



INSTITUT  
PAUL  
BOCUSE

École de Management  
Hôtellerie  
Restauration  
& Arts Culinaires

CENTRE  
DE  
RECHERCHE

Professional Seminars of the Institut Paul Bocuse Research Centre

## Satiety and eating behavior: Concepts and methods

Dr. France Bellisle

September 5<sup>th</sup> 2013

Lyon, France



### Program

*This one-day workshop is dedicated to share published knowledge on the role of satiety on eating behavior and to discuss methodologies for satiety measurements.*

*The day combines plenary talks presenting synthesis of scientific papers, case studies exercises and practical demonstrations.*

CENTRE DE RECHERCHE DE L'INSTITUT PAUL BOCUSE

ASSOCIATION LOI 1901 - N° SIRET 500 693 957 00010 - TVA INTRACOMMUNAUTAIRE FR23 500 693 957 - CODE APE : 9499Z

CHÂTEAU DU VIVIER - 69130 ÉCULLY - FRANCE

TEL. +33 (0)4 72 18 02 20 - FAX +33 (0)4 72 18 54 69 - recherche@institutpaulbocuse.com - www.institutpaulbocuse.com

## Context and objectives of the seminar

The world-wide epidemiology of obesity and nutrition-associated health problems has stimulated interest in the potential causes of overeating. In recent decades scientists of many disciplines have investigated not only the characteristics of foods that might lead to excessive intake but also the reasons why some individuals seem unable to limit their energy intake to reasonable amounts. Control mechanisms have been identified as determining factors of the daily intake, among which some stimulate intake (hunger, social facilitation, etc.) while others are inhibitory and limit intake. Satiety is one such inhibitory mechanism that occurs at the end of meals and should inhibit the desire to eat for hours until the return of hunger. The food industry has shown interest in this concept and claims of “enhanced satiety” have appeared in the marketing of many traditional or newly developed foods.

During this seminar, we will examine the concept of satiety and look at its underlying mechanisms: physiological and sensory, but also cognitive, psychological, social. The various methods used in scientific research to measure satiety and its effects on intake will be described. Finally a series of practical exercises will allow participants to understand how satiety acts in the daily motivation to eat and how foods that enhance satiety can contribute to a moderation of food intake.

## Speakers

**France Bellisle** is an internationally known expert in the field of eating behavior. Following a degree in experimental psychology (McGill and Concordia Universities, Montreal), France Bellisle worked at the College de France in Paris in the laboratory of Jacques Le Magnen. She obtained both a Doctorate Degree (1980) and a State Doctorate Degree (1984) from the University of Paris. From 1982 until 2009, she worked in French National Research Institutes (CNRS, INRA).

She developed original research in the field of human ingestive behaviours. Her research interests covered all types of determinants of food and fluid intake in human consumers, including psychological, sensory and metabolic factors as well as environmental influences.

She has published over 200 articles (original data and reviews) in international peer-reviewed journals and contributed to several books. She is a member of many international scientific societies. She was a deputy editor of the British Journal of Nutrition for six years and participates in editorial boards of many French and international scientific journals. She is now an adjunct professor at Laval university, Quebec. She is a member of the Scientific Board of the Institut Paul Bocuse Research Center.

**Julie-Anne Nazare** is the scientific coordinator of CENS, Centre Européen pour la Nutrition et la Santé, and is associate researcher at CarMEN Laboratory in Lyon. With the Centre de Recherche en Nutrition Humaine Rhône-Alpes, her research interests have involved the effects of postprandial metabolic kinetics on energy metabolism and satiety, and on the link between food quality and cardiometabolic risk profile.

**Agnès Giboreau** is the head manager of Research of the Institut Paul Bocuse. She dedicates her research to sensory perception and affective judgment in real context and more specifically regarding food and beverages consumed out of home.

***Did you know ?** The Institut Paul Bocuse Research Center is involved in the European Center for Nutrition and Health - CENS, presided by Martine Laville, a consortium of scientists and doctors, associating public bodies and industrial partners to study the economical and social issues linked to nutrition and health. To know more: [www.cens-nutrition.com](http://www.cens-nutrition.com)*

## Program *(this program may be subject to minor adjustments)*

### Thursday 5<sup>th</sup> 2013

8:30 *Welcome and coffee*

9:00 Introduction of participants

9:00 **1. General introduction**

Definitions – satiety, satiation, hunger...; Presentation of mechanisms; Historical and contemporary perspectives.

10:00 **2. Determinants of satiety related to the food**

2A. Nutritional composition; Reduced fat /sugar food; Energy and Volume, Sensory Specific Satiety...

2B. A case study on SSS in real meal context (A. Giboreau, Inst. P. Bocuse).

11:00 *Break and exercises*

11:30 **3. Other determinants**

3A. Related to context: social stimulation, time, distracters...

3B. Related to subjects: individual differences, pathologies.

12:30 *End of the morning session*

12:45 *Lunch at F&B restaurant, Institut Paul Bocuse*

14:00 **4. How to measure satiety ?**

4A. Classical approach.

4B. Subjective approach.

4C. Temporal approach.

4D. A case study on meal fractioning and consequences (JA. Nazarre, CENS).

15:30 *Break*

16:00 **5. Exercises**

5A. Discussion on morning exercises.

5B. Working groups on questions brought by participants (each participant will send in advance a specific question or study he/she wishes to discuss with the group).

5C. Example of research / applied questions will be raised. Participants will work together to propose an adequate methodology. Proposal will be discussed to reach consensual recommendations.

17h30 *Questions and Discussion*

18h *Farewell drink - End of the workshop*

18h15 **Optional visit of the Institut Paul Bocuse**

## Attendance

This seminar is targeted mainly at R&D and marketing professionals interested in innovative methods for the measure of consumer judgment and or product evaluation. While the context of the seminar at the Institut Paul Bocuse may call in priority for professionals from the food, beverage or foodservice industry, the seminar is open, more widely, to professionals and academics from both the private and public sectors, including the medical ones.

## Organization

**Date:** September 5<sup>th</sup>, 2013  
**Official language:** English  
**Location:** Institut Paul Bocuse Research Center Ecully (Lyon), France  
**Fees:** 650 €  
[covering registration, coffee breaks, reprints of the presented material, lunch]  
**Deadline for pre-registration:** **July 31<sup>st</sup>, 2013** **[the number of participants is limited]**

**Contact and queries:** [recherche@institutpaulbocuse.com](mailto:recherche@institutpaulbocuse.com)

**Accommodation** - List of possible hotels:

- Campanile Ecully [www.campanile.fr/ecully](http://www.campanile.fr/ecully)
- Cool and Bed, 32 quai Arloing 69009 Lyon [www.coolandbed.com](http://www.coolandbed.com)
- Resid' Hôtel Lyon Lamartine [www.residhotel.com/lyon-lamartine.html](http://www.residhotel.com/lyon-lamartine.html)
- Holiday Inn Lyon Vaise [www.holidayinn.com/hotels/fr/fr/lyon/lysvv/hoteldetail](http://www.holidayinn.com/hotels/fr/fr/lyon/lysvv/hoteldetail)
- Ibis Lyon Perrache [www.ibishotel.com/fr/hotel-2751-ibis-lyon-centre-perrache/index.shtml](http://www.ibishotel.com/fr/hotel-2751-ibis-lyon-centre-perrache/index.shtml)
- Hôtel Le Royal [www.mgallery.com/Lyon](http://www.mgallery.com/Lyon)  
(Hotel school of the Institut Paul Bocuse - ask us for partnership fare)

## The Institut Paul Bocuse professional seminars

*Located in Ecully, next to Lyon, the Institut Paul Bocuse offers both undergraduate and graduate programs aimed at training future professionals in the fields of culinary arts, hospitality and foodservice management. The Research Centre opened its doors in 2008, with the purpose of training young researchers and exploring the many scientific challenges pertaining to the areas of expertise of the Institut. At the interface between university and industry, the research projects are conducted from a multidisciplinary perspective, focusing on the study of choices, usages, and perceptions in order to investigate the link between man and food in the contexts of culinary arts, hospitality and foodservice. The Institut Paul Bocuse Research Center aims at better understanding the pleasure of eating in real contexts. Its experimental platform comprises a modular restaurant and kitchen. Its original in situ approach on meal experiences is part of EnoLL, the European network of Living Labs.*

*The Professional Seminars of the Research Centre are an opportunity to connect the industrial and academic worlds by providing professionals up-to-date knowledge of the most innovative scientific approach and practical methods.*

## Next seminar

**Date:** September 27<sup>th</sup> 2013  
**Topic:** Experimental Economics applied to Food Studies  
**Key speaker:** Pr. Bernard Ruffieux, GAEL