

## LIFESTYLE MEDICINE IN LATIN AMERICA & THE CARIBBEAN PREVENTION OF NCD'S

February 23-25, 2024 Willemstad, Curação

# Abstracts & Faculty Biographies for February 25

(Last Update Febr 7, 2024)



#### Abstract & Biography Dr. Fitzroy J. Henry

## Hidden nutritional challenges in combatting obesity in the Caribbean

Dr. Fitzroy J. Henry, Professor Public Health Nutrition, University of Technology, Jamaica

The silent escalating epidemic of obesity is the underlying cause of most deaths in the Caribbean. If action is not taken to curb our increasingly overweight populations the resultant



burden of NCDs will overwhelm our health systems and ultimately retard our overall health and economic development. To effectively combat obesity, not only the driving forces but also the hidden challenges need to be clearly identified and acted upon. The paper will elaborate data that highlight some technical, behavioral, economic, and trading obstacles preventing substantial reductions in the prevalence of obesity. The conclusion is that obesity reduction will more likely come from structural and policy related changes to the environment than from medical interventions targeted at the individual. The paper presents key policy options that could substantially reduce obesity in the Caribbean and elsewhere.

#### **Biography**

Professor Fitzroy Henry served 17 Caribbean countries for 18 years as the Past-Director of The Caribbean Food and Nutrition Institute (PAHO/WHO). After graduating from the University of London he worked as a researcher, lecturer, author, and consultant on 5 continents. He has published more than 150 peer-reviewed articles and has published 4 books.



#### Abstract & Biography Ms. Hedda Phillips-Boyce

The Barbados School Nutrition Policy: The Journey Hedda Phillips-Boyce

Barbados has been experiencing an exponential rise in overweight and obesity among school-aged children because of the obesogenic food environment and the decline in physical activity. Research reveals that 1 child out of every 3 is overweight. As a result of this, medical professionals and educators in Barbados are very concerned about the physical, social, and emotional effects of overweight among school-aged



children. There is also concern about the potential decline of the economic and non-economic affairs of the country.

To assist in addressing these problems, in 2021, the Ministry of Health and Wellness, in collaboration with the Ministry of Education, Technological and Vocational Training, commissioned the Pan American Health Organization to assist in creating a Barbados School Nutrition Policy. A multi-sectoral approach was used to garner information to create the policy, and canteen concessionaires, vendors, principals, students, and parents were sensitized about the policy.

The overall goal of the Barbados School Nutrition Policy is to create healthy school environments that enhance student learning and are conducive to the development of healthy lifelong eating and activity behaviours through a multisectoral and integrated approach.

The goal and objectives of the policy will be realized through proposed policy actions organized within a framework of six interrelated policy themes based on the WHO school policy framework. The six broad thematic areas for action are:

- Food Services Environment
- School Curriculum
- Physical Activity Environment
- School Health and Nutrition Services
- Health Promotion and the School Community

The policy was officially implemented in April 2023 using a phased approach. Nursery, primary and secondary schools are expected to comply with the Barbados School Nutrition Policy. There are several formal and informal strategies being used to change the food and physical environment in schools, as well as robust stakeholder involvement.

#### **Biography**

Hedda Phillips-Boyce has been an educator for over thirty-six years and has taught Food and Nutrition for most of those years. She has a passion for food and nutrition and how it relates to health and has had this passion from the time she was a teenager at secondary school. So, her natural progression was to further her tertiary education in this subject.



#### Abstract & Biography Dr. Fernanda Kroker-Lobos

## **Experimental Nutritional Interventions in Rural Guatemala:** Findings from the INCAP longitudinal Study

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The INCAP longitudinal Study is the longest cohort followed since birth in low and middleincome countries, including 2,392 participants from four rural communities in eastern Guatemala. Participants were beneficiaries of a nutritional supplementation intervention trial during the period from 1969 to 1977 and who in the last follow-ups (2015-2017) were men and women aged between 42 and 57 years. During the intervention trial, communities were randomized to receive either two types of supplements: (1) an energy- and protein-rich gruel called "atole" or (2) a low-calorie and nonprotein drink called "fresco". In addition to the nutritional intervention, a health education program and primary health-care assistance were provided, particularly aimed to mothers and young children (from conception to 7 years). To date, this study has had 7 important follow-ups over 50 years. The rigor with which the INCAP Longitudinal Study was implemented has generated strong and consistent evidence to support the need to invest in nutrition, health, and childcare during the first 1000 days of life (from conception to 2 years) to achieve better childhood development, physical growth, motor and mental development, well-being, and productivity, both inter- and transgenerational, generalizable to many populations worldwide. The INCAP longitudinal study has contributed to a consensus in the international community that the first 1000 days of life are a critical "window of opportunity" for nutrition interventions, with long-term impacts on human capital. More recently, evidence showed that improved nutrition in early life (first 1000 days) reduced the risk of diabetes by near 50% but increased the risk of overweight and obesity in middle adulthood (37-56y). Future research is warranted to understand the underlying mechanisms that drive these opposite associations. Between 2024-2026, a new follow-up will explore the consequences of early life nutrition and levels and changes on socioeconomic, mental health and physical health outcomes in mature adulthood (47-64y).

#### **Biography**

Dr Fernanda Kroker-Lobos is a nutritional epidemiologist, trained at the National Institute of Public Health of Mexico and Emory University, Atlanta. She is the coordinator of the INCAP Research Center for the Prevention of Chronic Diseases at the Institute of Nutrition of Central America and Panama (CIIPEC-INCAP). Her interests are food policy interventions, food environments and systems, and prevention of cardiometabolic risk factors over the life course.

https://www.incap.int/ciipec/index.php/es/quix-es/346-maria-fernanda-kroker-lobos-es



#### Abstract & Biography Dr. Camila Corvalán

#### **Food Labelling and School Nutrition in Chile**

Camila Corvalán¹, Marcela Reyes¹, Teresa Correa², Francesca Dillman-Carpentier³, Fernanda Mediano⁴, Lindsey Smith-Taillie⁵ 1. CIAPEC, Institute of Nutrition and Food Technology (INTA), University of Chile, Chile

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In June 2019, Chile completed the implementation of the Chilean Food Labelling and Marketing Law, one of the most comprehensive policies to date to improve children's food environment. The regulation includes the use of warning label on unhealthy food products, comprehensive marketing regulations, and several school restrictions to promote healthier school environments. We have reported positive food environment and behavioral changes after initial implementation of the law; however, it is important to assess whether these effects remained on the long-term. In the current talk, we will present results of the full implementation of the regulation. Using descriptive, before- and after-analyses, and difference-in-difference models, we will assess the impact of the regulation on food environment aspects such as the presence of warning labels on the food supply, marketing in TV of unhealthy products, presence of unhealthy foods in school environment, as well as in consumers' (attitudes towards food warning labelling, understanding of warning labels, use of information for making purchases, and dietary intake) and food industries' responses (discourses, food reformulation, food prices, salaries, and wages). We will discuss some of the strengths and limitations of our findings from a methodological and public policy perspective. We will end by discussing future improvement of the regulation and the need of applying complementary actions for improving diets.

#### **Biography**

Camila Corvalán is Master in Public Health and PhD in Nutrition. She is Associate Professor of the Institute of Nutrition and Food Technology of the University of Chile. She is also Director and principal investigator of the Center for Research in Food Environments and Prevention of Nutrition-Related Chronic Diseases, CIAPEC.



## **Abstract & Biography Professor Juan Rivera Dommarco**

The Mexican experience with the use of taxes for reducing the intake of sugar-sweetened beverages

Juan Rivera Dommarco and Arantxa Colchero, Instituto Nacional de Salud Pública

Excess body weight (overweight and obesity) is among the highest in the world in Mexico. To address this public health problem, a tool kit of polices to improve the food environment (taxes, school food guidelines, front of pack labelling and marketing regulations) have been implemented in combination with education to promote healthy choices, such as dietary guidelines.



Pigouvian taxes are designed to reduce negative externalities in the presence of market failures. Mexico was one of the first countries that implemented a Pigouvian tax to sugar-sweetened beverages (SSBs) beverages. Following the Mexican experience in 2013-15, more than 60 countries or cities in the world are implementing Pigouvian taxes to SSBs. The process that led to the tax approval required strategic partnership of key actors who generated and compiled evidence about the potential health benefits of a tax and disseminated this evidence to critical stakeholders and to the public. The National Public Health Institute (INSP) generated local evidence and compiled evidence in the literature that justified the implementation of the tax; likewise, using the evidence from INSP, advocacy organizations raised awareness among the public and fostered public demand for the tax, while lobbying organizations informed Congress members about the health, social and economic benefits of taxing SSBs.

A first proposal, supported by INSP, other research institutions and civil society, came from an opposition party senator who agreed to champion a 2 peso per liter SSB tax (20% of price); however, the approved proposal (a \$1 peso per liter tax) was a compromise proposed by the executive, whose party had the majority in Congress. The tax has been implemented since 2014.

We evaluated tax effects using a commercial dataset which estimated purchases of taxed and untaxed beverages before and after the tax implementation, adjusting for previous trends (2012-13). Compared with predicted (counterfactual) purchases based on past trends, post-tax purchases of taxed beverages showed an average reduction of 7.6% over 2014-15. An increase in purchases of water and other non-taxed beverages was also documented. Similar results were found in a study using household purchases at the national level. Higher reductions were found among households of low socioeconomic status, among those consuming higher amounts, in households with children and adolescents and among urban dwellers. Larger reductions were found in a study relying on a before-after tax implementation. We also published evidence discarding negative economic effects. Our study was a proof of concept showing that Pigouvian taxes on SSBs are effective in reducing purchases and intake of the taxed product, that SSB substitutes were healthy, and that substantial revenue was generated that could be used for obesity prevention.

#### Biography

Dr. Juan Rivera Dommarco is a Senior Professor and former General Past-Director (2017-2022) of the National Institute of Public Health (INSP) in México. He was the founding Director of the Center for Nutrition and Health at INSP (2002-2017). He is a Professor of



Nutrition at the Mexican School of Public Health housed at INSP and at the Rolling School of Public Health at Emory University, a Distinguished Fellow at the George Institute for Global Health in Australia. He is a member of the Mexican National Academy of Medicine and the National Academy of Sciences and of the Latin American Society of Nutrition, of which he was president (2015-2018). He serves at the IANPHI Executive Board as treasurer, at the Board of the Global Alliance for Improved Nutrition (GAIN), at the Member of the EAT-Lancet Commission 2.0 and is a Fellow of the American Society of Nutrition.

His research interests include the epidemiology of malnutrition in all its forms, birth cohort studies focusing on risk factors for malnutrition, the generation of evidence for the design of policy actions for the prevention of malnutrition in all its forms and the evaluation of nutrition policy. He is the author of more than 645 scientific publications and has given more than 800 presentations. His research has been used as the scientific basis for the design or modification of large-scale programs and policies in Mexico aimed at the prevention of undernutrition and obesity, such as the Conditional Cash Transfer PROSPERA, the taxation of sugar-sweetened beverages and other food environment regulations. He has participated in the evaluation of several nutrition programs and policies in Mexico.



#### **Abstract & Biography Professor Jaap Seidell**

## **Overweight in Poverty Areas and Among Immigrants in the Netherlands**

Jaap Seidell, Vrije Universiteit Amsterdam

#### Introduction:

Overweight and obesity have become pressing public health issues worldwide, with various factors contributing to their prevalence. In the Netherlands, the intersection of poverty and immigration has been identified as a significant factor influencing the rates of overweight among certain populations. This essay explores the complex relationship between

socioeconomic status, immigration, and overweight in the Netherlands.



#### Overweight in Poverty Areas:

Poverty and its associated challenges often create an environment conducive to unhealthy lifestyles and dietary habits. In the Netherlands, individuals living in poverty-stricken areas face a higher risk of being overweight due to limited access to nutritious food options, lower educational attainment, and fewer opportunities for physical activity. The affordability and availability of processed and calorie-dense foods in such areas contribute to an increased consumption of unhealthy diets.

Moreover, individuals in poverty may experience heightened stress levels, leading to emotional eating and a reliance on inexpensive but less nutritious food options. The lack of recreational spaces and safe environments for physical activity in these areas further exacerbates the issue, creating a cycle of limited resources and unhealthy behaviors that contribute to higher rates of overweight.

#### Immigrants and Overweight:

The immigrant population in the Netherlands faces unique challenges that contribute to higher rates of overweight. Immigrants often encounter difficulties in adapting to a new culture, including changes in dietary patterns and lifestyle. The acculturation process may lead to the adoption of less healthy eating habits, such as an increased intake of processed foods and reduced consumption of traditional, more nutritious foods.

Language barriers and limited access to culturally appropriate healthcare information also pose challenges for immigrants in managing their health effectively. Additionally, the stress of migration and potential discrimination may contribute to unhealthy coping mechanisms, including overeating and sedentary behaviors, further increasing the risk of overweight.

#### Intersectionality:

The intersection of poverty and immigration amplifies the challenges faced by certain communities in the Netherlands. Immigrants residing in poverty-stricken areas encounter a compounded set of barriers that significantly impact their health outcomes. The complex interplay between socioeconomic factors and cultural adaptation creates a unique set of circumstances that must be addressed through targeted interventions.

#### Addressing the Issue:

To combat overweight in poverty areas and among immigrants, a multi-faceted approach is essential. Community-based initiatives that focus on improving access to affordable and



nutritious food, creating safe spaces for physical activity, and providing culturally sensitive health education are crucial. Policymakers should also consider addressing broader socioeconomic inequalities to create an environment conducive to healthy living for all.

#### Conclusion:

The issue of overweight in poverty areas and among immigrants in the Netherlands is a complex and multifaceted challenge that requires comprehensive strategies. Recognizing the interplay between socioeconomic status, immigration, and health is crucial for developing effective interventions that promote healthy behaviors and address the root causes of overweight in these populations. By implementing targeted policies and community-based programs, the Netherlands can work towards creating a more equitable and healthier society for all its residents.

#### **Biography**

Prof. Jacob C. Seidell was appointed as full professor (2002-present) and head of the Institute for Health Sciences (2003-2013) at the VU University in Amsterdam. Since 2013 he is appointed as 'university professor' at the VU University and co-director of Sarphati Amsterdam, a multidisciplinary research institute that focuses on healthy development of children through healthier lifestyles and environments.

He obtained his MSc (1983) and PhD (1986) at the Department of Human Nutrition at the University of Wageningen, The Netherlands. He was awarded a senior research fellowship by the Royal Academy of Arts and Sciences (KNAW) for the period 1988-1992. From 1992-2002 he was head of the Department for Chronic Diseases Epidemiology at the National Institute for Public Health and the Environment. He also worked in Sweden, the United States and Canada.

His research focuses on the understanding of determinants of food choice and the effectiveness of (policy) interventions in the context of the prevention and management of non-communicable diseases in general and of obesity in particular. He (co)-authored well over 500 scientific papers and chapters in books on these topics, but he also writes columns and op-eds for leading national newspapers and he published four books on nutrition for the general public. He chaired numerous committees which produced dietary guidelines for the general population as well as for people with diabetes or obesity and he was a frequent consultant to the World Health Organization on these matters.

He has served as president-elect and as Past-president (1992-2000) of the European Association for the Study of Obesity and was past-editor-in-chief of the "European Journal of Clinical Nutrition" (1996-2006) and "Public Health Nutrition" (2006-2014). He is a member of the Royal Academy of Arts and Sciences (KNAW) and the Royal Holland Society of Sciences and Humanities (KHMW).



#### Abstract & Biography Dr. Simón Barquera

## The need of a comprehensive and balanced approach for obesity prevention and control

Simón Barquera, Director, Nutrition and Health Research Center, National Institute of Public Health, México. President Elect, World Obesity Federation

Obesity and NCDs have increased worldwide during the last four decades. In Mexico, we first identified the rapid increase in obesity during the year 2000, when the prevalence nearly doubled in a 10-year period. The National Institute of Public



Health (INSP) monitored the trends and participated in diverse initiatives related to prevention and control. For over a decade, we contributed to developing primary healthcare units with multidisciplinary teams to treat non-communicable diseases (NCDs), launch national campaigns, and design guidelines for healthy diets and physical activity. After several attempts, a soda and junk-food tax were approved by the government in 2014 and its impact was evaluated over the next two years. Recently, the country set in motion different policies to improve the food environment and promote healthier choices among the population, such as updated national food quidelines, front of pack warning labels for junk food, and marketing restrictions. During this period, significant opposition from multinational food industry companies was documented. These actions exemplify a clear need for strong mechanisms to prevent and prohibit industry interference, as well as to identify and manage conflicts of interest. Currently, an important body of evidence from national and international studies has found positive impacts from the implemented actions. Nonetheless, new barriers and challenges are constantly emerging. Lack of resources, diverse protest movements, sophisticated industry interference, novel forms of marketing, and silo fights are some of the new problems that have to be analyzed in order to develop a response that protects public health achievements while new interventions are developed. In addition to preventive measures, nutrition counseling, primary healthcare-integrated services, school interventions and multidisciplinary treatment teams are part of the necessary health services response and policy toolkit to achieve better results in the next decades. The presentation will provide an overview of endeavors in Mexico and pose some recommendations for other countries experiencing similar epidemiological and nutrition transitions.

#### **Biography**

Simon Barquera is a MD with a PhD from Tufts University in Boston, USA. He is a member of the Mexican National Academy of Medicine, Mexican National Academy of Sciences, and author of more than 364 scientific publications. He has participated in the development and evaluation of policies for obesity and NCD prevention and control, for which he has been recognized with the 18 Martinson Lectureship (University of Minnesota, 2018), the Michael and Susan Dell Lectureship in child health (2017), the Tufts University Nutrition Impact Award (2016), the Soper award for excellence in health literature (Pan American Health Organization, 2003) and the "Dr. Gerardo Varela" public Health Merit Award (Government of Mexico, 2020). He currently serves as Director of the Center for Research in Nutrition and Health of the National Institute of Public Health and recently he became, president elect of the World Obesity Federation.



#### Abstract & Biography dr. Ana V. Diez Roux

Social determinants of non-communicable disease Ana Diez Roux, Drexel Urban Health Collaborative, Philadelphia, PA, USA

This presentation will review existing evidence on the social determinants of NCDs with a special focus on Latin America and the Caribbean. Social determinants will be defined broadly to encompass individual level, neighborhood level and city or regional factors. We will discuss the impact of social inequalities as well as the role of socially patterned built, physical and natural environments. The presentation will also



review policy implications of these relationships as well as the need for additional evidence. Evidence presented will include select results from SALURBAL (Salud Urbana en America Latina), an international collaborative partnership on the drivers of urban health in Latin America.

#### Biography

Ana V. Diez Roux, MD, PHD, MPH, is Director of the Drexel Urban Health Collaborative, Philadelphia, PA, USA. From 2014 to 2023 she was the Dean of the Dornsife School of Public Health. Dr. Diez Roux is internationally known for her research on the social determinants of population health and the study of how neighborhood physical and social environments affect health.



#### **Abstract & Biography Professor Hanno Pijl**

## Lifestyle medicine for the prevention and treatment of type 2 diabetes mellitus

Hanno Pijl, Leiden University Medical Center, Leiden, The Netherlands

Essentially, type 2 diabetes is an inflammatory disease, just like many other non-communicable disorders. Iterative assaults on cellular integrity by adverse lifestyle habits trigger chronic low-grade inflammation, which is accompanied by insulin resistance, hyperglycemia and dyslipidemia. Thus, lifestyle



intervention is required to tackle the disease at its roots. In my lecture, I will briefly summarize our current knowledge of the role of the 7 most destructive lifestyle components in the aetiology of type 2 diabetes. I will also address the way forward in regard to treatment in terms of lifestyle advice and the way to offer it in clinical practice. Finally, if time allows, I will show a short video of a patient journey, illustrating the power of lifestyle intervention as compared to drug treatment in the management of type 2 diabetes.

#### Biography

Hanno Pijl is an internist-endocrinologist at the Leiden University Medical Center (LUMC). He is professor of Diabetology at the same institution since 2007. He practices internal medicine and co-authored over 300 papers in peer-reviewed scientific journals, primarily related to European expert in obesity and type 2 diabetes. He has been a member of the Dutch Health Council (standing committee on nutrition) from 2008-2016. He is former president (2014-2017) of the Dutch Obesity Partnership, an umbrella organization connecting all stakeholders involved in obesity care in the Netherlands. He is co-founder and member of the Management Team of the Dutch Innovation center for Lifestyle Medicine (www.lifestyle4health.nl), a joint effort of LUMC and the Dutch Organisation of Applied Science (TNO), focusing on lifestyle interventions in health care. His main scientific interest concerns the myriad relationships between our way of life and the pandemic of chronic disease that we are faced with.



#### Abstract & Biography Professor Beatriz D. Schaan, MD, PhD

#### **Pre-Diabetes in Adolescents**

Beatriz D. Schaan, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil

Prediabetes is a condition that precedes diabetes and serves as a warning to prevent the progression to diabetes. It is characterized by na elevation of fasting blood glucose above 99 mg/dL up to 126 mg/dL. This diagnosis can also be made using HbA1c.

During the oral glucose tolerance test people with glucose level in the second hour above 140 mg/dL are also considered to have prediabetes. HbA1c higher than 5.7% and lower than 6.5% is also diagnostic of prediabetes. These diagnoses are increasing, especially in people with overweight and obesity. Prediabetes in adolescents is mainly due to the presence of overweight and sedentalism.



In Brazil the prevalence of adolescents between 12 and 17 years who has obesity is 8,4%, and who has overweight is 17,1%, according to the Study of Cardiovascular Risk in Adolescents (ERICA), a large national school-based, cross-sectional study conducted in the country. Among obese adolescents, 29.7% have elevated levels of HbA1c, compared to 19.3% in normal weight students and 19.7% in overweight adolescents. This is probably due to poor diet, especially excessive ultra-processed foods, poor diet quality and sugary drinks. Regarding prediabetes in adolescents, it is important to prevent weight gain through better dietary habits, more physical activity and less sedentary time. It is recommended physical activity as well as good nutrition, especially in patient with family history of type 2 diabetes. Pharmacological treatment with metformin may also be considered.

#### Biography

Professor Beatriz D'Agord Schaan, MD, PhD.

Full Professor of Medicine at the Department of Internal Medicine at the Universidade Federal do Rio Grande do Sul (UFRGS), and a researcher in the Graduate Program in Endocrinology at UFRGS.

Together with her research groups, she conducted clinical research and population studies on diabetes, exercise, obesity, metabolic syndrome, among others. She has supervised dozens of graduate students and produced more than 200 publications with her group. She has also contributed to the Brazilian Diabetes Guidelines.

She was a Visiting Professor at the George Institute for Global Health/Imperial College London in the last semester of 2023.

She is currently Supervisor of Medical Residency in Endocrinology and Metabolism at the Hospital de Clinicas de Porto Alegre.

She is also the Editor-in-Chief of the Archives of Endocrinology & Metabolism since 2022.



#### Abstract & Biography Dr. Mónica Manrique

**Obesity and Diabetes: Diabesity** 

Mónica Manrique, Chile

The global prevalence of obesity is increasing rapidly with an exponential rise in the incidence of type 2 diabetes mellitus in recent years. The strong interlink between obesity and diabetes has generated a phenomenon called Diabesity. In pathophysiological terms, it is due to insulin resistance, a common condition in patients with obesity, which can contribute to the development of type 2 diabetes. Excess fat, especially at



the visceral level, triggers a chronic inflammatory response that affects the function of insulin. In addition, there are complications such as metabolic-associated fatty liver disease and obstructive sleep apnea, arterial hypertension, stroke, coronary heart disease, chronic kidney disease, osteoarthritis, and cancer, among others.

These alterations and diseases result in a decrease in quality of life, loss of productive years, increase in complications and other social and family alterations, and even death. Therefore, it is necessary that the phenomenon be addressed jointly and comprehensively under the approach of a multidisciplinary team. The role of non-pharmacological, measures, such as dietary adjustments, exercise interventions, pharmacological treatment and bariatric procedures should also be emphasized.

The concept of Diabesity is relatively new; it refers to the simultaneous presence of two major comorbidities, Obesity and Type 2 Diabetes, it has repercussions on the individual on a physical, psychological, economic, and social level. And from a collective perspective, it has serious repercussions on health systems and society. This concept must continue to be studied and understood to generate a holistic and comprehensive approach for the prevention and care of the complications of the phenomenon.

#### **Biography**

DR. MÓNICA MANRIQUE:

Medical Doctor – University of Chile (1988)

Master in Medical Sciences with a mention in Clinical Nutrition – University of Chile (1995) Postgraduate stay at Harvard University, USA (1992 – 1993) and Columbia University, USA (1994)

Diploma in Eating Disorder – P. Catholic University of Chile (2005)

Diploma in Positive Psychology, Enhancing People Institute (2010)

Director and founding member of the Chilean Association of Clinical Nutrition, Obesity and Metabolism (2007-2011)

Director Chilean Chapter Global Alliance against Obesity and Related Diseases (2008-2011) Head of the 1st Obesity Program in Chile, Nutrition Department. P. Catholic University of Chile (1993-2012)

President Obesity Study Group, Chile Medical Society (2014 to date)

Head of Clinical Nutrition Unit and Obesity Program, MEDS La Dehesa Clinic (2016 to date)