example of pseudo-contradictory results obtained in case-control versus between-populations studies. ***Int J Epidemiol*** 1990;19:571-7

Rolland-Cachera MF, Bellisle F. Timing weight-control measures in obese children. ***The Lancet*** 1990;335 (8694):918.

Rolland-Cachera MF, Cole TJ, Sempé M, Tichet J, Rossignol C, Charraud A. Body Mass Index variations : centiles from birth to 87 years. ***Eur J Clin Nutr*** 1991;45:13-21.

Rolland-Cachera MF. Assessment of obesity in children. ***Nutrition Research*** 1993;13:95-108.

Rolland-Cachera MF. Body composition at adolescence: methods, limitations and determinants. ***Hormone Research*** 1993,39(3):25-40.

Rolland-Cachera MF. Onset of Obesity assessed from the weight/stature2 curve in children: the need for a clear definition. ***Int J Obesity*** 1993;17:245-246.

Committee report. Defining Childhood obesity: the relative body mass index (BMI). ***Acta Pediatrica*** 1995, 84, 961-963.

Rolland-Cachera MF, Deheeger M, Akrout M, Bellisle F. Influence of macronutrients on adiposity development: a follow up study of nutrition and growth from 10 months to 8 years of age***. Int J Obesity*** 1995;19:573-578.

Deheeger, M., Akrout A., Bellisle F., Rossignol C., Rolland-Cachera MF. Individual patterns of food intake development in children: a 10 months to 8 years of age follow-up study of nutrition and growth. ***Physiol & Behav*** 1996, 59: 403-407.

Rolland-Cachera MF, Deheeger M, Bellisle F. Nutrient balance an android body fat distribution: why not a role for proteins? ***Am J Clin Nutr*** 1996, 64 : 663-64.

Deheeger M, Rolland-Cachera MF, Fontvieille AM. Physical activity and body composition in 10-year-old children : linkages with nutritional intake. ***Int J Obesity*** 1997, 21: 372-379.

Rolland-Cachera MF, Brambilla P, Manzoni P, Akrout M, Del Maschio A, Chiumello G. A new anthropometric index, validated by magnetic resonance imaging (MRI), to assess body composition. ***Am J Clin Nutr*** 1997, 65: 1709-1713.

Parizkova J & Rolland-Cachera MF. High protein intake early in life as a predisposition for later obesity and further health risks. ***Nutrition*** 1997,13:818-9.

Rolland-Cachera MF, Deheeger M, Bellisle F. Increasing prevalence of obesity among 18-year-old males in Sweden: evidence for early determinents. ***Acta Paediatrica*** 1999;88:365-367.

Bellisle F and Rolland-Cachera MF. Three consecutive (1993, 1995, 1997) surveys of food intake, nutritional attitudes and knowledge, and lifestyle in 1000 French children aged 9-11 years. ***J Hum Nutr Dietet*** 2000;13:101-111.

Rolland-Cachera MF, Bellisle F, Deheeger M. Nutritional status and food intake in adolescents living in Western Europe. ***Eur J Clin Nutr*** *2*000;54:S41-S46.

Brambilla P, Rolland-Cachera MF, Testolin C, Briend A, Salvatoni A, Testolin G, Chiumello G. Lean mass of children in various nutritional states. Comparison between dual-energy X-ray absorptiometry and anthropometry. ***Ann N Y Acad Sci*** 2000;904:433-6.

Papadimitriou A, Preece MA, Rolland-Cachera MF, Stanhope R. The anabolic steroid oxandrolone increases muscle mass in prepubertal boys with contitutional delay of growth. ***J Pediatr Endocrinol Metab*** 2001;14:725-7.

Rolland-Cachera MF, Deheeger M, Bellisle. Early adiposity rebound is not associated with energy or fat intake in infancy. ***Pediatrics*** 2001;108:218-9.

Bellisle F, Rolland-Cachera MF. How sugar containing drinks might increase adiposity in children. ***The Lancet*** 2001;17:490-491.

Deheeger M, Bellisle F, Rolland-Cachera MF. The French longitudinal study of growth and nutrition: data in adolescent males and females. ***J Human Nutr & Dietetics*** *2002;15:429-38.*

Rolland-Cachera MF, Castetbon K, Arnault N, Bellisle F, Romano MC, Lehingue Y, Frelut ML, Hercberg S. Body Mass Index in 7 to 9 year-old French children: frequency of obesity, overweight, and thinness. ***Int J Obesity*** 2002;26:1610-1616.

Rolland-Cachera MF, Thibault H, Souberbielle JC, Soulié D, Carbonel P, Deheeger M, Roinsol D, Longueville E, Bellisle, Serog P. Massive obesity in adolescents: dietary interventions and behaviours associated with weight regain at 2 years follow-up. ***Int J Obesity*** 2004; 28:514-9.

Rolland-Cachera MF, Brambilla P. Reference body composition and anthropometry. ***Int J Obesity*** **2005;29(8):1010.**

Rolland-Cachera MF. Rate of growth in early life. A predictor of later life? ***Adv Exp Med Biol*** 2005;569:35-39.

de Assis MAA, Rolland-Cachera MF, Grosseman S, de Vasconcelos FAG, Luna ME, Calvo MC, Barros MVG, Pires MM, Bellisle F. Obesity, overweight and thinness in schoolchildren of the city of Florianópolis, Southern Brazil. ***Eur J Clin Nutr*** 2005 ;59:1015-21.

Rolland-Cachera MF, Deheeger M, Maillot M, Bellisle F. Early adiposity rebound: causes and consequences for obesity in children and adults. ***Int J Obesity*** 2006;30:S11-S17.

de Assis MAA, Rolland-Cachera MF, de Vasconcelos FA, Bellisle F, Conde W, Calvo M, Grosseman S, Ireton MJ, Luna M. Central adiposity in Brazilian school children aged 7 to 10 years. ***British Journal of Nutrition***, 2007;97:799-805

Rolland-Cachera MF, Péneau S, Bellisle F. Metabolic syndrome definition in children: a focus on the different stages of growth***. Int J Obes*** (Lond) 2007;31(11):1760.

Bellisle F, Rolland-Cachera MF . Three consecutive (1993, 1995, 1997) surveys of food intake, nutritional attitudes and knowledge, and lifestyle in 1000 French children, aged 9-11 years. ***J Hum Nutr Diet*** 2007;20(3):241-51.

Péneau S, Thibault H, Meless D, Soulié D, Carbonel P, Roinsol D, Longueville E, Sérog P, Deheeger M, Bellisle F, Maurice-Tison S, Rolland-Cachera MF. Anthropometric and behavioral patterns associated with weight maintenance after an obesity treatment in adolescents. ***The Journal of Pediatrics*** 2008;152(5):678-84.

El Taguri A, Rolland-Cachera MF, Mahmud SM, Elmrzougi N, Abdel MA, Betilmal I, Lenoir G. Nutritional status of under-five children in Libya: a national population-based survey. ***Libyan J Med*** 2008;3:6-10.

Péneau S, Salanave B, Maillard-Teyssier L, Rolland-Cachera MF, Vergnaud AC, Méjean C, Czernichow S, Castetbon K, Vol S, Tichet J, Hercberg S. Prevalence of overweight in 6- to 15-year-old children in central/western France from 1996 to 2006: trends toward stabilization. ***Int J Obesity*** (Lond). 2009;33:401-7.

Salanave B, Péneau S, Rolland-Cachera MF, Hercberg S, Castetbon K. Stabilization of overweight prevalence in French children between 2000 and 2007and 2007 in France. ***Int J Pediatr Obes*** 2009;4(2):66-72

Koletzko B, von Kries R, Closa Monasterolo R, Escribano Subías J, Scaglioni S, Giovannini M, Beyer J, Demmelmair H, Gruszfeld D, Dobrzanska A, Sengier A, Langhendries JP, Rolland Cachera MF, Grote V, for the European Childhood Obesity Trial Study Group. Lower protein in infant formula is associated with lower weight up to age two y: a randomized clinical trial. ***Am J Clin Nutr*** 2009; 89:1836-45

Péneau S, Thibault H, Rolland-Cachera MF. Massively obese adolescents were of normal weight at the age of adiposity rebound ***Obesity*** 2009;17:1309-10.

El Taguri A, Besmar F, Abdel Monem A, Betilmal I, Ricour C, Rolland-Cachera MF. Stunting is a major risk factor for overweight: results from national surveys in 5 Arab countries. ***East Mediterr Health J***. 2009;15(3):549-62.

de Onis M, Garza C, Onyango AW, Rolland-Cachera MF; le Comité de nutrition de la Société française de pédiatrie. WHO growth standards for infants and young children. ***Arch Pediatr***. 2009;16(1):47-53.

Koletzko B, von Kries R, Monasterolo RC, Subías JE, Scaglioni S, Giovannini M, Beyer J, Demmelmair H, Anton B, Gruszfeld D, Dobrzanska A, Sengier A, Langhendries JP, Cachera MF, Grote V; European Childhood Obesity Trial Study Group. Infant feeding and later obesity risk. ***Adv Exp Med Biol***. 2009;646:15-29.

Koletzko B, von Kries R, Closa Monasterolo R, Escribano Subías J, Scaglioni S, Giovannini M, Beyer J, Demmelmair H, Gruszfeld D, Dobrzanska A, Sengier A, Langhendries JP, Rolland Cachera MF, Grote V. Can infant feeding choices modulate later obesity risk? ***Am J Clin Nutr*** 2009;89:1502S-1508

Rolland-Cachera MF, Péneau S. Interpretation of the use of the new WHO growth standards. ***Arch Pediatr*** 2009;16:737-68.

Thibault H, Meless D, Carriere C, Baine M, Saubusse E, Castetbon K, Rolland-Cachera MF, Maurice-Tison S. Early screening criteria for children at risk of overweight ***Arch Pediatr*** 2010 ;17 :466-473.

Rolland-Cachera MF, Péneau S. Stabilization in the prevalence of childhood obesity: a role for early nutrition. ***Int J Obesity*** (Lond) 2010;34:1524-5.

Thibault H, Castetbon K, Rolland-Cachera MF, Girardet JP. Why and how to use the new body mass index curves for children. ***Arch Pediatr***. 2010;17(12):1709-15.

Péneau S, Rouchaud A, Rolland-Cachera MF, Arnault N, Hercberg S, Castetbon K. Body size and growth from birth to 2 years and risk of overweight at 7-9 years. ***Int J Pediatr Obes*** 2011;6:e162-9.

Péneau S, Salanave B, Rolland-Cachera MF, Hercberg S, Castetbon K. Correlates of sedentary behavior in 7 to 9-year-old French children are dependent on maternal weight status. ***Int J Obes*** (Lond). 2011;35(7):907-15.

Rolland-Cachera MF, Péneau S. Assessment of weight gain: variations according to the reference used. ***Am J Clin Nutr*** 2011;94(6 Suppl):1794S-1798S

Rolland-Cachera MF. Childhood obesity: current definitions and recommendations for their use. ***Int J Pediatr Obes*** 2011;6(5-6):325-31.

Rolland-Cachera MF. Towards a simplified definition of childhood obesity? A focus on the extended IOTF references. ***Pediatr Obes***. 2012;7(4):259-60.

Rolland-Cachera MF, Péneau S. Growth trajectories associated with adult obesity. ***World Rev Nutr Diet***. 2013;106:127-34.

Rolland-Cachera MF, Maillot M, Deheeger M, Souberbielle JC, Péneau S, Hercberg S. Association of nutrition in early life with body fat and serum leptin at adult age. ***Int J Obes*** (Lond). 2013;37:1116-22.

Péneau S, Hercberg S, Rolland-Cachera. Breast-Feeding, Early Nutrition, and Adult Body Fat. ***The Journal of Pediatrics*** (in press).