

6th Global Symposium on **KETOGENIC THERAPIES FOR NEUROLOGICAL DISORDERS:**

*Embracing Diversity,
Global Implementation and Individualized Care*

October 5-9, 2018

International Convention Center Jeju, Jeju, Korea

Important Dates

Opening of Online Abstract Submission

March 28 (Wed.), 2018

Abstract Submission Deadline

June 15 (Fri.), 2018

Pre-registration Deadline

August 31 (Fri.), 2018



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Organizing Committee of the 6th Global Symposium on
KETOGENIC THERAPIES FOR NEUROLOGICAL DISORDERS

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Welcome Message

Dear Colleagues,

We are pleased to inform you that 6th Global Symposium on KETOGENIC THERAPIES FOR NEUROLOGICAL DISORDERS (KETO 2018) will be held in Jeju, Korea from October 5-9, 2018. Held in the Asian-Oceanian region for the first time, the symposium aims to contribute to improving the lives of people with neurological disorders and exchange scientific and clinical accomplishments under the theme of "Embracing Diversity, Global Implementation and Individualized Care".

The 6th Global Symposium on Ketogenic Therapies welcomes research scientists, pediatric and adult neurologists, epileptologists, nurses, dietitians, other allied health professionals, and trainees from every related field, with the fundamental goal of sharing up-to-date information on this rapidly expanding area of inquiry and high translational significance. To achieve such goal, scientific programs will focus on promoting collaborative research into the underlying mechanisms of metabolism-based therapies, facilitating new collaborative clinical work and clinical applications, and defining important clinical and research questions that should be pursued in the future. In addition to cutting-edge keynote and topical presentations, the symposium will include both practical workshops and rapid-fire research reviews by leading scientists.

The Organizing Committee is devoting its utmost efforts to prepare a most meaningful and enjoyable symposium, and we strongly believe that KETO 2018 will bring together hundreds of medical professionals, scientists, trainees and industry to discuss the latest advances of ketogenic therapy research and innovations.

We look forward to welcoming you all to Jeju, Korea in 2018.

Sincerely Yours,

Heung Dong Kim, MD, PhD

Chair, Organizing Committee of KETO 2018

Hoon-Chul Kang, MD, PhD

Chair, Program Committee of KETO 2018

Since the launch of The Charlie Foundation twenty-four years ago there has been an extraordinary sea of change in usage of ketogenic diet therapies. What was once a last resort for children with drug resistant seizures is now being used as a first, second or third option for many. What was once a therapy applied exclusively for people with epilepsy is today used for a variety of neurological disorders including brain tumors, autism, early onset Alzheimer's Disease among others. Perhaps most extraordinarily, what was once considered an unhealthy diet is now becoming mainstream nutrition.

For this 6th Global Symposium, the organizers have brought together a remarkable group of clinicians and researchers, all of whom are internationally recognized for their expertise in and contributions to the broad areas of dietary therapies, metabolism, epigenetics, and translational neurosciences. The current meeting represents a further watershed moment in the history of ketogenic therapies as the baton of advancing this field will be passed to a new generation of leaders and advocates in different parts of the globe.

Jim Abrahams

Executive Director – The Charlie Foundation for Ketogenic Therapies

Welcome to the 6th Global Symposium on Ketogenic Therapies for Neurological Disorders. I am particularly thrilled that this welcome is coming from Jeju, Korea.

I know that the next few days will be extremely memorable in many ways as utilisation of medical ketogenic therapies continues to grow. You will hear from many outstanding investigators, clinicians and contributors during your stay and the opportunities for discussion, collaboration and networking that will arise from this meeting will mean new projects, new research and new experts in the future.

The ketogenic diet is as important to me today as it was all those years ago when it saved Matthew's life and I created Matthew's Friends. Part of the Matthew's Friends mission is always to advocate that Ketogenic Therapies should be made available to all those who need them, wherever in the world they may be and that work still continues to this day and will continue, until the mission is complete.

It is impossible for me to put into words how truly grateful I am to Professor Helen Cross OBE and Dr Elizabeth Neal RD for their vision and dedication with their work and the clinical trial that Matthew was enrolled on. I would not like to think where he would have been today if it were not for them...that thought is truly terrifying.

Matthew's life and our family life changed forever because of a ketogenic diet, as does the lives of many thousands of his friends around the world. We know that more families are coming and we must be ready for them. I am so thankful that you are here and you will be taking so much knowledge back to your own countries, please share it with colleagues, be advocates for the diet, be proactive in getting clinics and ketogenic centres set up. Matthew's Friends will always do all we can to support that endeavour.

On behalf of all the Matthew's Friends organisation from the UK, Canada and New Zealand, have a great meeting and we look forward to welcoming you to Brighton, in the United Kingdom in 2020.

With warmest regards,

Emma Williams, MBE

Founder/CEO – Matthew's Friends Charity, Director – Matthew's Friends Clinic



Day 1 October 5 (Fri.)

Pre-congress workshop 1

13:00-15:10	Practical implementation of ketogenic therapy I	Chair(s): Eric Kossoff, Christina Bergqvist
13:00-13:40	Introduction to the KD	Eric Kossoff (Johns Hopkins University, USA)
13:40-14:20	Overview of the mechanisms of the KD	Jong Rho (University of Calgary, Canada)
14:20-15:00	Indication of the KD (epilepsy, autism, brain cancer and other neurologic disorders)	Ingrid Scheffer (University of Melbourne, Australia)
15:00-15:10	Q&A	

Pre-congress workshop 2

15:30-17:20	Practical implementation of ketogenic therapy II	Chair(s): Elizabeth Thiele, Beth Zupce-Kania
15:30-16:00	Diverse ketogenic therapies (classic, Atkins, modified Atkins, and low glycemic index treatment)	Elizabeth Thiele (Harvard Medical School, USA)
16:00-16:40	Practical dietary procedure for ketogenic therapies	Beth Zupce-Kania (The Charlie Foundation, USA) Meredith Hornbuckle (Children's Healthcare of Atlanta, USA) Lisa Vanatta (Phoenix Childrens Hospital, USA)
16:40-17:10	Management and prevention for complications of the ketogenic therapies	Joo Hee Seo (Florida Epilepsy Center, USA)
17:10-17:20	Q&A	
18:30-20:30	Welcome reception	

Day 2 October 6 (Sat.)

08:00-08:15	Welcome	Heung Dong Kim, Jong Rho, Jim Abrahams, Nancy Abrahams
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Special lecture 1

08:15-08:45	Revisiting the KD and related therapies in the modern era	Chair(s): Ingrid Scheffer Heung Dong Kim (Yonsei University, Korea)
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Main session 1

08:45-10:25	Dietary therapy for epilepsy: Recent update	Chair(s): Heung Dong Kim, Ingrid Scheffer
08:45-09:10	KD therapy and epilepsy genetics	Ingrid Scheffer (University of Melbourne, Australia)
09:10-09:35	Impaired signaling pathways in epilepsies and other diseases	Amy Brooks-Kayal (Children's Hospital Colorado, USA)
09:35-09:55	Revised recommendation of KD from international consensus	Eric Kossoff (Johns Hopkins University, USA)
09:55-10:15	Expanding KD therapy from infancy to adult	Helen Cross (University College London, UK)
10:15-10:25	Discussion	

Parallel session 1

10:40-12:00	KD therapy in epilepsy syndromes	Chair(s): Tae Sung Ko, Hirokazu Oguni
10:40-11:00	Early onset epileptic encephalopathy (EIEE, WS, etc.)	Douglas Nordli (Children's Hospital Los Angeles, USA)
11:00-11:20	Dravet syndrome	Christina Bergqvist (Children's Hospital of Philadelphia, USA)
11:20-11:40	Myoclonic-atic tonic epilepsy	Hirokazu Oguni (Tokyo Women's Medical University, Japan)
11:40-12:00	Structural epilepsy	Da Eun Jung (Ajou University, Korea)

Parallel session 2

10:40-12:00	Methods for improving KD compliance	Chair(s): Sang Ook Nam, Janak Nathan
10:40-11:00	Premade keto meals, snacks, supplements, and formulas	Pavel Klein (Mid-Atlantic Epilepsy and Sleep Center, USA)
11:00-11:20	Strategies for providing patient access to diet clinics and dietitian support	Janak Nathan (Dr Nathan's Sanjeev Clinic, India)
11:20-11:40	Psychological strategies to improve compliance	Se Hee Kim (Yonsei University, Korea)
11:40-12:00	Modified diets for adolescents and adults with intractable epilepsy	Antoaneta Balabanov (Rush University Medical Center, USA)

12:00-13:30	Lunch	
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Main session 2		
13:30-15:20	Delving into the details of ketogenic nutrition	Chair(s): Beth Zupec-Kania, Songmi Lee
13:30-13:50	An overview of micronutrients and their potential for insufficiency in KD therapies	Heidi Pfeifer (Harvard Medical Center, USA)
13:50-14:10	Supplementing with nutrients that may benefit KD therapy; vitamin D, electrolytes, carnitine and others	Denise Potter (Michigan State University, USA)
14:10-14:30	Fats and oils contribute important nutrients to ketogenic therapies	Kelly Roehl (Rush University Medical Center, USA)
14:30-14:50	Constipation, renal stones and acute illnesses on KD	Eunjo Lee (Severance Hospital, Korea)
14:50-15:10	Evidence of KD in adult	Mackenzie Cervenka (Johns Hopkins University, USA)
15:10-15:20	Discussion	
Parallel session 3		
15:40-17:20	Individualized diet therapy - choosing the right KD therapy for the right patient	Chair(s): Elizabeth Thiele, Mackenzie Cervenka
15:40-16:05	Use of the KD therapy in neonates	Lindsey Thompson (Children's Mercy Hospital, USA)
16:05-16:30	LGIT for Angelman syndrome	Elizabeth Thiele (Harvard Medical School, USA)
16:30-16:55	KD for Rett syndrome	Pi-Lien Hung (Kaohsiung Chang Gung Medical Center, Taiwan)
16:55-17:20	KD therapy for mitochondrial disorders	Young Mock Lee (Yonsei University, Korea)
Parallel session 4		
15:40-17:20	Basic research for testing KD therapies	Chair(s): Robin Williams, Byung Ho Cha
15:40-16:00	Understanding KD with rodent epilepsy models	Do-Young Kim (Barrow Neurological Institute, USA)
16:00-16:20	Yeast models move understanding of ketogenic mechanisms	Robin Williams (Royal Holloway University of London, UK)
16:20-16:40	Cellular insights into KD therapies	Simon Heales (University College London, UK)
16:40-17:00	Fatty acid for glioblastoma bioenergetics	Seok-Gu Kang (Yonsei University, Korea)
17:00-17:20	Optogenetic approaches	Eunji Cheong (Yonsei University, Korea)

Day 3 October 7 (Sun.)

Special lecture 2		Chair(s): Douglas Nordlil
08:00-08:30	Basic mechanism of KD action	Jong Rho (University of Calgary, Canada)
Main session 3		
08:30-10:10	Recent and future of clinical trials on KD in the epilepsy field	Chair(s): Stéphane Auvin, Huei-Shyong Wang
08:30-09:00	Ketogenic diets in inborn disorders of metabolism - new ways of thinking	Sabine Scholl-Bürgi (University of Innsbruck, Austria)
09:00-09:30	Clinical trial design for KD therapies - promoting international collaboration	Ki Joong Kim (Seoul National University, Korea)
09:30-10:00	Designing a KD study with gut microbiota	Se Heon Kim (Korea University, Korea)
10:00-10:10	Discussion	
Parallel session 5		
10:30-12:10	Brain-Gut inter-relationships	Chair(s): Jong Rho, Derrick Chan
10:30-10:55	What is the impact of the microbiome on brain cellular metabolism?	Jong Rho (University of Calgary, Canada)
10:55-11:20	An overview of human and model organism microbiomes	In-Geol Choi (Korea University, Korea)
11:20-11:45	Potential role of microbiota in immunity and epilepsy	Derrick Chan Wei Shih (KK Women's and Children's Hospital, Singapore)
11:45-12:10	Effects of the KD in experimental models of neurological disease	Jane Shearer (University of Calgary, Canada)
Parallel session 6		
10:30-12:10	KD therapies and sleep	Chair(s): Kristina Simeone, Kyu Young Chae
10:30-10:55	KD treatment and sleep in epilepsy	Ming-Yu Chang (Chang Gung Children's Hospital, Taiwan)
10:55-11:20	Mediterranean diet and sleep	Fabio Galvano (University of Catania, Italy)
11:20-11:45	Intermittent fasting and sleep	Hyang Woon Lee (Ewha Womans University, Korea)
11:45-12:10	Temporal effects of the KD on cardiac-respiratory pathology in a model of SUDEP	Kristina Simeone (Creighton University, USA)
12:10-13:30	Lunch	



Main session 4		
13:30-15:20	KD for status epilepticus	Chair(s): Rima Nababout, Jeehun Lee
13:30-13:55	KD therapy for super-refractory status epilepticus	Mackenzie Cervenka (Johns Hopkins University, USA)
13:55-14:20	Pearls and pitfalls for emergency KD use in pediatrics	Rima Nababout (Necker Enfants Malades Hospital, France)
14:20-14:45	Parenteral vs. enteral ketosis induction in super-refractory status epilepticus	Sirinuch Chomtho (Chulalongkorn University, Thailand)
14:45-15:10	Favorable factors for KD response in super-refractory status epilepticus	Jeehun Lee (Sungkyunkwan University, Korea)
15:10-15:20	Discussion	
Parallel session 7		
15:40-17:20	Glut1-deficiency and KD: past, presence and future	Chair(s): Jong Hee Chae, Joerg Klepper
15:40-16:00	Clinical spectrum and genetic mechanism of GLUT1-DS	Yasushi Ito (Tokyo Women's Medical University, Japan)
16:00-16:20	Have we done wrong? long term follow-up of cardiovascular risk factors in Glut1 deficiency treated with ketogenic diet therapies	Nicole Heussinger (Children's Hospital Aschaffenburg-Alzenau, Germany)
16:20-16:40	Use and potential of the modified Atkins diet in Glut1D	Jeong A Kim (Yonsei University, Korea)
16:40-17:00	The future therapy of Glut1D; triheptanoic and ketoesters	Hoon-Chul Kang (Yonsei University, Korea)
17:00-17:20	Glut1D and KD: where will we be in 2025?	Joerg Klepper (Children's Hospital Aschaffenburg-Alzenau, Germany)
Parallel session 8		
15:40-17:20	Basic research for KD therapies	Chair(s): Sookyong Koh, Ji Eun Choi
15:40-16:05	Regulation of systemic inflammation by metabolic substrates	Emily Goldberg (Yale University, USA)
16:05-16:30	Anti-inflammatory targets for epilepsy: drugs vs. diets	Sookyong Koh (Emory University, USA)
16:30-16:55	Role of KD therapy in autoimmune encephalitis	I-Jun Chou (Chang Gung Children's Hospital, Taiwan)
16:55-17:20	Clinical studies and anti-inflammatory mechanisms of diet treatments	Stéphane Auvin (Paris-Diderot University, France)
18:00-20:00	Poster rounding and discussion	

Day 4 October 8 (Mon.)

Special lecture 3		
08:00-08:30	Disease-modifying, anti-epileptogenic, and neuroprotective effects of the ketogenic diet: clinical implications	Chair(s): Manisha Patel Michael Wong (Washington University, USA)
Main session 5		
08:30-10:10	Identifying signaling pathways targeted by KD : first steps towards precision medicine	Chair(s): Manisha Patel, Michael Wong
08:30-09:00	Metabolomic identification of altered signaling pathways by KD	Manisha Patel (University of Colorado Denver, USA)
09:00-09:30	Ketone bodies as signaling molecules or PPAR-mediated signaling by the KD	Tim Simeone (Creighton University, USA)
09:30-10:00	Metabolic dysfunction underlying autism spectrum disorder and potential treatment approaches	Susan Masino (Trinity College, Hartford, USA)
10:00-10:10	Discussion	
Parallel session 9		
10:30-12:10	Expanding the use of the KD therapy	Chair(s): Sookyong Koh, Sang Ook Nam
10:30-10:50	Modified diets for better compliance, including non-traditional use	Bobbie Henry-Barron (Johns Hopkins University, USA)
10:50-11:10	KD therapy for autism spectrum disorder	Ning Cheng (University of Calgary, Canada)
11:10-11:30	KD therapy for cognitive impairment, mental retardation and Alzheimer's disease	Danna Zhu (Zhengzhou University Third Hospital, China)
11:30-11:50	KD therapy after resected pancreatic cancer	Chang Moo Kang (Yonsei University, Korea)
11:50-12:10	KD therapy for brainstem tumors	Kuang-Lin Lin (Chang Gung Children's Hospital, Taiwan)



Parallel session 10		
10:30-12:10	Expansion to Asia: bringing ketogenic therapies to our region I	Chair(s): Teik Beng Khoo, Yuwu Jiang
10:30-10:50	Multi-center control trial for KD treating West syndrome in Chinese patients	Yuwu Jiang (Peking University First Hospital, China)
10:50-11:10	China: helping build centers for excellence	Jianxiang Liao (Shenzhen Children's Hospital, China)
11:10-11:30	Indian perspective	Janak Nathan (Dr Nathan's Sanjeev Clinic, India) Suvasini Sharma (Lady Hardinge Medical College, India)
11:30-11:50	Experience of KD: Malaysian perspective	Teik Beng Khoo (Hospital Kuala Lumpur, Malaysia)
11:50-12:10	Experience with the KD in the Philippines	Benilda Sanchez-Gan (Philippine General Hospital, Philippines)
12:10-13:40	Lunch	
Parallel session 11		
13:30-15:00	Diverse targets with mTOR pathway disorders for diet therapies	Chair(s): Michael Wong, Hoon-Chul Kang
13:30-14:00	The mTOR pathway as a target for dietary therapy in epilepsy and related disorders	Michael Wong (Washington University, USA)
14:00-14:30	GATOR complex genes as a potential therapeutic targets of diet therapy	Stéphanie Baulac (Pitié-Salpêtrière Hospital, France)
14:30-15:00	Diet therapy for the management of epilepsy associated to toropathies	Hoon-Chul Kang (Yonsei University, Korea)
Parallel session 12		
13:30-14:45	Expansion to Asia: bringing ketogenic therapies to our region II	Chair(s): Shahnaz Ibrahim, Soon Hak Kwon
13:30-13:45	Experience of the KD: the Pakistani perspective	Shahnaz Ibrahim (Aga Khan University, Pakistan)
13:45-14:00	Experience of the KD from Saudi Arabia	Adel Mahmoud (King Fahad Medical City, Saudi Arabia)
14:00-14:15	Experience from South Africa	Kath Megaw (Constantiaberg Mediclinic, South Africa)
14:15-14:30	KD Experience in Thailand	Krisnachai Chomtho (Chulalongkorn University, Thailand)
14:30-14:45	Experience of the KD: an Iranian perspective	Parvaneh Karimzadeh (Shahid Beheshti University, Iran)
Hand over session		Chair(s): Jong Rho, Emma Williams
15:20-15:50	Hand over session	Heung Dong Kim, Helen Cross, Emma Williams
16:30-17:30	Regional committee meeting	
19:00-21:00	Gala dinner	



Day 5 October 9 (Tue.)

Family support group		
09:00-12:00	Preparing a family for the KD therapy	Chair(s): Emma Williams, Nancy Abrahams
09:00-09:30	Caring for a child with epilepsy	Sookyong Koh (Emory University, USA)
09:30-10:00	Bringing parents to the table	Natasha Schoeler (University College London, UK)
10:00-10:30	Nursing know-how in diet compliance	Brialie Forster (Austin Health, Australia)
10:30-11:00	How parent support groups may help	Emma Williams (Matthew's Friends, UK)
11:00-11:30	Support from Charlie Foundation	Jim Abrahams (The Charlie Foundation, USA) Nancy Abrahams (The Charlie Foundation, USA)
11:30-12:00	Psychological support for family with intractable epilepsy	Soyong Eom (Yonsei University, Korea)
The keto workshop for dietitians		
09:00-12:00	KD meal planning strategies	Chair(s): Beth Zupec-Kania, Songmi Lee
09:00-09:30	Initiation of the KD	Elizabeth Neal (Matthew's Friends Clinics, UK)
09:30-10:00	Monitoring and supplementation of the KD	Heidi Pfeifer (Harvard Medical School, USA)
10:00-10:30	Sharing KD recipes and cooking demonstrations	Eunjeung Choi (Sejong University, Korea)
10:30-11:00	KD therapy for malignancy	Songmi Lee (Severance Hospital, Korea)
11:00-11:30	Mobile apps for KD meal planning	Eunjo Lee (Severance Hospital, Korea)
11:30-12:00	Application of cooking oils for the KD recipe	Hsiu-Fen Lee (Taichung Veterans General Hospital, Taiwan)



Organizing Committee

Executive Committee		Program Committee		
Chair	Heung Dong Kim, Korea	Chair	Hoon-Chul Kang, Korea	
Members	Jim Abrahams, USA Jong Rho, Canada Emma Williams, UK	Members	Stephane Auvin, France Mackenzie Cervenka, USA Derrick Chan Wei Shih, Singapore	Eun Joo Lee, Korea Elizabeth Neal, UK Kristina Simeone, USA Beth Zupec-Kania, USA
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Registration Fee

Register through website and save the budget!

Category	Early Bird Registration By June 29 (Fri), 2018	Pre-registration By August 31 (Fri), 2018	On-site Registration
Physician/PhD Scientist	USD 250 / KRW 250,000	USD 300 / KRW 300,000	USD 400 / KRW 400,000
Trainee, Nurse, Others	USD 150 / KRW 150,000	USD 200 / KRW 200,000	USD 300 / KRW 300,000

One Session Registration

- Pre-congress Workshop (Oct.5, Fri) Registration only: USD 100 / KRW 100,000
- Family Support Group Session (Oct.9, Tue) Registration only: USD 50 / KRW 50,000
- The keto workshop for dietitians (Oct.9, Tue) Registration only: USD 50 / KRW 50,000

Gala Dinner



- **Date & Time:** Oct. 8 (Mon), 19:00 - 21:00
- **Venue:** To be confirmed
- **Admission:** USD 50 / KRW 50,000
- * For invited guest: USD 30 / KRW 30,000



Register early
to save the budget &
reserve your hotel

Travel Bursary Award

The Organizing Committee will provide Travel Bursary Award to **selected overseas presenting authors whose abstracts are selected for poster presentation**. After the abstract submission is closed, the Program Committee will conduct a peer review and assign the grants based on the content of the abstracts and the authors' nationalities. Awardees will be notified in July, 2018 by e-mail.

Travel Bursary Award: **\$300 + registration fee**

Host City

Host City, Jeju – the most beautiful Island in Korea

The symposium will be held at International Convention Center Jeju (ICC Jeju) in Jeju, Korea. Situated at the center of Northeast Asia, Jeju Island has long enjoyed its prestige as an acclaimed tourist destination. Jeju Island offers wide range of lodging facilities, and bountiful tourist assets which make it a dream location for symposium with almost unlimited recreational resources at hand.

JEJU ISLAND

