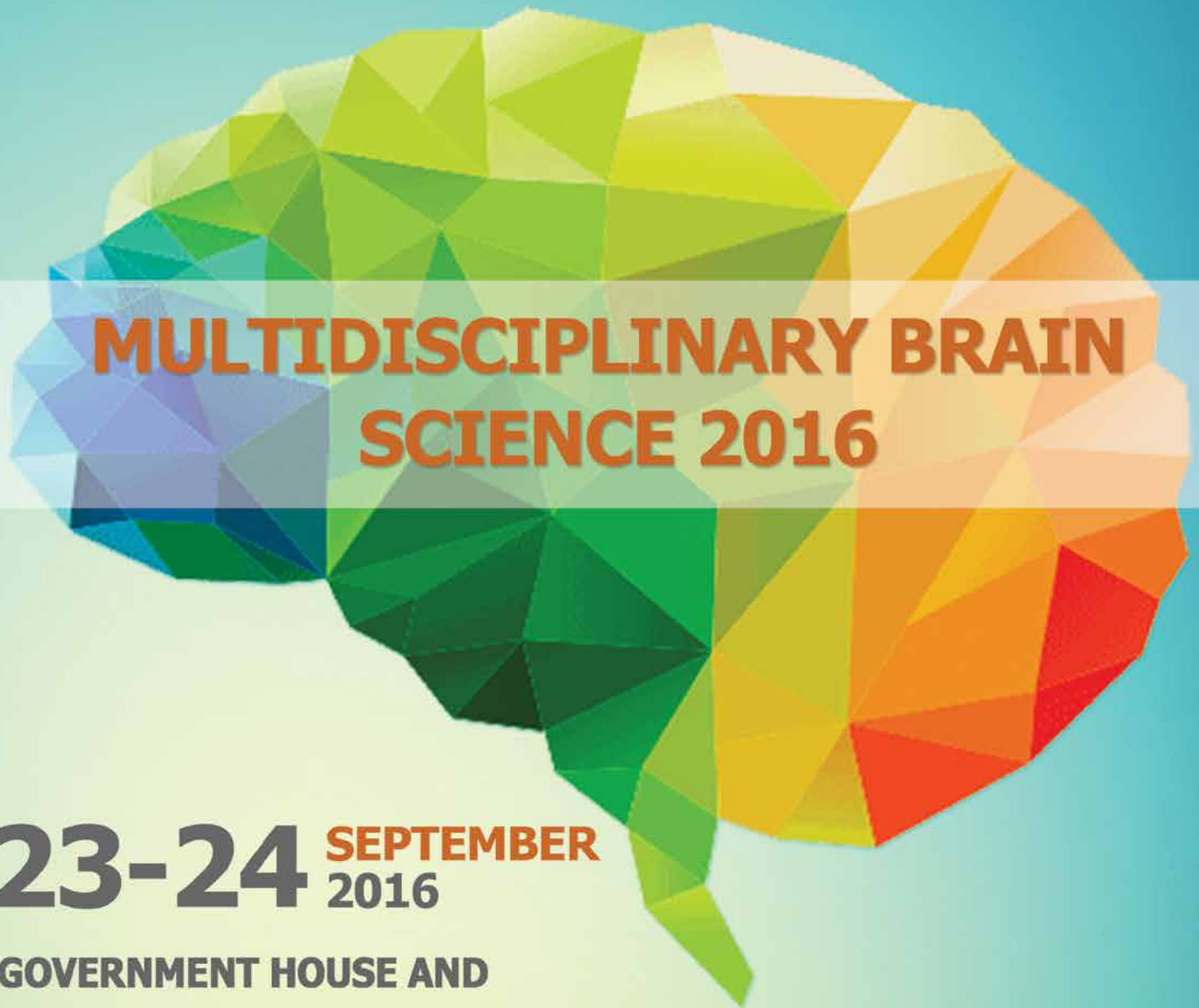
MNUMS

IBRO

MNS
Mongolian Neuroscience Society

MONGOLIAN NEUROSCIENCE SOCIETY

The 3rd Annual Meeting of The Mongolian Neuroscience Society



MULTIDISCIPLINARY BRAIN SCIENCE 2016

23-24 SEPTEMBER 2016

GOVERNMENT HOUSE AND
SS CLUB CONFERENCE HALL - ULAANBAATAR - MONGOLIA

Diamond sponsor:

Co-organizer:

Mongolian Epilepsy Society

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MULTIDISCIPLINARY BRAIN SCIENCE 2016

Organizing Committee:

Mongolian Neuroscience Society

Damdindorj B. /PhD, President of the MNS/
Battuvshin L. /PhD, Executive director of the MNS/
Enkhsaikhan L. /PhD, Secretary General/
Darambazar G. /PhD, Board Member/
Bilegtsaikhan Ts. /PhD, Board Member/
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Bayasgalan T. /PhD, Board Member/
Jambaldorj J. /PhD, Board Member/
Angarag G. /Deputy Director, Press and Media/

Mongolian National University of Medical Sciences

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Dashdulam Ts. /M.Sc/
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Undarmaa O. /M.Sc/

Department of Radiology
Munkhbaatar D. /PhD/

Department of Mental Health
Khishigsuren Kh. /PhD/

Department of Neurology
Tovuudorj A. /PhD. Prof/

The Third State Central Hospital
Mongolian Society of Psychiatry
Mongolian Society of Neurologist
Mongolian Epilepsy Society

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The 3rd Annual Meeting of The Mongolian Neuroscience Society

ABSTRACT

Sept.23-24 .2016
Ulaanbaatar,
Mongolia

MULTIDISCIPLINARY BRAIN SCIENCE 2016

The 3rd Annual Meeting of The Mongolian Neuroscience Society

CONTENTS

MULTIDISCIPLINARY BRAIN SCIENCE 2016

WELCOME MESSAGE FROM MONGOLIAN NEUROSCIENCE SOCIETY

I would like to deliver my warmest greetings of the fortunate day that all we gathered here for the third annual meeting of Mongolian Neuroscience Society together.

It is my great pleasure to welcome you to the 3rd Annual Meeting of Mongolian Neuroscience Society on "Multidisciplinary Brain Science" organized in Ulaanbaatar. Hereby I would like to express my sincere gratitude to our distinguished guests, colleagues, participants, sponsors and all members of our societies. I am proud to tell that today we are welcoming honorable speaker professor Cheng Ting Chien, Kyung-Jin Kim, Cheah Pike See. Great thanks for the IRBO lecturers, Dr. Muryama, Dr. Fujisawa, and Dr. Ling for presenting and making effort to attend the meeting.

I am sure that the meeting provides unique opportunity for Mongolian researchers, doctors and students. On behalf of the Organizing Committee of Mongolian Neuroscience Society, School of Bio-Medicine, Mongolian National University of Medical Sciences, we would like to show our deepest gratitude to you for the tremendous contribution. Without you, we can not make this meeting happen.

We realize a big responsibility and opportunity that we have to bring new wave in the neuroscience research and health field.

DAMDINDORJ B.

President of The Mongolian Neuroscience Society

WELCOME MESSAGE FROM MONGOLIAN NATIONAL UNIVERSITY OF MEDICAL SCIENCES

Dear doctors, researchers and invited speakers,

Research into the brain has always been characterized as requiring a multidisciplinary research structure, from biological research into brain and neuro functions seeking to discover the principles of operation of the brain. On this occasion, with the successive holding of "Multidisciplinary Brain Science 2016, we are able to extend our considerations into the realm of brain covering a broad range of research subjects in the fields of neuroscience.

The 21st century is said to be the century of the brain on the basis of the great strides in neuroscience that have been achieved to date. There are only a few countries in the world where the field of neuroscience is sufficiently advanced and where there are developed medical structures in place to tackle the challenge of brain and mental disorders. We are pursuing a goal to developing neuroscience in collaboration between Mongolian National University of Medical Sciences and Mongolian Neuroscience Society.

To this end the promotion of basic research is absolutely essential. The latest developments in advanced research technologies, including imaging and computational techniques, are pointing the way towards possibilities for new applications. A new type of neuroscience research is now starting to bloom, through the fusion of basic research and clinical research. I promote interdisciplinary and international cooperation, partnership to nurture the next generation of young researchers and participation from a wide-range of fields, including participation from our colleagues at Asia Pacific Region.

I heartily hope this meeting will become great opportunity to interact scientists and researchers in different fields of neuroscience.

G. Batbaatar Prof

President, Mongolian National University of Medical Sciences

INVITED SPEAKERS

Kyungjin Kim

Position Title:

President
Korea Brain Research Institute (KBRI), Daegu 41068 Korea
Tel: Office (82-53) 980-8100
Fax: (82-53) 980-8108 / E-Mail: kyungjin@kbri.re.k

Distinguished Professor
Department of Brain & Cognitive Sciences,
Daegu Gyeongbuk Institute of Science and Technology (DGIST),
Daegu 42988, Korea
Tel: Office (82-53) 785-6144
Fax: (82-53) 785-6109 / E-Mail: kyungjin@dgist.ac.kr

Education:

B.S. (1975):	Department of Zoology, College of Natural Sciences, Seoul National University, Seoul, Korea
M.S. (1979):	Department of Zoology, College of Natural Sciences, Seoul National University, Seoul, Korea
M.S. (1981) & Ph.D. (1984)	Department of Physiology & Biophysics, University of Illinois at Urbana-Champaign(UIUC), Urbana, IL 60801 USA

Research/Professional Experiences:

2015 – present:	President, Korea Brain Research Institute (KBRI), Daegu, Korea
2015 – present:	Professor, Department of Brain & Cognitive Sciences, DGIST, Daegu, Korea
2003 – 2013:	Director, Brain Research Center for 21st Century Frontier Program in Neuroscience Supported by Ministry of Science and Technology
2000 – 2015:	Professor, Department of Biological Sciences/ Brain and Cognitive Sciences, College of Natural Sciences, Seoul National University, Seoul, Korea
1999 - 2000:	Chairman, Department of Molecular Biology, College of Natural Sciences, Seoul National University, Seoul, Korea
1999 – 2015:	Adjunct Professor, Interdisciplinary Program of Neuroscience, Seoul National University, Seoul, Korea

Society Activity and Services:

- Membership, Korean Society of Molecular and Cell Biology, Korean Brain Society, Korean Brain and Neuroscience Society, Korean Society of Endocrinology
- Membership, Society for Neuroscience (USA), Endocrine Society (USA)
- Secretary General, Asia & Oceania Society for Comparative Endocrinology (AOSCE) (2000-2003)
- Regional Council member, International Neuroendocrinology Federation (INF) (2003-2007)
- President, Korean Brain Society (2006-2007)
- President, Korean Brain and Neuroscience Society (2008-2009)
- President, Korean Society of Integrative Biology (2009-2010)
- President, Korean Society of Endocrinology (2013)
- President, Korean Society of Molecular & Cellular Biology (2014)

INVITED SPEAKERS

Cheng-Ting Chien

Address: Institute of Molecular Biology, Academia Sinica,
128 Academia Road, Section 2, Nankang Taipei, Taiwan 11529
Phone 886-2-2788-3562
Fax: 886-2-2782-6085
E-mail: ctchien@gate.sinica.edu.tw

Education:

1985 B.S. in Chemistry, National Taiwan University, Taipei,
1993 Ph.D. in Biochemistry and Cell Biology, SUNY at Stony NY, USA

Research and professional experience:

2004 Research Fellow, Institute of Molecular Biology, Academia Sinica, Taipei
2008 Coordinator, Neuroscience Program in Academia Sinica (NPAS, http://proj3.sinica.edu.tw/~npas/index.ch.html)

2008/7-2009/6	Visiting Fellow, Stanford University, CA, USA
2005/11-2007/12	Associate Director, Institute of Molecular Biology, Academia Sinica, Taipei
2000-2004	Associate Research Fellow, Institute of Molecular Biology, Academia Sinica, Taipei
1996-2000	Assistant Research Fellow, Institute of Molecular Biology, Academia Sinica, Taipei
1993-1996	Postdoctoral Research, Howard Hughes Medical Institute and University of California, San Francisco, CA, USA. Mentor: Dr. Yuh Nung Jan
1988-1993	Graduate Study for Ph.D. in Biochemistry and Cell Biology, SUNY at Stony Brook, NY, USA. Advisor: Rolf Sternglanz
1989-1990	Teaching Assistant in Biology and Biochemistry, Department of Biochemistry and Cell Biology, SUNY at Stony Brook, NY, USA
1987-1988	Teaching Assistant in Analytical Chemistry, Department of Chemistry, National Taiwan University

Present positions and affiliations:

Research Fellow, Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan Coordinator, Neuroscience Program in Academia Sinica (NPAS), Academia Sinica, Taipei Professor, Institute of Molecular Medicine, National Taiwan University, Taipei, Taiwan Associate Professor, Institute of Neuroscience, National Yang-Ming University, Taipei, Taiwan Professor, Graduate Institute of Medical Sciences, Taipei Medical University, Taipei, Taiwan
Professor, Graduate Institute of Life Sciences, National Defense Medical College, Taipei,Taiwan

Publications:

1. 13.Su T. T.*, Parry, D. H., Donahoe, B., Chien, C.-T., O'Farrell, P. H., Purdy, A. (2001) Cell cycle roles for two 14-3-3 proteins during Drosophila development. J. Cell Sci., 114, 3445-3454.
2. 14.Ou, C.-Y., Lin, Y.-F., Chen, Y.-J. and Chien, C.-T.* (2002) Distinct Protein Degradation Mechanisms Mediated by Cul1 and Cul3 Controlling Ci Stability in Drosophila Eye Development. Genes & Dev., 16, 2403-2414.
3. 15.Chou, Y.-H. and Chien, C.-T.* (2002) Scabrous Controls Ommatidial Rotation in theDrosophila Compound Eye. Dev. Cell, 3, 839-850.
4. 16.Ou, C.-Y., Pi, H. and Chien, C.-T.* (2003) Control of protein degradation by E3 ubiquitin ligases in Drosophila eye development. Trends Genetics, 19, 382-389 (review).

INVITED SPEAKERS

Cheah Pike See

Address: Unit Anatomy, Department of Human Anatomy, Faculty of Medicine& Health Sciences, Universiti Putra Malaysia, 43400 UPM , Serdang Selangor, Malaysia.
Contact No: (office) 603-89472355
(fax) 603-89422341
(e-mail) cheahpikesee@upm.edu.my

Academic Qualifications

Nama Sijil / Kelayakan (Certificate / Qualification obtained)	Nama Sekolah Institusi (Name of School / Institution)	Tahun (Year obtained)	Bidang pengkhususan (Area of Specialization)
Ph.D.	Universiti Kebangsaan Malaysia	2008	Medical Science (Anatomy)
B.Sc.(Hons)(Biomedic. Sci.),[first class honour: CGPA – 3.829]	Universiti Putra Malaysia	2002	Biomedical Science
S*Cert.	S* Alliances on life science	2003	Bioinformatics

Scientific experience & specialisation

Certificate / Qualification obtained	Name of School Institution	Year	Area of Specialization)
Postdoctoral Fellow	Centre for Cancer Biology, Australia	2010	Neuroscience
Postdoctoral Fellow	University of Adelaide, Australia	2010	Neuroscience

Scientific papers-journal

1. Kura AM, Saifullah B, Cheah PS, Zobir MH, Azmi N, Fakurazi S. 2015. Acute Oral Toxicity and Biodistribution Study of Zinc Aluminium-Levodopa Nanocomposite. Nanoscale Research Letters. Accepted for publication on 9th Jan 2015. (IF = 2.481)
2. Zainal Abidin S, Abbaspourbabaei M, Ntimi CM, Siew WH, PS Cheah, Rosli R, Nordin N & Ling KH. Mir-3099 is overexpressed in differentiating 46C mouse embryonic stem cells upon neural induction. Malaysian Journal of Medical Sciences, 2014, Special issue: 26-32.
3. Bala U, Tan KL, Ling KH and Cheah PS. 2014. Harvesting the maximum length of the sciatic nerve of adult mouse; a step-by-step approach. BMC Research Notes. 7:714.doi:10.1186/1756-0500-7-714
4. Tan KL, Ling KH, Hewitt CA, Cheah PS, Simpson K, Hyde L, Pritchard MA, Smyth GK, Thomas T and Scott HS. 2014. Transcriptional profiling of the postnatal brain of the Ts1Cje mouse model for Down syndrome. Genomics Data. DOI information: 10.1016/j.gdata.2014.09.009.
5. Ling KH, Hewitt CA, Tan KL, Cheah PS, Vidyadaran S, Lai MI, Lee HC, Simpson K, Hyde L, Pritchard MA, Smyth GK, Thomas T and Scott HS. 2014. Functional transcriptome analysis of the postnatal brain of the Ts1Cje mouse model for Down syndrome reveals global disruption of interferon-related molecular networks. BMC Genomics. 15(1):624. doi:10.1186/1471-2164-15-624. (IF = 4.400)

INVITED SPEAKERS

Shigeyoshi Fujisawa, Ph.D.

Laboratory Head
Laboratory for Systems Neurophysiology
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Academic Employment

2012	Present RIKEN Brain Science Institute Team Leader
2012-2012	New York University, School of Medicine, The Neuroscience Institute, Post-doctoral Researcher. Dr. György Buzsáki's Laboratory
2005-2012	Rutgers University, Center for Molecular and Behavioral Neuroscience, Post-doctoral Researcher. Dr. György Buzsáki's Laboratory
2005-2005	The University of Tokyo, Graduate School of Pharmaceutical Sciences, Post-doctoral fellow. Adviser: Dr. Yuji Ikegaya and Dr. Norio Matsuki

Education

2005	Ph.D., Pharmaceutical Science Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan Adviser: Dr. Yuji Ikegaya and Dr. Norio Matsuki
2002	M.Sc., Engineering Graduate School of Engineering, Kyoto University, Japan Adviser: Dr. Ali Ide-Extessabi
2000	B.Sc., Engineering Department of Engineering, Kyoto University, Japan Adviser: Dr. Ali Ide-Extessabi

Fellowships

2006-2006	Uehara Memorial Foundation, Postdoctoral Fellowships for Research Abroad
2007-2008	Japan Society for the Promotion of Science (JSPS), Postdoctoral Fellowships for Research Abroad

Publications

Patel J, **Fujisawa S,** Berényi A, Royer S, & Buzsáki G. (2012) Traveling Theta Waves along the Entire Septotemporal Axis of the Hippocampus. Neuron, **75:**410-417.

Madisen L, Mao T, Koch H, Zhuo JM, Berenyi A, **Fujisawa S,** Hsu YW, Garcia AJ 3rd, Gu X, Zanella S, Kidney J, Gu H, Mao Y, Hooks BM, Boyden ES, Buzsáki G, Ramirez JM, Jones AR, Svoboda K, Han X, Turner EE & Zeng H. (2012) A toolbox of Cre-dependent optogenetic transgenic mice for light-induced activation and silencing. Nat Neurosci. 15:793-802.

Fujisawa S & Buzsáki G. (2011) A 4-Hz oscillation adaptively synchronizes prefrontal, VTA and hippocampal activities. Neuron, **72:**153-165.

Sirota A, Montgomery S, **Fujisawa S,** Isomura Y, Zugaro M & Buzsáki G. (2008) Entrainment of neocortical neurons and gamma oscillations by hippocampal theta rhythm. Neuron, 60:683-697.

INVITED SPEAKERS

Masanori Murayama

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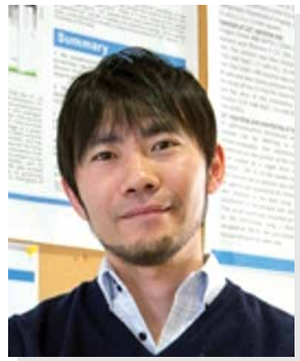
E-mail: masa_murayama@brain.riken.jp



Education

Ph.D. in Life Science in March 2006, Tokyo University of Pharmacy and Life Science (2005-2006, Prof. Hiroyoshi Miyakawa; 2003-2005, Prof. Yoshihisa Kudo)
Master of Life Science, in March 2003, Tokyo University of Pharmacy and Life Science (Prof. Yoshihisa Kudo; 2001-2003)
Bachelor of life science, in March 2001, Tokyo University of Pharmacy and Life Science (Prof. Yoshihisa Kudo; 1997-2001)

Scientific Employment

January 2010-present: Team leader, Behavioral Neurophysiology Lab, Brain Science Institute (BSI), Riken, Japan
April 2006-February 2010: Post-doctoral fellow, Department of Physiology, University of Bern, Switzerland

Publications

H. Lütcke†, M. Murayama†, T. Hahn, D.J. Margolis, S. Astori, S.M.A. Borgloh, W. Göbel, Y. Yang, W. Tang, S. Kügler, R. Sprengel, T. Nagai, A. Miyawaki, M.E. Larkum, F. Helmchen and M.T. Hasan(† equal contribution to this work)

"Optical recording of neuronal activity with a genetically encoded calcium indicator in anesthetized and freely moving mice"

Frontiers in Neural Circuits, 4;9, 2010 M. Murayama and M.E. Larkum. "Enhanced dendritic activity in awake rats"

Proc. Natl. Acad. Sci. USA 106, p20482-20486, 2009 M. Murayama and M.E. Larkum. "In vivo dendritic calcium imaging with a fiberoptic periscope system"

Nature Protocols 4, p1551-1559, 2009 M. Murayama, E. Pérez-Garci, T. Nevian, T. Bock, W. Senn and M.E. Larkum. "Dendritic encoding of sensory stimuli controlled by deep cortical interneurons" **Nature** 457, p1137-1141, 2009 M. Murayama, E. Pérez-Garci, H-R. Lüscher and M.E. Larkum. "Fiberoptic system for recording dendritic calcium signals in layer 5 neocortical pyramidal cells in freely moving rats"

Journal of Neurophysiology, 98, p1791-1805, 2007 M. Murayama, K. Miyazaki, Y. Kudo, H. Miyakawa and M. Inoue. "Optical monitoring of progressive synchronization in dentate granule cells during population burst activities"

European Journal of Neuroscience, 21, p3349-3360, 2005

INVITED SPEAKERS

DR. KING HWA LING (Michael)

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Selangor DE, MALAYSIA.
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Website: http://www.neurosains.org/

Academic qualifications / Education

Year	Certificate / Qualification obtained	Name of School / Institution
2006-2011	Ph.D (With Dean's Special Commendation for Outstanding Thesis Award)	University of Adelaide, SA, Australia (With Professor Hamish S. Scott, Assoc. Prof. Paul Thomas, Dr. Tim Thomas and Dr. Chelsee A. Hewitt)
2002-2005	M.Sc. (With Distinction)	Universiti Putra Malaysia, Malaysia (With Prof. Rozita Rosli, Prof. Wan Kiew Lian and Assoc. Prof. Mariana Nor Shamsudin)
2003	S*Cert. (With Distinction)	S* Life Science Informatics Alliance Hosted by the National University of Singapore, Singapore.
1999-2002	B.Sc. (Hons)	Universiti Putra Malaysia, Malaysia (With Prof. Rozita Rosli, Prof. Gnosothie Duraisamy, Assoc. Prof. Chong Pei Pei and Dr Mohd Nasir Mohd Taib)
1997-1998	STPM/A Level Equivalent	SMK Abdul Rahman Talib, Kuantan, Malaysia
1995-1996	SPM/O Level Equivalent	SMK Alor Akar, Kuantan, Malaysia.

Year	Type of article -Journal	Title
2016	Original Research – Genomics	Natural antisense transcription from a comparative perspective
2015	Original Research – ASM Science Journal	Brain activation display functional asymmetry in response to action, background and tonal frequency during a pitch memory processing: An fMRI study
2014	Original Research – PLoS ONE	Altered expression of immune-related genes in children with Down syndrome
2014	Original Research – PLoS ONE	Protein expression profiles characterize distinct features of mouse cortices at different developing stages
2014	Original Research – Gene Regulation and System Biology	Endothelin-1 but not endothelial nitric oxide synthase gene polymorphism is associated with sickle cell disease in African children

VENUE MAP

PROGRAM AT A GLANCE

DAY 1 SEPTEMBER 23, 2016 (Friday)

Time	GOVERNMENT HOUSE Citizen Hall (09:00-18:00)
9:00	IBRO LECTURES (09:00-11:30)
	Chairs: Jambaldorj J, Darambazar G
	Coffee break
	Speakers: Masanori Muryama, Shigeyoshi Fujisawa, and Michael KH Ling
11:30	Lunch Break
13:00	OPENING CEREMONY (13:00-13:30)
	President of Mongolian Neuroscience Society, President of Mongolian National University of Medical Sciences, Representatives of the Ministry of Education, Culture, Science and Sports, the Ministry of Health, and Ulaanbaatar city council
	Group Photography
13:30	PLENARY LECTURES (13:30-15:30)
	Chairs: Damdindorj B, Battuvshin L
	Speakers: Kyungjin Kim, Cheng-Ting Chien, and Pike-See Cheah
	Coffee break
15:40	INTRODUCTORY LECTURES (15:40-17:30)
	Chairs: Bayasgalan T, Enkhsaikhan L
17:30	Speakers: Lkhagvasuren L, Myagmar O, Nasantsengel L, Altantsetseg P, Tsogtsugar J, Tovuudorj A, Battuvshin L
18:00	WELCOME RECEPTION (17:30-20:00)

SATELLITE EVENT I (09:00-11:00)	
	MEETING WITH POLICY MAKERS
	Participants: Kyungjin Kim, Cheng-Ting Chien, and Pike-See Cheah, and MNS representatives
9:00	Mongolian National University of Medical Sciences
10:00	Ministry of Education, Culture, and Science
11:00	Ministry of Health
	Lunch Break

DAY 2 SEPTEMBER 24, 2016 (Saturday)

Time	Conference Center of SS Club (09:00-18:00) Hall A	Hall B	Hallway
	NEUROSCIENCE (09:00-10:00)	NEUROIMAGING (9:00-10:00)	POSTER SESSION (09:00-16:00)
9:00	Chairs: Jambaldorj J, Bilegtsaikhan Ts	Chairs: Munkhbaatar D, Tuvshinjargal D	
	Speakers: Chinzorig Ch, Enkh-Amar A, Chimeglkham B, Munkhzul D, Darambazar G,	Speakers: Nasanbayar E, Badamsed Ts, Enkhbold S, Tuvshinjargal D	Poster Presentations (authors in place)
	Coffee break		
	NEUROLOGY (10:15-13:00)	NEUROMARKETING (10:00-10:40)	
10:15	Chairs: Tovuudorj A, Altantsetseg P	Chairs:Speakers: Tamir O, Oyuntsetseg L	
	Speakers: Ganshirmen G, Erdenechimeg Ya, Delgermaa Ts, Abai S, Budlkham J, Amarjargal M, Enkhjil D, Odgerel D, Byambasuren D	SATELLITE EVENT II (11:00-12:00) MEDIA & PRESS	
13:00	Lunch		
14:00	MENTAL HEALTH (14:00-15:45)	SATELLITE EVENT III (15:00-15:45)	
	Chairs: Battuvshin L, Jargal B	BRAIN AWARENESS EVENT FOR HIGH SCHOOL STUDENTS	
	Speakers: Oyunsuren D, Enkh-Uchral P, Oktyabrjargal E, Altaisaikhan Kh, Tsenddoo B, Delgermend Ts, Erkhembayar N	"New Mongol" High School and Technology School	
	Coffee break		
16:00	SOCIAL PSYCHOLOGY (16:00-17:00)	SATELLITE EVENT IV (15:00-16:00)	
	Chairs: Sugarmaa M, Bayarmaa Ts	BOARD MEETING	
	Speakers: Oyunbileg Ts, Bayarmaa Ts, Oyut-Erdene N, Baigalmaa Ch, Munkhzul Kh	Local Societies	
17:45	CLOSING REMARKS & AWARDS		
18:00	DINNER & PARTY (18:00-20:00)		

DAY 3 SEPTEMBER 25, 2016 (Sunday)

Time	Cultural Programs (11:00-19:00) Full day program (11:00-19:00)	Half day program (14:00-19:00)
	Terelj National Park Tour	Ulaanbaatar City Tour
11:00	Hotel->Genghis Khaan Statue->Lunch->Terelj National Park->Dinner-> Hotel	Hotel->Sukhbaatar Square->Gandan Monastery->Zaisan Statue
19:00 - later	DEPARTURE	

PROGRAM IN DETAIL

DAY 1 SEPTEMBER 23, 2016 (Friday)

Time	GOVERNMENT HOUSE Citizen Hall (09:00-18:00)	
	IBRO LECTURES (09:00-11:30)	
	Chairs: Jambaldorj J, Darambazar G	
	Speakers: Masanori Muryama, Shigeyoshi Fujisawa, and Michael KH Ling	
9:00	Masanori Murayama	Riken Brain Science Institute, JAPAN
	Perceptual memory consolidation requires a cortical top-down input during sleep	
9:40	Shigeyoshi Fujisawa	Riken Brain Science Institute, JAPAN
	Hippocampal representations of spatial information of self and other	
10:20	Coffee break	
10:30	Michael KH Ling	Universiti Putra, Malaysia
	Demystifying the underlying mechanisms of neurogenic-to-gliogenic shift in Ts1Cje mouse model for Down syndrome	
11:30	Lunch Break	
13:00	OPENING CEREMONY (13:00-13:30)	
	Damdindorj B	President of Mongolian Neuroscience Society
	Batbaatar G	President of Mongolian National University of Medical Sciences
	Oyunchimeg D	Ad Interim State Secretary,Director, Department of Public Administration and Management the Ministry of Health
	Erdenechimeg D	Director-general, Education Policy Department
	Sandui Ts	Chairman, Ulaanbaatar city council
	Group Photography	
	PLENARY LECTURES (13:30-15:30)	
	Chairs: Damdindorj B, Battuvshin L	
	Speakers: Kyungjin Kim, Cheng-Ting Chien, and Pike-See Cheah	
13:30	Kyungjin Kim	President, KBRI, KOREA
	Functional Link between Circadian Timing System and Mood Regulation through REV-ERBα	
14:20	Cheng-Ting Chien	Director, NPAS, Academia Sinica, TAIWAN
	Regulated Golgi outposts in neuronal dendrite development	
15:10	Pike-See Cheah	Vice President, Malaysia Neuroscience Society, MALAYSIA
	Molecular, metabolic and functional characterisation of adult skeletal muscle in Down syndrome mouse model : insights into the muscle	
16:00	Coffee break	
	INTRODUCTORY LECTURES (16:00-18:00)	
	Chairs: Bayasgalan T, Enkhsaikhan L	
	Speakers: Lkhagvasuren L, Myagmar O, Nasantsengel L, Altantsetseg P, Tsogtsugar J, Tovuudorj A, Battuvshin L	

16:10	Lkhagvasuren L	President, Mongolian Academy of Medical Sciences
	New wave of Neuroscience in Mongolia	
16:25	Nasantsengel L	Director, National Institute of Mental Health
	Current state of Mental health service in Mongolia	
16:40	Tsogtsugar J	Public Advisor to the President of Mongolia
	Impacts of alcoholism on the nerves of society	
16:55	Myagmar O	Board member of Mongolian Psychological Association
	Current situation and future prospects of the development of psychological science in Mongolia	
17:10	Altantsetseg P	Head, Neurology Center, The 3rd State Central Hospital
	Current situation and future approach development of Neurology Center	
17:25	Tovuudorj A	Head, Department of Neurology, MNUMS
	Effectiveness of SPECT study in Neurology	
17:40	Battuvshin L	Executive Director, Mongolian Neuroscience Society
	Closing remark	
18:00	WELCOME RECEPTION (18:00-20:00)	

DAY 2 SEPTEMBER 24, 2016 (Saturday)

Time	Conference Center of SS Club (09:00-18:00) Hall A	
	NEUROSCIENCE (09:00-10:00)	
	Chairs: Jambaldorj J, Bilegtsaikhan Ts	
	Speakers: Chinzorig Ch, Enkh-Amar A, Chimeglkham B, Munkhzul D, Darambazar G,	
9:00	Chinzorig Ch	
	Retrosplenial cortical neuronal responses during spatial navigation in rats	
9:15	Enkh-Amar A	
	Direct action of glucagon on vagal afferent neurons: possible role in feeding regulation	
9:30	Chimeglkham B	
	Altered axonal ion currents by hindlimb unloading: Implication for disuse atrophy	
9:45	Munkhzul D	
	The effects of intragastric infusion of umami solutions on amygdalar and lateral hypothalamic neurons in rats	
10:00	Darambazar G	
	Regulation of Nucleobindin-2/Nesfatin 1 in paranventricular nucleus of hypothalamus	
10:15	Coffee break	
	NEUROLOGY (10:15-13:00)	
	Chairs: Tovuudorj A, Altantsetseg P	
	Speakers: Ganshirmen G, Erdenechimeg Ya, Delgermaa Ts, Abai S, Budlkham J, Amarjargal M, Enkhjil D, Odgerel D, Byambasuren D	
10:25	Ganshirmen G	
	Study results of out-of-pocket expenses incurred by inpatients for their drug treatment in hospitals	
10:40	Erdenechimeg Ya	

Myotonic dystrophy in mongolia: current findings of clinic-epidemiological and molecular-genetic study

10:55 Delgermaa Ts

Age Dependency of Ischemic Stroke Subtypes and Vascular Risk Factors

11:10 Abai S

Surgical treatment of ischemic stroke

11:25 Budlkham J

Neuroprotective effects of Zhenbao pills (珍宝丸) on in vivo stroke model

11:40 Amarjargal M

Temporal lobe seizures semiological features.

11:55 Enkhjil D

Ethanol effects of postnatal development on rats

12:10 Odgerel G

Ethanol and the microencephaly

12:25 Byambasuren D

Neuroprotection in brain ischemia

13:00 Lunch

MENTAL HEALTH (14:00-15:45)

Chairs: Battuvshin L, Jargal B

Speakers: Oyunsuren D, Enkh-Uchral P, Oktyabrjargal E, Altaisaikhan Kh, Tsenddoo B, Delgermend Ts, Erkhembayar N

14:00 Oyunsuren D

Risk factor analysis for fatal suicide cases

14:15 Enkh-Uchral P

Bipolar disorder

14:30 Oktyabrjargal E

Research work for the changes in the relation using the method of psychodrama (on the example of student group)

14:45 Altaisaikhan Kh

How our brain effects on health and well-being?

15:00 Tsenddoo B

Role of steppe and the secret of democratic history of Mongolia

15:15 Delgermend Ts

Psychological counseling sessions in the school setting play as mental health support for students facing difficulty

15:30 Erkhembayar N

To assess psychological screening and quality of life in type 2 diabetic mongolian patients: a cross sectional hospital-based study

15:45 Coffee break

SOCIAL PSYCHOLOGY (16:00-17:15)

Chairs: Sugarmaa M, Bayarmaa Ts

Speakers: Oyunbileg Ts, Bayarmaa Ts, Oyut-Erdene N, Baigalmaa Ch, Munkhzul Kh

16:00 Oyunbileg Ts

Study on attitude of students who has been studying in kindergarden teacher

16:15 Bayarmaa Ts

Comparative study on attachment styles of first gradestudents to their teachers

16:30 Oyut-Erdene N

Learning for ageing in social work education

16:45 Baigalmaa Ch

Studying the relationship between marital and sexual satisfaction

17:00 Munkhzul Kh

Predisposing social and psychological factors of video game addiction among adolescents in mongolia

Conference Center of SS Club (09:00-18:00)

Time **Hall B**

NEUROIMAGING (09:00-10:00)

Chairs: Munkhbaatar D, Tuvshinjargal D

Speakers: Nasanbayar E, Badamsed Ts, Enkhbold S, Tuvshinjargal D

9:00 Nasanbayar E

Retrosplenial cortical neuronal responses during spatial navigation in rats

9:15 Badamsed Ts

Direct action of glucagon on vagal afferent neurons: possible role in feeding regulation

9:30 Enkhbold S

Altered axonal ion currents by hindlimb unloading: Implication for disuse atrophy

9:45 Tuvshinjargal D

The effects of intragastric infusion of umami solutions on amygdalar and lateral hypothalamic neurons in rats

NEUROIMARKETING (10:00-10:40)

Chairs: , Speakers: Tamir O, Oyuntsetseg L

10:00 Tamir O

Neuromarketing: an application of neuro science

10:30 Oyuntsetseg L

Development of new approaches of economics and management based on neuroscience

DAY 3 SEPTEMBER 25, 2016 (Sunday)

Time **Cultural Programs (11:00-19:00)**

	Full day program (11:00-19:00)	Half day program (14:00-19:00)
	Terelj National Park Tour	Ulaanbaatar City Tour
11:00	Hotel->Genghis Khaan Statue->Lunch->Terelj National Park->Dinner-> Hotel	Hotel->Sukhbaatar Square->Gandan Monastery->Zaisan Statue

19:00 DEPARTURE

ORAL PRESENTATION

OP-01 Perceptual memory consolidation requires a corticoal top-town input during sleep

OP-02 Hippocampal representations of spatial information of self and other

OP-03 Demystifying the underlying mechanisms of neurogenic-to-gliogenic shift in Ts1Cje mouse model for Down syndrome

OP-04 Functional Link between Circadian Timing System and mood Regulation through REV-ERB□

OP-05 Regulated Golgi outposts in neuronal dendrite development

OP-06 Molecular, metabolic and functional characterisation of adult skeletal muscle in Down syndrome mouse model : insights into the muscle weakness seen in human condition

OP-07 Current situation and further objectives of the Information Center

OP-08 Impacts of alcoholism on the nerves of society

OP-09 Retrosplenial cortical neuronal responses during spatial navigation in rats

OP-10 Direct action of glucagon on vagal afferent neurons: possible role in feeding regulation

OP-11 Altered axonal ion currents by hindlimb unloading: implication for disuse atrophy

OP-12 The effects of intragastric infusion of umami solutions on amygdalar and lateral hypothalamic neurons in rats

OP-13 Regulation of Nucleobindin-2/Nesfatin-1 in paraventricular nucleus of hypothalamus

OP-14 Study results of out-of-pocket expenses incurred by inpatients for their drug treatment in hospitals

OP-15 Myotonic dystrophy in Mongolia: current findings of clinic-epidemiological and molecular-genetic study

OP-16 Age Dependency of Ischemic Stroke Subtypes and Vascular Risk Factors

OP-17 Surgical treatment of ischemic stroke

OP-18 Neuroprotective effects of Zhenbao pills (珍宝丸) on in vivo stroke model

OP-19 Pituitary stalk interruption syndrome: Case report

OP-20 Diagnostic radiology: Optic nerve glioma, meningioma and neuritis

ORAL PRESENTATION

OP-21 Temporal lobe seizures semiological features. (Introduction)

OP-22 Ethanol effects of postnatal development on rats

OP-23 Ethanol and the microencephaly

OP-24 Neuromarketing: an application of neuroscience

OP-25 Development of new approaches of economics and management based on neuroscience

OP-26 Effectiveness of SPECT study in Neurology

OP-27 Bipolar disorder

OP-28 How our brain effects on health and well-being?

OP-29 To assess psychological screening and quality of life in type 2 diabetic Mongolian patients: a cross sectional hospital-based study

OP-30 Risk factor analysis for fatal suicide cases

OP-31 Research on the prevalence of sleep disorders among population

OP-32 Research work for the changes in the relation using the method of psychodrama (on the example of student group)

OP-33 Role of steppe and the secret of democratic history Mongolia

OP-34 Study on attitude of students who has been studying in kindergarden teacher

OP-35 Love attitude, prototype and analyzing on it

OP-36 Comporative study of attachments styles of first class pupils to their teachers

OP-37 The parents relationship typelogy's studied the impact on children's behavior

OP-38 Learning for ageing in social work education

OP-39 Studying the relationship between marital and sexual satisfaction

OP-40 Study of individual's personality traits (based upon examples of 16-18 year old Mongolian students)

OP-41 Predisposing social and psychological factors of video game addiction among adolescents in Mongolia

OP-42 Neuroprotection in brain ischemia

OP-43 Mental health care summary report of Mongolia

OP-44 Psychological counseling sessions in the school setting play asmental health support for students facing difficulty

PERCEPTUAL MEMORY CONSOLIDATION REQUIRES A CORTICAL TOP-DOWN INPUT DURING SLEEP

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Non-rapid eye movement (NREM) sleep is essential for consolidation of an animal's motor and sensory learning experiences. During sleep, bottom-up inputs from sensory organs to the brain are largely silenced and inactive. However during the NREM phase synchronous oscillations ranging from 0.5 to 4 Hz (slow wave activity) occur across cortical regions. These observations have led to the hypothesis that interregional transfer of internal information during NREM sleep has a significant role in memory consolidation. Recently, we identified a cortical top-down circuitthat underlies somatosensory perception in the mouse hindpaw (Manita et al., Neuron 2015). However, the role of top-down cortical inputs during sleep in memory, particularly in the consolidation mechanism, has yet to be examined.

We developed a novel perceptual learning task that requires sleep for memory consolidation and examined the role of top down input during sleep. During NREM sleep between the learning and retrieval periods, the optogenetic inhibition of an anatomically identified cortical top-down input from M2 to S1, but not *vice versa*, resulted in the suppression of functional communication causality from M2 to S1, the absence of reactivated S1 neurons, and behavioral deficits in texture memory consolidation. In NREM sleep and sleep-deprived states, closed-loop asynchronous or synchronous M2-S1 co-activation, respectively, reduced or prolonged memory retention. Top-down cortical information flow in NREM sleep is thus required for perceptual memory consolidation (Miyamoto et al., Science 2016).

HIPPOCAMPAL REPRESENTATIONS OF SPATIAL INFORMATION OF SELF AND OTHER

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The hippocampus has been thought to provide internal representations of spatial maps of external worlds, embodied by assemblies of place cells which encode positional information of an animal. Spatial encodings of hippocampal place cells are often sensitive to external landmarks; place cells can capture even slight environmental changes and quickly remap their spatial encodings. These observations indicate that hippocampal spatial representations are objective and are not constructed simply from path-integrations. If hippocampal map is objective, however, the spatial information of external cues such as moving objects or other animals should be also represented in the map. Yet, no evidence that hippocampal neurons have spatial representations of other animals has been reported. Here we investigate whether and how the hippocampus represents the spatial information of external agents, by examining activities of hippocampal neurons while an animal is observing another individual in the same environment.We newly developed spatial observation task, which is carried out with two rats, a forerunner('the other') and an observer ('the self'), in a T-maze. Central for this task is that a correct choice (i.e., left or right arm) for the observer rat is determined by the choice of the forerunner, that is, the observer is required to watch carefully the trajectory of the forerunner. Using this behavioral task, we have performed large-scale extracellular recordings from CA1 of the observer rats. We found a group of neurons which represented the spatial trajectory information of the other during the task behavior, indicating that distinct cell assemblies are involved in representing other's and self's trajectories. These results suggest that hippocampal cell assemblies can also map the spatial information of the other, as well as that of the self.

DEMYSTIFYING THE UNDERLYING MECHANISMS OF NEUROGENIC-TO-GLIOGENIC SHIFT IN TS1CJE MOUSE MODEL FOR DOWN SYNDROME

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Neurogenic-to-gliogenic shift is a mechanism where the neural progenitor cells prefer to commit to gliogenic fate leading to the reduction of neurogenesis and increased astrogliogenesis in the brain of Down syndrome (DS) individuals. The shift has been hypothesised as the underlying cause to various brain-related pathologies in DS individuals mainly attributing to reduced functional neurones, increased neuronal wastage and the failure in regeneration.

The effect of additional genetic dosage and activation of JAK-STAT signalling pathway in the neurogenic-to-gliogenic shift in the brain of DS mouse model known as Ts1Cje will be discussed. The inference based onJAK-STAT signalling activation and neurogenic-to-gliogenicshif in the brain of Ts1Cje will be highlighted.

FUNCTIONAL LINK BETWEEN CIRCADIAN TIMING SYSTEM ANDMOOD REGULATION THROUGH REV-ERBα

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Circadian rhythm regulates a variety of physiological and behavioral consequences in mammals. The mammalian circadian timing system is hierarchically organized: The central circadian pacemaker residing in the suprachiasmaticnucleus(SCN) of the anterior hypothalamus orchestrates numerous extra-SCN local oscillators in several regions of the brain and peripheral tissues. The molecular clock machinery has two interlocking feedback loops that drive the circadian oscillation in a cell-autonomous, self-sustainable manner. It works through transcription/translation-based auto-feedback loops and post-translational modifications that contribute to the fine regulation of molecular circadian clockwork. The circadian nature of mood and its dysfunction in affective disorders is well recognized, but the underlying molecular mechanism remains unclear. We found that REV-ERBα impacts midbrain dopamine (DA) production and mood-related behaviors in mice.

Genetic abrogation of Rev-erbα gene or pharmacological inhibition of REV-ERBα activity in the ventral midbrain induced mania-like and depressive behaviors in association of hyper-dopaminergic state. REV-ERBα represses tyrosine hydroxylase (TH, a rate-limiting step of DA synthesis) gene transcription by competition with NURR1(a nuclear receptor for DA neuronal development and maintenance) and functions driving circadian expression of DA system. Furthermore REV-ERBα represses TH gene transcription by recruiting histone deacetylase 3(HDAC3) to the promoter region resulting in suppressive histone deacetylation. In summary, the present study demonstrates the novel functional link between circadian timing system and DA-controlling mood regulation through REV-ERBα.

REGULATED GOLGI OUTPOSTS IN NEURONAL DENDRITE DEVELOPMENT

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Abstract: Neurons are the fundamental unit that makes up our brain. They are born of different types with distinct morphology, which is mostly accounted for by the dendritic trees. One fascinating question to answer is how neurons grow such exuberant dendrites once they are born. We have been using Drosophila dendritic arborization (da) neurons as the model system to study dendrite development. There are four types of da neurons (classes I-IV) with class IV da (c4da) neurons being most complex in terms of morphology. We envision that cellular machineries such as endocytosis and exocytosis are highly active during dendrite elaboration. Mainly by fluorescence imaging techniques and fly genetics, we investigate how various cellular processes such as Golgi dynamics, protein modification and cell-cell interaction may contribute to dendrite arborization. The da dendrites are also suitable to study human disease genes in inducing dendrite degeneration.

MOLECULAR, METABOLIC AND FUNCTIONAL CHARACTERISATION OF ADULT SKELETAL MUSCLE IN DOWN SYNDROME MOUSE MODEL: INSIGHTS INTO THE MUSCLE WEAKNESS SEEN IN HUMAN CONDITION

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Down syndrome (DS) is caused by full or partial triplication of human chromosome 21. In addition to intellectual disability, motor dysfunction due to hypotonia is commonly seen in DS individuals and its underlying mechanism remains unknown. Ts1Cje, a mouse model for DS was employed to investigate the motor performance in vivo and to elucidate the disrupted molecular regulatory network within the peripheral neuromuscular system that may lead to hypotonia. Various behavioral assessment of the motor performance showed that the Ts1Cje mice exhibit weaker muscles strength than that of wildtype.

Sciatic nerve of the Ts1Cje mice has lower myelination and lower conduction velocity than that of the wildtype group. The talk also focus on the gene profiling of the Ts1cje skeletal muscles analysed via the Agilent microarray platform and bioinformatics analyses. Lastly, the effects of trisomy genes on the changes of satellite cell pools (adult muscle stem cells), cellular functionality and metabolic profiling of the Ts1Cje skeletal muscle were also investigated.

CURRENT SITUATION AND FURTHER OBJECTIVES OF THE INFORMATION CENTER

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Our country is a country of a small population but vast territory, with a unique nomadic and sedentary mixed culture wherein it is really required to have a complex interactive integrated information, communication and e-monitoring electronic network system of a national level which will enable the departments of neuroscientific and clinical neurology, neurosurgery and children's neurology develop in close integrated ties in terms of the theory and practices, will help in full utilization of the abilities and skills of few highly professional specialists, will support with the neurological and neurosurgery services from one centralizedpoint of services and promotethe rural countries with timely professional advices and assistance via remote calls and diagnosis.

Therefore in order to facilitate our objectives of establishing National Neurology Center by the Third State CentralHospital in the designated facility, equipping it with modern diagnostics and analysis apparatuses and equipment which will carry out integrated clinical services and assistances, trainings and research works, our most important key work is to reflect these objectives in the health policy of the country and reinforce its implementation.

Key words: Neurology Center, neuroscientific, neurology, neurosurgery

IMPACTS OF ALCOHOLISM ON THE NERVES OF SOCIETY

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Public Advisor to the President of Mongolia

Scientists and researchers agree that one of the major reasons for neurological, mental and behavioral disorders is alcoholism. Alcoholism affects the human nervous system and creates disorders in human mental functioning and behaviors. That specific person is also creating disorder in his or her family, community, and social psychology. In other words, he or she is creating disorder in the brain of society. It occurs to be a negative impact on the society.

In order to develop neuro-science as a whole, we need to study all related areas, such as social life, philosophy and social security. Just like the term "social psychology" exists, I believe that there should be a term called "social neuro-science". Nerves of society get sick just like humans, and this in turn affects human health.

Many social factors affect human mental functioning and people's minds, which can turn into social disorders. Society may seem invisible. However, preventing situations where people who are affected by a social neurology disorder believe that they are healthy, is the main grounds of my speech.

An individual who lines up with a specific nation's national culture, heritage, pride, advantages and psychological features, will show great support to the development of neuro-science, which I believe, is an intellectual project to heal social neurology. We worked with and changed the people, from every social stage, who truly believed that they were healthy, when in fact they were effected by, and had mental disorders, caused by alcohol's harms. Because of that, we have real experiments and results of the research of our work, that we can bring to the attention of Mongolian and world neuro-science researchers that can prevent potential dangers and risks.

RETROSPLENIAL CORTICAL NEURONAL RESPONSES DURING SPATIAL NAVIGATION IN RATS

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Human neuropsychological studies suggest that the retrosplenial cortex (RSC) is important in spatial navigation. The RSC receives spatial information from hippocampal place cells, head direction cells in the thalamus, and grid cells in the entorhinal cortex. In the present study, activity of RSC neurons was recorded while rats were placed on a treadmill affixed to a motion stage that was translocated along a figure 8-shaped track. Of the 256 RSC neurons recorded, 49 showed differential responses to the directions to window (south) and door (north) sides of a recording room, along which the animals were translocated in the long axis of the trajectory (direction-related neurons), while activity of 21 RSC neurons increased non-differentially to the directions (translocation neurons). Activity of some direction-related neurons was decreased when translocation without locomotion was imposed. The translocation neurons were further tested with a running protocol on the treadmill under four-step speeds (1, 6, 12, 16 cm/s) at the fixed location, and showed positive or negative linear relationships between neuronal firing rates and running speeds.

Histological data indicated that the direction-related and translocation neurons were intermingled in the RSC, and were more concentrated in a granular part of the RSC.

Theoretical studies suggest that path integration, which sums up the vectors of distance and direction travelled from a start point to estimate current position, requires instantaneous information of head direction and locomotion speed. The present results indicate that the rodent RSC processes two important information for path integration; head direction and locomotion speed.

Key words: *Retrosplenial cortex, speed cells, spatial navigation, head direction, path integration*

DIRECT ACTION OF GLUCAGON ON VAGAL AFFERENT NEURONS: POSSIBLE ROLE IN FEEDING REGULATION

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Background: Glucagon reportedly is transiently secreted immediately after meals and implicated in meal-evoked satiety. Glucagon intraperitoneal injection reduces feeding and this effect is attenuated by subdiaphragmaticvagotomy, suggesting the involvement of the vagal afferent nerves. However, the mechanism by which glucagon influences vagal afferents is less defined.

Aim: In this study, we investigate the direct action of glucagon on vagal afferent nodose ganglion (NG) neurons.

Results: Glucagon receptor mRNA was detected in mice NG using by RT-PCR. Glucagon at 10-9∽10-7 M, but not 10-10 M, increased [Ca2+]i in isolated single NG neurons. Glucagon at 10-8 M exerted a maximal effect, inducing [Ca2+]iincreases in approximately 8% of NGNs. Glucagon-induced [Ca2+]i increases were attenuated by glucagon receptor antagonist. All of the glucagon-responsive NG neurons also responded to cholecystokinin-8 (CCK-8) with increases in [Ca2+]i, which reduces food intake via direct interaction with vagal afferents.

Conclusion: These results demonstrate that glucagon directly interacts with the subpopulation of vagal afferent neurons that respond to CCK-8. This interaction may underlie the production of satiety after meals. This study also suggests that glucagon and CCK-8 share a common vagal afferent-mediated pathway that inhibits feeding.

Keywords: *glucagon, vagal afferents, food intake, cholecystokinin*

ALTERED AXONAL ION CURRENTS BY HINDLIMB UNLOADING: IMPLICATION FOR DISUSE ATROPHY

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Background: Disuse atrophy has large impact on quality of life and requires prevention in society. Axonal excitability testing can measure axonal membrane propertiesin vivo. This study aimed to characterize the excitability changes in peripheral motor axons caused by hind-limb unloading (HLU), which is a model of disuse atrophy.

Material and method: Hind-limb unloading was performed in normal 8-week-old male mice by fixing the proximal tail by a clip connected to the top of the animal's cage for 3 weeks. Axonal excitability studies were performed by stimulating the sciatic nerve at the ankle and recording the compound muscle action potential from the foot. Total RNA was extracted from sciatic nerves of HLU and control group mice. mRNA of Scn1a (Nav 1.1) and Scn2a (Nav 1.2) genes was quantified by real-time qRT-PCR.

Results: The amplitudes of the motor responses of the unloading group were 51% of the control amplitudes (2.2 ± 1.3 mV [HLU] vs. 4.3 ± 1.2 mV [Control], P = 0.03). Multiple axonal excitability analysis showed that the unloading group had a smaller strength-duration time constant (SDTC) and late subexcitability (recovery cycle) than the controls (0.075 ± 0.01 [HLU] 35vs. 0.12 ± 0.01 [Control], P< 0.01; 5.4 ± 1.0 [HLU] vs. 10.0 ± 1.3 % [Control], P = 0.01, respectively). Three weeks after releasing from HLU, the SDTC became comparable to the control range. Using a modeling study, the observed differences in the waveforms could be explained by reduced persistent Na+ currents along with parameters related to current leakage. Quantification of RNA of a Scn1a gene coding a voltage-gated Na+ channel tended to be decreased in the sciatic nerve in HLU.

Conclusion: The present study suggested that axonal ion currents are altered in vivo by HLU. It is still undetermined whether the dysfunctional axonal ion currents have any pathogenicity on neuromuscular atrophy or are the results of neural plasticity by atrophy.

Key words: axonal excitability, persistent Na+ channel, hind-limb unloading, disuse atrophy

THE EFFECTS OF INTRAGASTRIC INFUSION OF UMAMI SOLUTIONS ON AMYGDALAR AND LATERAL HYPOTHALAMIC NEURONS IN RATS

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Previous behavioral studies have suggested that L-glutamate, an umami substance, is detected in the gut, and that this information regarding glutamate is conveyed from the gut to the amygdala and the lateral hypothalamus (LH) through the vagus nerve to establish glutamate preference. In this study, we investigated the roles of the amygdala and LH in the information processing of gut glutamate. We recorded the activity of amygdalar and LH neurons during the intragastric administration of five test solutions (monosodium L-glutamate [MSG, 60 mmol/L]; inosine monophosphate [IMP, 60 mmol/L]; a mixture of MSG and IMP; NaCl [60 mmol/L]; or physiological saline) in intact and subdiaphragmaticvagotomized awake rats. In intact rats, 349 and 189 neurons were recorded from the amygdala and LH, respectively, while in vagotomized rats, 104 and 90 neurons were recorded from the amygdala and LH, respectively. In intact rats, similar percentages of neurons (30–60%) in the amygdala and LH responded to the intragastric infusion of the solutions. Vagotomy significantly altered responses to the MSG and NaCl solutions. In particular, vagotomy suppressed the inhibitory responses to the NaCl solution. Furthermore, vagotomy increased the response similarity between the MSG and NaCl solutions, suggesting that vagotomy impaired the coding of the postingestive consequences of the MSG solution in the amygdala and LH, which are unique for glutamate. The present results provide the first neurophysiological evidence that amygdalar and LH neurons process glutamate signals from the gut.

Keywords: Amygdala, glutamate, lateral hypothalamus, postingestive effects, vagus nerve.

This work was supported partly by the Japan Society for the Promotion of Science (JSPS) Asian Core Program, JSPS Postdoctoral Fellowship for North American and European Researchers (Short-term), and research funds from Ajinomoto Inc.

REGULATION OF NUCLEOBINDIN-2/NESFATIN-1 IN PARAVENTRICULAR NUCLEUS OF HYPOTHALAMUS

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Objectives: Nesfatin-1, a recently discovered anorectic peptide processed from NUCB2, is expressed in the neurons inspecific brain areas including the paraventricular nucleus of hypothalamus (PVN), a pivotal center of feeding regulation.Although nesfatin-1's downstream anorectic neural pathway has been well investigated, the regulation of nesfatin-1expressing neurons in the PVN has little been studied.Since starvation decreases and refeeding stimulates nesfatin-1expression specifically in the PVN, we examined direct effects of meal-evoked metabolic factors, glucose, insulin andcholecystokinin (CCK), on PVN nesfatin-1 neurons.

Methods: Weprepared brainsliceand dissected PVN from C57BL/6 mice, isolated single neurons by enzyme treatmentcombined with trituration, and measured cytosolic calcium concentration ([Ca2+]i) by ratiometric fura-2 fluorescenceimaging. The effects of glucose, insulin and CCK on [Ca2+]i were measured in isolated single PVN neurons, followed byimmunocytochemical staining of these neurons for nesfatin-1.

Results: Glucose (10 mM), insulin (10-13M) and CCK (10-13M) induced increases in [Ca2+]i in 55 of 311 (16.6%), 32 of 249(12.9%) and 8 of 39 (20.5%) PVN neurons tested, respectively.

Moreover, the post [Ca2+]imeasuremen timmunocytochemistry identified 58% of glucose-responsive neurons, 63% of insulin-responsive neurons, and 50% ofCCK- responsive neurons as nesfatin-1 neurons, indicating that nesfatin-1 neuron is the major target for glucose, insulinand CCK in the PVN.Intracerebroventricular injection of CCK (30pmol) significantly increased nesfatin-1 mRNA in the PVN and inhibitedfeeding. In addition, antiserum against nesfatin-1 blocked CCK-induced anorexia.

Conclusion: These results demonstrate that glucose, insulin and CCK directly interact with and increase [Ca2+]iin PVNnesfatin-1 neurons, and that the nesfatin-1 neuron is the major target for all of them in the PVN. Postprandial activation ofthe PVN nesfatin-1 neurons could be mediated by these meal-evoked nutritional and endocrine factors, which potentiallycontributes to generation of satiety.

STUDY RESULTS OF OUT-OF-POCKET EXPENSES INCURRED BY INPATIENTS FOR THEIR DRUG TREATMENT IN HOSPITALS

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Background: According to the WHO Western Pacific Regional policy document "Health Financing Strategy", if patients' out-of-pocket costs are more than 30 percent of the cost of health care received, then it hinders the implementation of universal healthcare services. It is believed that when direct payments for the services at the point of use accounted for 15-20% of the total cost of health care the subsequent financial burden is relatively less likely to occur.In our country, the direct out-of-pockets costs paid by individuals and households have increased to an alarming degree and now accounting to 41% of total health expenditure.In the National Health Insurance Law it is stated that "If insured inpatients have provided medicines for themselves and paid for medicines that are prescribed in the patient's history of disease as essential, then healthcare providers should reimburse them the costs of the medicines at the estimated average market price". Although studies have been conducted in some hospitals in our country on the total hospital expenditures for clients, the studies that specifically addressed the estimation of out-of-pockets costs spent by inpatients for diagnosis and treatment are rare; therefore, this lack of estimation was the rationale for this study.

Objectives: To determine reasons for and estimate the costs of out-of-pocket payments paid by inpatients for drug treatment during their hospital stay.

Methods: The study was conducted using cross-sectional design. The data was collected from district hospitals using the data of 1335 inpatients hospitalized during 2013-2014.

Study results: The costs of medicines for drug treatment in a secondary-level hospital were 48241 MNT (95% CI 43419-53479) and 61432 MNT (95% CI 50902-73659) in a tertiary-level hospital. The cost structure analysis of aforementioned costs spent on 1 inpatient showed that hospitals spent 54% on medicines, 24% on use of diagnostic kits, and 22% on laboratory tests, respectively. A comparison of study respondents' total expenditures associated with their hospital stay at different levels of medical care demonstrated that inpatients admitted to specialized medical centers incurred the most expenses. While 28.4% of hospitalized patients paid out-of-pocket medical costs for their drug treatment, 51.85% of total medical expenses were paid by inpatients with an average cost being 104534 MNT (95% CI 76341-144035 MNT). The most common reason for paying the out-of-pocket drug costs was shortage of the medicines in the hospital with 62% inpatients mentioning the reasons related to drug supply interruption, while 28% responded that they paid for medicines on the doctor's recommendation. 3% of inpatients who paid out-of-pocket drug costs were reimbursed. The respondents indicated the inability to perform the laboratory tests at the hospital as the most common reason (26%) for paying the out-of-pocket costs for getting laboratory analyses elsewhere, while 26% did it on the doctor's recommendation.

Conclusion: It was determined that 28.4% of inpatients paid out-of-pocket costs for medicines, while 51.85% of total medical costs, or 104,534 MNT in average, were paid by inpatients. The results of study of reasons for out-of-pockets payments by inpatients show that 62% of drug costs incurred due to interruptions in supply of essential drugs at hospitals, while more than 50% of out-of-pocket payments for laboratory tests and the use of diagnostic equipment were required due to inability to be done at hospitals or on the doctor'srecommendation.

MYOTONIC DYSTROPHY IN MONGOLIA: CURRENT FINDINGS OF CLINIC-EPIDEMIOLOGICAL AND MOLECULAR-GENETIC STUDY

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Background: Previous the prevalence of myotonic dystrophy **(DM)** was identified very rare, because of the poor diagnostics. In fact, due to getting high quality of diagnosticalequipments the disease is determined very common among people in the world. **DM:** Prevalence in West: 13.5 per 100,000, Western Europe: 4/100,000, Japan: 5/100,000.

In a comprehensive epidemiological survey among Jews living in Israel, the average prevalence of myotonic dystrophy (DM) was 15.7/105 with intercommunity variations; the Ashkenazi Jews had the lowest rate, 5.7/105 as compared to the rate in the Sephardim/Oriental Jews 20/105 and the in the Yemenite Jews 47.3/105.

There are two major types of myotonic dystrophy: type 1 and type 2. Genetic loci: DM 1: 98% of families. Myotonin protein kinase (DMPK); Chromosome 19q13.32; Dominant.

DM 2 (PROMM) Zinc finger protein 9 (ZNF9); Chromosome 3q21.3; Dominant .

DM1 & DM2 expansions: May have originated from few founder mutations

Our previous study has shown that the prevalence and structure of the neurohereditary diseases were different by provinces and some from of these diseases as 'indigenous' in some isolated population. There are some scientific results of our researches-genetics about consanguineous, which is more potential factor of community is some area of Mongolia. All these circumstance is giving to carry out this study.

Goal: The study was aimed to establish the prevalence of myotonic dystrophy in Mongolia. The main purpose of the study is to evaluate Mongolian families with inherited myotonic dystrophy, establish an accurate diagnosis using the newest technological advances, and investigate the underlying molecular mechanisms among Mongolians.

Method: In this study which is a part of general epidemiological study of myotonic dystrophy among population Mongolia from 21 aimags and the capital city Ulaanbaatar during the period from 1997 to 2013.

We studied in three levels as bags, soums and provinces with researchers and neurologists. Suspected people are screened and registered. Significant progress has been made in identifying neuromuscular disorders based on the use of novel diagnostic methods, including electron microscopy of biopsied nerve and muscle tissue, nerve conduction testing and electromyography.

Genetic study was conducted in laboratories of Health Science Institute of Marylyn in USA and Human Genetic Institute of Halle in Germany. Genetic studies in order to localize clone and further characterize the disease-causing genes. The chromosomal location of genes involved in these disorders was determined by linkage analysis, characterization of the cloned genes and detection of pathogenic mutations was carried out using a variety of techniques.

Result: The prevalence is 5.61 per 100.000. Several aimags, especially Gobi-Altai 27.06/100.00, Orkhon 16.68/100.000 and Khuvsgul15.35/100.000 are high prevalence with over 3-5 times the average. The rest of aimags have a prevalence from 1.12 (Darkhan- Uul) to 7.54 (Selenge) per 100.000 populatoin.

In an effort to explain an unusually high frequency of DM in the Mongolian population, we have studied the distribution of CTG repeats in the normal Mongolian population and compared our preliminary results with the known frequencies in other populations. The distribution of the number of CTG repeats in the Mongolian population is very similar to that in the Japanese and Tibetan, but not the populations from South-Eastern China. This result may reflect migration routes of the ancient Asian populations from central Asia to Japan through Korean peninsula, which is supported by genetic closeness between the Mongolians and Koreans, Japanese and Northern Chinese. The fraction of the Mongolian population showing the CTG repeat number over 19 is about 8%, which could be the reservoir for recurring DM mutations in this population characterized by a relatively high DM prevalence.

We have identified 23 people with myotonic dystrophy in these 6 provinces population by neurological examination. DM type 1 that CTG repeats in non transcription 3' region of DMPK gene was revealed in 6 patients whereas DM type 2 was revealed in 3 patients.

Conclusions:

1. The relatively high prevalence of myotonic dystrophy was determined among the Mongolian population, especially in Gobi-Altai, Orkhon and Khuvsgulaimags with over 3-5 times the average. Thus, the whole, Mongolia is belonging to countries that have comparatively high prevalence of this disease in world, especially in aimags which this disease is more than usually.
2. The fraction of the Mongolian population showing the CTG repeat number over 19 is about 8%, which could be the reservoir for recurring DM mutations in this population characterized by a relatively high DM prevalence
3. With the result of genetic testing, CTG repeated in non-transcription 3' region of DMPK gene, the DM type 1 causing/related gene was revealed, meaning DM type 1 is prevalent. CCTG four times repetition in 1 intron of ZNF-9 gene on chromosome 3, the DM type 2 causing/related gene wasrevealed, showing DM type 2 is also prevalent.
4. The study concludes that there is a need of more intensive response to fight and prevent this disease through upgrading to the modern neurological and genetic diagnostics of the disease, and their regular and sustainable application. Consequently, there is also should be need to create and improve clinical and genetic counseling for patients with this disease.

Key word: Myotonic dystrophy, prevalence, CTG, DMPK, type

AGE DEPENDENCY OF ISCHEMIC STROKE SUBTYPES AND VASCULAR RISK FACTORS

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Objectives

Age dependency of acute ischemic stroke etiology and vascular risk factors have not been adequately evaluated in stroke patients in Mongolia. Aims of this study were to evaluate how stroke subtypes and vascular risk factors vary with age in tertiary hospital, Ulaanbaatar.

Materials and methods

Patients aged 20-89 years consecutively admitted to the Department of Neurology, First Central Hospital with acute ischemic stroke between October 2014 and July 2016 were included. The study population was categorized as young (20-49 years) and old-aged (50-89 years) patients. Stroke etiology was defined by Trial of org 10172 in acute stroke treatment (TOAST) criteria. Risk factors and history of cardiovascular disease were recorded.

Results

In total, 220 patients with acute cerebral infarction were included: 146 were males (66.4%) and 74 were females (33.6%). Among them 90 patients were young, 130 old-aged. Mean age for young patients was 38.5 ± 5.6 and for old (65.4 ± 7.8).

The proportion of large-artery atherosclerosis (14.4% vs 24.4%) and of small-vessel occlusion (15.6% vs 33.8) was lower among young-aged patients than elderly. The proportion of cardioembolism was similar in both age groups (23.3% vs 21.5%) with moderately prevalence in the young. The proportion of stroke of other determined cause was highest among young patients (22.2% vs 6.9%). Some risk factors such as active smoking, long-term alcohol use, migraine with aura, non-atherosclerotic vasculopathy, and infective diseases prevailed among the young, while the diabetes mellitus, coronary artery disease, and prior stroke) dominated in the elderly. The proportions of hypertension increased with age.

In conclusion, the proportion of stroke subtypes and vascular risk factors are age dependent. Age 20-49 years constitutes the active period in life where heterogeneous risk factors become manifest and stroke subtypes are changed.

SURGICAL TREATMENT OF ISCHEMIC STROKE

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Carotid artery stenosis and occlusion are the reason of about 25% of acute cerebral stroke and cerebrovascular chronic insufficiency. High blood pressure, smoking, hypercholesterolemia, alcoholism, obesity, diabetes mellitus are the risk factors. The bifurcation of the common carotid artery in the neck region is one of the mostcommon sites for the occurrence of atherosclerotic plaques.

We are performing several types of revascularizing surgeries for ischemic stroke of brain such as CEA, direct (STA-MCA) and indirect bypass (EDAS, EMAS), besides conservative treatment. In our country, surgical treatment is just new and conservative treatments are used up to now. We will present here a successful CEA of ischemic stroke case.

A 65 aged man admitted to Stroke unit of our hospital, diagnosed as DS: Ischemic stroke. Occlusion of right ICA. He was a smoker, had high blood pressure, left hemiparesis, dysarthria and dysphagia. And complications were getting worsened. 4 days after onset, CEA performed under general anesthesia. The patient was positioned supine, with the head rotated 20O to the left side. A skin incision measuring approximately 8 cm is made in the skin, anterior border of the sternocleidomastoid muscle. Hemostasis was performed. Exposed and dissected CCA, ICA and ECA and clamped. Arteriotomy in ICA is done over palpatable plaque and that was removed by dissector. Closed by Prolene 6.0, with saphenous vein patch graft, the vessel was filled with heparinized saline before last knot. Clamps are released in order. We could feel ICA pulsating. No post surgical complications.

After 45 days, patient recovered fully and drove his car on his own tocame to see us. Carotid endarterectomydone for schemic stroke case was successful. We aim to make this kind of surgery better.

Keywords:

carotidendarterectomy, atherosclerotic plaque, carotid occlusion, ischemic stroke

NEUROPROTECTIVE EFFECTS OF ZHENBAO PILLS (珍宝丸) ON IN VIVO STROKE MODEL

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Background and Objectives: Zhenbao pills (ZBP) has been used to treat ischemic stroke in traditional Mongolian medicine hospital. This study was to investigate the effects of ZBP on ischemic brain damage in vivo stroke model.

Materials and Methods: To study the neuroprotective effect of ZBP an in vivo model of ischemia was induced by permanent middle cerebral artery occlusion (pMCAO) in mice. ZBP (50, 150, 450mg/kg) was administered orally just after and 2hr after pMCAO. Infarct volume was measured by 2,3,5-triphenyltetrazolium chloride staining 24h after pMCAO.

Results: The cortical infarct volume was significantly less in ZBP (150mg/kg)-treated group than in the vehicle-treated group when administrated once just after pMCAO ($p<0.05$). The cortical infarct volume was significantly less in ZBP (150mg/kg)-treated group than in the vehicle-treated group when administrated immediately after pMCAO and 2 hours later again for 2 times ($p<0.01$).

Conclusion: These results suggest that ZBP might have neuroprotectived effect on focal cerebral ischemia.

Key words: Zhenbao pills, neuroprotection, permanent middle cerebral artery occlusion

PITUITARY STALK INTERRUPTION SYNDROME: CASE REPORT

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Introduction

Pituitary stalk interruption syndrome (PSIS) is a rare entity with an estimated incidence rate of 0.5/1,000,000 births.[1] PSIS are characterized by the presence of a thin or absent pituitary stalk, associated hypoplastic or aplastic anterior pituitary and ectopic posterior pituitary (EPP) on magnetic resonance imaging (MRI).[2] This can be associated with midline defects and various pituitary endocrine deficiencies, ranging from isolated growth hormone deficiency (IGHD) to combined pituitary hormone deficiency (CPHD).[3] The endocrine outcome seems to be a progressive onset of hormone deficiencies leading to panhypopituitarism, but posterior pituitary function is usually maintained, occasionally it may be disturbed depending on the position of the posterior pituitary.[4] PSIS is also associated with higher than normal frequency of breech presentation, difficult delivery, or the consequence of adverse perinatal factors such as birth trauma, prolonged labor, or forceps delivery is unclear.[5] Later in childhood, children may present with short stature, decreased growth rate, seizures, hypotension, intellectual delay and delayed puberty.

Case Reports

A 16-year-old boy presented for the evaluation of short stature and delayed puberty in our outpatient department (OPD). Parents noticed that the child is not growing well as compared to his peers, and also noted that the child has not developed any sign of puberty in the form of the moustache, beard growth, pubic hair and scrotal growth. He has been well with no chronic medical problems, no hospitalizations, and no surgeries. The child is a product of nonconsanguineous marriage and uneventful 8 months vaginal delivery in the hospital with breech presentation. The child had a history of birth asphyxia and cried 10 min after birth. There were no history of feeding difficulties, seizures, neonatal jaundice, lactose intolerance; developmental milestones - gross motor, fine motor, social delay. The child is average in studies at school. Social, family and peer interactions are normal and no behavioral problems. The child has two elder siblings with normal growth and development. There is no such history in family members and relatives.

Examination

Height: 112.5 cm, standard deviation: 8.0, standard deviation score: 4.75, lower segment (LS): 64 cm, upper segment (US): 64 cm, US/LS: 1.0, arm span (AS): 128 cm, weight: 30.7 kg.

Investigations

His growth chart showed an average growth velocity of 3 cm/year. Complete blood count (CBC), erythrocyte sedimentation rate (ESR), thyroid function tests (TFT's), urinalysis (UA), and serum electrolytes are normal. Hormonal analysis shows thyroid stimulating hormone (TSH): 3.80 μIU/ml (N = 0.4–5.0 μIU/ml), T4: 2.90 μg/dl (N = 5–12 μg/dl), follicle-stimulating hormone (FSH) (basal): 0.98 mIU/ml (N = 1-10 mIU/ml), luteinizing hormone (LH) (basal): 0.12 mIU/ml (N = 2-8 mIU/ml), prolactin: 50.46 ng/dl (N = 2-15 ng/dl), fasting morning cortisol: 1.5 μg/dl (N = 5-25 μg/dl), testosterone: <0.45 nmol/L (N = 10-35 nmol/L), growth hormone (GH) stimulation test (Insulin): <0.05 ng/ml (normal > 10 ng/ml), X-ray hand 7.4 years (bone age). MRI brain: Anterior pituitary hypoplasia, EPP and absent pituitary stalk

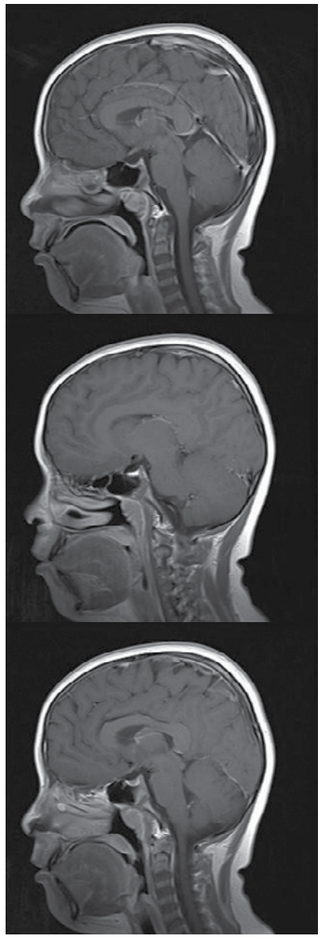

Figure 1

Sagittal T1-weightedpostcontrast image shows ectopic posterior pituitary (white arrow), stalk not visualized

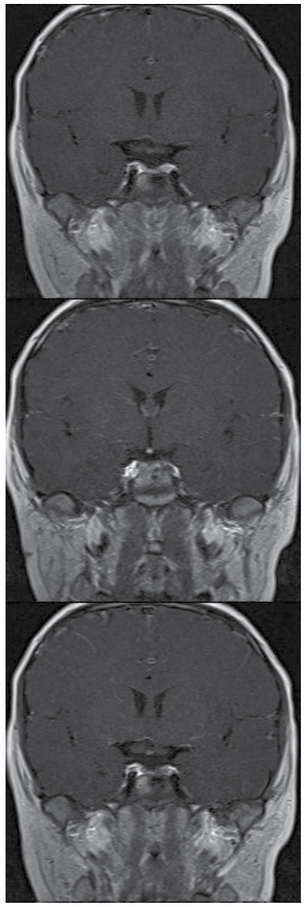

Figure 2

Postcontrast coronal T1-weighted image – pituitary stalk not visualised (note ectopic posterior pituitary-white arrow)

Discussion

Pituitary stalk interruption syndrome was firstly reported by Fujisawa et al. in 1987. PSIS has a male predominance with a male, female sex ratio between 2.3 and 6.9:1, pointing on X-linked inheritance. Mean age at diagnosis is 9.4 ± 11.6 years with no effect of neonatal distress and breech delivery on the age of presentation.

The cause of PSIS is still unknown and many theories are proposed like perinatal injuries, defective organogenesis due to genetic or environmental factors during pregnancy. Rare mutations of HESX1, LH4, OTX3 and SOX3 can be the cause of PSIS in familial cases. PSIS are generally of hypothalamic origin having different pathogenesis in IGHD and CPHD.According to current view mode of delivery and/or neonatal hypoxemia are not the cause of PSIS, but are direct or indirect consequence of the hypothalamic-pituitary lesion.

In a large Chinese study of 55 patients, short stature was found in 85.5% patients with bone age delay of 7.26 ± 5.37 years. The prevalence of various hormonal deficiencies was 100% for GH, 95.8% for gonadotropins, 81.8% for corticotrophin and 76.3% for thyrotropin. Hyperprolactinemia was found in 36.4%. More than two anterior pituitary hormone deficiencies were found in 92.7% cases.

Location of EPP has functional prognostic significance with a greater number of anterior pituitary hormone deficiencies when posterior pituitary is present at the median eminence or hypothalamic region.The capacity of the anterior pituitary to respond to stimulation tests using hypothalamic releasing hormones depend on the cause of PSIS, the volume of pituitary and age of presentation.

In our study, three male children present in growth clinic of endocrine OPD with complaints of short stature and inability to attain puberty. There is history of nonintuitional vaginal deliveries at home, with breech presentation and with birth asphyxia. There is no significant past and family history. On examination all the patients have height and weight < 3rd percentile for their age, have no signs of puberty and have micropenis. On investigation, all the patients have CPHD along with delayed bone age. T2-weighted and gadolinium enhanced MRI brain is suggestive of hypoplasticadenohypophysis with EPP and absent stalk. On the basis of these findings, the diagnosis of PSIS was made, and patients were started on hormonal replacement therapy.

DIAGNOSTIC RADIOLOGY: OPTIC NERVE GLIOMA, MENINGIOMA AND NEURITIS

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Optic nerve meningiomas are benign tumours arising from the arachnoid cap cells of the optic nerve sheath, and represent ~20% of all orbital meningiomas, the majority of which are direct extensions from intracranial meningiomas. These tumours typically appear as masses within the optic nerve, isointense to grey matter on both T1 and T2 weighted imaging, demonstrating vivid enhancement which clashes with the non-enhancing optic nerve ("tram-track sign" on axials or "non-enhancing dot sign" on coronals). Meningiomas of the optic nerve sheath have the same imaging characteristics as meningiomas elsewhere. The morphology of the tumour is variable: tubular: 65%, exophytic: 25%, fusiform: 10%. Occasionally cysts filled with arachnoid fluid develop between the globe and the anterior margin of the tumour as a result of impaired CSF flow backwards. These are known as perioptic cysts. **CT:** The tumour is usually isoattenuating to the optic nerve on non-contrast studies, although calcification is sometimes seen. Following administration of contrast the tumour enhances. On axial or oblique sagittal imaging the enhancing tumour surrounding the non-enhancing optic nerve results in the so-called tram-track sign. This is most evident in tumours with tubular growth pattern. On coronal imaging the tumour appears as a cuff of enhancing tumour around a central non-enhancing dot (optic nerve). Tumour extending into the optic canal may lead to canal widening, or alternatively hyperostosis. Appearances on MRI are similar to those on CT with a greater ability to delineate posterior extension. Imaging should include thin axial and coronal (+/- sagittal) T1, fat suppressed T2 and fat suppressed postcontrast T1 sequences. **T1:** isointense to somewhat hypointense compared to the optic nerve, **T1 C+ (Gd):** homogeneous enhancement, **T2:** isointense to somewhat hyperintense compared to the optic nerve. Differential diagnosis; a number of entities can mimic an optic nerve meningioma and result in enlargement of the optic nerve. More common entities to be considered in the differential include: optic nerve glioma, orbital pseudotumour, orbital lymphoma / leukaemia, orbital metastases, sarcoidosis.

Optic nerve gliomas are relatively uncommon tumours, with variable clinical course and often seen in the setting of neurofibromatosis type I (NF1). They are characterised on imaging by an enlarged optic nerve seen either on CT or MRI. Usually showing low T1 and high central T2 signal on MRI images, enhancement is variable. CT is often the first investigation performed and although not as sensitive as MRI, the diagnosis can often be made, especially if thin slice imaging through the orbits is performed, or coronal and sagittal reconstructions obtained from volumetric data. The optic nerve is variably enlarged, and the mass may either be fusiform or exophytic in appearance. Additionally the nerve may be elongated with kinking or buckling. MRI is the modality of choice to diagnosis and assessment of the posterior extent of the tumour. **T1:** enlargement, often iso to hypointense compared to the contralateral side, **T1 C+ (Gd):** enhancement is variable, **T2** hyperintense centrally, low signal at the periphery representing the dura. The main differential is that of optic nerve meningioma however the potential list is much longer including most causes of optic nerve enlargement. Absence of calcification can be used to differentiate optic nerve glioma from optic nerve sheath meningioma. Additionally, when the bulk of the tumour is located at the chiasm, the differential should include pituitary region masses.

Optic neuritis merely denotes inflammation of the optic nerve, and is one of the more common causes of optic neuropathy. It can be thought of as broadly divided into infectious and noninfectious causes, although the latter is far more frequent. On imaging, optic neuritis is most easily identified as a unilateral optic nerve swelling, with high T2 signal and contrast enhancement. MRI is the modality of choice for visualising the optic nerve. Functional MRI or multifocal visual evoked potentials have also been shown to allow early diagnosis. Typically findings are most easily identified in the retrobulbar intra-orbital segment of the optic nerve, which appears swollen, with high T2 signal. High T2 signal persists and may be permanent; chronically the nerve will appear atrophied rather than swollen. Contrast enhancement of the nerve, best seen with fat-suppressed T1 coronal images, is seen in >90% of patients if scanned within 20 days of visual loss.

TEMPORAL LOBE SEIZURES SEMIOLOGICAL FEATURES. (INTRODUCTION)

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Epilepsy one of the most common serious neurological disorders, with prevalence rate at 1% of general population, affecting about 65 million people globally, which manifests recurrent unpredictable epileptic seizures. 60% of all epilepsies is focal epilepsy, in 65% of it epileptic focus is localized in temporal lobe. According the importance of the connections among areas involved in the ictal discharge and other cortical areas, close or distant, and subcortical areas as well TLEs seizures are classified to anterior temporal seizures (mesial or antero- mesial) MTLE and posterior temporal seizures (laterial or neocortical) NTLE. The syndromic classification of seizure may be exactly evaluated by epilepsy surgery results, invasive ictal recordings and stimulatrions by intracerebral electrodes. But TLE can be easy distinguished by their specific semiological features. Anterior temporal seizures semiological features consists of no loss of contact at seizure onset; epigastric subjective manifestation; pseudo- vertiginous sensation (cephalic sensation); vegetative manifestations (variable and long lasting); dreamy – state (experiential hallucinations without a predominant perceptive content); absence of gustatory hallucinations at seizureonset; eye opening or slow head orientation ipsilateral to ictal discharge or staring; rhythmic chewing (lip- smacking movements; '' simple'' gestural and verbal activities. In contrast posterior temporal seizuressemiological features are presented by loss of contact at seizure onset; acoustic hallucinations or illusions; impaired verbal comprehensions; gnostic and praxic disturbances; dreamy state (acoustic or visual illusions orvisual experiential hallucinations);oculo- cephalic deviation ipsi- or contralateral to ictal discharge. MTLE has a strong association to complex febrile seizures, epilepsy onset usually during the first 15 years of age. Main seizures in MTLE presented by complex focal, secondary generalized seizures rare and never prevailing, epileptic status very rare, in 90% of cases subjective manifestation abdominal, progression with silent intervals.

ETHANOL EFFECTS OF POSTNATAL DEVELOPMENT ON RATS

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Alcohol use in children and adolescents is not widespread in worldwide. However, early addiction of alcohol predicted to use excessive amount of alcohol and alcoholic beverage later in live. However, very little is known about the effects of alcohol exposure during this period of postnatal development. The goal of the present study was to evaluate the growth and development of ethanol intake rats comparing with the control group of rats. After treatment with either 10% or 15% of ethanol, both 20- and 30-day-old rats regained their righting reflex significantly earlier than control group of rats. In 30-day-old rats, serum ethanol concentrations (SECs) were significantly greater at the time of the recovery of the righting reflex than control group of rats. Developmental differences in the effects of ethanol on locomotor activity were also observed. In 30-day-old rats, 15% ethanol generally decreased locomotor activity. Ethanol did not significantly alter locomotor activity in 20 day-old rats. Finally, there were significant developmental differences in the development of social sphere. 10% and 15% ethanol group of rats, 20 and 30 day old rats were made the disturbance than the control group of rats. These findings indicate that locomotor activity and righting reflex were evaluated significantly earlier in ethanol intake rats than control group of rats however, development of near future tend to change on disturbance and chaos movement.

ETHANOL AND THE MICROENCEPHALY

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Microencephaly, defined in animal subjects as having a small brain relative to body size, is a gross neuroanatomical anomaly associated with heavy alcohol exposure during development. As described above, such an anomaly in humans is inferred by deficits in head circumference because we cannot remove and weigh the human brain. However, in animals, the most common and traditional means of measuring microencephaly is brain weight. Numerous reports have shown that alcohol exposure during the brain growth spurt (a period of most intense brain growth) in rats significantly reduces the weight of the forebrain, brain stem, and cerebellum. Importantly, in the microencephalic brain, not every brain region is affected equally. Using a three dimensional stereological techniques, it can be estimate the volume (size) of various brain regions to demonstrate microencephaly. It appears that heavy alcohol exposure during the brain growth spurt (early postnatal period in rats, and third trimester and early infancy in humans) leads to the most severe and pronounced microencephaly compared with exposure during other developmental stages. Surprisingly, in rats, even 1 day of alcohol exposure at a high dose (15%) is sufficient to cause growth deficits in specific brain regions, such as the cerebellum. The findings of the study could be indicating that the alcohol exposure during development can induce significant structural changes to the developing brain.

NEUROMARKETING: AN APPLICATION OF NEURO SCIENCE

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Neuroscience attempts to collect knowledge about the structure and function of the brain. Marketing researchers can have important data about consumer brain's response to marketing stimuli beyond the subjective reports given by the participant by using tremendous progression of neuroscience (P. Renvoisй and Morin 2007; Hubert and Kenning 2008).

Thus briefly, neuromarketing is an interdisciplinary field that combines marketing and neuroscience which studies consumers' sensorimotor, cognitive, and affective response functioned by the brain. More broadly, neuromarketing is considered as a branch of the general field of neuroeconomics, which is based on economics, neuroscience and also psychology, to study the brain function in decision-making situations (Kenning and Plassmann 2005).

Scholars agree that the establishment of neuromarketing starts in the end of the 1990s when Gerry Zaltman first used fMRI as a marketing tool. However, terminology "neuromarketing" was first introduced by Prof. Ale Smidts in 2002 and the first Neuromarketing conference was held in Houston, USA in 2004.

Development of the neuroscience underlying human decision making has been in progress in the last 15 years from which measurements of neural activity and a deeper understanding of neural mechanisms marketing research apparently have applied to. Neuromarketing research is based on two powerful considerations (Ariely and Bems 2010) – insights from neuroscience might improve the marketing message for existing products and determine how products are valued before they even exist in the marketplace, improving product design (Telpaz, Webb, and Levy, 2015). Both of them rely on the proposal that neuroscience can provide insights on gathering real information about consumer preferences that is unobtainable through conventional methods because neuroscience methods work like taking a snapshot of the brain activity of the consumer to whom marketing stimuli embraced to.

Previous studies have demonstrated that different preference elicitation methods can result in different subject responses. An application of self-report questionnaires for evaluating preferences, attitudes, and purchase intention of consumers can result in a biased or inaccurate result. Furthermore there are many reasons (discretion, shame, etc.) that consumers sometimes decline to state their actual preferences, and in other cases, they cannot represent their real preferences (Telpaz, Webb, and Levy, 2015). These factors confound the task of evaluating consumer preferences and limit the ability to predict choice at the time of the purchase decision even though marketing messages in many campaigns are intended to influence consumers' preferences, attitudes, and/or actual purchases as well as future purchases. Thus, theoretical evidence exists that (1) neuroscientific methods can provide marketers with information that is not obtainable through traditional marketing research tools, (2) such neural markers can be reliably obtained from a relatively small sample of participants, and (3) these neural markers are actually predictive of commercial success (Boksem and Smidts, 2015).

The main findings of the neuroscience suggest that the ventromedial aspect of the prefrontal cortex (vmPFC) is implicated in implicit valuation and processing preferences and goals, independent of conscious awareness. Importantly, these neural indicators of implicit preference have been shown to be predictive of the actual choices people make. Besides, previous findings have shown activity in the vmPFC in response to products or advertisements in a small sample of participants (a

"neural focus group") to be predictive of population-wide commercial success (Boksem and Smidts, 2015).

Neuromarketing thus covers the consideration of all the senses and their responses to marketing stimuli by using neuroscience tools such as MRI, EEG, Facial Coding, Eye Tracking, Skin Conductance, Voice Analysis etc., to gather information about the brain responses and find out the buy button inside the consumer mind (www.salesbrain.com).

What music would work best on your company video? What color would work best on your website? What will work as a hook and how can you get them to create stronger memories and impressions both on and offline? Brands work very hard to create a consistent smell in their environment, not just so it smells fresh but to alter your subconscious. For example, anyone that has tried to sell a house was probably told to bake some bread and put on a pot of coffee. Sony's Flagship store pumps the smell of melon into it, turns out this is a tested and winning combination that has made customers stay calm and apparently buy more.

The Hyatt hotel chains spray lobbies and rooms in their own signature smell, so no matter which one you are in you are welcomed with their unique and familiar smell.

DEVELOPMENT OF NEW APPROACHES OF ECONOMICS AND MANAGEMENT BASED ON NEUROSCIENCE

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Today, the world economy is increasingly based on knowledge and information. In this situation, the creativity and intelligence of human are became the most valuable resource of any nation. Many researches indicate that through the application of technologies of consciousness that unlock the hidden reserves of the brain it is possible to increase intelligence, creativity and performance in people of all ages. Researchers have been studied for last 30 years on how to be an important study of mind-brain in applied sciences and achievements in development of neuroscience provides answers to questions like how can we leverage our brain in life, job and business, how make the best decision, how manage people effectively and how understand better human behavior. Such questions give rise to exciting symbiotic developments of neuroscience and other disciplines, such economics and management. This kind of convergence has given birth new interdisciplinary fields such as NeuroEconomics, NeuroManagement and NeuroMarketing. Researchers are indicated that, all kinds of neuroscientific tools can be used to investigate economic and management decision-making, which is EEG, MEG, PET, fMRI.

Scientists defined NeuroEconomics as the application of neuroscientific methods to analyze and understand economically relevant behavior and it can contribute to create models of economy that are based on a realistic description of human behavior and the comprehension of the driving forces of this behavior. NeuroManagement makes crucial insights from neuroscience accessible and applicable to support people to establish positive and sustainable behavioral changes in their self, in their team and in their organisation. It could give a new perspective on the core drivers of human behaviour, the so-called brain rules, on which NeuroManagement is based. It is intended to inform the integration of neuroscientific theory and research into the management field. Also, it is the study of leadership through the lens of neuroscience and explores central elements of leadership, including self-awareness, awareness of others, insight, decision making, and influencing. NeuroEconomics and NeuroManagementfocuse on exploring human brain activities and mental processes when people are faced with typical problems of economics and management.

This research provides insight into development of above mentioned new approaches of economics and management based on neuroscience.

EFFECTIVENESS OF SPECT STUDY IN NEUROLOGY

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Structural and functional images of the brain play an important role as powerful adjuncts in the management of an increasing number of neurologic diseases. Brain SPECT, in particular, with perfusion agents or with neuroreceptor imaging radiopharmaceuticals, is rapidly becoming a clinical tool in many places. For many neurologic conditions, this imaging modality has been used in diagnosis, prognosis assessment, evaluation of response to therapy, risk stratification, detection of benign or malignant viable tissue, and choice of medical or surgical therapy. Epilepsy is one of the most prevalent neurologic disorders and affects approximately

1% of the general population. Most complex seizures arise from the temporal lobes, and the condition of 10%–20% of these patients is refractory to medication. Many can be rendered seizure free with surgery. Only 40%–50% of extra temporal lobe seizures can be treated by surgery. The research on epilepsy is being made the level of genetics, neurophysiology, neuromorphology and neuroimaging diagnosis (SPECT, CT, MRI) and despite the fact that in accordance with the worldwide trends towards the globalization, the opinions and conclusions of researchers on this research field couldn't yet unified. The role of brain SPECT in epilepsy is not the diagnosis of the disease but the localization of the seizure focus for surgical therapy, especially in temporal lobe epilepsy. This is why, we have put an objective of studying of SPECT in interictal period of epileptic seizures in the conditions of our country. By analyzing brain SPECT during the interictal period of seizures, there were prevailing hypoperfusion degree (AI) of blood flow to reach 23.0%.

BIPOLAR DISORDER

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Introduction:

The prevalence of bipolar affective disorder in the world is about 3% and it is differently by nationality and men and women. According to the recent studies of Europe, scientists have increased their interests in making earlier and more accurate diagnosis of bipolar disorder In Mongolia, although there are studies about clinical symptoms of bipolar affective disorder which had done under a name of depression or manic syndrome respectively, there is no complex study about this disorder.

Purpose:

We aimed to study about some influence factors, common clinical symptoms, incidence of dangerous acts to others, diagnostic delay, disability and risk of suicide of bipolar affective disorders.

Methods:

This study is cross-sectional study used purposive sampling model. We conducted our study in clinical departments of National Center for Mental Health. We collected patient history from participants by subjective and objective anamnesis and by interviewing we determined the mental status of participants and we filled 546 item-questionnaire cards with 35 subsections on each of them. Also we used data logging method to collect data from clinical records of archive and outpatients control cards.

Results: Our study included in total 112 patients with mean age of 42.05±0.97 years, ranging from 14 to 62 years; 31(27.7%) were male and 81(72.3%) were female. Only 4.5% (n=5) of participants had no diagnostic delay or sought help and got treatment from psychiatrist within a month and 95.5% had length of diagnostic delay more than a month.

But mean age at symptom onset of patient-related diagnostic delay was 27.9±0.8 which means olderage at onset is significantly to patient-related delays (Pvalue 0.011). Mostly occurred influence factors in start or relapse of bipolar affective disorder were psycho trauma like family conflict (n=73, 65.2%), family alcoholism (n=46, 41.1%), being jobless (n=72, 64.3%) and etc. Also, 53.6% (n=60) out of the total 112 participants had a hereditary history of mental disorder and by drawing the hereditary picture, it might be inherited due to incompletely expressed autosomal dominant gene. According to comparison between disability and clinical types of bipolar affective disorder, efficiency of bipolar clinical types to disability were differently (Pvalue 0.009) and statistically significant.

Conclusion: Mostly occurred influence factors in start or relapse of bipolar affective disorder were psycho trauma like family conflict, family alcoholism and being jobless and also it might be inherited by unrelated with sex, incompletely expressed autosomal dominant gene.

Key words: mania, depression, delay, disability.

HOW OUR BRAIN EFFECTS ON HEALTH AND WELL-BEING?

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The brain is key organ for our health and well-being. Brain activity is decreased with age. There is strong relationship between brain reserve and behavioral changes. The Healthy brain related to happiness, healthy, wealthy and more successful. On the other hand the unhealthy brain makes us sadder, sicker, poorer and less successful. Why some of us away from brain injuries unharmed but others do not?

The brain function tests are important that to evaluate mental health. In this work we trying to summarize brain function test usage in our clinical practice.

There are few studies regarding brain function using EEG and SPECT in Mongolia

TO ASSESS PSYCHOLOGICAL SCREENING AND QUALITY OF LIFE IN TYPE 2 DIABETIC MONGOLIAN PATIENTS: A CROSS SECTIONAL HOSPITAL-BASED STUDY

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Background: The type 2 diabetic patients are at high risk for psychiatric morbidities, including depression, acculturated anxiety and low quality of life (Collins MM et al., 2009, Gonzales JS et al., 2008).

Methods: We assessed quality of life (Short Form 36 Health Survey, SF-36), depression (Center for Epidemiological Studies Depression Scale, CES-D), and anxiety (Spielberger's State-Trait Anxiety Inventory, STAI) with measuring a fasting glucose level, body mass index, and blood pressure in 132 patients (mean age: 56.14±10.1 years, male/female ratio: 57/42) who were referred to the department of endocrinology at a municipal hospital (Sukhbaatar district, Ulaanbaatar city) between January and February, 2016.

Results: The quality of life was low in 19 (13.77%) patients, moderate in 116 (84.05%) patients, and high in 3 patients (2.18%). 32.61% of the patients had moderate or severe depression score in CESD. 97.1% and 88.4% of the patients showed moderate or severe anxiety score both in trait STAI and state STAI, respectively. Quality of life was inversely correlated with depression score (p<0.001), and with state STAI score (p<0.001). There was a positive correlation between a fasting glucose level and state STAI score (p<0.05).

Discussion: These findings suggest that Mongolian adult patients with type 2 diabetes have an enhanced risk of suffering from depression and anxiety which lead to impaired quality of life. In conclusion, this disquisition describes for the first time quality of life, depression, and anxiety scores in patients with diabetes in Mongolia.

RISK FACTOR ANALYSIS FOR FATAL SUICIDE CASES

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Introduction: Suicidal behaviors are the problems of major concern in today's society, which sometime or other affects the lives of a significant proportion of the population. Multiple risk factorsare associated with suicidal behavior, which has been conceptualized as the outcome of the interaction between an individual's diathesis for suicidal acts and triggers for suicidal behavior.

Goal: To define risk factors associated with suicidal behavior cases, which registered in Ulaanbaatar during last 24 years.

Material and methods:Suicide data was obtained from archive fatal suicide records of the General Police Department, registered among Ulaanbaatar community for the period between 1991 and 2014. There were correlated with a suite of birth, seasonality, meteorological and macro-economic data. The study design was descriptive and retrospective.Data was entered, coded, and analyzed including error review, descriptive statistics, and binary logistic regression analysis.

Results: Totally 4198 fatal suicide cases were registered among Ulaanbaatar population from 1992 to November, 2014 years and 83.6% of those were male.Fatal suicide rate was minimum 6.9 per 100 000 populations in 1991, maximum 38.7 (2005) and 34.3 (2006). Average fatal suicide rate was 20.95 per 100000 Ulaanbaatar populationsin last 24 years and it is higher than average suicide rate of Mongolia (for male 16.3; for female 3.7). Most of fatal suicide cases registered among 20-29 aged youth (p=0.023) and psychosocial causes leading to fatal suicide correlated with will (r=0.317; 0.442 p=0.000).

Most of fatal suicide cases were strangled themselves and used this methods 1.496 times more than other methods for fatal suicide (OR=1.496; p=0.000) for both sexes. For strangulation many people completed suicide within their ger, specifically from ger-toono (p=0.048). Fatal suicide cases, registered in February, March, April and August were more than other months and Wednesday's fatal suicide risk was 1.787 times high than other weekdays (OR=1.787 p=0.002).Month's average air temperature was 16.1±14.15°C; average air humidity was 870.6±3.62 mmHgand averageair pressure was 54±17.99% during last 24 years. Strong positive (for average month's air temperature) and negative (for average month's air humidity and air pressure)correlation was defined between fatal suicide cases and seasonality or meterological factors in winter time.But strong positive correlation in summer(for air humidity) or spring time (for air pressure) was defined. Trend-cycle for fatal suicide cases was defined byARIMA (0,0,0; 0,1,0) model analysis.Birth year of fatal suicide cases by lunar chronology was a risk effect in suicide year, months and suicide days with statistically significant (p=0.000). Family abuse, alcohol drinking(r=0.194; p=0.000), unemployment (r=0.094; p=0.022)werelow positive correlation with fatal suicide cases and suicide risk was increased 4.1 (for alcohol drinking)or 7.4 (for unemployment) times. Some macroeconomic indicators are influenced to suicidal behavior positively and negatively. Positive stronger effect for economic growth, unemployment, youth unemployment and life expectancy to fatal suicidal behavior and negative stronger effect for inflation or consumer price index rates defined with statistically significant.

Conclusion:Risk factors associated with suicidal behavior cases are defined several variables, such as gender, 20-29 aged group, winter time, air temperature, humidity, pressure, moon year and some macroeconomic indicators.

RESEARCH ON THE PREVALENCE OF SLEEP DISORDERS AMONG POPULATION

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Aims: Aim of this research was to determine prevalence of mental problems and common mental disorders and to research some of social-economical features.

Methods: Our study covered 12000 participants randomly selected from 5 districts of Ulaanbaatar and 46 soums from 11 provinces between 18-64 years old. Data collecting process was done September to October, 2013 in Ulaanbaatar, October to November, 2013 in rural areas. The participants were examined by questionnaire and clinical interviews.

Statistical analysis was performed using a statistic software package, SPSSv.17 and fisher test, x2 test.

Results: 17.1 % of all population was diagnosed by sleep disorder. In order to ages sleep disorder rate was the highest (36.2%) between 35-49 years old (p=0.0001). By the gender sleep disorders among female were 1.3 times more than among males (p=0.0001). In order to education sleep disorders were highest among participants with secondary and higer education. By the living areas sleep disorders in urban areas were more than in rural areas (p=0.001).

In order to profession sleep disorders rate were higher among employed and office workers (p=0.0001). In order to marital status, chronic fatigue rate was higher among married and divorced participants (p=0.0001).

Conclusion:

17.1 % of all population was with sleep disorders, was higher among urban citizens, and females 35-49 years old. Also was higher among participants with secondary and higher education, unemployed and office workers. Insomnia was the highest rate 16.6% among participants with sleep disorders.

RESEARCH WORK FOR THE CHANGES IN THE RELATION USING THE METHOD OF PSYCHODRAMA (ON THE EXAMPLE OF STUDENT GROUP)

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Concept of psychodrama psychological discussion by (Jacob Levy Moreno 1892-1974),

a founder of sociometry, in fact, group discussions including 4 basic elements (incorrelation of the group, structure of the group, organization, and consolidation of the members) was considered as the core part and was overseen in comparison with gestalt and other concepts of psychological discussion. During the performance according to concept of psychological consultation of Moreno psychodrama, as well as it can see the eclectic attitude from some unconscious reveal of psychoanalysis /during relation with male people, understood suddenly regarding comparison of them with father/, technique of cognitive psychology, “Here and now” principle of gestalt psychology.

Psychodrama methods were firstly used in the group consultation of home country with estimation of outcome. New aspect of research work exists in the establishment of psychodramas of pre and post consultation relation, in comparison with socimetric research methods. It has a significance to become a first step to apply in the practice studying various concepts regarding group psychological consultation, to explain on the Mongolian examples, as well as to draw analysis.

It considers as certain determination how to conduct group psychological consultation in practice, to determine challenges of every individual, to build reliable and free atmosphere, to give support for tackling the issues of every client, how to draw analysis on the certain case of consultation, as well as seek the way to support them through analysis and research work is able to show that practice to perform such kind of activity by researchers, neurologist and social employee.

ROLE OF STEPPE AND THE SECRET OF DEMOCRATIC HISTORY MONGOLIA

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Mongolia has 2000 years of rich history, culture, and tradition, but is still a young nation in regards to civilization and urbanization. We started urbanization in XX century under the Socialist regime, one of human kind’s most abnormal systems. Nationalization of livestock in 1959 led to last movement of nomads and first migration to cities. This marks the 50th year, but considering the common worldwide development since 1990, Mongolian civilization and urbanization is merely 20 years old today. Socialism introduced numerous urban elements in our lives, but we looked at this brutal communist society as one of many passing “natural disasters”. That’s why we endured it, hoping it would pass like freezing winter cold and scorching summer heat. In this political system, the state lied that people would live happily in communism and people lied back that they believed in communism. It was a two-way deceit circle. One could say that these were the years Mongolian socialism was nomadic society with urban settlers’ masks.

Mongolia transitioned into modern democratic country in 1990. However, our nomadic mentality of thousand years still remains.

If one compares it to 800 century ago, one can see that heroes of “Mongolian Secret History” race with SUV’s, with cellphones on hand.

They still imagine democracy as being kings in their valley, freedom as being ungoverned, and national independence as living carefree in endless steppe. To them, foreign investments these days seem like foreigner’s livestock that cause dzud disaster in.

Therefore, one can conclude:

First of all, Mongolians face troubles of young civilization.

Second, Mongolians still have the mentality and characters of being their own kings and running away from problems, instead of solving them.

Third, they are expert at adapting, and faking to get used to new environment, which convinces the whole world that Mongolians are keeping up with market transition and globalization.

STUDY ON ATTITUDE OF STUDENTS WHO HAS BEEN STUDYING IN KINDERGARDEN TEACHER

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In recent years, kindergarden teachers have been one of the popular jobs in Mongolia. There are 21 universities and colleges in total for preparing kindergarden teachers with D012201 index. The number of colleges and universities were increased compared to a previous year.

Teachers should be well-educated and prepared for meet the requirement of social neccesity. It means more broader conception that teachers should have great skills, desire to teach, passion to learn, capable to prepare educated students.

Age of 3 and 4 is very important for human development and fundamental phase of formation of character. Studies on students interests of the job, attitudes on lessons and inspiration of learn are significant for detecting issues, solving the problem, finding new ideas in this field.

Key words: kindergarten teachers, inspiration, environment, attitude

LOVE ATTITUDE, PROTOTYPE AND ANALYZING ON IT

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In this reaserch, the theoretical view by Psychologist and sociologist John Alan Lee and professor, Doctor Robert Sternberg and philosopher, Psychologist and sociologist Erich Fromm studied the love, is generally researched and used for the justification of this theory.

Totally 18-30 aged, 460 participators are participated in this study and 233 participators are female, 227 participators are male.

By studying the concept of Love attitude and prototype in 18-30 age young people, comprehending their psychics then coming the suitable situation for communicating them. It has a practical importance to be used by hand book for the teachers, pedagogic, psychologists, family researchers and social workers and also co-working with them.

I have reached the conclusion by using the methodology to study the objects of Love attitude and prototype in 18-30 aged young people with “Triangular Love scale” by R. Sternberg, “Love attitude scale” by C.S Hendrick & S.S Hendrick. Whereas today’s young people are boundless, affectionate, and warm, respected each other, mutual well understanding, ready to help mutually and consider the well communication, the number of percent of agape type in men is comparatively higher than others, it means they have adult responsibilities that is about protecting one’s own everything, gradually preciously love them and individually devoted themselves. The number of percent of storge and pragma types women are higher than men’s percent. It means they understand love is for them, to choose loved one they demand the requirement how to be, looking for the well requirement situated ones, and have a attitude to share their benefit with them than exchanging the what they feel, mutually get closer by not sexual relation. The study revealed that nevertheless couples, today’s loved people care each other close to relation and warmly, but it is revealed that they have been losing the best characters such a responsibility, romantic, intimate, honest, also inability taking the responsibility, over-independent.

In our daily life, we normally communicate each other without, further in the long period communication, so that, raised our mutual intimate feeling. Whereas when we were singles, we preferred not love but the normal relation, as being close with someone and having couples, that normal feeling and communication changed into the love or romantic relation, so that on the way of relation, it creates the perfect love.

COMPARATIVE STUDY ON ATTACHMENT STYLES OF FIRST GRADESTUDENTS TO THEIR TEACHERS

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The effectiveness of development and training activity is in many respects determined by the relations between the teacher and the student. These relations with the special significance can be manifested in the joint training activity. As one of the factors, which determine the interrelations of teacher and student, appears the attachment of student to the teacher.

Research methods that determine attachment to a teacher in the primary school age are still not clearly identified in the literature. Many methods determine expression of affection to his mother. To study the affection of the first grade of students to the teacher, we developed a model of attachment to the teacher, we have compiled a new questionnaire, based on the following methods: (Kerns, 2000, Al-Yagon, Mikulincer, 2004 E.V.Pupyreva 2007... , M.V.Yaremchuk., 2005)

In conclusion summarizes the results of the study indicated that they confirm the hypothesis, presents the key findings:

1. In our study handshaking attachment to the mother and the teacher was obtained. The degree of reliability of attachment to the mother affects the reliability of attachment to the teacher. Even found a significant correlation between the degree of reliability of the attachment to the mother and the reliability of attachment to the teacher.
2. Comparing communication attachment to the mother and the teacher of students of the first grade, we found that students with a fragile type of attachment to mother (type C) have a reliable attachment to other family members (eg, father, grandparents); and also these students show affection to the teacher with a secure attachment style (type B).
3. Attachment to the teacher the students of the first grade is characterized by a gender and cultural features, which retains its stability in school life. It is shown that the Russian graders gladly accept a teacher, but feel that their teacher is not enough attention to them. A Mongolian graders tend to the presence of the teacher, because he is nice next to the teacher, and they are happy to accept a teacher, but feel that the teacher is not enough sensitive and attentive.
4. Children with different types of attachment to the teacher have different characteristics. Three types of attachment to the teacher can be identified.

- Reliable attachment is characterized by confidence of first-graders in a positive attitude on the part of the teacher, school student feels it necessary and valuable for the pupil teacher, when it receives the support of the teacher;

- Ambivalent attachment is characterized by uncertainty of first-graders in a positive attitude on the part of the teacher, the perception of a lack of support, feelings of anxiety and fear;

- Avoidant attachment is characterized by a pronounced distance in relation to teachers, pupils do not perceive teachers as a source of possible help and support, less close with their teachers;

THE PARENTS RELATIONSHIP TYPELOGY'S STUDIED THE IMPACT ON CHILDREN'S BEHAVIOR

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The Parents relationship typelogy's discussed the impact on children's behavior **(accentuation of character types).**

With the development of democratic society, the needs for acquiring skills to make smart decisions, compare the multiple viewpoints, reflect critically to any situations, live sustainably and as well as to discover oneself have increased enormously among young people in recent decades.

However, The World Health Organization and the Ministry of Health, results of surveys conducted by the National Center for Children and data raises a lot of trouble in the school and the family environment and adolescent socialization and shows the lack of developments in progress. This reality, considering the issue of parental communication patterns (type) to study the impact of the behavior (accentuation of character types). Adolescent and family relationships are selected to develop proposals to improve this topic.

The first chapter of Communications and a general understanding of the patterns of behavior and family relationships, communication models, teen socialization features B.D.Parygen, V.N.Panfyrov, Karina Leongard, Andrey Yevgenyevich Lichko, Alfred Adler, Salvador Minuchin scientific perspective, have been taken into account

The second chapter studies the organization and development, including an explanation of the results of research and study Timoty Leary is "Interpersonal diagnosis personal methods", G. Schmieschek "Behavioral enhancement diagnostic tests", Koffmann's "family photo portrait" using the test "parental communication patterns to study the impact on adolescent behavior, data processing gas was analyzed.

The relationship between husband and wife typical teen behavior, in order to study the impact of "parental communication research in this field depends on the adolescent's behavior patterns can be a basis for the development of services to families," and it is assumed that men "unrelated dominant (the bio-survival circuit) energy strong "(R = 0.67), a very high correlation with fathers, confident, independent and self-reliant, and highly competitive in the teens, confident, energetic and directly affect the behavior and communication patterns of women and children-Definition relationships (the neurogenetic circuit - too careful = 0.5) the neurogenetic circuit pattern on the families try to be friendly features. Obedience to this type of extreme behavior, along with the others and the mother of this child too involved in promoting careful influential research results have shown that the shape and behavior statistics and qualitative research (family photo portrait) results of our proposed complied with the hypothesis that the show is

LEARNING FOR AGEING IN SOCIAL WORK EDUCATION

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Ageing is the present demographic change in many countries including Mongolia. 2030 Agenda for Sustainable Development highlighted the population ageing trend and countries are aware about various implications for all spheres of society, including education, health, housing, social protection, labour and economic sectors, as well as family structures and inter-generational ties. Learning of ageing by younger generations as well as by older adults themselves is considered of importance. This paper attempts to answer the question whether the Mongolian higher education is ready to address the needs of the changes in the population structure in case of social work education. The analysis of social work curriculum in the Mongolian universities demonstrates the necessity of integrating ageing in the teaching and curriculum content. For curriculum evaluation "Geriatric social work competency scale" was used (CSWE. Gero-Ed Center, 2006) which lists four categories of competencies 1/ values, ethics, and theoretical perspectives, 2/ assessment, 3/ intervention, 4/ aging services, programs, and policies. Data related to curriculum, teachers, learners, and training resources were collected and analyzed. Social work students' knowledge, perception, and attitude towards ageing, older adults, and gerontology social work are examined. The study showed the need to increase gerontology competence of social work students as well as social service professionals especially in the those working in the social welfare sector.

Keywords: learning for ageing, social work education, gerontology competence

STUDYING THE RELATIONSHIP BETWEEN MARITAL AND SEXUAL SATISFACTION

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Purpose: The purpose of this research is to determine relationship between marital quality, marital and sexual satisfaction among married women and men and influencing factors (socio-demographic characteristics such as age, gender, education, length of marriage and etc.) to those variables.

Methods: We used the following marital satisfaction and sexual satisfaction questionnaires and self-constructed questionnaire (socio-demographic characteristics) for data collection: Marital satisfaction index, Sexual satisfaction index, Quality if marriage index and Kansas marital satisfaction scale. Data were analyzed using statistical tests such as Pearson r, Independent t-test, Mann-Whitney U test and One-way ANOVA. Statistical significant level was 0.05.

Results: According to the research findings, the majority of male participants and half of female participants were satisfied with their sexual relationship and none of them were very unsatisfied. The most of male participants and half of female participants were satisfied with their marital relationship and few of both sex participants were not satisfied. In marital quality scale, about 60 percent of female participants and about 70 percent of male participants expressed high quality rate.

There was a significant correlation between marital satisfaction and sexual satisfaction ($p \leq 0.000$) and between marital satisfaction and marital quality ($p \leq 0.000$) and between sexual satisfaction and marital quality ($p \leq 0.000$).

Conclusion: There are needs to provide couple counselling for increasing the marital satisfaction and sexual satisfaction. The intervention would include increasing communication skill, problem solving skill, changing the attitude toward for expectation about their husband or wife displeasing behaviors and enhancing their sex life.

Key words: marital satisfaction, sexual satisfaction, marital quality, socio-demographic characteristics

STUDY OF INDIVIDUAL'S PERSONALITY TRAITS (BASED UPON EXAMPLES OF 16-18 YEAR OLD MONGOLIAN STUDENTS)

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An appropriate use of human development factors and full utilization of human rights on development and education needs to be studied as a priority issue. This is a demand of the social development to fully fulfill human potentials as citizens.

The current research is new due to first time studying personality factors in comparison using the R.Cattel's methodology of 16 factors for studying personality factors (16F) of 500 16-18 aged students and a model of R.Cattel's 14 factors for adolescence (HSPQ), identifying their social attitude, emotions, self-confidence and self-reliance skills that are defined by some differentiated indicators depending on the age, gender and environment and providing explanations from the theoretical and methodological points of view.

Based upon research findings of surveys conducted among Mongolian 16-18 aged students, we have developed recommendations and suggestions to further broaden studies of younger children, adolescence, and adults. Also compiling more necessary data in terms of comparing with similar data from other countries we have prepared preliminary conditions for next step research.

As a result of using the R.Cattel's methodology of 16 factors, the research findings showed that majority of high school students' personality factors, mainly physical development factors, fell in the range of 4-6 points which referred to an average level, however in terms of 3 factors fell above or below average.

1. "0" factor was at 7.1 point which is a high indicators. "0" factor refers to a nervous, alarmed and self-guilty state. The person with the "0" factor is usually a nervous, stressed out and worried person. This kind of personality on the one hand does not rely on self, is likely to make himself or herself guilty, and has a low self-esteem. This happens when parents and teachers have approached him or her from an authoritarian position since early ages and never provided any kind of advice or help. On the other hand, it is affected by social and economic problems in our country and lack of state policy on developing young people.

2. In terms of "B" and "Q" factors, high school students scored poorly. (3.8 and 3.2). Poor indicator of the "B" factor might be related to low intellectual abilities and loss of personal control. Therefore, we have not taken this factor as related to personal intelligence. It is proved by scholarly works done by our research team members,

O.Myagmar and B.Tuya, who claim that our adolescents and young people possess intellectual abilities at an average and above average level. So this factor is more dependable on the personal emotional mood.

3. The other factor that scored below average was factor "Q". The person with this factor is not independent, relies on others, and always seeks support, advice or praise from others. We consider this factor is related to critical issues of the modern society. For instance, nowadays children do not learn self-reliant life and do not take initiative within the family and school environment, and they are taught these skills as well.

PREDISPOSING SOCIAL AND PSYCHOLOGICAL FACTORS OF VIDEO GAME ADDICTION AMONG ADOLESCENTS IN MONGOLIA

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Video game addiction among adolescent in Mongolia has been serious neuropsychological problem since Information Technology that is the single, most rapidly changing and growing industry in the world. While current neurobiological and psychological studies emphasized brain and social model of addiction, it doesn't explain fully what is predisposing factors towards video game use. In this review, we studied that such dysfunctional and addictive behaviour is underpinned by family climate, emotional intelligence, implicit and explicit self esteem or not. The sample of 68 adolescents was recruited from 500 video game stations in Ulaanbaatar, Mongolia. The method of randomized stratified selection in every school was used for its constitution. Participants were asked to complete the Video game addiction scale for adolescents, Trait emotional intelligence questionnaire, Name letter projective test, Rosenberg self esteem test, as well as projective test of Family design. Our study presents positive family climate and implicit self esteem are much more important for building life long adult characteristics that are disrupted by video game use.

Key words: game, addiction, adolescent

NEUROPROTECTION IN BRAIN ISCHEMIA

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Neuroprotection is a strategy or a combination of strategies, which prevent or ameliorate brain injury and/or stimulate recovery of neurons and their environment; direct interaction with the primary damaging factor or activation of intrinsic mechanisms which prevent secondary damage of the neurons.

The ischemic cascade is a series of biochemical reactions that are initiated in the brain and other aerobic tissues after seconds to minutes of ischemia (inadequate blood supply). The diversity of pathophysiological mechanisms of neuronal damage warrants the combined approach to their elimination.

The targets of neuroprotection for acute cerebral ischemia is Local inflammatory response inside the ischemic focus, oxidative stress (excessive production of free radicals and reactive oxygen species), disruption of blood-brain barrier as a sequence of the activation of matrix metalloproteinases, glutamate-mediated excitotoxicity, apoptosis. The modalities for that reperfusion, increase of oxygen delivery, supply neurons with energy substrates and metabolic protection, hemodilution, stimulation of systemic circulation in order to increase cerebral blood flow.

Whereas targets in chronic cerebral ischemia decrease of energy suppliers (ATP and phosphocreatine), dysfunction of mitochondrial respiratory chain, failure of oxidative phosphorylation. disturb of ATP transportation and utilization, apoptosis. For that adequate correction of hypertension, hyperlipidemia, microcirculatory and metabolic derangements of diabetic origin. Pro-mitochondrial, antiinflammatory, anti-excitatory, or anti-oxidant strategies, which enhance specific pathways responsible for protein clearance or degradation and reduce toxic oligomers or aggregates.

Use of medications with multipotent mechanisms of action, which can interrupt pathological neurochemical reactions at different stages of their evolution, is preferable. Thus modern neuroprotective treatments are represented by complex compounds, which demonstrate antihypoxic and antioxidant effects and improve energy metabolism in neurons and other types of cells in central nervous system.

MENTAL HEALTH CARE SUMMARY REPORT OF MONGOLIA

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Mongolia has a Mental Health Law and National Mental Health Second Program /2010-2019/ formulated in 2009. Both the plan and policy include the same components including the development of community mental health services, development of a mental health components in primary health care, human resources, advocacy and promotion, human rights protection of users, financing, quality improvement and monitoring system.

The Mongolian mental health system operates at the primary, secondary and tertiary care levels.

1. Primary care: Family clinics
2. Secondary care: Psychiatric inpatient and outpatient care units of districts and provinces, Voluntary facility for alcoholic patients, Unvoluntary facility for alcoholic patients
3. Tertiary care: National Mental Health Centre of Mongolia

The mental health service in Mongolia is still largely based in a stand-alone mental hospital.

0.21 psychiatric beds, 0.05 psychiatrists (135), 0.08 nurses, 0.002 psychologists, 0.008 occupational therapists per 1000 population.

By the results of epidemiological study on common mental and behavioural disorders among population, there was revealed prevalence of chronic fatigue – 16.2%, anxiety – 18.5%, depression – 6%, alcohol addiction – 6.2%, sleep disorders – 17.1%, unexplained somatoform disorders was 17.1% among population.

There was introduced new methods of psychopathological diagnostics and diagnostic instruments of forensic psychiatry such as polygraphy.

In recent years despite mental health program and mental health legislation envisaging community mental health care, the mental health care existing is still hospital based. And psychosocial rehabilitation of chronic mental disorder needs to be supported by establishing day care centers and community residential homes.

In current situation we have still High number of admission in hospital. 80% of total patients are chronic. Average length of stay is 29,3 days. Number of beds and psychiatrists is very few in rural area.

Overcome these challenges

The Mental Health system in Mongolia has a range of mental health facilities. However, the existing mental health system is still largely hospital based. A move towards community care will require a change in direction of mental health funding towards community mental health facilities and promotion of mental health in the community .

Options in the psychosocial rehabilitation of those with mental illness could include day care centres and community residential homes. To deliver such programs extensively, the development of training programs would be needed for various professionals, including medical students, nurses, psychologists, social workers and psychiatrists. Furthermore, the intersectoral collaboration among social welfare, housing, legal, employment and education sectors should be improved. Assisting mental health planners and evaluators and planning, providing and evaluating mental health services. Also Increasing the allocation of resources for mental health is very important.

PSYCHOLOGICAL COUNSELING SESSIONS IN THE SCHOOL SETTING PLAY ASMENTAL HEALTH SUPPORT FOR STUDENTS FACING DIFFICULTY

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Background: Every year,510.100 students get secondary education in Mongolia. The half of them is in the capital city of Ulaanbaatar going to 119 public schools. There is no psychologist or licensed counselor providing psychological counseling for students.1Students face difficulties in their lives that they need support system outside their families. Some face physical and verbal abuse, bully, and loss in trust. Some students have parents dealing with alcohol issues, unemployment and divorce in their homes. Many teachers and social workers lack the skill to provide psychological counseling to students which leaves students with no support. Student at schools are at the phase of building relationships and their mental wellbeing is crucial to become a trustworthy adult.

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Methods: We chose 7 secondary public schools with more than 1,000 students each to provide psychological counseling on walk-in basis. Classroom workshops, private counseling and group trainings were provided to 70% of all students per school. In two years, we collected over 1010 psychological session notes and conducted qualitative analysis on it.

Result: We categorized the data into 7 steps.

STUDENT

*At the conference, we will provide more detailed results and correlations.

Conclusions: Every year, hundreds of students commit crimes at various levels and around 50 students commit suicide.2Many of the cases are preventable within psychological support. The qualitative analysis result can be the guide to build skilled counselors at secondary schools.

Event preceded the issue

Behavioral and attidude symptoms

Consequences

Thoughts and feelings

Actions taken

Changes suggested by psychologist

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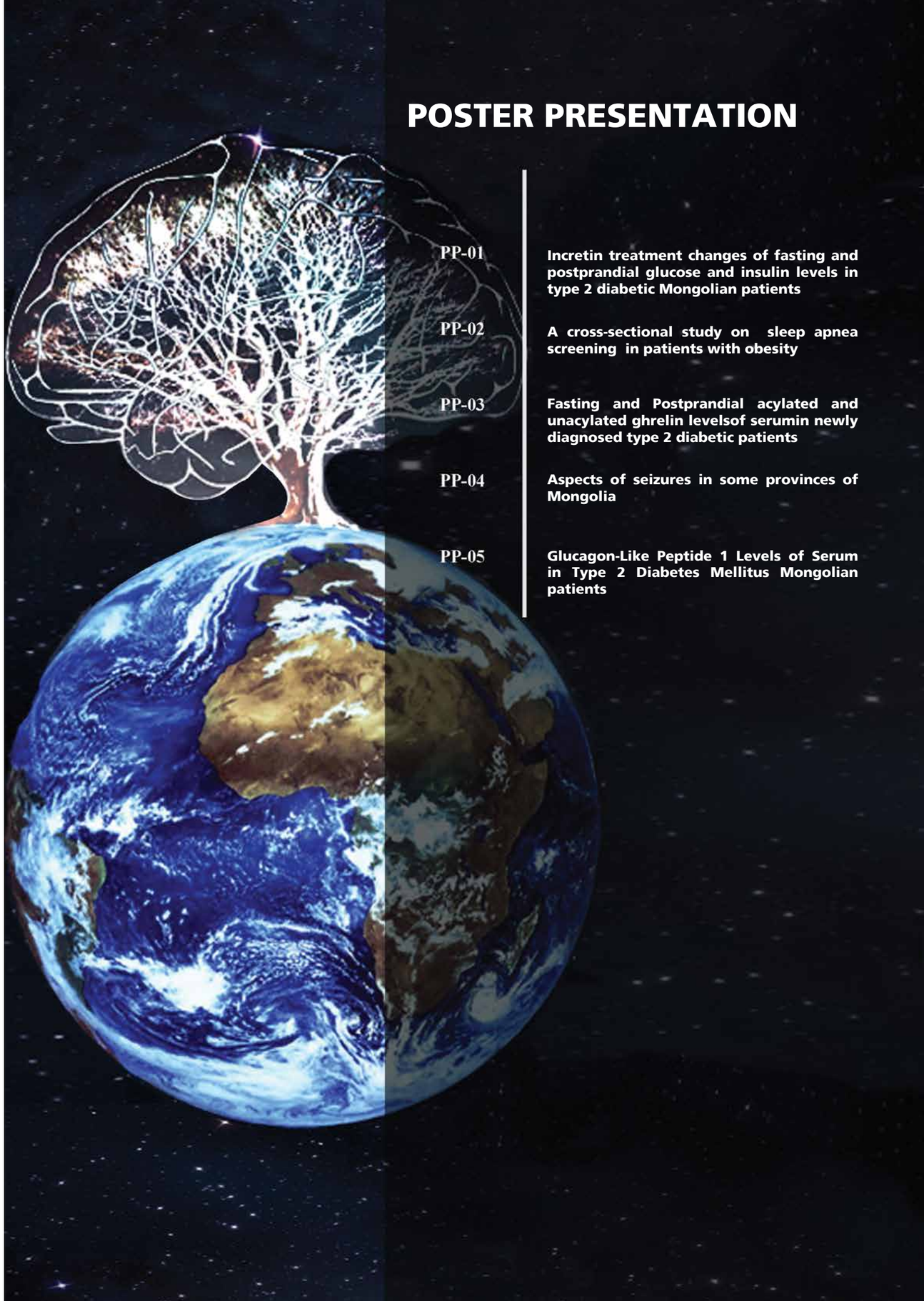
Keyword:

Students facing difficulty, psychological support, counseling skill, qualitative analysis



POSTER PRESENTATION

INCRETIN TREATMENT CHANGES OF FASTING AND POSTPRANDIAL GLUCOSE AND INSULIN LEVELS IN TYPE 2 DIABETIC MONGOLIAN PATIENTS

Altanzul A[1], Battulga Kh[1], Enkhchimeg Ts[1], Damdindorj B[1]
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Introduction: Discovery incretin hormones and their role on glucose metabolism and pathogenesis of type 2 diabetes mellitus (T2DM) are current interests of diabetology. Incretin hormones are secreted from intestinal endocrine cells in response to food ingetion and potentiate pancreatic insulin secretion when compared with glucose administration. Insulin release and deteriorates glucose tolerance in rodents and humans. Conversely, enhances insulin responses and lowers glucose concentrations during glucose tolerance tests. Therefore incretin tereatment important role in insulin release and glucose homeostasis. This study aimed to investigate blood glucose and plasma insulin response to glucose tolerance test in newly diagnosed type 2 diabetic patients.

Methods: Insulin and blood glucose concentrations were measured on fasting and postprandial state at 15, 30, 60 and 120 minutes incretin therapy before and after in 20 newly diagnosed type 2 diabetic patients and 11 healthy subjects. Statistical analyses wereperformed using the Student's t-test for comparison between two groups on measurements of insulin, ghrelin and glucose levels. P values below 0.05 were considered statistically significant.

Results: Serum insulin, blood glucose levels were singnificantly higher ($p<0.05$) in newly diagnosed type 2 diabetic patients than control subjects. In postprandial state, blood glucose level was potently higher ($p<0.01$ insulin levels were significantly lower ($p<0.05$) in type 2 diabetic patients

Conclusion: DM type 2 Mongolian people 1 phase insulin secretion emissions and the loss of pancreatic beta cell function, the decrease in peripheral tissue insulin sensitivity is a major cause of increased hunger and sustainable meal blood glucose after eating. Incretin treatments promote insulin secretion, increased emission of beta cell function Mongolian people living with DM type 2. Reduces strongly the amount of blood glucose by improving insulin sensitivity .

Word key: Insulin, glucose, OGTT, GLP-1, DPP-4 inhibitor, Meal test

A CROSS-SECTIONAL STUDY ON SLEEP APNEA SCREENING IN PATIENTS WITH OBESITY

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Background: 53% of participants of a population-based study were evaluated as obese among Mongolian adults (Shiwaku K et al., 2004). It has been suggested that obstructive sleep apnea (OSA), characterized by involuntary cessations of breathing during sleep, is one of the strong risk factors for obesity through oxidative stress (Schober A et al., 2010, Xu Z et al., 2008). Methods: We assessed sleep apnea risk factors using self-reporting Berlin Questionnaire (BQ), Global Physical Activity Questionnaire (GPAQ) in 35 obese (body mass index, BMI>30 kg/m2) hospitalized patients (mean age: 51.94±15.93, male/female ratio: 17:18) who were referred to departments of internal medicine in general hospitals between February and March, 2015 and in 35 age and gender-matched healthy subjects ($18.0<BMI<24.9$) recruited from a local area. BMI, a fasting glucose level, blood pressure, total of eight circumferences including neck, chest, waist, hip and thigh, and triceps skinfold were measured according to Framingham protocols. Alcohol consumption, tobacco smoking and sleep behaviors including pillow usage were questioned individually in both groups. Results: 19 (54%) patients had a high-risk BQ score, whereas 6 (17%) healthy subjects had high- risk BQ score (OR=5.74, 95% CI: 1.904-17.282, $p<0.01$). 26 (74%) patients were assessed as snorers, whereas 9 (26%) healthy subjects were assessed as snorers (OR=8.36, 95% CI: 2.857- 24.379, $p=0.001$). There was a strong correlation between BQ score and snoring score ($p=0.001$). Increased neck circumference and increased systolic blood pressure were also associated with sleep apnea in obese patients ($p<0.05$). Discussion: These findings suggest that there is a clear relationship between obesity and OSA. To prevent complications including cardiac attack, diabetes mellitus, metabolic syndrome, hypertension, and daytime sleepiness due to comorbid sleep apnea syndrome, BQ combined with measuring snoring, neck circumference, and blood pressure should be considered for screening of OSA in obese patients.

FASTING AND POSTPRANDIAL ACYLATED AND UNACYLATED GHRELIN LEVELSOF SERUMIN NEWLY DIAGNOSED TYPE 2 DIABETIC PATIENTS

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Objective

To make comparative study Fasting and postprandial ghrelin levels to appear blood insulin and glucose levels in serum for control and type 2 diabetic patients.

Methods

Serum acylated ghrelin, unacylated ghrelin, insulin and blood glucose concentrations were measured on fasting and postprandial state at 15, 30, 60 and 120 minutes in 14 newly diagnosedtype 2 diabetic patients and 14 healthy subjects. Statistical analyses were performed using the Student's t-test for comparison between two groups on measurements of insulin, ghrelin and glucose levels. P values below 0.05 were considered statistically significant.

Results

Fasting unacylated ghrelin level significantly lower ($p<0.05$) and serum insulin, blood glucose levels were singnificantly higher ($p<0.05$) in newly diagnosed type 2 diabetic patients than control subjects. In postprandial state, blood glucose level was potently higher ($p<0.01$) and serum unacylated ghrelin, insulin levels were significantly lower ($p<0.05$) in type 2 diabetic patients. However, plasma acylated ghrelin weren't decreased after feeding in type 2 diabetic patients compared to control subjects

Conclusion

These results indicate that the lower level of fasting unacylated ghrelin and sustainable level of postprandial acylated ghrelin may important reason for hyperglycemia and impairment of insulin release in type 2 diabetic patients.

ASPECTS OF SEIZURES IN SOME PROVINCES OF MONGOLIA

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BACKROUND: Epilepsy is one of the most common neurological disorder. Scientists have found that the main causes of epilepsy are inherited. Compared to the general population, a person with epilepsy is 3.7 times more likely to have a family history of epilepsy, especially on the mother's side.

GOALS: Determine what percentage of epilepsy causes are hereditary and compare causes by gender and age.

MATERIALS AND METHOD: Medical information was collected on 268 people with epilepsy from neurologists in Hovsgul, Orkhon, Bayankhongor, and Umnugobi provinces in Mongolia. Descriptive methods were used to analyze the information. All participants were given a 38 question survey with 6 main categories. Participants also underwent a neurological examination including EEG. Participants had previously undergone CT and MRI scans to diagnose their epilepsy. Their CT and MRI scans were compared with the EEG result.

RESULTS: 52,9% of the participants were men and 47.1% were women. 87 participants were age 0-14, 101 were age 15-34, and 80 were age 35-64. No participants were 65 years or older. The examination revealed that 3.1% of participants had damaged blood vessels in the brain, 24.6% had brain injuries acquired prenatally, 16.9% had head or brain injuries, 3.6% had a neurological infection, 49.2% had idiopathic generalized epilepsy (IGE), and 2.6% had a neurodegenerative disorder. Comparing factors by age group, the most common factors among participants age 0-14 were perinatal injuries or IGE. Among participants age 15-34 and 35-64, the most common factors were IGE and head and brain injury. We also examined the length of time the participants have had epilepsy. 11.8% of participants have had epilepsy up to 1 year, 29.2% have had epilepsy 2-5 years, 17.4% have had epilepsy 6-10 years, and 41.5% have had epilepsy over 10 years. Participants were interviewed about their family history. 6.7% have epilepsy in their family on their father's side. 20% have a family history of epilepsy on their mother's side. 52% of the women had IGE. For men, 19% had head or brain injuries. Participants age 0-14 had juvenile myoclonic epilepsy, mild childhood epilepsy, or autosomal dominant nocturnal frontal lobe epilepsy (ADNFLE). 7 of the participants' families had a history of epilepsy in 3 generations. 11 families had a history of epilepsy in 2 generations. 14 families had a history of autosomal dominant epilepsy.

CONCLUSION: Inherited causes of epilepsy was for 49.2% of the participants. Perinatal injuries was for 24.6%.

Epilepsy inherited from the mother's side is more common.

18 of the participants' families with inherited epilepsy need molecular genetic testing.

Key words: genetic epilepsy's diagnose, idiopathic epilepsy

GLUCAGON-LIKE PEPTIDE 1 LEVELS OF SERUM IN TYPE 2 DIABETES MELLITUS MONGOLIAN PATIENTS

Enkhchimeg.Ts[1], Altanzul.A[1], Battulga.Kh[1], Damdindorj.B[1]
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Backaround: glucagon like peptide-1 (GLP-1), an incretin hormone, regulates glucose metabolism by inducing beta cell mass, insulin secretion and suppressing glucagon secretion. the aim of the study is to assess the level of fasting and post-prandial GLP-1 levels to appear blood insulin and glucose levels in serum and their risk for type 2 diabetes mellitus (T2DM). in Mongolia, no data on GLP-1 levels are available both in normal subjects and subjects with T2DM.

Methods: Serum total and active GLP-1, insulin and blood glucose concentrations were measured on fasting and postprandial state at 15, 30, 60 and 120 minutes in 14 newly diagnosed T2DM and 14 subjects with normal glucose tolerance. P values below 0.05 were considered statistically significant. results: both fasting and post-prandial GLP-1 levels were significantly lower in subjects with T2DM than control subjects ($p<0.01$). In postprandial state, blood glucose level was potently higher and serum total GLP-1, insulin levels were significantly lower ($p<0.05$) in T2DM. conclusion: this study it can be concluded that low levels of total and active GLP-1 are an important risk factor for T2DM in the Mongolian population.

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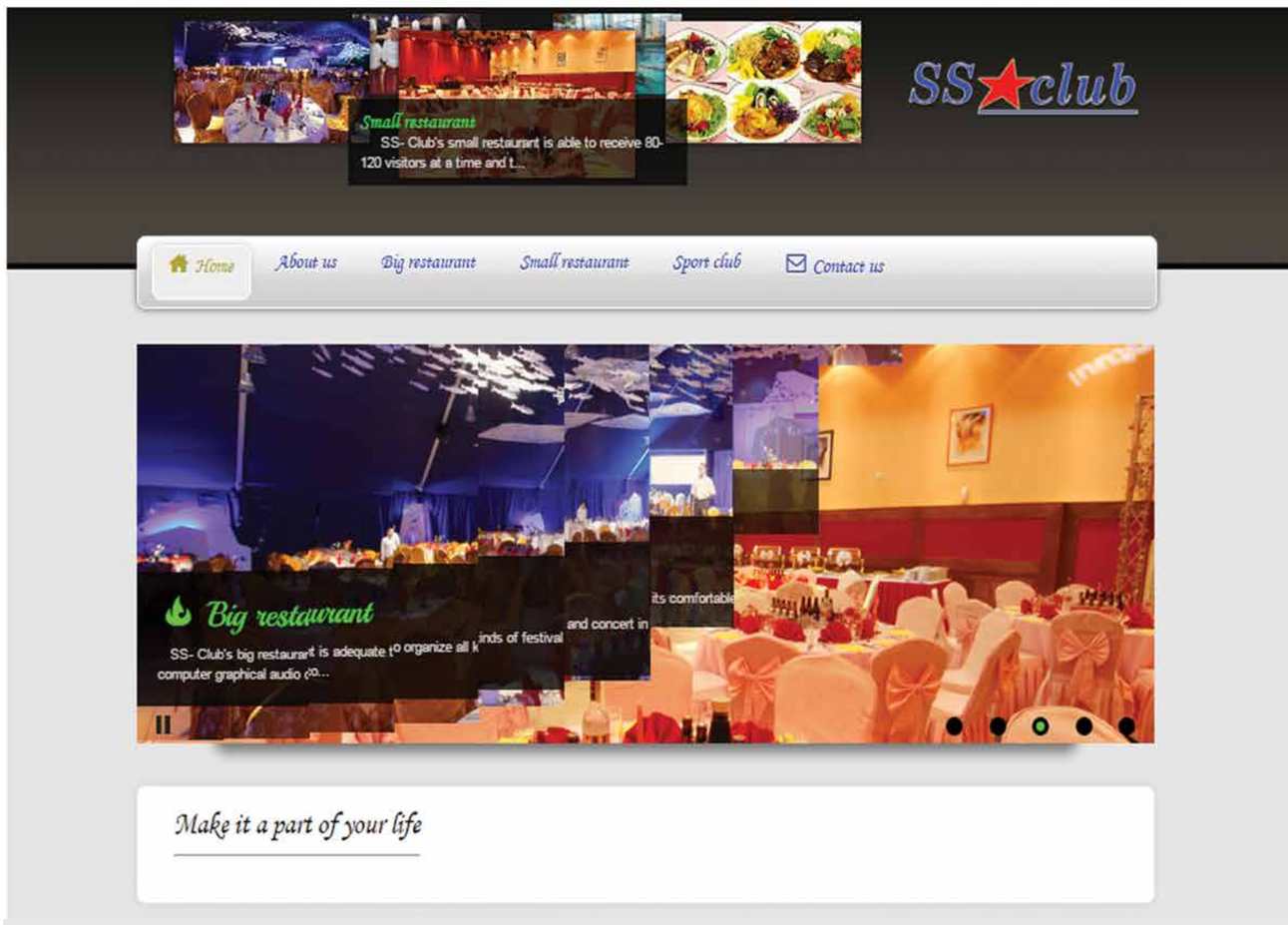

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