



SLTBR

Society for Light Treatment
and Biological Rhythms



30th Annual Meeting Program
June 21-24, 2018 – Groningen
The Netherlands



Groningen, June 2018

Dear Friends & Colleagues,

On behalf of the 2017-2018 board of directors, scientific and planning committees, we would like to welcome you to the 30th Annual Society for Light Treatment and Biological Rhythms meeting in Groningen, The Netherlands, hosted by the University Medical Center Groningen.

This year, the SLTBR Annual Meeting is celebrating the 30th Anniversary and a special symposium has been organized with presentations from founding members of SLTBR. Again this year, we have selected internationally renowned speakers. We are very excited to hear from all of our speakers; we are grateful for their participation in the meeting! We also welcome them to join as members and being an active part of the SLTBR for years to come.

This year we will also have an additional student course, organized and offered by the School of Behavioral and Cognitive Neuroscience (BCN) as well as a networking event for different societies and groups related to lighting research as well as light and chronotherapy.

We are grateful for the support of our sponsors. Without their contributions the meeting would be impossible to organize each year.

Last, but certainly not least, we would like to express our gratitude to the SLTBR board of directors, particularly Ybe Meesters as local host and our administrative manager Nikki Hafezi, who have contributed countless hours to making this annual meeting possible. This year we will elect five new board members, including a new vice-president and a student board member. We are convinced these new members will bring new ideas and more energy into the SLTBR.

Without active involvement and dedication to the meeting and society, the SLTBR would be unable to provide a solid platform needed to promote active discussion and foster progress in the field of light therapy and biological rhythms.

Thank you again for your support and participation, and we hope that you'll enjoy this year's meeting!



Best wishes,

Mirjam Münch, PhD
(SLTBR President 2016-18)



Dorothy Sit, MD
(SLTBR Vice-President 2016-18;
Program Director 2018)

SLTBR President, 2016-2018

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Groningen, June 2018

Dear Colleagues,

This year's SLTBR Annual Meeting will be organized in collaboration with the Groningen Research School of Behavioural and Cognitive Neurosciences (BCN). Therefore, and on behalf of the board of the Research School BCN, I would like to welcome you to the 30th Annual Society for Light Treatment and Biological Rhythms meeting in Groningen, The Netherlands.

Since 1987 BCN represents the neuroscience research of the Universities of Groningen and Twente. Its interdisciplinary research activities are performed at five different Groningen faculties, the Faculty of Science and Engineering, the Faculty of Medical Science/University Medical Center Groningen, the Faculty of Behavioural and Social Sciences, the Faculty of Philosophy, the Faculty of Arts, and the Technical Medical (TechMed) Centre of the University of Twente.

BCN sees it as its mission to support an active neurosciences community and stimulate translational neurosciences research. It aims to bring together neurosciences research that spans from the specifications of brain activity at the molecular or cellular level, analysis of physical and mental operations, up to the complex level of information processing. Finally, BCN offers students interesting and challenging, science-related Research Master's and PhD Training Programs.

On the day preceding the SLTBR congress BCN will organize its annual symposium, title 'Research @ Rhythms', open to all students, post-docs, trainees. Two leading scientists, Prof. Bill Schwartz (Dep. of Neurology and of Integrative Biology, University of Texas (Austin) and Chief editor of the Journal of Biological Rhythms) and Prof. Samer Hattar (NIMH, Bethesda (Washington)) will discuss two interesting topics: 1. an interactive guide to when, where and how to publish your work, and 2. the newest insights of retinal circuits underlying the effects of light on rhythms, mood and learning, respectively. A great opportunity for our students, post-docs and trainees to meet and exchange knowledge and ideas with these esteemed researchers.

I would like to express my gratitude to the SLTBR to give BCN the opportunity to participate in this year's SLTBR meeting.

Thanks and I hope that you'll all enjoy this year's meeting!



Best wishes,

Prof. Robert Schoevers,

Director BCN



The 30th Annual Meeting Groningen 2018

Meeting Program

Thursday, June 21st

8:15 - 8:45 Name badges and congress bags available for pick-up in Room 5161.0253

University of Groningen, Bernoulliborg, Zernike Campus, Nijenborgh 9, 9747 AG
Groningen. Room: 5161.0253

8:45 - 12:30 Behavioural and Cognitive Neuroscience (BCN) Research school symposium
Research @ Rhythms

<https://www.rug.nl/research/behavioural-cognitive-neurosciences/>

Open to all students, post-docs, trainees

Chair: Renske Lok and Tom Woelders (University of Groningen)

This BCN event will be organised for students on the day preceding the actual SLTBR congress. During this event, two leading scientists will discuss topics that are especially interesting for students:

Prof. Bill Schwartz from the Departments of Neurology and of Integrative Biology at the University of Texas (Austin) and Chief editor of the Journal of Biological Rhythms will present an interactive guide to when, where and how to publish your work.

Prof. Samer Hattar, working at the NIMH in Bethesda (Washington) will talk about the newest insights of retinal circuits underlying the effects of light on rhythms, mood and learning. You might even benefit from this knowledge for your own well-being and performance!

After these talks you will be invited for an interactive discussion regarding these topics and your own work. Benefit from the knowledge of these esteemed scientists!

8:45 - 9:00 Welcome by Robert A. Schoevers, Chair of the BCN Research School

9:00 - 9:45 Publish or perish: an interactive guide to when, where, and how to publish your work

Bill Schwartz (USA)

9:45 - 10:15 Coffee Break

10:15 - 11:00 How light through retina-brain circuits influences circadian rhythms, mood and learning

Samer Hattar (USA)

11:00 - 12:30 Student pitches and discussion

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9:00 - 12:30	University of Groningen, Bernoulliborg, Zernike Campus, Nijenborgh 9, 9747 AG Groningen. Room: 5161.0267 <u>SLTBR Retreat</u> (Invitational) Past presidents, SLTBR board members and invited guests
12:30 - 13:30	Lunch Break
13:30 - 16:30	Room: 5161.0267 Multidisciplinary network event with representatives from different societies/committees Open to all conference participants and students, post docs, trainees and BCN members
13:30 - 13:50	Center for Environmental Therapeutics (CET) Michael Terman (USA)
13:50 - 14:10	Chronotherapy Network Netherlands (CNN) Presentation by Esmée Verwijk and Harm-Pieter Spaans (NL)
14:10 - 14:30	Presentation from the Daylight Academy (DLA) Kirstin Kopp (CH) and Marion Bétizeau (CH)
14:30 - 14:50	The Color Technical Group (Optical Society, OSA): Scope, aims and opportunities Manuel Spitschan (UK)
14:50 - 15:20	Networking coffee break - complimentary by the Optical Society of America (OSA)
15:20 - 15:40	New global CIE standard with metrics to quantify light for light responses influenced by intrinsically-photosensitive retinal ganglion cells Luc Schlangen (NL)
15:40 - 16:30	Discussion
17:00 - 18:00	Social Event: Boat tour through the canals of Groningen (separate registration)
17:00 - 18:00	University of Groningen, Room 5171.0504, Linnaeusborg, Nijenborg 7, 9747 AG Groningen (at walking distance of 120 m from the Bernouilleborg) SLTBR Board Meeting (board members and past presidents)

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Friday, June 22th

Congress Venue in the University Medical Center Groningen (UMCG), Hanzeplein 1, 9713 GZ Groningen; Room: 'Rode Zaal'

7:30 **Exhibition Set-up begins** (Fontein Patio)

8:00 **Poster mounting begins at 8:00** (Fontein Patio)

8:00 - 8:45 **Registration** (Fontein Patio)

8:45 - 9:00 **Welcome from the SLTBR President and Robert A. Schoevers, Chair of the BCN Research School, Groningen**

9:00 - 12:30 **SLTBR/BCN CME COURSE**

Open to all conference participants and students, post docs, trainees and BCN members

Chair: Marijke Gordijn and Ybe Meesters (NL)

9:00 - 9:45 **Towards an understanding of circadian and seasonal clocks**
Bill Schwartz (USA)

A59

9:45 - 10:30 **On light, circadian rhythms and mood**
Samer Hattar (USA)

A36

10:30 - 11:00 **Coffee Break** (Fontein Patio)

11:00 - 11:45 **Chronically disrupted sleep, neuronal plasticity and depression**
Peter Meerlo (NL)

A46

11:45 - 12:30 **Novel chrono-therapeutic strategies in a day treatment program for complex mood disorders**
Robert Levitan (CA)

A40

Please note: The remaining part of the meeting is open for registered participants only

12:30 - 13:45 **Lunch Break** (Fontein Patio)

13:00 - 13:30 **SLTBR Annual Membership Meeting**

13:45 - 15:30 **SYMPOSIUM 1: NEW MARKERS FOR LIGHT AND BIOLOGICAL RHYTHMS**
Chair: Konstantin Danilenko (RU)

13:45 - 14:20 **Visual and non-visual responses to short-wavelength light**
Manuel Spitschan (UK)

A62

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14:20 - 14:55	Non-visual responses to light: how do they compare in terms of sensitivity and dynamics? Claude Gronfier (FR)	A31
14:55 - 15:30	Caffeine and light at night; effects on sleep and circadian rhythms in rodents Tom de Boer (NL)	A21
15:30 - 16:00	Coffee Break (Fontein Patio)	
16:00 - 17:30	<u>ORAL PRESENTATIONS I</u> Chair: Zdenka Bendova (CZ)	
16:00 - 16:15	ADHD-related symptoms in neuro-typical adults are correlated with increased day-time sleepiness, reduced arousal levels and evening chronotype Maria Korman (ISR)	A39
16:15 - 16:30	The effects of bright light therapy on depression, sleep and circadian rhythm in patients with Parkinson's disease and a depressive disorder: results of a double-blind randomized controlled trial Sonja Rutten (NL)	A54
16:30 - 16:45	A pilot study of adjunctive personalized integrated chronotherapy for perinatal mood disorders Katherine M. Sharkey (USA)	A60
16:45 - 17:00	Prevalence of winter depression in a prospective cohort study Anna Wirz-Justice (CH)	A77
17:00 - 17:15	The effect of systematic light exposure on sleep and sleep quality in a mixed group of fatigued cancer survivors Ali Amidi (USA)	A81
17:15 - 17:30	Efficacy and safety of light therapy for bipolar depression Francesco Benedetti (IT)	A6
18:15 - 21:00	Poster session; wine & cheese (Fontein Patio)	
18:15 - 21:00	All poster presenters are required to participate, and to provide a 2 minute presentation to the poster committee	

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Saturday, June 23rd

	University Medical Center Groningen (UMCG), Hanzeplein 1, 9713 GZ Groningen; Room: 'Rode Zaal'	
8:00 - 8:30	Registration (Fontein Patio)	
8:30 - 10:15	<u>SYMPOSIUM 2: NEW CHRONOTHERAPEUTIC APPROACHES</u> Chair: Katharina Wulff (UK) & Karin Smolders (NL)	
8:30 - 9:05	Impact of light on functional brain connectivity in young and older individuals Julie Carrier (CA)	A16
9:05 - 9:40	Is insomnia a disorder of rhythm or sleep and is chronotherapy useful? Eus van Someren (NL)	A70
9:40 - 10:15	Novel biomarkers for circadian rhythms and sleep Derk-Jan Dijk (UK)	A25
10:15 - 10:45	Coffee Break (Fontein Patio)	
10:45 - 12:15	<u>ORAL PRESENTATIONS II</u> Chair: Christian Cajochen (CH)	
10:45 - 11:00	Temporal dynamics in light exposure, well-being, and sleep among independent living elderly Karin C.H.J. Smolders (NL)	A61
11:00 - 11:15	Pupil responses to colour: a novel insight into the wiring of the human retina Tom Woelders (NL)	A80
11:15 - 11:30	Dynamics of daytime light exposure impacts on sleep architecture in a naturalistic setting Claudia Nowozin (DE)	A48
11:30 - 11:45	Melatonin, body temperature and alertness response to late evening light are reduced by prior early evening light exposure Luc Schlangen (NL)	A65
11:45 - 12:00	Living in the photon space - the biological value of daylight for human well-being Katharina Wulff (UK)	A83
12:00 - 12:15	Chronotype and depressive symptoms in students: an investigation of possible mechanisms Niki Antypa (NL)	A69

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12:15 - 13:15	Lunch Break (Fontein Patio)	
13:15 - 15:00	<u>SYMPOSIUM 3:</u> Chair: Dorothy Sit (USA)	
13:15 - 13:50	Blue-blocking glasses as additive treatment for mania: a randomized placebo-controlled trial Tone Henriksen (NOR)	A37
13:50 - 14:25	Light therapy for perinatal depression Katherine L. Wisner (USA)	A79
14:25 - 15:00	Advanced chronotherapeutics for depression during pregnancy Barbara Parry (USA)	A49
15:00 - 15:30	Coffee Break (Fontein Patio)	
15:30 - 17:00	<u>ORAL PRESENTATIONS III</u> Chair: Klaus Martiny (DK)	
15:30 - 15:45	Acute exposure to blue light at night impairs glucose tolerance, alters insulin secretion and increase sugar intake in diurnal rodents Anayanci Masis-Vargas (F/NL)	A45
15:45 - 16:00	The effect of bright light on blood pressure and heart rate in essential hypertension Mikhail L. Blagonravov (RU)	A10
16:00 - 16:15	Additive and opponent spectral effects on melatonin regulation in healthy humans John Hanifin (USA)	A35
16:15 - 16:30	Investigation of retinal spectral-domain optical coherence tomography (SD-OCT) findings on biological rhythm perspective Cigdem Sahbaz (TR)	A56
16:30 - 16:45	Late sleep, early decline: late sleep is associated with increased cellular aging Dora S. Wynchank (NL)	A84
16:45 - 17:00	Peripheral micro RNAs are altered by total sleep deprivation and psychological stress and predict cognitive performance in humans Namni Goel (USA)	A86
18:00	Shuttle departure from NH Groningen Hanzeplein	

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18:30 - 22:00	Restaurant De Rietschans, Meerweg 221, 9752 XC Haren Banquet Dinner
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22:00 Shuttle departure from De Rietschans (to NH Groningen Hanzeplein)

22:30 Shuttle departure from De Rietschans (to NH Groningen Hanzeplein)

Sunday, June 24th 2017

8:30 - 9:00 University Medical Center Groningen (UMCG), Hanzeplein 1, 9713 GZ Groningen;
Room: 'Rode Zaal'
Registration (Fontein Patio)

9:00 - 12:30 ANNIVERSARY SYMPOSIUM: 30 years of SLTBR – where should we go from here?
Moderator: Domien Beersma (NL)

9:00 - 9:35 Who we were, are, and might become
Michael Terman (USA) A66

9:35 - 10:10 Thirty years ago and now: the amazing and wonderful world of light
Anna Wirz-Justice (CH) A78

10:10 - 10:45 Light and darkness; from clinical treatment to healthy lifestyle approach
Marijke Gordijn (NL) A30

10:45 - 11:15 Coffee Break (Fontein Patio)

11:15 - 11:50 Lunar mood cycles and their relationship to seasonal mood cycles
Tom Wehr (USA) A74

11:50 - 12:30 General Discussion

12:30 - 13:30 Lunch Break (Fontein Patio)

13:30 - 14:30 Keynote Lecture Norman Rosenthal (USA)
Hot wiring your emotional brain: a novel look at the cranial nerves
Introduction: Michael Terman (USA)

14:30 - 15:00 Poster & Travel Awards

15:00 - 15:15 Closing Remarks and Farewell

POSTER PRESENTATION - FRIDAY, JUNE 22TH, 18:15 – 21:00

Circadian and reward measures show robust bidirectional relationships in bipolar spectrum disorder in a 20-day naturalistic ecological momentary assessment study

Lauren B. Alloy (USA) A1

The effects of exercise and napping on overnight sleep

Karina Ando (JP) A2

Synchrony between bipolar mood cycles and lunar tidal cycles ended after initiation of light treatment and treatment of hypothyroidism

David H. Avery (USA) A3

Effect of chronotype and time of assessment on cognitive performance

Katarína Baranyaiová (CZ) A4

Integration of non-image-forming (NIF) effects of light in venetian blinds and electric lighting control

Marta Benedetti (CH) A5

The circadian rhythm of ADHD

Denise Bijlenga (NL) A7

Relationship between diurnal variation and depression severity in patients with unipolar major depression

Jonathan Jetsmark Bjerre (DK) A8

Prolonged photoperiod induces changes in sleep. The impact of blue-enriched light

Louise H Bjerrum (NOR) A9

Estimating parameters in a model of the human circadian rhythm using a particle filter

Jochem H. Bonarius (NL) A11

From space flight lighting countermeasures to the patient bedside: developing light therapy for sleep and mood disruption in brain injury

George Brainard (USA) A12

Impact of light's origin on acute alertness

Kai Broszio (DE) A13

Effects of light therapy on mood and glucose metabolism in patients with depression and type 2 diabetes

Annelies Brouwer (NL) A14

Light therapy: is it safe for the eyes? A systematic review

Annelies Brouwer (NL)

A15

Differences in energy expenditure during morning and evening maximal ergospirometry in extreme chronotypes

Kateřina Červená (CZ)

A17

Application of mathematical modeling for faster circadian entrainment

Philip Cheng (USA)

A18

Assessing the impact of light-at-night on sleep, circadian function and on physical and mental well-being

Michael Cleary-Gaffney (IRL)

A19

Actimetric day/night index as a predictor of treatment response in depression

Konstantin V. Danilenko (RU)

A20

Polychromatic white light exposure reduces objective sleepiness depending on melanopic lux at low light intensities during daytime

Jan de Zeeuw (DE)

A22

Documentation of mixed lighting conditions in non-image forming studies

Aicha K. Diakite (DE)

A23

Actigraphy in combined chronotherapy to determine predictors of response in the treatment of depressive disorder

Stella J.M. Druiven (NL)

A26

Benefits of evening vs. morning training in the acquisition and consolidation of motor skill in older adults

Carmit Gal (ISR)

A27

The influence of daytime light on nighttime sleep

Moniek Geerdink (NL)

A28

Circadian measures are not phase delayed in bipolar spectrum disorder in a 20-day naturalistic ecological momentary assessment study

Namni Goel (USA)

A29

Bright light therapy in rheumatoid arthritis to improve symptoms of fatigue and other disease outcomes: a randomized controlled pilot trial

G. Esther A. Habers (NL)

A33

A multicenter randomised controlled trial with bright light therapy to decrease depressive symptoms in adults with intellectual disabilities: preliminary results

Pauline C.M. Hamers (NL)

A34

Promoting healthy light exposure regimes to improve sleep timing and quality among adolescents Laura M. Huiberts (NL)	A38
Effects of bright light exposure on alertness under forced desynchrony conditions Renske Lok (NL)	A41
Melanopsin retinal ganglion cell function in seasonal mood, melatonin regulation and light therapy Helle Ø. Madsen (DK)	A42
Dynamics of subjective thermal comfort and skin temperatures under self-selected (day-) lighting conditions Lenka Maierova (CZ)	A43
Extended photoperiod alters circadian rhythmicity and expression of synaptic plasticity-associated genes. The impact of blue-enriched light Andrea R. Marti (NOR)	A44
The degree of radiation-induced DNA strand breaks is altered by acute sleep deprivation and psychological stress and is associated with cognitive performance in humans Maria Moreno-Villanueva (USA)	A47
Bright light exposure during simulated night shift work - impact on daytime sleep Torhild T. Pedersen (NOR)	A50
The efficacy and safety of morning light therapy for (winter) depression in bipolar disorder Lisette Rops (NL)	A51
Do dynamic changes in light level and spectral power distribution improve acute alertness during daytime? Inga Rothert (DE)	A52
Can bright light exposure function as a compensation of midday nap deprivation among habitual nappers? Taotao Ru (CN)	A53
Evening chronotype is associated with medical comorbidities and factor structure of depression: a descriptive study Cigdem Sahbaz (TR)	A55
Association of serum BDNF levels and BDNF val66met polymorphism with sleep habits in healthy young adults Kaori Saitoh (JP)	A57
Development of the Dutch guideline for light therapy in patients with bipolar depression Peter F.J. Schulte (NL)	A58

The relationship between melatonin and cortisol profiles with cancer related fatigue: a study protocol

Daniëlle E.J. Starreveld (NL)

A63

Does early response predict subsequent remission in bipolar depression treated with three cycles of total sleep deprivation combined with light therapy and lithium?

Masahiro Suzuki (IT)

A64

The effect of chronic sleep deprivation on cognition in healthy middle aged men

Jana Thomas (NL)

A67

Programmed environmental illumination during autologous stem cell transplantation hospitalization for the treatment of multiple myeloma reduces severity of depression

Heiddis Valdimarsdottir (USA)

A68

Triple chronotherapy for depression – experience in the UK

David Veale (UK)

A71

Room-light 1:1 - light simulation using a mock-up of patient bedrooms in the projected new psychiatric hospital Bispebjerg

Carlo Volf (DK)

A72

EPFL smart glass field study

Forrest S. Webler (CH)

A73

Seasonal affective disorder and non-seasonal affective disorders: results from the NESDA study

Wim H. Winthorst (NL)

A75

Seasonality of negative and positive affect in a large crowdsourcing study in the Netherlands (HowNutsAreTheDutch)

Wim H. Winthorst (NL)

A76

Systematic light exposure and cognition in hematopoietic stem cell transplant survivors: a pilot study

Lisa M. Wu (USA)

A82

Bright light exposure triggers earlier onset of selective consolidation of motor-skill accuracy in humans

Takuya Yoshiike (JP)

A85

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Supported by Daylight Academy



The **Daylight Academy** wants to promote international and interdisciplinary **cooperation** among **scientists, engineers** and **architects** as well as other professionals involved in **daylight research** or with a strong interest in daylight-related topics.

For more information please visit our website
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Anna Wirz-Justice

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Volunteers

Thank you for your time and dedication in taking care of the details!

University Medical Center Groningen and the University of Groningen

Thank you four your hospitality and support!

Karger Publisher, Basel, Switzerland

Thank you for publishing our SLTBR meeting abstracts in a Special Issue of Neuropsychobiology!

Dieter Kunz

Thank you for giving working time to the President to be dedicated to SLTBR!

Links

Different campus maps:

https://www.nh-hotels.com/hotel/nh-groningen/map?_ga=2.64848936.640067353.1526975554-2066225114.1526975554

<https://www.google.nl/maps/search/Zernike+Campus+Bernouilliborg/@53.2395524,6.5303526,16.02z>

<https://www.rug.nl/feb/contact/zernike-map.pdf>

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WLAN: Access

UMCG Guest



Bernoulliborg
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