



12<sup>th</sup> World Congress on  
**Advances and Innovations in Dementia**

September 17-18, 2018 Singapore

**Workshops**  
Day 1

12<sup>th</sup> World Congress on  
**ADVANCES AND INNOVATIONS IN DEMENTIA**  
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## Christel Goh

Founder of Play Huahee, Singapore

### Early intervention through localized games

The World Alzheimer's Report 2011 recommends that more randomized controlled trials are required to promote evidence-based intervention in early stage dementia. There is a lack of relevant localized games and activities that can be used as early intervention tools to engage seniors in Singapore. Having experienced the pain of dementia at home, the author created card games comprising localized items that seniors would be familiar with. It started off as a memory matching card game deck. Her card games received a positive response from hospitals and senior facilities because seniors were able to relate to the familiar items featured on the card games. This invokes nostalgia and positive memories. They added more game plays such as charades, Snap, Pictionary, storytelling, coloring and puzzles. The author is planning to explore research on the effectiveness of early intervention through games on seniors, having personally experienced the positive impact of early intervention in her grandmother's situation. Her grandma showed early warning signs of dementia a few years ago, family then embarked on a journey of early intervention where they encouraged lifestyle changes in her grandmother through food, exercise and activities. The author is hoping to continue to bring the message of early intervention to other communities through card games.

### Biography

Christel Goh is the Founder of Play Huahee, Singapore. Play Huahee is a social movement that aims to encourage communities to embark on early intervention in their seniors' conditions. She hopes to encourage this through creating localized and relevant games for seniors. Play Huahee's games are currently used as tools to engage seniors by organizations such as National University Hospital, Khoo Teck Phuat Hospital, Monfort Care.

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## **Scientific Tracks & Abstracts** **Day 1**

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## ADVANCES AND INNOVATIONS IN DEMENTIA

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**How to improve caregiving self-efficacy on managing disruptive behavior of dementia client? ARCT study on an evidence-based psychosocial intervention****Wai-Kit Tang**

Castle Peak Hospital, Hong Kong

**Background:** Caregivers (CGs) of People with Dementia (PWD) often experience role overload and a high level of perceived burden during caregiving. The American Psychiatric Association has recommended using a psychosocial intervention as a quality practice to enhance the Self-Efficacy (SE) of CGs in dementia caregiving.

**Methodology:** Critically compare the program design through a literature review and adopting Bandura's (1997) theoretical framework of self-efficacy, an evidence-based psychosocial intervention for dementia caregiver (PSI-CG) was worked out which aimed at enhancing the caregiving SE and reduce the perceived burden of the CG. The intervention focused on providing four types of information to bolster the caregivers' self-efficacy. They include mastery experience, vicarious learning, verbal persuasion and physiological and psychological feedback. The intervention consisted of three face-to-face group sessions that included knowledge and skills training, group sharing and relaxation exercises. After each group session, a telephone call was provided to each CG by the program assistant for knowledge checking and consolidating strengths and gains in the previous sessions. After validation on the intervention, an RCT study was conducted to examine the effectiveness. A total of 115 CG of PWD were recruited while follow-up visit in the Mental Health Centre in Hong Kong. Upon three intervention groups, block randomization and a block size of eight was used to randomize the CGs to receive either the PSI-CG (n=56) or the control intervention (n=59) by using a ratio of 1:1.

**Results & Conclusion:** The GEE results indicated the intervention effectiveness that compared with the control group who received the information booklet, those who received the PSI-CG had significantly greater improvements in overall caregiving SE ( $p=0.045$ ), particularly on the SE in handling disruptive behaviors ( $p=0.005$ ). The particular favorable effect on handling disturbing symptoms may be related to the education on the communication skills by modifying the CG mindset towards PWD behaviors, and peer-led discussions over symptom management. For further improvements, future study may consider adding components, for example, a social break and additional booster sessions, to facilitate peer support among the CG.

**Biography**

Wai-Kit Tang is currently working as a Psychogeriatric Nurse in Castle Peak Hospital, Hong Kong. Focusing on clinical nursing, his researching topics were mainly about dementia and late-life depression. Having articles about psychosocial interventions for dementia caregivers in several international journals, he also studies on clinical risk management.

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### **Innovative technologies for dementia care in the home**

**Alessandra Doolan and Shang-Yih Chen**  
University of Sydney, Australia

In Australia, there are more than 400,000 individuals living with dementia. The number of people with dementia is estimated to increase to more than 500,000 by 2025 and over 1,000,000 by 2050. Dementia is a major cause of disability in older Australians; nearly 95% of individuals living with dementia are aged 65 years or older. The estimated economic burden of dementia in Australia costs around \$14 billion (2016) and is expected to increase more than double by 2050. Currently, around 75% of Australians with dementia live in the community. Projections suggest future demand for care will not be met. Innovative technologies are increasing the possibility for people with dementia to remain living independently at home. Evidence shows that being able to stay at home and performing similar routines prior to diagnosis can slow the progression of dementia. However, as the disorder progresses, it is important that the dementia sufferer has access to in-home services and support from doctors, allied health services, carers and family. Home modifications to improve mobility and accessibility may become necessary. Despite the high costs associated to living at home for people with dementia, the cost is 85% less on average compared to the costs for those living in residential aged care setting. With the growing burden of dementia in Australia, there is a crucial need to develop a comprehensive holistic national approach to improving the quality of care and support for people with dementia living in the community. Health policies are to be implemented to increase accessibility to safe and cost-effective technologies that improve the quality of life of people with dementia to continue living independently in the community.

#### **Biography**

Alessandra Doolan is an independent Healthcare Consultant specializing in health economics, advocacy and policy. She has obtained her PhD in Clinical Research and Master of Public Health at the University of Sydney, majoring in Health Economics and Policy Research. She has over 20 years of experience in healthcare in the public and private sectors including the areas of community care, allied health and hospital quality management systems. She has founded the Health and Technology Advisory Group, working with various organizations in improving healthcare access for patients and communities. She holds an honorary title at the Sydney Medical School, The University of Sydney. She is recently appointed to the role of a Specialist Advisor in the areas of medical devices, vaccines and biologicals with the Therapeutic Goods Administration (TGA), the regulatory body for therapeutic goods in Australia and a Division of the Australian Government Department of Health.

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### **Autologous neural cell therapy reverses a dementia syndrome in older pet dogs**

**Thomas Duncan**  
University of Sydney, Australia

**D**ementia currently affects 50 million individuals worldwide, with projections of 130 million by the year 2050. Due to limited progress in medical management dementia remains an incurable and fatal disorder. The underlying clinic-pathologic issue in early Alzheimer's dementia is mass neuronal loss in the hippocampus. Repopulation by exogenous neural precursors is a promising therapeutic strategy but has yet to reach clinical trial. One of the major challenges has been poor translational fidelity between rodents and humans. We have therefore focused on Canine Cognitive Dysfunction (CCD), a neurodegenerative disorder in older pet dogs with many parallels to human Alzheimer's and dementia. Dogs with CCD display amnesia, spatial disorientation and agitation and express neurodegeneration alongside Alzheimer pathology. To date, we have produced >50 genetically non-modified neural precursor cell lines from adult canine skin, termed SKNs. These are highly homogenous in culture, rate-limited by virtue of low number of maximal cell doublings and differentiate almost exclusively into neurons, endogenously up-regulating neuronal specification genes. We show that canine SKN transplantation into the aged rodent hippocampus is safe and leads to widespread neuronal engraftment. Donor cells become electro-physiologically active and integrate synaptically into host neuronal circuitry. Moreover, we observe rescue of hippocampal-dependent place recognition memory deficits, with exploration ratio restored to levels equivalent with young rats. Accordingly, we are now assessing the safety and efficacy of our SKN therapy in a world-first therapeutic trial to treat dementia in a higher-order animal model. We can report that 18-months following MRI-guided intra-hippocampal injection of autogenic SKNs, two consecutive patients demonstrate stable and clinically meaningful improvement in CCD signs, such that they are functionally cured. These results are paralleled by dramatic improvements on objective spatial memory testing. These exciting early trial results indicate that SKN therapy can, in-principle reverse a naturalistic dementia-like syndrome.

#### **Biography**

Thomas Duncan is a Postdoctoral Researcher at the University of Sydney, Australia. His background is in histology, cell biology and regenerative medicine. At the University of Sydney, he manages Australia's first Canine Brain Bank and leads research into the neuropathology of canine dementia and the development of an autologous cell therapy for human Alzheimer's disease. He is a Lecturer at the University of Sydney of Neuroscience, Regenerative Medicine and Human Anatomy and Histology.

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**Psychosocial wellbeing among family cares of persons with late on-set dementia: Home based palliative care****Sam Sangeeth G and Daniel Solomon M**  
Bishop Heber College, India

It is evident and obligatory that care runs in every aspect across life span, also significant in old ageing population with chronic diseases. Family is central to care. Home based palliative care with effect partnership with formal and informal carers are needed. Dementia is neuropsychiatric and public health problem which causes multiplicity of psychosocial vulnerabilities. The cluster of vulnerabilities will lead them to be a susceptible second patient. The aim of the study is to find the level of psychosocial wellbeing of family carers with persons with dementia in home based palliative care environment. Well-being is the appraisal of quality of life. Palliative care is designed to enhance quality of life. According to WHO, mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. Wellbeing of carers has to be fostered, to dismantle the ill-being through health promotion. The objective of the study is to know the sociodemographic details of family carers, burden, resilience, social support and family dynamics of the carers in the family utilizing home palliative care facilities. Hypothesis was constructed and tested between the variables. The researcher has used descriptive research design. The research setting was Harippad Block, kumarapuram panchayat was selected with 15 wards and sample survey was done with the carers attached with palliative services. The standardized measuring instruments used were Zarit carers burden scale, Resilience scale by Gail. M. Wagnild and Multidimensional social support scale and Macmaster Family Assessment Device. The collected data was analyzed through Statistical Package for Social Science SPSS23.

**Conclusion:** To conclude Home based palliative care services must fill the service gap in India for long term care. Psychosocial component has to be strengthened through professional mediation.

**Biography**

Sam Sangeeth G is a researcher in ageing studies hails from India. He has passion in working with psychosocial aspects of ageing, neuropsychiatric aspects of disability, rehabilitation of ageing population, non-communicable diseases in aging and family dynamics. He has experience in teaching, research and practice. He is the Reviewer of Indian Journal of Psychiatric Social Work and has national and international affiliations with professional and academic bodies. He has experience in conducting exchange programs for other university students. His current research is on psychosocial resilience on carers with persons with dementia.

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**The hidden relation, clues of autism, ADHD and depression which reveal the effective cause and cure**

**Van Duy Dao**

Hanoi University of Pharmacy, Vietnam

**Lack social skills and talk:** Language is the product of living environment - as your native language and my native language, we speak it naturally without thinking at all. We are not born with our native language, so I doubt their connection with their living environment and/or the state of mind that they cannot/don't want to learn. You can test them with Aesop fables(they do not understand), pretending game - they do not understand, interacting, communicating or persuading. They are in the low level of this. For official test: you can test them with EQ test, and Aesop stories, metaphors. All these low-level vital skills make them never feel safe, connection to the environment: it makes them stress. Over time, it makes the downward spiral that make them more and more lack of social skills and suffer more stress.

**ALL IN ONE, ONE IN ALL:** Neurologist, psychiatrist, sociologist, gastroenterologist, urologist, educators, sleep therapists, cardiologist, language therapists, educators, trainers, teachers: there is no separation in the health of heart, stomach, muscle, cognitive thinking, sleeping, hormone system: all are interdependent and under the state of mind. It is the advantages of eastern philosophy and the basic of eastern traditional medicine.

**PARETO IN HEALTH/MEDICINE:** Remember when working with the mind: irrational mind, the giant brain evolved for millions of years, illogical mind and placebo effects, neuro-plasticity, mirror neurons, self affirmation, self-talk, nocebo effects, t1/2 of all substances, taboos, rituals, religious belief, compound effects, conditioned responses, and magical adaptability, illusive mind, self healing/destroying, irrational thinking, subliminal message, marketing of luxury brand, and hysteria: what do we feed the mind of beings everyday? and what if all of these lead to negativity or positivity? maybe outliers or failures!

**5 mins of rapping can affect whole life:** 5 mins of abusing can make victims fear whole life, 1 mins of bombing, earthquake, fear, hysterical stress the killing can affect their whole life. It creates the conditioned of Fight and Flight that they can not consciously control. They rarely joy it is said by genes, So they accept it as gifts or nobles term, not diseases. Even they take more expensive medication than others. Read their behaviors, read the body language. In stress state, stress chemicals: adrenalin, noradrenalin, and cortisol will dominate the body. The effect is listed in any medical book, look closer we can see all these effects are available in kids, to some extents, the effects caused by stress

**Biography**

Dao Duy Van has completed his Pharmacist Bachelor's degree from Hanoi University of Pharmacy.

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**Day 2**

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**Suchi**

*Happiness Strategist and Laughter Coach, Singapore*

**Adopting laughter therapy to get dosage of happy hormones while having dementia: Helping to remove stress/depression and anxiety caused by a family member having Dementia**

**Statement of the Problem:** There is a lack of awareness about what happy hormones are and what can be done to get them. People tend to feel unhappy for multiple reasons and a family member having Dementia adds on Stress levels of not only the patient but the caregivers as well. Having dementia leads to a person feeling depressed and anxious in some cases.

**Methodology & Theoretical Orientation:** Dosage of happy hormones will not only make the patient feel happy but it will also have a positive impact on the recovery of the patient. Adopting Laughter therapy and getting hormones which makes one feel good will help many to recover from Dementia and depression & anxiety caused by it. . Studies have shown that a healthy lifestyle can reduce the risk of developing chronic diseases and certain types of dementia.

**Findings:** One needs to work on his/her energies using Laughter Therapy which is a positive approach for not having Depression & Anxiety related to Dementia. The therapy can be used as a Holistic way to recovery.

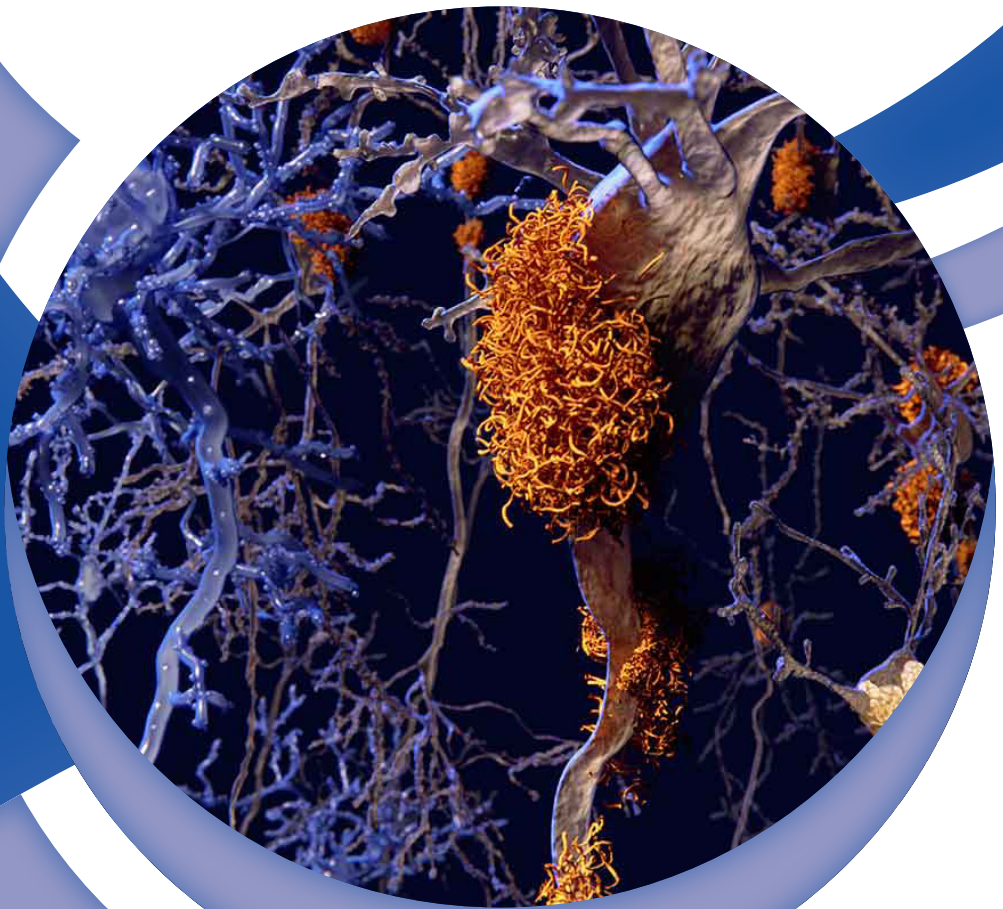
**Conclusion & Significance:** The Laughter therapy which includes ways to get the dosage of happy hormones promotes overcoming Depression & Anxiety caused by Dementia is a fun way to manage stress related to it. Repeated sessions to be conducted to remind patients that life while having Dementia or during the recovery should go beyond just seeking medical and counselling help and also include rebuilding Spiritual, Physical, Emotional, Relational and Mental health. The model has been put together from for testing in many settings including hospitals ,elderly homes and senior citizen centers. This is not a research book or paper. It is just an effort to demystify the help available for Depression & Anxiety caused by Dementia. It is an attempt to motivate and encourage people to seek help and take a simple approach to remember and work on all aspects of their recovery.

**Biography**

Suchi is an experienced International Pre School Principal/Manager who learnt laughter exercises from many coaches around the world. She then designed Laughter Therapy which is being used in many places such as hospitals and senior activity centers. She provides individual and group therapy in educational and home settings. She is a Former Manager/Trainer, now engages in building social awareness about depression and anxiety caused by dementia and the harm it brings to people, families and communities. She has been awarded by MINDS and various community clubs in recognition of her social work.

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**Day 2**

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### **Dementia and the cycle of role reversal: Always a matriarch**

**Naomi Lilly**  
Duke University, USA

**M**y grandmother is an 88-year-old African American woman with dementia. My project seeks to explore the role dementia has played within my family, specifically, how the cycle of role reversal has shaped the matriarch position my grandmother once held within my family.

**Discussion:** Topic will be facilitated by my grandmother, her children and grandchildren. Literary works include publications that focus on dementia as a symptom and dementia as it pertains to the role of caretakers. These works were used to demonstrate differences between written text and what it means to face dementia outside of text. The final project will take the form of a documentary that seeks to capture the emotions and realities my family has had to face as a result of my grandmother's condition. The documentary is different from a paper because in many ways, it serves as a case study that helps to build personality and impact. This personality and impact will ultimately help viewers paint an image of what life looks like for a person with dementia and how the conditions that are attributed to dementia, impact surrounding individuals (i.e. family).

**Conclusion:** The documentary will be guided by the recognition of a role reversal and reflections on memories before and after my grandma's condition began and continued to worsen. These memories help to allow individuals to recognize the changes dementia can have on what may be considered a person's everyday routine. These memories will also help viewers connect to the content due to the raw nature of the responses given by interviewees and the unfortunate realities dementia presents. These answers help to paint the image of a matriarch and a change in the hierarchal roles within the family at large.

#### **Biography**

Naomi Lilly is a Member of the class of Duke University 2020. She is studying African American Studies and Gender Studies and pursuing a Certificate in Documentary Studies. At Duke, she is a Member of the Penny Pilgram Cohort, the Political Chair Co-President for Duke's NAACP chapter, a Member of the Duke Deja Blue Acapella Group and a Content Creator for The Bridge (an online publication). Her academic interests include gender and racial injustice, the role of activism in today's society and the media's growing impact with issues related to social injustice(s).

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**Cardiovascular risk and mild cognitive impairment for Alzheimer's disease**Lina Maria Lopez Roa<sup>1</sup>, Giancarlos Conde<sup>2</sup>, Beatriz Miranda<sup>3</sup> and Yasmina Garcia<sup>4</sup><sup>1</sup>University of Cauca, Colombia<sup>2</sup>Universidad del Sinú, Colombia<sup>3</sup>University of Sucre, Colombia<sup>4</sup>Fundación Apoyo Alzheimer, Colombia

**Background & Aim:** The old individuals represent the fastest growing population today higher age is a risk factor for Alzheimer's disease. However exist limited information about clinical markers and biomarkers for the risk to Alzheimer's disease. The main objective of this study is to identify cardiovascular risk associated with Mild Cognitive Impairment (MCI) to Alzheimer's disease.

**Methods:** The study included a total of 202 participants. The study logistics complied with the Declaration of Helsinki. Cardiovascular risk for this study was defined as the probability of developing a cardiovascular disease within a defined period of time, such as high blood pressure, cholesterol, overweight/obesity, tobacco use, lack of physical activity and diabetes and the risk of Mild Cognitive Impairment (MCI) to Alzheimer's disease was evaluate with The Montreal Cognitive Assessment (MoCA). To determine the association between the study variables and the risk of MCI, a binary logistic regression was used for statistical analyses. All p values <0.05 were regarded as statistically significant.

**Results:** The general characteristic of the study was 202 participants of which 47.6% was women; mean age of 72±8.5 years, 97 participants with MCI risk. In general, we found a relationship tendency that exposes an increased risk of mild cognitive impairment in the elderly for overweight, lack of fruit consumption and diabetes, however these relationships were not statistically significant except for hypertension (OR: 1.42, p=0.03); while physical activity may reduce MCI risk (OR: 6.3; p=0.02), and low fat intake was a protective factor for the risk of mild cognitive impairment (OR: 0.331; P=0.04).

**Conclusions:** Physical activity and good eating habits decrease the risk of mild cognitive impairment to Alzheimer's disease in the elderly.

**Biography**

Lina Maria Lopez Roa is pursuing PhD in Biomedical Research Methodology and Public Health. He is the Professor at the Cauca University, Department of Family Medicine, attached to the research group human body movement and quality of life.

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**Meaningful measures of metabolic and appetite perturbations in dementia prevention, diagnosis and care****Artemissia-Phoebe Nifli**  
University of Crete, Greece

The increasing prevalence of dementia worldwide and the development of diagnostic tools paved the way for a more thorough investigation of the course of the disease. Due to the same reasons, the transition to the final stages has been delayed for a great fraction of subjects, while the latent character of cognitive impairment has been established, as amyloid beta and tau deposits may accumulate for decades before the onset of symptoms. Therefore, it was speculated that other factors could incite or precipitate the progression of dementia. Recent findings support the interference of metabolic impairment, yet, it is not clear how the differentiation of metabolic markers in middle age or early stage would later promote cognitive deterioration. On the other hand, weight and appetite disturbances are vast and easily quantifiable late in the trajectory of the disease. It seems possible for the non-cognitive signs to synchronize with cognitive impairment, and for hormones, oxidative capacity, mal-absorption and muscle wasting to synchronize with the ongoing depositions in the mature brain. Although it is premature to incorporate all these changes to decision-making, the cross-talk among chemosensory experience, food preferences and nutritional habits, glucose and lipid metabolism and peripheral and central neurodegeneration indicates the need for a comprehensive approach. It is also encouraging that even in late-stage dementia patients, the limited pharmacotherapy, as well as the non-pharmacological interventions may substantially improve metabolic and appetite perturbations, in spite of cognitive decline.

**Biography**

Artemissia-Phoebe Nifli is Specialized in Neurosciences and Experimental Endocrinology at the Faculty of Medicine, University of Crete and worked as a Postdoctoral Fellow at Harvard University. Besides her intermittent academic duties, she is a Principal Investigator at TRC-Thessaly, studying the biochemical and behavioral denominators of human nutrition. She has presented her work in 72 conferences and published more than 26 papers in peer-reviewed journals. She is also Member of the Reviewer Board of several acclaimed scientific journals, while she is a long-time Member of Alzheimer Hellas.

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