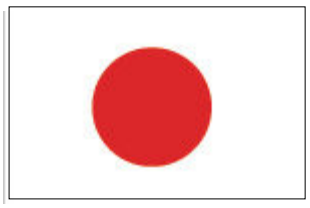
Turkish-Japanese Sleep Forum 2013
Türk-Japon Uyku Forumu 2013



Date: May, 29(Wed)-30(Thu), 2013

Location: Tokyo Convention Hall

1-1, Kyobashi, Chuo-ku, Tokyo, Japan

Tokyo Square Garden 5F

TEL: 81-3-5542-1995 FAX :81-3-5542-1994

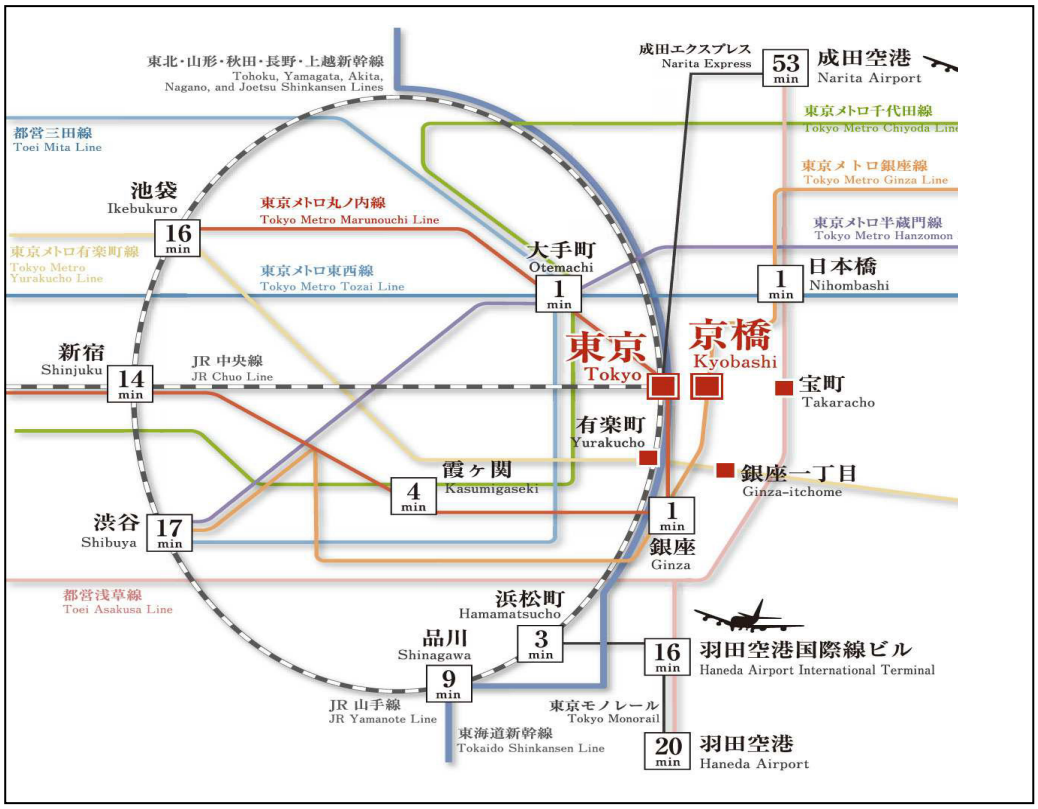
Dear colleagues and friends,

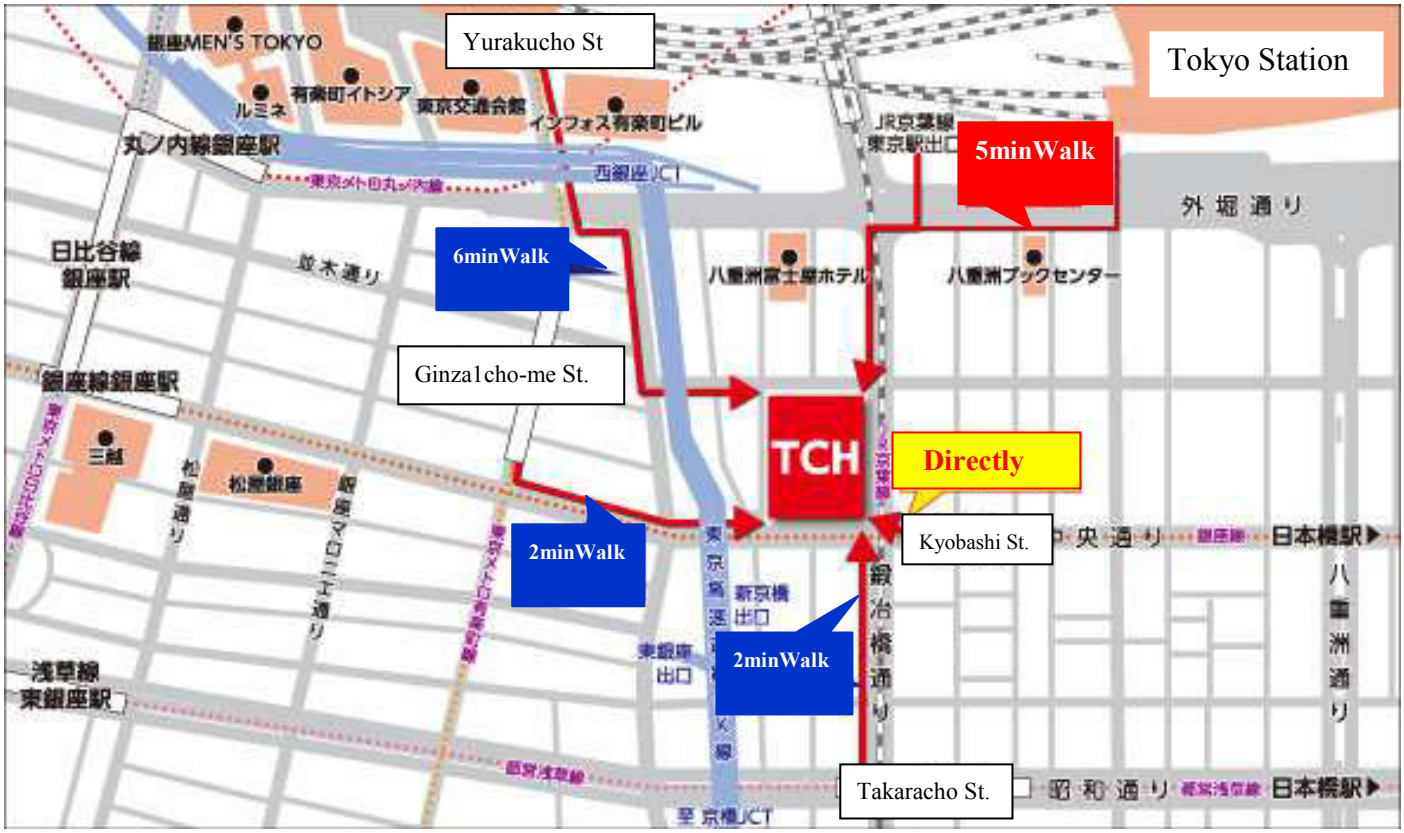
Thank you very much for attending the Fourth Turkish-Japanese Sleep Forum held in Tokyo.
Turkey and Japan are located at the west and east end of the Asian continent in the same latitude. Both countries have long history and are made up of almost one ethnic group. Both countries have a long history of friendship such as the rescue operation of the disaster of Ertuğrul Fırkateyni, evacuation of Japanese residents from Iran by Turkish airline and so forth.
In 2010, "Japan year 2010 in Turkey" was held to commemorating the 120th Anniversary of the disaster of Ertuğrul Fırkateyni. On that occasion, the First Turkish-Japanese Sleep Forum was held in Izmir. More than twenty Japanese researchers attended the Forum and the forum made a great success. The second Forum was held in Kyoto on the occasion of Worldsleep2011 and the third Forum was held in 2012 again in Izmir.
Through these Forums, ideas of joint research programs have been emerged. This time it will be quite fruitful to discuss those possibilities further.
I cordially hope for further development of Turkish-Japanese Sleep Forum and mutual friendship between Turky and Japan.

Tetsuo Shimizu, M.D.

President of the Japanese Society of Sleep Research
Department of Neuropsychiatry,Akita University Graduate School of Medicine,

【**Access**】 Five stations and 24 lines are available.Directry connected to Haneda and Narita Airport.





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Five Minute walk from JR Tokyo Station

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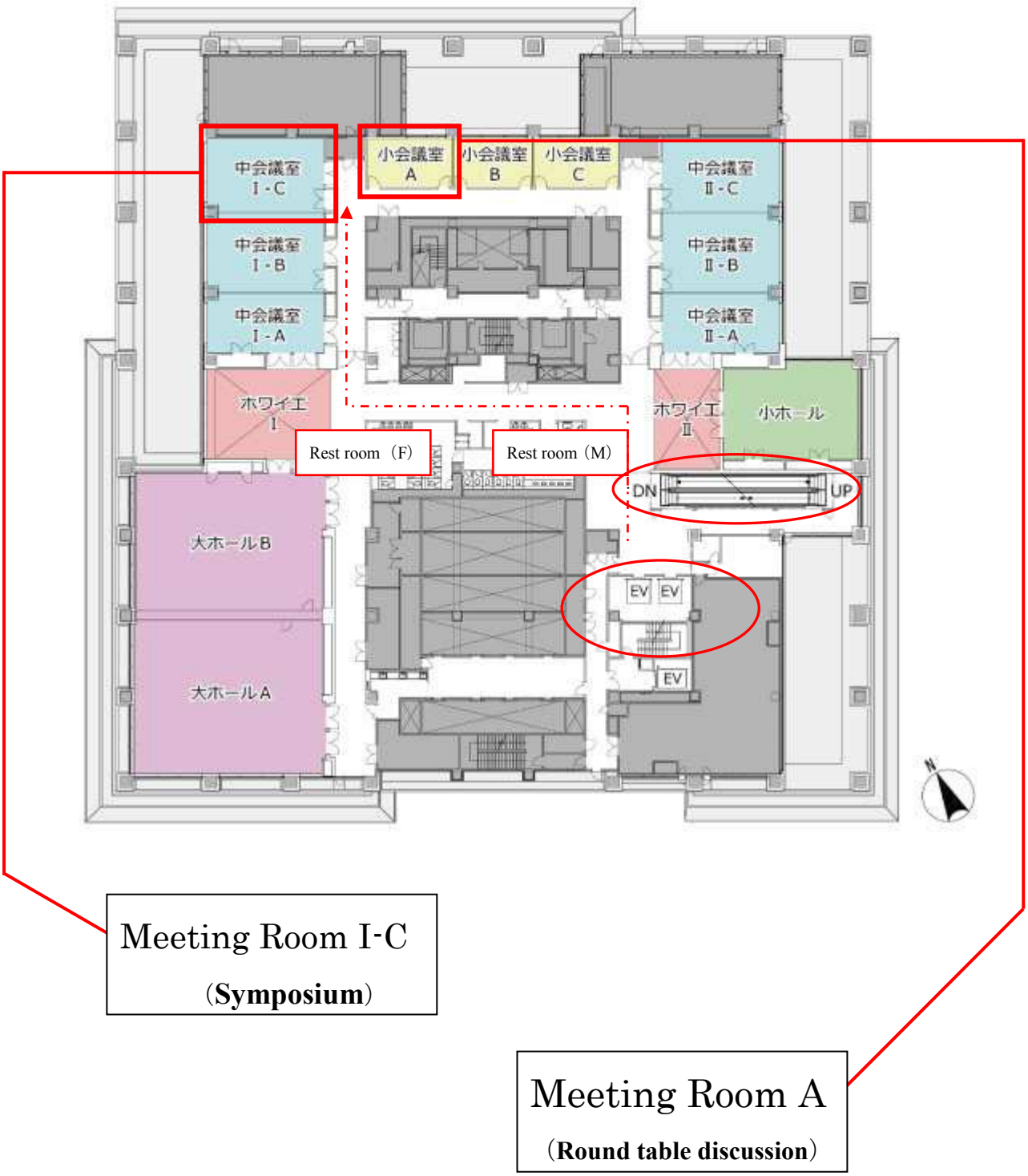
【Meeting place guide map】 Tokyo Square Garden 5Floor



【Schedule】

May 29th（Wed）

Symposium 1 （15：00－20：00）

Opening remarks Dr.Kenichi Honnma

1st session

Dr. Murat Ozgoren “Sleep and Conscious States Technology and Research”

Dr. Yuichiro Abe “The development of the Social Rhythm Metrics Japanese version: a brief overview in the frame of psychosocial intervention for bipolar isorder”

2nd session

Dr. Sadik Ardiç “Risk of Chronic Diseases Due to Duration of Sleep”

Dr. Koichi Hirata “Sleep disorders in Parkinson’s disease”

Coffee Break

3rd session

Dr. Murat AKSU “Sleep regulation and neuroendocrine function”

Dr. Takashi Kanbayashi “The Pathophysiologic Basis of Symptomatic Narcolepsy and Hypersomnia”

4th session

Dr. Barış Baklan “The Changes in Cyclic Alternating Pattern (CAP) of EpilepsyPatients”

Dr. Motohiro Ozone “The evaluation of Hypnotics Using Cyclic Alternating Pattern method”

5th session

Dr. Adile Oniz “Sleep and sleepiness: how to get more out of vigilance measures”

Dr. Yuichi Inoue “Sleep disorders and accidents”

May 30th（Thu）

Round table discussion (Business Meeting) （10：00－12：00）

Lunch and break （12：00－13：30）

Symposium 2 （13：30－15：30）

6th session

Dr. Akiko Hida “Assessment of circadian phenotype using an individual’s biopsy sample”

Dr. Hikmet Yilmaz “Actigraphic data in sleep disorders”

7th session

Dr. Hiroshi Kadotani “Genomic epidemiological study in Sleep”

Dr. Derya Karadeniz “The second phase of the Turkish Adult Population Sleep Epidemiology Study”

Closing remarks Dr. Tetsuo Shimizu

Break and Sightseeing

Dinner （18：30－20：30）

Ibuki Ginza

3-5-4, Ginza, Chuo-ku, Tokyo, Japan

Phone: +81 3 3563-2424

http://r.gnavi.co.jp/g475735/map/#figure

Hotel

Hotel Gracery Ginza

7-10-1 Ginza, Chuo-ku, Toyko

Phone: +81 3 6686-1000

http://ginza.gracery.com/

Abstract

Name / Ad Soyad: *Murat Ozgoren,* **Address / Adres:** Dokuz Eylul University, Faculty of Medicine, Dept. of Biophysics, Sleep and Conscious States Technology Research and Application Center, Izmir, Turkey
E-mail / Posta: murat.ozgoren@gmail.com

Short CV / Kısa Özgeçmiş:

Murat Ozgoren , M.D. PhD., is Professor of Medicine and vice-rector of Dokuz Eylul University. He chairs ESFRI Health and Food Strategy Working Group of Europe.
His research interests include sleep, conscious states and pathological processes, applied brain biophysics, signal processing, information processing in the brain. He is the chair of Biophysics Dept. , Faculty of Medicine, and director of Sleep and Conscious States Technology and Research Center, Dokuz Eylul University. He is one of the coordinatos for Biomedical Industrial PhD program and Health Innovation in Izmir action called INOVIZ. He has co-organized the first Turkish Japanese Sleep Forum . He is the working group chair of Turkish Sleep Medicine Society (TSMS) in Basic Sciences . He is the R&D Committee chair of International Sleep Science & Technology Association (ISSTA). He is the associate editor in the journal of "Sleep and Biological Rhythms".

Abstract Form

Title / Başlık

Sleep and Conscious States Technology and Research

Abstract / Özet:
Interestingly the human brain has a very dynamic functional and behavioral pattern that is so transient and adaptive. However the overall tools and methodologies of capturing these so called "state" like traits heavily relies on the conventional methods. Some of these include classical polysomnography of sleep research, bed-side monitoring of coma patients, neurocognitive assessment for neurodegenerative pathologies and psychovigilance tests for fatigue assessment. These varying spectra of multiple applications make it so hard to paint an overall picture of the brain as a whole. There needs to be a paradigm change to address these variants with a more comprehensive approach. One of these, we propose is the brain responsiveness scales and brain biophysics cognitive and functional sleep battery.
Furthermore in order to embrace the different research areas, we have recently launched a research and technology center for sleep and different conscious states. The center will create an environment for neurology, brain biophysics, anesthesiology, chest diseases, ENT, biomedical engineering and etc. to tackle sub-specific or fusion studies. The basement will have a bunker study concept for biological rhythms. There will be also a section for sleepiness and vigilance lab for pilots, drivers and shift workers etc. We hope this center will create a positive impact for national (TSMS) and international and cross domain collaboration.

Key words: brain responsiveness, sleep continuum, cognitive states, conscious states, sleep biophysics
Anahtar kelimeler: beyin yanıtlılığı, uyku süreğenliği, bilişsel durumlar, bilinç durumları, uyku biyofiziği

Name / Ad Soyad: *Yuichiro Abe,* **Adresses / Adres:** CLIPSYD, Université Paris Ouest, Nanterre La Défense, France/ Department of Psychophysiology, National Institute of Mental Health, Tokyo, Japan.
E-mail / Posta: abepsy@yahoo.co.jp

Short CV / Kısa Özgeçmiş:

Dr. Yuichiro Abe is a Japanese clinical psychiatrist and a post-doctroal research associate. He has been living in Paris for four years. His main research interests are the psychiatric epidemiology of hypomania and the pathophysiology of adolesecent insomnia and nightmares. Currently, he has been translating the IPSRT manual into Japanese to treat bipolar disorder.

Abstract Form

Title/ Başlık

The development of the Social Rhythm Metrics-Japanese version: a brief overview in the frame of psychosocial intervention for bipolar disorder

Abstract / Özet:

In the late 1980s, the reserch group at the departement of psychiatry, Pittsburgh University in the US had argued that major mood disorders, such as major depression and bipolar disorder, reflected a disruption in sleep/wake and circadian rhythms (Ehlers et al., 1988; 1993). The key component supporting this model is derived from both empirical and anecdotal evidence, relating sleep abnormalities observed in mood disorders to the possible core pathophysiology of the disorder. Concerning the theoretical model of mood disorders, they reached the conclusion that, in those who were vulnerable to mood disorders, it was the loss of social *zeitgebers* (timekeepers/timecues) and/or the appearance of *zeitstörers* (timedisrupters) that led to new mood episodes (i.e., Social Zeitgeber Theory).

In the early 1990s, with the aim of evaluating the stability of patients' social rythms, this Pittuburgh group had developed an instrument specifically designed to measure the rhythmicity of a person's daily life. This instrument is called the Social Rhythm Metric (SRM-17), tracks the timing of the occurrence of 15 prespecified activities and 2 individually selected activities (Monk et al., 1990; 1991). Afterward, they shortened it in a 5-item version (SRM-5) for its practical utility (Monk et al., 2002).

Clinically, in 2005, Ellen Frank, a psychologist and one of the members of the Pittsburgh group, developed the Interpersonal and Social Rhythm Therapy (IPSRT), based on both essential components of classical IPT (Interperonal psychotherapy) and social zeitgeber theory. Its major therapeutic strategy is to achieve patients' social rhythm stability by making use of such slightly revised SRM instruments (SRM-II-5 and SRM-II-17). The IPSRT has proven efficiency on psychosocial maintenance treatment for bipolar disorder during 2 years (Frank et al., 2005). Interestingly, the IPSRT includes several components of conventional sleep hygiene techniques. Therefore, this conceptual subsumption, caring for bipolar sleep disturbances in utilizing the empirical supported instruments, may be the most critical element of this psychosocial intervention.

In this presentation, I'll mention both the SRM-IIs and the IPSRT, as our group has been translating these into Japanese under authors' supervision. Sleep may matter in the course of bipolar disorder, according to the recent STEP-BD research reports (Gruber et al., 2011). Hence, clinicians will have to pay more attention to both biological and social zeitgebers of psychiatric disorders. In the research domain, it is crucial to understand the characteristics of the SRM instruments in a more profound way. In the clinical domain, it might be promising to develop the appropriate psychiatric intervention for patients with significant sleep-wake rhythm instability.

Key words: *Pittuburgh groups, Social Zeitgeber Theory, Social Rhythm Metric (SRM), Interpersonal and Social Rhythm Therapy (IPSRT), Bipolar disorder*

Sadik Ardiç[1], Ahmet U. Demir[2], Zeynep Zeren Ucar[3], Hikmet Fırat[1], Oya Itil[4], Derya Karadeniz[5], Murat Aksu[6], Serhan Sevim[7], Hikmet Yılmaz[8] , Burcu Oktay[9] for the TAPES (Turkish Adult Population Epidemiology of Sleep Disorders) Investigation Committee

[1] :MD,SB Dışkapı Yıldırım Beyazit Training and Research Hospital, Sleep Disorders Diagnosis and Treatment Center
[2] : MD, Hacettepe University, Medical Faculty, Dept. of Chest Diseases Ankara,Turkey.[3] :MD, Department of Pulmonary Diseases, Dr Suat Seren Chest Diseases and Surgery Training and Research Hospital, Izmir, [4] : MD, Dokuz Eylül University, Medical Faculty, Dept. of Chest Diseases,Izmir, Turkey. [5] : MD, Cerrahpasa University, Medical Faculty, Dept. of Neurology, İstanbul, Turkey. [6] : MD, Erciyes University, Medical Faculty, Dept. of Neurology Kayseri, Turkey. [7] : MD, Mersin University, Medical Faculty, Dept. of Neurology, Mersin, Turkey. [8] MD, Celal Bayar University, Medical Faculty, Dept. of Neurology Manisa, Turkey. [9] : MD, Pulmonologist

Abstract Form

Risk of Chronic Diseases Due to Duration of Sleep in the Middle Age Turkish Adult Population

Background: previous investigations have suggested an association between duration of sleep and cardiovascular diseases and DM. We aimed to investigate the association between sleep duration and chronic diseases (hypertension, DM, heart disease) middle age group (45-65) adults, who did not report any sleep complaint.
Methods: an interviewer administered questionnaire was used to collect data in a nationwide representative sample of adult population of 5021 adults (2598 women, 2423 men) in Turkey. Chronic diseases were defined as affirmative response to physician diagnosis of diseases listed in Carlson comorbidity index. Insomnia was defined according to DSM-IV criteria as difficulty initiating or maintaining sleep for ≥1/month, risk of sleep disordered breathing by Berlin questionnaire (BQ), excessive daytime sleepiness as Epworth sleepiness scale>10, and restless legs syndrome (RLS) according to IRLSSG criteria for ≥5/month. sleep complaints was defined as reporting any of the above.
Results: sleep duration was reported as <6h, 6h, 7h, 8h, >8h in 10%, 16.4%, 22.5%, 28.4%, 22.7%. Gender was not significantly different between sleep duration categories (Male/Female %: 54.2/45.8, 53.1/46.9, 54.9/45.1, 55/45, 47.4/52.6; p: 0.25). Those in >9h group were significantly older than the other groups (53.2±5.6, 53.1±5.8, 53.4±6.0, 52.7±5.8, 54.3±5.9; p: 0.005). Sleep complaints (n: 586) were reported more frequently among <6h group (62.7%, 40.2%, 42%, 30.9%, 31.2%; p<0.001). Hypertension (30.7%, 23.1%, 25.4%, 20.1%, 29.2%; p: 0.01) and DM (20.3%, 13.9%, 11.4%, 10.2%, 12.7%; p<:0.02) were associated with sleep duration. Heart disease was not significantly different between sleep duration groups (15.7%, 9.6%, 12%, 10.4%, 14.7%; p<0:14). Association between sleep duration (categorized as >6h, 6-8h and >8h) and chronic diseases were adjusted for age, gender, body mass index, smoking, education status, income level, regular exercise, current working and night shift in the logistic regression models. Reference group was 6-8 h. Among those who did not report any sleep complaint, sleeping <6h and >8h were associated with DM (OR: 3.11, 95%CI: 1.43-6.79) and hypertension (OR: 1.66, 95%CI:1.08-2.54), respectively. After the adjustment for time in bed, holyday sleep duration and nap habit the association was preserved for DM (OR: 2.97, 95%CI: 1.34-6.58) but not for hypertension (OR: 1.39, 95%CI:0.72-2.41).
Conclusions: Short sleep duration in the middle age group, who do not report any sleep complaint might be a risk factor for DM and metabolic consequences like obesity. This effect could be due to increased insulin resistance or altered secretion of hormones like ghrelin or cortisol.

Corresponding Author:
Ahmet U. Demir, MD.
Hacettepe University, Department of Chest Diseases, Sihhiye, Ankara, 06100, Turkey.
Phone: 00-90-312-305 1531. Fax: 00-90-312-310 0809.
Email: ademir68@gmail.com

Key words: diabetes mellitus; habits; heart diseases; hypertension; sleep

Koichi Hirata[1], Keisuke Suzuki[1], Tomoyuki Miyamoto[2], Masaoki Iwanami[2], Hidehiro Takekawa[1] and Masayuki Miyamoto[1]

[1]Department of Neurology, Dokkyo Medical University, Tochigi, Japan
[2]Department of Neurology, Dokkyo Medical University Koshigaya Hospital, Saitama, Japan
E-mail: hirata@dokkyomed.ac.jp

Abstract Form

Title / Başlık
Sleep disorders in Parkinson's disease

Abstract / Özet:
Parkinson disease (PD) is a movement disorder that is characterized by bradykinesia, resting tremor, rigidity, and impaired postural reflexes, which are caused by the degeneration of dopaminergic neurons in the substantia nigra.

Sleep disorders in PD are among the most common nonmotor symptoms, with a prevalence ranging from 40 to 90%, and can interfere with the quality of life of the patient. Sleep disorders are caused by various factors, including nocturnal motor symptoms, psychiatric symptoms, dementia, dopaminergic medications, and circadian cycle disruptions.

Sleep disorder salso can occur at the early stage of PD and can worsen as the disease progresses. The worsening of sleep disorders occurs in a similar manner to the progression of motor dysfunction, cognitive impairments, and depression, which support the idea that complex mechanisms and impairments of the arousal system and sleep structure play a role. Sleep disorders can be underestimated if the patients, their families, and their physicians do not investigate the possibility of impaired sleep.

Recently we studied characteristics of sleep disturbances in Japanese PD patients in r multi-center study including a total of 188 Japanese patients with PD and age-matched 144 control subjects. The results of this survey suggested that complications due to treatment (dyskinesia, wearing off, on-off), depressive state and disease stage are significant determinants of sleep disorders in Japanese patients with PD.

A comorbidity of restless legs syndrome (RLS), and rapid eye movement sleep behavior disorder (RBD) is often observed. The orexin system may be involved in PD, contributing to the daytime sleepiness independent of impaired sleep. The fact that RBD can precede or coexist with PD has received attention, and whether RBD and PD are caused by similar neurodegenerative process remains unknown.

RBD may be a prodrome of neurodegenerative disorders including PD, and this finding is a topic of great interest. As a result, the following questions are under investigation: what factors can determine who will develop neurodegenerative disorders, who will remain free of any symptoms during life, what neuroprotective strategy is effective for patients that are susceptible to neurodegenerative disorders, and when should this strategy be employed?

RLS and PD may share a pathogenesis, i.e., dopaminergic dysfunction, given that both RLS and PD have a favorable response to dopaminergic treatments and given the presumed dopaminergic dysfunction in RLS. However, the pathogenic link between RLS and PD should be investigated further.

In this presentation, we review and show the current our study concerning sleep disorders in PD.

Key words: Parkinson's disease, restless legs syndrome, rapid eye movement, sleep behavior disorder

Name / Ad Soyad: Prof. *Murat AKSU,M.D.,* **Adresses / Adres:** Erciyes University Medical Faculty, Neurology Department, 38039 Kayseri, Turkey. Acibadem Kayseri Hospital, Kayseri, Turkey. **E-mail / Posta:** aksu@erciyes.edu.tr

Short CV / Kısa Özgeçmiş: He is the president of the Turkish Sleep Medicine Society. He was graduated Hacettepe University Medical Faculty in 1988, and completed his residency in Erciyes University in 1993. He has studied as the fellow at National Institutes of Health İn USA in 1998-1999 and worked as a scientist in 2002-2005 in same institutation in USA.He still holds the professor position in Erciyes University Neustology Department and also the head of Neurology and Sleep Disorders Unit in Acibadem Kayseri Hospital.

Abstract Form

Title / Başlık

Sleep regulation and neuroendocrin function.

Drivers and sleep

Abstract / Özet:

Sleep on wheels is a major pubilc health problem. In previous studies, sleepiness while driving was found as the first or second most common accident reason on road.Therefore it is been studied and continue to be determined the sleepiness and sleep disorders in professional drivers. There are two completed studies which indicates that sleep diorders and sleepiness are very common promblems in professional bus drivers.

Key words: Key words should not be more than 6 words.

Anahtar kelimeler: Anahtar kelimeler 6 kelimeden fazla olmamalıdır.

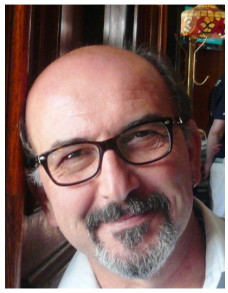
Takashi Kanbayashi MD, PhD.
Department of Neuropsychiatry,
Akita University School of Medicine,
1-1-1 Hondo, Akita 010,Japan ,
+81-18-884-6122(phone), +81-18-884-6445(Fax),
email: takashik@med.akita-u.ac.jp

Abstract Form

The Pathophysiologic Basis of Symptomatic Narcolepsy and Hypersomnia

The symptoms of narcolepsy can occur during the course of other neurologic conditions (ie, symptomatic narcolepsy). Inherited disorders, tumors, and head trauma were the three most frequent causes for symptomatic narcolepsy. Other causes include multiple sclerosis (MS), vascular disorders, and encephalitis. Cerebrospinal fluid orexin-A (hypocretin-1) measures were carried out in some recent cases with symptomatic narcolepsy, and moderate decreases in orexin levels were seen in a large majority of these cases. Excessive daytime sleepiness (EDS) in these symptomatic cases was sometimes reversible with an improvement of the causative neurologic disorder and with an improvement of the orexin status. Recently, we found that several symptomatic narcoleptic cases with MS show unique bilateral symmetric hypothalamic lesions associated with significant orexin ligand deficiency. In addition, these patients often share the clinical characteristics of neuromyelitis optica (NMO) and the detection of NMO-IgG (or anti-aquaporin-4 [AQP4] antibodies), suggesting a new clinical entity. Further studies of the involvement of the orexin system in symptomatic narcolepsy and EDS are helpful to understand the pathophysiologic mechanisms for occurrence of EDS and cataplexy.

Keywords: Narcolepsy, Hypocretin, Orexin, NMO, MS, AQP4



Name / Ad Soyad: Barış Baklan, **Adresses / Adres: Dokuz Eylül University**, Faculty of Medicine, Department of Neurology, Clinical Neurophysiology,Section of Epilepsy and Sleep Disorders, Izmir, Turkey. **E-mail / Posta:** baris.baklan@deu.edu.tr

Short CV / Kısa Özgeçmiş: Prof.Dr. Barış BAKLAN, M.D.

He is the professor of Neurology in Dokuz Eylül University Medical Faculty. 55 years old. He completed his medical education in İzmir; Egean University Medical Faculty 1980. He was to be Neurologist in 1987. He earned his assoc. professor degree in 1995 and professor degree in 2001, at Dokuz Eylül University , İzmir.

He is the founder and the chair of Epilepsy in Dokuz Eylül Üniversity Hospital Epilepsy Clinic in 1991, In 1999 epilepsy and sleep laboratory .

Research of interests: Epilepsy and sleep; nocturnal paroxismal events, non epileptic psychogenic seizures, The differential diagnosis of sleep disorders and epilepsy, Routine EEG and video EEG trainer

Currently, the head of the Turkish Association of Epilepsy ILAE (2010-2014)

Abstract Form

Title / The Changes in Cyclic Alternating Pattern(CAP) of Epilepsy Patients

Objective: The aim of this study was to determine the changes in the polysomnographic parameters and the cyclic alternating pattern (CAP) in generalized and partial epilepsy patients (with and without epileptiform discharges on EEG) using video-EEG-PSG recording.

Methods: 73 patients diagnosed with epilepsy and 19 healthy controls within the same age group (control group) underwent an 8-hour long sleep video-EEG-PSG recording. After the first evaluation, the CAP parameters were scored in 57 patients (31 generalized and 26 partial epilepsy) and 16 healthy subjects who had no sleep diseases and the results were compared within the groups.

Results: The total sleep time and the NREM I phase were found to be longest in the partial epilepsy group and shortest in the control group, while the REM phase was found to be exactly the opposite to this. The mean CAP ratios were found to be statistically higher in the generalized epilepsy group when compared to the other two groups. This difference was also found in the control group and the generalized epileptic patients who had no abnormality on EEG. No difference was found between the partial epilepsy and the control group regarding CAP ratios.

Conclusions: Patients with generalized epilepsy have differences compared to healthy individuals regarding the macro- and micro-structure of sleep, and it seems that these differences are independent from the epileptiform discharges. In partial epilepsy patients, no microstructural differences were detected, while macrostructural changes were evident.

Key words: Generalized epilepsy, Partial epilepsy, Sleep, Electroencephalography, polysomnography, CAP

Name / Ad Soyad: *Motohiro Ozone, M.D., Ph.D.,* **Adresses / Adres:** Dept. of Psychiatry, Jikei University school of medicine, 3-25-8, Nishishimbashi, Minato-ku, Tokyo, 105-8461, Japan **E-mail / Posta:** ozone@jikei.ac.jp

Abstract Form

Title / Başlık

The evaluation of Hypnotics Using Cyclic Alternating Pattern method

Abstract / Özet:

Polysomnography (PSG) is a Golden-standard for objective sleep evaluation today. Most of PSG data are generally analyzed with Rechtschaffen and Kales method (R&K), which was developed in 1968. However, several sleep disorders, such as Sleep State Misperception and Sleep Apnea Syndrome in children, are not revealed in terms of the sleep abnormalities using conventional method (R&K).

Cyclic Alternating Pattern (CAP) is a novel PSG analysis method, developed by Prof. Terzano in Italy. It is characteristic of focusing on arousal reactions, and it evaluates with variables including k-complexes and delta burst, which were excluded as arousal in ASDA's rule (1992). It is reported that CAP rate (the ratio of CAP time to total Non-REM sleep time) reflects the degree of sleep instability and is the most sensitive to subjective sleep evaluation among conventional sleep parameters.

According to our CAP studies, CAP parameters have a high sensitivity to the changes in sleep structure by the administration of sleep medicine. Regarding Open-Label Study of Yokukansan (YKS) using CAP method in Patients with Psychophysiological Insomnia, CAP rate and the number of CAP cycle counts significantly decreased after one-week administration of YKS. YKS is one of the Japanese traditional drugs for insomnia, having the national Insurance coverage in Japan. However, the efficacy on sleep disturbance has not been objectively clarified using conventional method so far. Our findings suggested that YKS had a potential to raise the sleep stability in insomniacs.

Furthermore, in our CAP analysis on the association between mood, daytime-sleepiness, and psychomotor function, CAP parameters have well-correlations with those variables (correlation between CAP rate vs. mean S RRT of PVT: $r=0.540$, $p<0.05$, CAP subtype A3 counts vs Visual Analogue Scale in sadness: $r=0.467$, $p<0.01$, CAP subtype A3 counts vs. VAS in Lowered Motivation: $r= 0.478$, $p<0.01$).
From these, CAP method would become one of the suitable PSG analysis methods in the evaluation of newer hypnotics and the other sleep promoting drugs.

Key words: Cyclic Alternating Pattern, Polysomnography, psychomotor function, Yokukansan, Insomnia

Name / Ad Soyad: *Adile Oniz,* **Address / Adres:** Dokuz Eylul University, Faculty of Medicine, Dept. of Biophysics, Sleep and Conscious States Technology Research and Application Center, Izmir, Turkey
E-mail / Posta: adile.oniz@deu.edu.tr

Short CV / Kısa Özgeçmiş:

She is a medical doctor and has a PhD in Biophysics. Her research interests are application of cognitive processes, learning, brain dynamics, electrophysiology, brain pathologies. She is a group psychotherapist and psychodramatist. She was the secretary of National Biomedical Engineering Congress-2009, bridging Engineering and Medical Faculties. She was in organizing committee of the two Brain Biophysics Workshops in Izmir and local organizing committee of 13th World Congress of Psychophysiology-Olympics of the Brain in Istanbul. She is the Secretary General of Sleep and Conscious States Technology and Research Center and deputy director of Metrology and Calibration Center for Biomedical Research.

Abstract Form

Title / Başlık

Sleep and sleepiness: how to get more out of vigilance measures

Abstract / Özet:
In our research center and also sleep biophysics labs, multimodal approach is used to understand the brain under different conditions (awake, sleep, anesthesia, pathologies etc.) as clinical and basic sciences areas. In this session, some results from different projects in basic science on the level of alertness and sleepiness in DEU Biophysics Department's Laboratory will present.

The somatosensory event related potentials will be given as an objective method for brain responsiveness measurements in sleep. The non-painful pneumatic stimulation technic makes it possible to study the all night-long sleep tactile function recording without causing much of a disturbance. Furthermore it enables the objective assessment of somatosensory responses that can be used also in other sleep-like states (i.e. anesthesia, coma, stupor). Therefore the extended test can also have a further application for functional monitoring of patients' revival of brain functions.

Additionally, psychovigilance tests (PVT) will be given a sample as a subjective method. Overall our scope will be to achieve vigilance battery and cognitive biophysics tools to assess the sleepiness and cognitive functions during sleep. These can serve as human factor performance methods for also mental load intensive computer and human activities such as in aviation.

Key words: vigilance, sleepiness, PVT, cognitive sleep measures, somatosensory

Anahtar kelimeler: *vijilans, uykululuk, PVT, kognitif uyku ölçümleri, somatosensoriyel*

Yuichi Inoue[1], Yoko Komada[1],

[1]Department of Somnology, Tokyo Medical University ,Tokyo, Japan

E-mail: inoue@somnology.com

Abstract Form

Title / Başlık

Sleep disorders and accidents

Abstract / Özet:

Sleep disorders are not uncommon and have a profound impact on industrialized 24-h societies. Consequences of sleep problems include impaired social and recreational activities, increased human errors, loss of productivity, and elevated risk of accidents. Conditions such as behaviorally induced insufficient sleep syndrome, CNS hypersomnias, shift-work, jet lag and sleep apnea syndrome warrant public health attention, since daytime sleepiness due to these sleep disorders may affect performance of daily activities. The increased risk of accidents seems to relate with the symptom severity of excessive daytime sleepiness, and many studies have shown a clear relationship between the severity of respiratory disorder indices in OSAS and the driving risk. Treatment of sleep apnea with nasal continuous positive airway pressure appears to reduce the risk of traffic accidents among the OSAS affected population, and taking naps is accepted as a countermeasure for preventing sleepiness related accidents under sleep deprived condition. There is a need for a social awareness program to educate the public about the potential consequences of various sleep disorders in order to reduce the number of sleep-related traffic accidents.

Key words:
sleepiness, accident, sleep apnea, sleep loss, shift work

Name / Ad Soyad: *Akiko Hida,* **Adresses / Adres:** Department of Psychophysiology, National Center of Neurology and Psychiatry, Tokyo, Japan. **E-mail / Posta:** hida@ncnp.go.jp

Short CV / Kısa Özgeçmiş:
Ph.D. in Molecular Cell Biology from University of Tokyo. 2000~2002 Research associate in Laboratory of Functional Genomics, Institute of Medical Science, University of Tokyo. 2003~2007 Research associate in the Department of Biological Sciences, Vanderbilt University. 2007~2009 Research scientist in the Department of Psychophysiology, National Institute of Mental Health, National Center of Neurology and Psychiatry.
2009~present: Section Chief of Psychophysiological Function, Department of Psychophysiology, National Institute of Mental Health, National Center of Neurology and Psychiatry.

Abstract Form

Title / Başlık

Assessment of circadian phenotype using an individual's biopsy sample

Abstract / Özet:

Behavioral and physiological processes exhibit circadian rhythms in most organisms including humans. These rhythms are driven by a system of self-sustained clocks and are entrained by external cues. The mammalian central oscillator, SCN incorporates environmental information and orchestrates slave oscillators in peripheral cells. The circadian clock system is composed of a hierarchy of oscillators that involve transcription and translation feedback loops of multiple clock genes. Disorganization of the circadian system is known to be closely related to many diseases including sleep, mood and metabolic disorders. Advanced sleep phase type, delayed sleep phase type and non-entrained type of circadian rhythm sleep disorders (CRSD) are thought to result from malfunction/maladaptation of the circadian system. Dissection of human circadian clock system is indispensable to understanding the pathophysiology of CRSD. It is laborious and costly to evaluate an individual's circadian rhythm precisely, however, because the subject is usually required to stay in a laboratory environment free from external cues and masking effects for over a couple of weeks. Therefore, more convenient assessment of circadian phenotype are required to reduce patients' burden. In this study, we evaluated rhythmic characteristics of physiological functions from 17 healthy male subjects under a 28-h forced desynchrony protocol. Furthermore, we assessed clock gene expression in primary fibroblasts derived from subjects' skin biopsy samples using a luminescence reporter assay system and observed daily rhythms of luminescence in the cells. The period length of fibroblast rhythms correlated significantly with the preferred sleep times and chronotypes, whereas that of physiological rhythms did not correlate with these parameters. Our results suggest that surrogate measurements using cultured fibroblasts from an individual's biopsy samples might be useful for assessing circadian phenotype.

Key words: circadian rhythms, sleep habits, surrogate measurements, biopsy samples, clock gene expression, peripheral cells

Anahtar kelimeler: Anahtar kelimeler 6 kelimeden fazla olmamalıdır.

Name / Ad Soyad: Hikmet Yilmaz, **Adresses / Adres:** Celal Bayar University, Faculty of Medicine, Department of Neurology, Section of Epilepsy ans Sleep Disorders, Manisa, Turkey. **E-mail / Posta:** yilmazhikmet@hotmail.com

Short CV / Kısa Özgeçmiş: Prof. Hikmet Yilmaz,M.D.
He is the professor of Neurology in Celal Bayar University Medical Faculty. He completed his medical education in Istanbul University Cerrahpasa Medical Faculty in Istanbul and residency in Inonu University, Malatya. He earned his assistant professor degree in 1996 at Celal Bayar University, Manisa. He earned his associate professor degree in 2002 and professor degree in 2009. He studied as investigator in Neurology in 1998-1999 during 6 months in Vienna University Medical Faculty, Vienna, Austria. He is the founder and the chair of Epilepsy and Sleep Disorders Unit in Celal Bayar University. He is the professor of Neurology in Celal Bayar University and his private doctor's office. He has more than 60 publications an 105 oral and poster presentations . He is the member of Board of Directors of Turkish Sleep Medicine Society and president of Sleep Disorders Council at Celal Bayar University.

Abstract Form

Title / Actigraphic data in sleep disorders

Abstract: Sleep evaluation in humans has been usually performed with polysomnography (PSG), a technique considered the gold standard for sleep studies. But some sleep disorders (circadian sleep disorders, insomnia, excessive sleepiness, sleep related movement disorders etc..) that may be beter understood by completing actigraphy monitoring. It is also used in assessing the effectiveness of pharmacologic, behavioural, phototherapeutic or chronotherapeutic treatments for such disorders. Actigraphy is a non-invasive method of monitoring human rest/activity cycles. A small actigraph unit, also called an actimetry sensor, is worn on the wrist of the non-dominant arm by a patient to measure gross motor activity. Motor activity often under test is that of the wrist, measured by an actigraph in a wrist-watch-like package. The unit continually records the movements it undergoes. The data can be later read to a computer and analysed offline. With the push of a button, it may also have the ability to mark events such as bedtimes or waketimes. Active times result in a peak (or bar) on the graph while quiet times, such as sleep, will be represented by a flat line. Actigraphs may be worn for weeks or even months. Generally, it can record data for 24 hours per day for about two weeks. This information is then used to create a graph. They are useful to help determine whether disruptions in the sleep-wake cycle exist, as may occur in many different sleep disorders. Actigraphy permits the patient to stay in his or her natural sleep environment which may render the measured data more generally applicable. Actigraphs are also more affordable than performing a PSG and can therefore be advantageous as well, particularly when conducting large field tests. Because of the limitations of actigraphy, it is recommended to use complementary assessment methods (objective and subjective) whenever possible. Our sleep center did a lot of acigraphic sleep studies in recent years. Firstly, we studied sleep characteristics by using actigraphic sleep analysis in patients who underwent coronary artery bypass graft surgery. At next study, we used the actigraphic sleep analysis in patients with epilepsy after treatment and we evaluated the effects of antiepileptic drug on motor activity and continuity of sleep. We also used the actigraphic sleep analysis to evaluated sleep characteristics in the allergic rhinits groups, epileptic patients and health care workers. So, I am going to talk about our studies realeted to actigraphy and sleep in Turkish Japanese Forum 2013.

Key words: Actigrapy, sleep analysis, coronary artery bypass graft surgery, epilepsy, allergic rhinitis, health care workers

Name / Ad Soyad: *Hiroshi Kadotani,MD, PhD* **Adresses / Adres:** Department of Psychiatry, Shiga University of Medical Science. Seta Tsukinowa-cho, Otsu City, Shiga, 520-2192 JAPAN
E-mail / Posta: kadotani@belle.shiga-med.ac.jp

Short CV / Kısa Özgeçmiş:

1990: Graduated from Kyoto University Faculty of Medicine.
1997: PhD, Graduate Scool of Medicine, Kyoto University
1997-2001 : Postdoctoral Research Fellow, Stanford University School of Medicine
2001-2005 : PRESTO, JST (Japan Science and Technology Agency)
2002-2007: Associate Professor, HMRO, Kyoto University Graduate School of Medicine
2007- 2013: Associate Professor, Center for Genomic Medicine, Kyoto University Graduate School of Medicine
2013-now: Professor, Department of Psychiatry, Shiga University of Medical Science

Abstract Form

Title / Başlık

Genomic epidemiological study in Sleep

Abstract / Özet:

We have conducted two genetic epidemiological study in Japan. The first one is “Kyoto Health and Sleep Study @ Osaka (KSHS@Osaka)” and the other is Nagahama 0-Degree Sleep Study (Nag-0-sl Study).

KSHS@Osaka was performed in a male working population in 2004-2005 (n=322). Type 3 portable monitor (Morpheus: Teijin, Tokyo, Japan, which is the same as Somté: Compumedics, Victoria, Australia) , a sheet-style type 4 portable monitor (SD-101: Kenzmedico, Honjo, Japan), and actigraphy (Actiwatch AW-Light: Mini-Mitter, Bend, Ore.) were monitord. Questionnaires including SF-36 (Short-Form 36-Item Health Survey), PSQI (Pittsburgh Sleep Quality Index), ESS (Epworth Sleepiness Scale), MEQ (Morningness-Eveningness Questionnaire) and Zung Self-Rating Depression Scale (SDS) were used. Genome-wide association study (GWAS) was performed with OminiExpress (Ilumina, San Dıego, USA). The number of participants in KSHS@Osaka may be too small for GWAS in general. However, Single Nucleotide Polymorphisms (SNPs) data from this study are imformative in candidate gene approaches. We have collaborated with circadian rhytms researchers. We have analyzed some candidate genes which were suggested to affect sleep/wake patterns. We also made international insomnia genetic consortium to perform GWAS with larger sample size (n>18,000).

Nag-0-sl Study is a on-going genomic cohort study in sleep. Nagahama city (in Shiuga prefecture, Japan) and Kyoto University made a contract to perform Genome-cohort study and Biobanking (“Nagahama 0-degree cohort study”) in 2007. We decided to add a sleep and mental health survey on this mother cohort.
Sleep-study with a type 3 portable monitor (Morpheus: Teijin, Japan) and a portable EEG (SleepScope: Sleep-Well, Japan) are perfprmed at home. All the participants are asked to fill in a questionnaire, including SF-36, PSQI, ESS, ISI (Insomnia Severity Index), MEQ and M.I.N.I. screen (Mini-internatinal neuropsychiatric interview screen).

Key words: epidemiology, cohort, genome, sleep, mental health, transdisciplinarity

Name: Prof. Derya Karadeniz, MD, Phd
Adresses : Istanbul University, Cerrahpasa Faculty of Medicine, Department of Neurology, Sleep Disorders Unit, Istanbul, Turkey
E-mail: deryak6609@yahoo.com.tr
University: Istanbul University, Cerrahpaşa Faculty of Medicine, 1984-1990

Academical Status:

Degree	Place	Year
Fellowship	Istanbul University, Cerrahpaşa Faculty of Medicine, Department of Neurology	1990-1995
''Assistant Etranger''	Universite Montpellier, Faculte de Medecine, Hopital Gui de Chauliac, Clinique de Neurologie, Montpellier, France	1993-1994
Doctor (Neurologist)	Istanbul University, Cerrahpaşa Faculty of Medicine, Department of Neurology	1995-2001
Associated Professor	Istanbul University, Cerrahpaşa Faculty of Medicine, Department of Neurology	2001-2007
Professor	Istanbul University, Cerrahpaşa Faculty of Medicine, Department of Neurology	2007 November

Other Diplomas:
Universite Montpellier, Diplom Interuniversitaire Veille et Sommeil : 10.10.1994
Diplom of Phd of Clinical Neurophysiology: 25.01.2011
Certificate of Expert in Sleep Medicine in Europe (ESRS; European Sleep Research Society Board): 11.04. 2013

The Membership of Associations
Turkish Sleep Medicine Society (President)
Turkish Neurological Society
Turkish Epilepsy Society
The Society of EEG-EMG

European Sleep Research Society
World Association of Sleep Medicine
International Restless Legs Study Group
European Restless Legs Study Group

Abstract Form

Title: The second phase of the Turkish Adult Population Sleep Epidemiology Study

Abstract
Sleep disorders constitute an important public health problem. Prevalence of sleep disorders in Turkish adult population was investigated in a nationwide representative sample of 5021 Turkish adults (2598 women and 2423 men, response rate: 91%) by an interviewer administered questionnaire.
Insomnia was defined by the DSM-IV criteria, habitual snoring and risk for sleep related breathing disorders (SDB) by the Berlin questionnaire, excessive daytime sleepiness (EDS) by the Epworth sleepiness scale score, and restless legs syndrome (RLS) by the complaints according to the International Restless Legs Syndrome Study Group criteria.
Mean age of the participants was 40.7±15.1 (range 18 to 90) years. Prevalence rates (men/women) were insomnia 15.3% (10.5%/20.2%; p<0.001), high probability of SDB 13.7% (11.1%/20.2%; p<0.001), EDS 5.4% (5.0%/5.7%; p: 0.09), RLS 5.2% (3.0%/7.3%; p<0.001). Aging and female gender were associated with higher prevalence of sleep disorders except for habitual snoring.
In the second part of the study, polysomnography (PSG) and multiple sleep latency test (MSLT) in addition to structured clinical interview and questionnaires will be performed in subjects who have SDB and also in normal subjects according to the first part of the study. The subjects will be choosen randomly. The second part will be performed in selected accreditated sleep centers of Turkish Sleep Medicine Society. According to an estimated prevalence, 600 to 100 subjects will be recorded. The data will be collected in 10-12 months. Definition and standardization of the procedures and reliability and validity testing for each center will be performed.

Key words: Epidemiology, sleep, sleep related breathing disorder

Name / Ad Soyad: Necati Gokmen, Adresses / Adres: Dokuz Eylul University, Faculty of Medicine, Departmen of Anesthesiology and Reanimation, Izmir, Turkey. **E-mail / Posta:** necati.gokmen@deu.edu.tr

Short CV / Kısa Özgeçmiş: Necati Gokmen (1963) has received his M.D. degree from school of medicine Dokuz Eylul University in 1988. He had a anestesiology specialist degree in 1995. He earned his assoc. professor degree in 2004 and professor degree in 2009, at Dokuz Eylül University, İzmir. He earned his PhD in Biophysics in 2012. He is the chair of intensive care unit in Departmen of Anesthesiology and Reanimation in 2013.

Abstract Form

Title / Başlık

Abstract / Özet:

His academic interests are neuroanesthesia, intensive care, electrophysiological studies and circadian rhytims.

Key words:
Anahtar kelimeler:

Name / Ad Soyad: *Gonca İnanc,* **Adresses / Adres:** Dokuz Eylul University, Faculty of Medicine, Department of Biophsics, Izmir, Turkey. **E-mail / Posta:** gonca.inanc@gmail.com

Short CV / Kısa Özgeçmiş: She is the research assistant of Biophysics Dept. in Dokuz Eylul University Medical Faculty. She completed her license education in Celal Bayar University Faculty of Arts and Sciences of Physics Dep. and her masters education in Dokuz Eylul University Medical Faculty of Biophysics Dept.

Abstract Form

Title / Başlık

Abstract / Özet:

Her research areas are EEG, brain dynamics, oscillations, sleep and biorhythms, somatosensory evoked potentials and somatosensory event related potentials during sleep, information processing in the brain.

Key words:
Anahtar kelimeler:

Name/Ad Soyad: Nurhak Demir
Adresses/Adres: Dokuz Eylül University, Faculty of Medicine, Department of Neurology, Clinical Neurophysiology Section, Izmir, Turkey **E-mail/Posta:** nurhakdemidir@gmail.com
Short CV/Kısa Özgeçmiş: Dr. Nurhak Demir, MD
She is training for clinical neurophysiology residency in Neurology Department of Dokuz Eylül University Medical Faculty. She is also studying for postgraduate degree in clinical neuroscience in the Department of Neuroscience of Dokuz Eylul University Health Science Institute. She completed medical education in Istanbul University Cerrahpasa Medical Faculty (English program) in Istanbul in 2003, and neurology residency in Bakirkoy State Hospital for Research and Training in Neurology, Neurosurgery, and Psychiatry in Istanbul in 2008.

Abstract Form

Title / Başlık

Abstract / Özet:

Research areas: Epilepsy, Sleep Disorders

Interests: Cognitive state in the patients with obstructive sleep apnea syndrome; biomarkers for excessive daytime sleepiness in polysomnographic records of obstructive sleep apnea; cognitive effects of anticonvulsive drugs in newly diagnosed epilepsy patients

Key words:
Anahtar kelimeler:

The Japanese Society of Sleep Research

【Secretariat】

Convention Linkage, Inc.

KS Blg.3F, 2 Sanbancho, Chiyoda-ku,

Tokyo 102-0075 Japan

Phone: +81-3-3263-8688 Fax: +81-3-3263-8693