Nestlé Nutrition Institute Middle East

Strong Foundations for a Healthy Future

20th-23rd April, 2017

Munich – Germany

For healthcare professionals only

On Behalf of

Nestlé Nutrition Institute
Middle East

www.nestlenutrition-institute.org

we would like to welcome you to attend
Nestlé Nutrition Institute Forum:

Strong Foundations for a Healthy Future

20th-23rd April, 2017
Le Meridien Munich Hotel
Munich – Germany

General Remarks:
This invitation is personal & Nestlé Nutrition Institute will be covering only the guests' accommodation based on bed & breakfast & meals will be served as indicated in the program for invitees only.

Any expenses and extras at the hotel will be charged directly to you.

Please note that you will be asked to present a credit card upon your check-in at the hotel, so as to cover your extras consumption at the hotel.

We wish you a very successful meeting!

For healthcare professionals only

AGENDA

Friday 21st April

Time	Group	Topic
09.00-16.00	All	Beissenhoven Factory Visit: Nestle Nutrition RTF Formulas (3 hours) 2 Groups

Saturday 22nd April

Time	Group	Topic	Speaker
09.00-09.05	All	Welcome	Mohamed Khallaf
09.05-09.15	All	Introduction to the meeting	
Time	**Group**	**Topic**	**Moderator**
09.15-10.45	A	Metabolomics: A new tool to improve child nutrition and health	Olaf Uhl
	B	Childhood obesity complications: The cause & how to pause	Eslam El Baroudy
	C	Early protein intake, metabolic programming and later obesity	Atul Singhal
10.45-11.00	All	**Coffee Break**	
11.00-12.30	B	Metabolomics: A new tool to improve child nutrition and health	Olaf Uhl
	C	Childhood obesity complications: The cause & how to pause	Eslam El Baroudy
	A	Early protein intake, metabolic programming and later obesity	Atul Singhal
12.30-14.30	All	**Lunch Break**	
14.30-16.00	C	Metabolomics: A new tool to improve child nutrition and health	Olaf Uhl
	A	Childhood obesity complications: The cause & how to pause	Eslam El Baroudy
	B	Early protein intake, metabolic programming and later obesity	Atul Singhal
16.00-17.00	All	Wrap up and closing	
	All	**Dinner**	

OLAF UHL

Division of Metabolic and Nutritional Medicine,
Dr. von Hauner Children's Hospital, Univ. of Munich
Medical Centre - Klinikum d. Univ. München,
Lindwurmstr, Germany

Olaf Uhl started his academic career after the study of Analytical Chemistry at the University of Applied Sciences Magdeburg-Stendal. He developed industrial experience in pharmaceutical industry at Pfizer GmbH and Oncotec Pharma GmbH. In 2009, he joined the Division of Metabolic and Nutritional Medicine at the Dr. von Hauner Children's Hospital. He did his PhD about the determination of glycerophospholipid species by liquid chromatography coupled to mass spectrometry in human tissues. In 2013, he assumed responsibility for the mass spectrometric laboratory of the Dr. von Hauner Children's Hospital.
The collaboration in EU projects DynaHealth, MetaGrowth and EarlyNutrition facilitated the analyses of large human cross-sectional and longitudinal cohorts to investigate relevant but unidentified regulatory substrates involved in the modulation of growth and body composition. This work based upon the analyses of metabolites in human body fluids or tissues such as amino acids, non-esterified fatty acids, acylcarnitines, phospholipids and intermediates of the TCA cycle using robust high-throughput methods. Currently he establishes a core facility within the hospital of the Ludwig-Maximilians-Universität in Munich to transfer analytical knowledge into wide clinical research.

Metabolomics-
A new tool to improve child nutrition and health

Metabolomics describes the determination of a broad range of small molecules, metabolites, within a biological sample. Metabolites are potentially all small molecules up to about 1500 Da, which act as substrates, intermediates or end products of process within a biological sample. Typical sample materials in human research are blood, urine and saliva. These specimens represent different spectra of the metabolism. For instance, blood represents a broad mixture of substances including small hydrophilic metabolites to large complex lipids. Beside untargeted technical approaches like high-resolution mass spectrometry or nuclear magnetic resonance spectroscopy, targeted analysis based on high-pressure liquid chromatography coupled to triple quadrupole mass spectrometry has been shown its ability to cover a broad range of relevant metabolites such as amino acids, carbohydrates, phospholipids, nonesterified fatty acids, acylcarnitines or organic acids. The entire current metabolic profile is influenced by various factors such as diet, physical condition, stress and diseases, not only from short-term but also from long-term perspectives. Furthermore, there is not only a genetic influence as shown e.g. on fatty acid metabolism, but also epigenetic effects are suggested and might be the missing link for the “programming” hypothesis. This theory states that adverse events during pregnancy or early childhood change fetal and newborn metabolism which causes long-term health problems. Serve events like smoking during pregnancy already proofed this concept. However, even mild influences like differences in early infant feeding showed alterations in the metabolism. For example, a specific profile of elevated amino acids and their break-down products acylcarnitines were found in plasma of infants fed formula with high level of protein. Further, supplemented long-chain polyunsaturated fatty acids in infant formula were found to be incorporated into certain plasma phospholipid profile of infants and thus into cellular membrane. On the maternal side, the pre-pregnancy BMI was the strongest parameter for the variation of maternal plasma metabolites, even compared with other influencing factors such as diet, gestational weight gain, or age. Metabolic patterns of insulin resistance have been identified in young adults and sex-specific differences could also be shown. This high variability in the metabolic profile and the long list of influencing factors covers the opportunity to investigate genetic, environmental, nutritional and pathogenic influences on the metabolome and potentially provide opportunities of personalized medicine.

DR. ESLAM TAWFIK EL-BAROUDY

Consultant in Pediatric Department,
Sheikh Khalifa Medical City (SKMC),
managed by Cleveland Clinic,
Abu Dhabi, UAE.

Dr. Eslam T. El-Baroudy is a Professor and Consultant of Pediatrics at faculty of Medicine's hospitals, Cairo University, and currently works at Sheikh Khalifa Medical City (SKMC), managed by Cleveland Clinic, Abu Dhabi, UAE, where he runs the Feeding Clinic and attends to children and babies with feeding difficulties, failure to thrive & nutritional behavioural disorders. Dr. El-Baroudy is a graduate of Cairo University, where he obtained his Master degree (M.Sc.) and Doctorate of Medicine (M.D. "Clinical Ph.D.") degree in General Paediatrics. He also obtained his Paediatric Fellowship from the Royal College of Paediatrics and Child Health (FRCPCH), London (UK). Dr. El-Baroudy is an International Member of the American Academy of Paediatrics (AAP) and he is an International board certified lactation consultant (IBCLC). In addition to his long experience dealing with feeding and nutritional problems, he has an interest in diagnosis and management of allergic and asthmatic patients and a special interest in renal diseases especially of the metabolic nature. Dr. El-Baroudy has published in all these aspects in reputable journals. Finally, he is an international instructor of the Paediatric Fundamentals Critical Care Support (PFCCS) course accredited by the American Society of Critical Care Medicine (ASCCM).

Early Nutritional Programming & HMOs

Early nutrition programming is the concept which states that differences in nutritional experience at critical periods in early life, both pre- and post-natally, can programme a person's development, metabolism and health for the future. This has been well-established in animal studies and there is a large amount of data from retrospective observational studies in people that suggest that a similar effect is seen in humans.

Early nutrition programming shows that most of the differences seen in childhood may persist into adulthood.

The implications of early nutrition programming are huge - differences in risk factors for cardiovascular disease, diabetes and obesity, in immune function and allergy risk, in bone health, and in cognitive, neuro-motor and behavioural outcomes have all been seen in children. The potential for improving the health of future generations is enormous.

Early nutrition programming insights about when the critical periods are, how the effects are mediated and whether or not they can be reversed are still under continuous investigations for proper understanding the role of specific nutrients and their interactions in the maternal and infant diet on programming effects on disease and their risk factors.

Infant gut colonization begins prenatally, continues during the first 2–3 years of life, and is essential for the programming of the gastrointestinal, metabolic, neural, and immune development of the infant.

Among the all the components in human milk, such as proteins, lactose, or nucleotides, Human Milk Oligosaccharides (HMOs) are the only ones which have been proved to play an important role in the stimulation of the growth of intestinal specific bacterial species and mucosal immune system.

Human Milk Oligosaccharides (HMOs) are diverse, biologically active components and most of them are based upon lactose which is modified in the mammary gland by the attachment of monosaccharides such as fucose, N-acetylglucosamine, and/or sialic acid. Thus, complex structures with very specific linkages are built, which is the basis for the multifunctionality of HMOs.

It is now possible to produce large quantities of HMOs enabling supplementation to infant formula, with the goal of supporting the gut microbiota composition and developmental outcomes more similar to that of the breastfed infant.

PROF. ATUL SINGHAL

Professor in Paediatric Nutrition at the Institute of Child Health, University College London, Honorary Consultant Paediatrician at Great-Ormond Street Hospital, London, UK.

In 1986, Atul Singhal got his MBBS from the University of London. He earned his Diploma in Child Health in the year 1988 and became a recognized member of the Royal College of Physicians, London in the following year, 1989. He acquired the Certificate of Specialist Training in Pediatrics by 1996 and he then succeeded his Clinical Doctorate in the University of London by 1997.

Atul Singhal was an Honorary Consultant Paediatrician in Whittinghton Hospital, London from April 1998 to December 2013, alongside being the Deputy Director of MRC Childhood Centre, UCL until January 2012. From then, he moved on to become the Director of Childhood Nutritional Centre, ICH, UCL.

He has broad interests in paediatric nutrition but his research focuses on the influence of early nutrition for long-term health, the effects of nutritional interventions to reduce long-term cardiovascular risk, and nutritional interventions for obesity.

Early Protein Intake, Metabolic Programming and Later Obesity

The idea that nutrition in early life may influence, or programme, has major implications for long-term health. The strongest evidence for this concept is for the benefits of breast-feeding for long-term risk of obesity. Although the mechanisms for these effects are not known, we proposed that faster growth (upward centile crossing) as a result of relative over-nutrition in formula fed compared to breast-fed infants could adversely affect later obesity risk - the Growth Acceleration Hypothesis - (upward centile crossing for weight); a hypothesis now confirmed in >45 studies (summarized in 6 systematic reviews) including an individual-level meta-analysis in 47,661 participants from 10 cohorts.

Central to the growth acceleration hypothesis is the fact that breast-fed infants grow more slowly than those fed formula probably because of the lower protein content of breast-milk compared to cow's milk based formulas. Formula-fed infants receive on average 0.5g/kg/d greater protein than breast-fed infants which could increase later adiposity possibly by mechanisms that involve programming of hormonal factors that affect appetite regulation and adipose tissue deposition. This difference in protein intake is most marked between 3 and 12 months of age when the protein concentration of breast-milk falls rapidly. Therefore a lower protein intake in infancy that leads to slower weight gain might improve long-term health and particularly the risk of obesity - a hypothesis now confirmed in 5 randomised controlled trials.

The strength of the evidence supporting the growth acceleration hypothesis is challenging established public health practices. Professional bodies have recognized the role of faster infant weight gain in increasing the risk of long-term obesity. The WHO growth charts based on slower growing exclusively breast-fed infants are now widely used and can help in the prevention of over-feeding in infancy. Furthermore, contrary to previous medical and public opinion, promoting catch-up growth by nutritional supplementation in healthy term infants born small for gestation may not be appropriate. Finally, the benefits of a slower rate of infant weight gain as seen in breast-fed compared to formula fed infants has led to a reduction in the protein content of formulas in order to reduce the risk of over-feeding in formula-fed infants. Finally, cow's milk, a major source of excess protein for young children in richer countries, is not recommended below 12 months of age and even restricted to <500 ml/d in toddlers. The key message for healthcare professionals and parents is that 'bigger is not necessarily better'.

GENERAL INFORMATION

LOCAL TIME

GMT/UTC

+01:00 HOUR

ELECTRICAL PLUGS

ELECTRICAL CURRENT IS

220 VOLTS.

UK plug sockets used throughout Germany

WEATHER

AVERAGE TEMPERATURE IN APRIL

8°C TO 17°C

CURRENCY

THE CURRENCY IN GERMANY LIKE ALL OTHER EUROPEAN UNION STATES IS THE

EURO

€

WEBSITE

HTTP://WWW.
LEMERIDIENMUNICH.COM/

AIRPORT
PICK-UP & DROP-OFF

On Arrival: Our driver will wait at the airport after customs, holding a "**Nestlé Nutrition Institute**" sign.

On Departure: Your transportation to the airport will be ready **3 hours** before your flight time. Pick-up will be from the hotel lobby and our driver will be holding a "**Nestlé Nutrition Institute**" sign.

LANGUAGE

German &
English

ACCOMMODATION
Le Meridien Munich Hotel

Address: Bayerstrasse 41,
Munich, 80335,
Germany

INTERNATIONAL DIALING CODE

+49 (GERMANY)
89 (MUNICH)

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DETAILED SCHEDULE

THURSDAY, 20TH APRIL 2017	
15:00	Check in
FRIDAY, 21ST APRIL 2017	
06:30 – 07:45	Breakfast at the hotel at Le Potager restaurant located at Lobby
07:45-08:00	Gathering at the hotel lobby for the factory visit **First Group UAE, Kuwait, Bahrain, Lebanon & Jordan**
09:30 – 11:00	Germany factory visit
11:00	Transfer back to hotel **First Group**
09:15-09:30	Gathering at the hotel lobby for the factory visit **Second Group KSA, Oman, Qatar**
11:00 – 12:30	Germany factory visit
12:30	Transfer back to hotel **Second Group**
13:30 – 16:00	Lunch at hotel
19:30 – 19:45	Gathering at hotel to move for Offsite dinner at Augustiner Keller (walking distance)
20:00 – 22:00	Offsite dinner at Augustiner Keller restaurant
SATURDAY, 22ND APRIL 2017	
06:30 – 08:30	Breakfast at the hotel at Le Potager restaurant located at Lobby
08:30 – 09:00	Registration & welcome coffee break
09:00 – 17:00	Meeting at Elysee I&II at the Ground Floor
10:45 – 11:00	Coffee break in the foyer area
12:30 – 13:30	Lunch at Le Potager restaurant located at Lobby
15:00 – 15:15	Coffee break in the foyer area
19:30 – 21:30	Dinner at the hotel
SUNDAY, 23RD APRIL 2017	
06:30 – 10:30	Breakfast at the hotel at Le Potager restaurant located at Lobby
12:00	Check out from the hotel

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