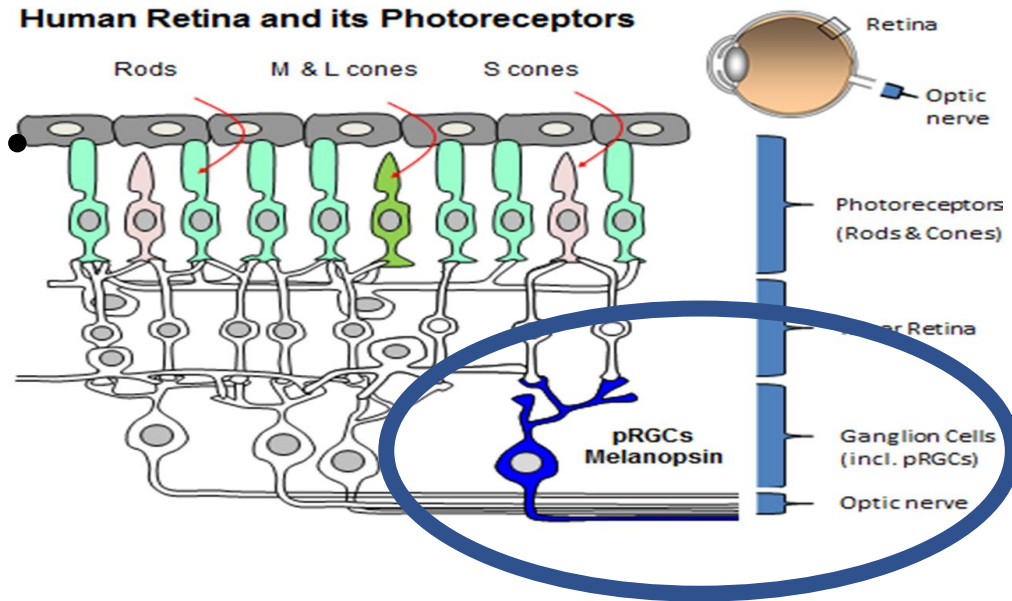




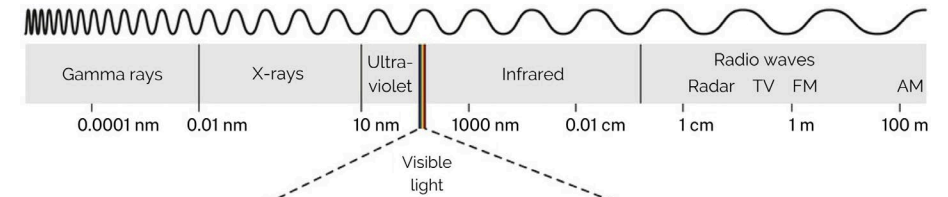
BLUES- Stemningsstabiliserende
effekter af blå lys blokering

Helle Østergaard Madsen,
afdelingslæge, post.doc

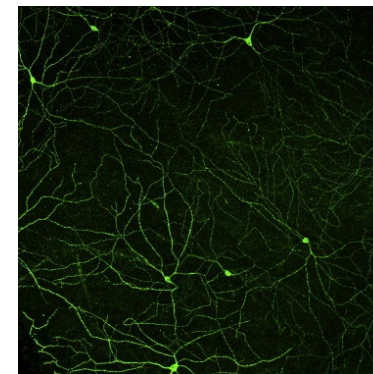
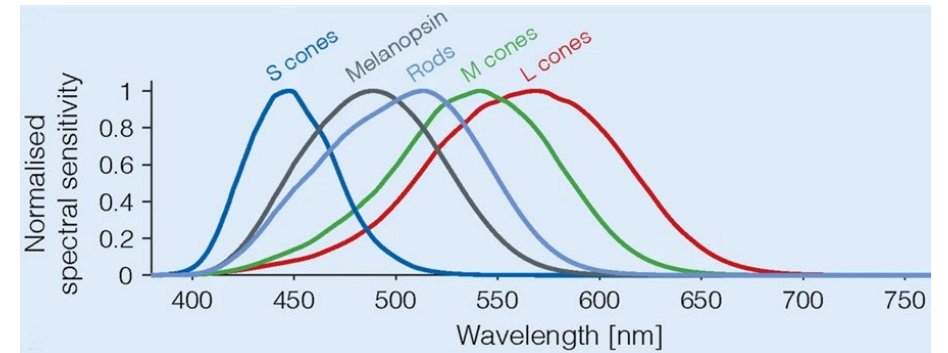
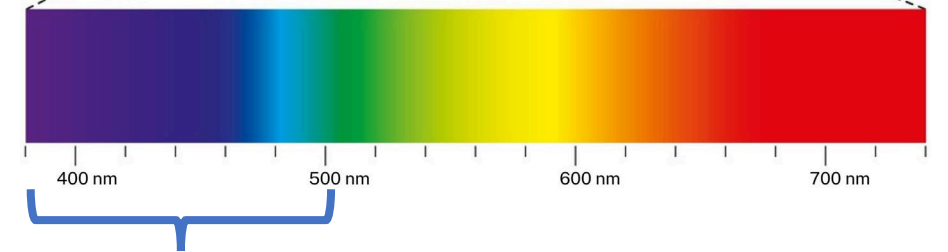
IpRGC



< 10.000 celler – dendritnetværk over hele nethinden
(>100.000 millioner stave og tappe)



The Visible Light Spectrum



IpRGC og stemningsleje

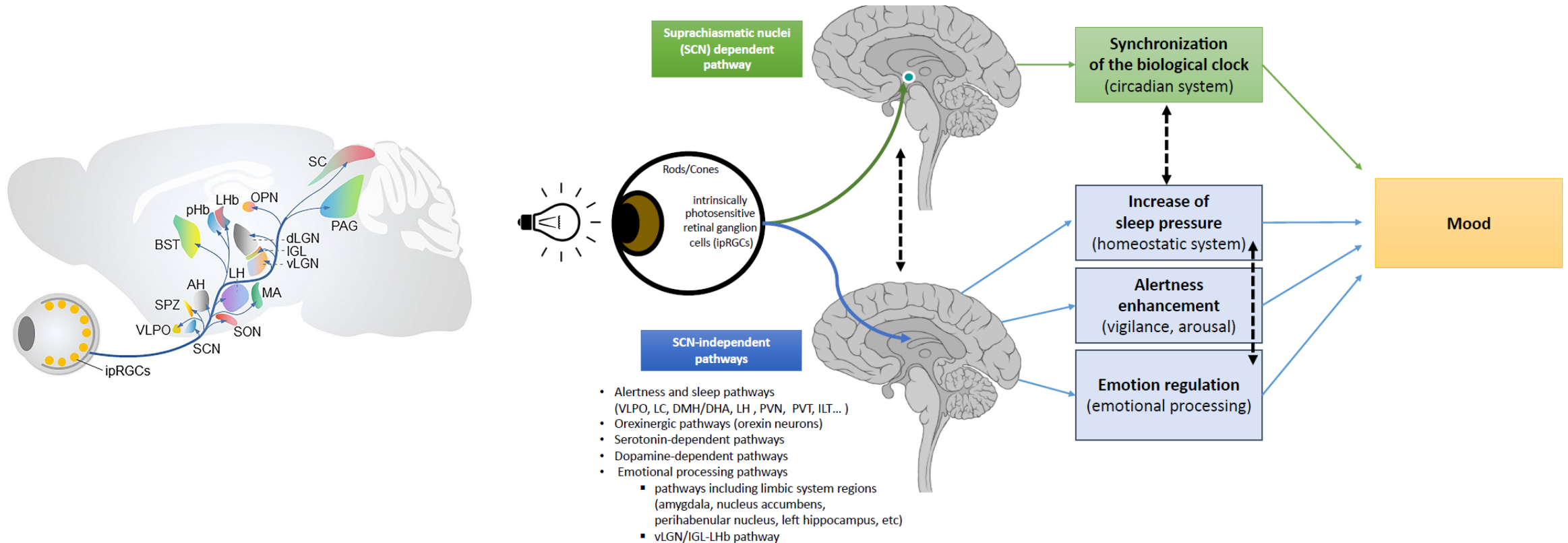
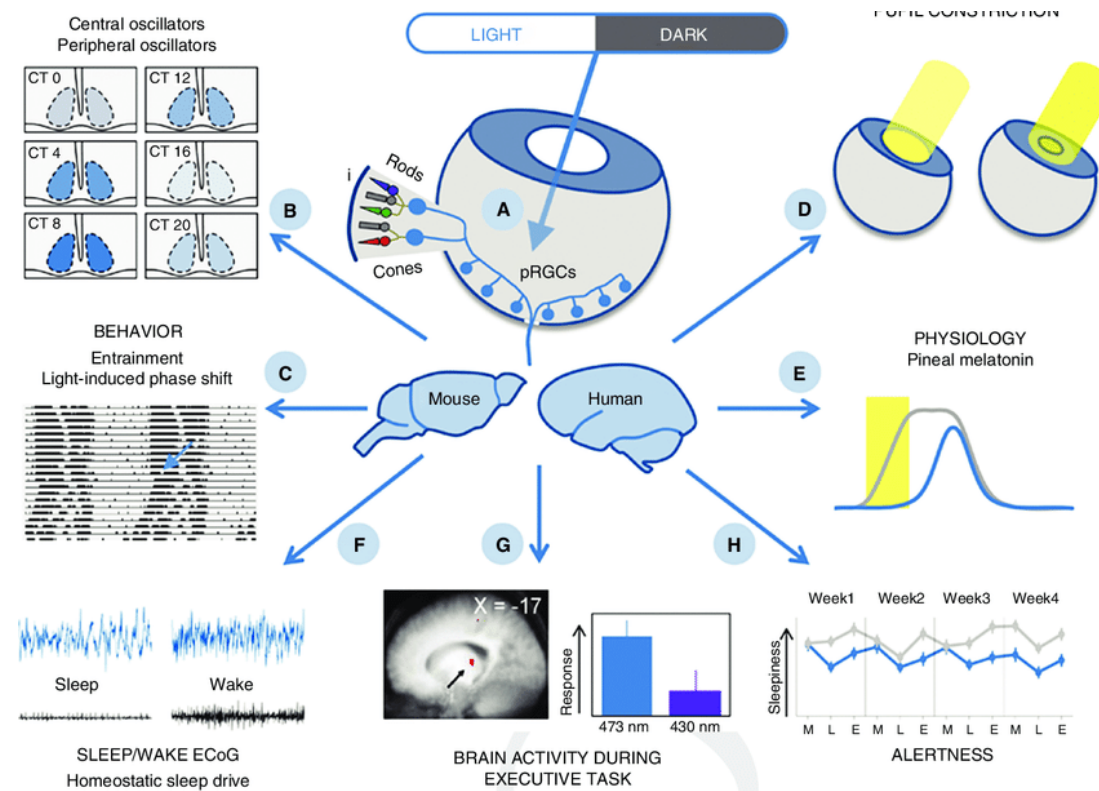


Figure 1. Multi-level processes and retina–brain pathways of photic regulation of mood.

Ikke-billeddannende effekter af lys



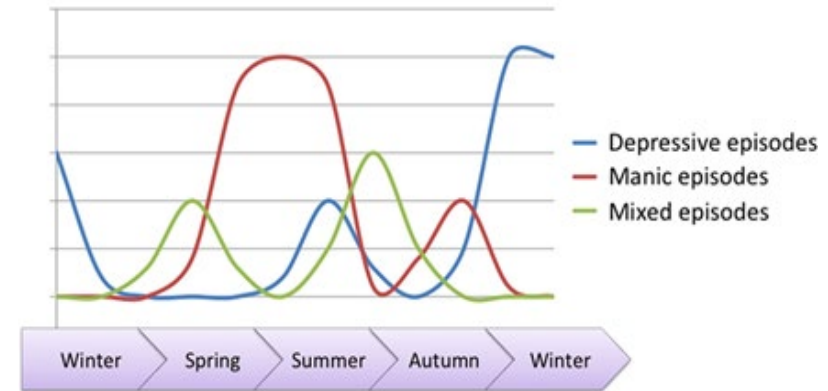
Sæsonvariation i indlæggelser

Flere symptomer på vinterdepression

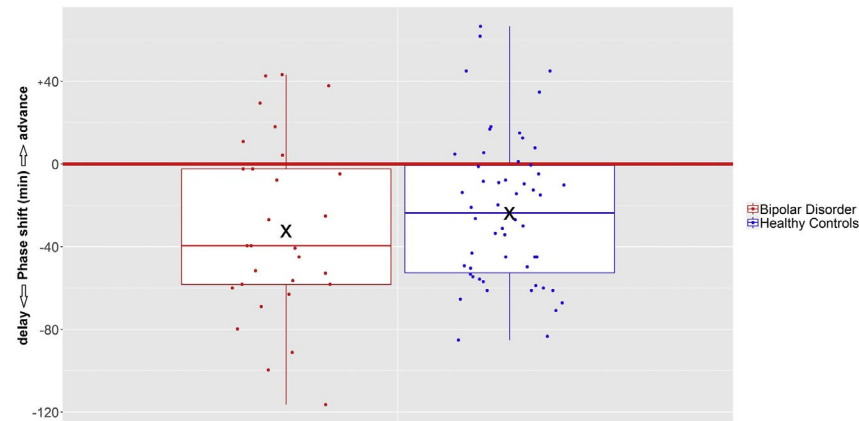
Lysterapi er effektivt mod bipolar depression

Øget faseforskydning ved lyseksponering

Admission
Rates



Geoffroy et al 2014



Ritter 2022

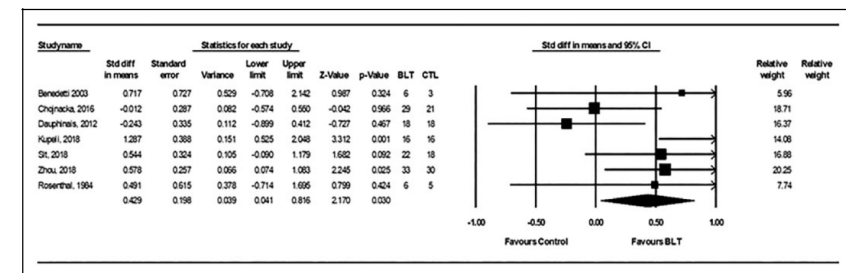


Figure 3. Forest plots from meta-analysis for standardized mean difference in Hamilton Depression Rating Scale scores for active light treatment versus control condition in bipolar depression. CI: Std diff = standardized difference; CI = confidence interval; BLT = bright light treatment; CTL = control condition.

Lam et al 2020

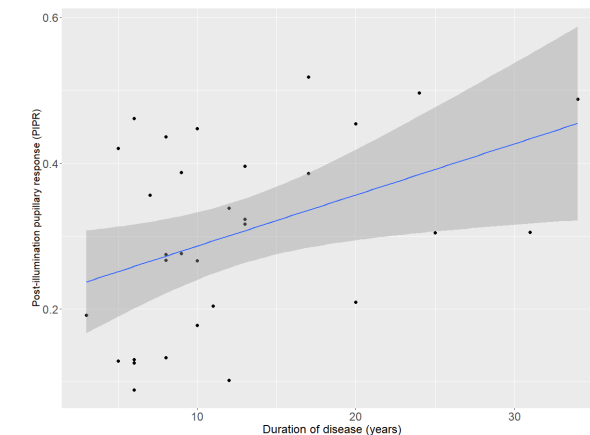
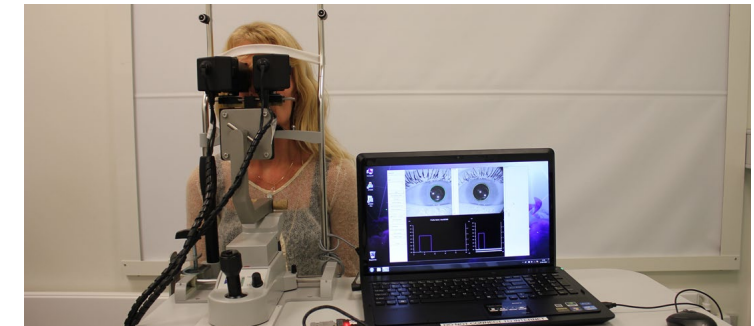
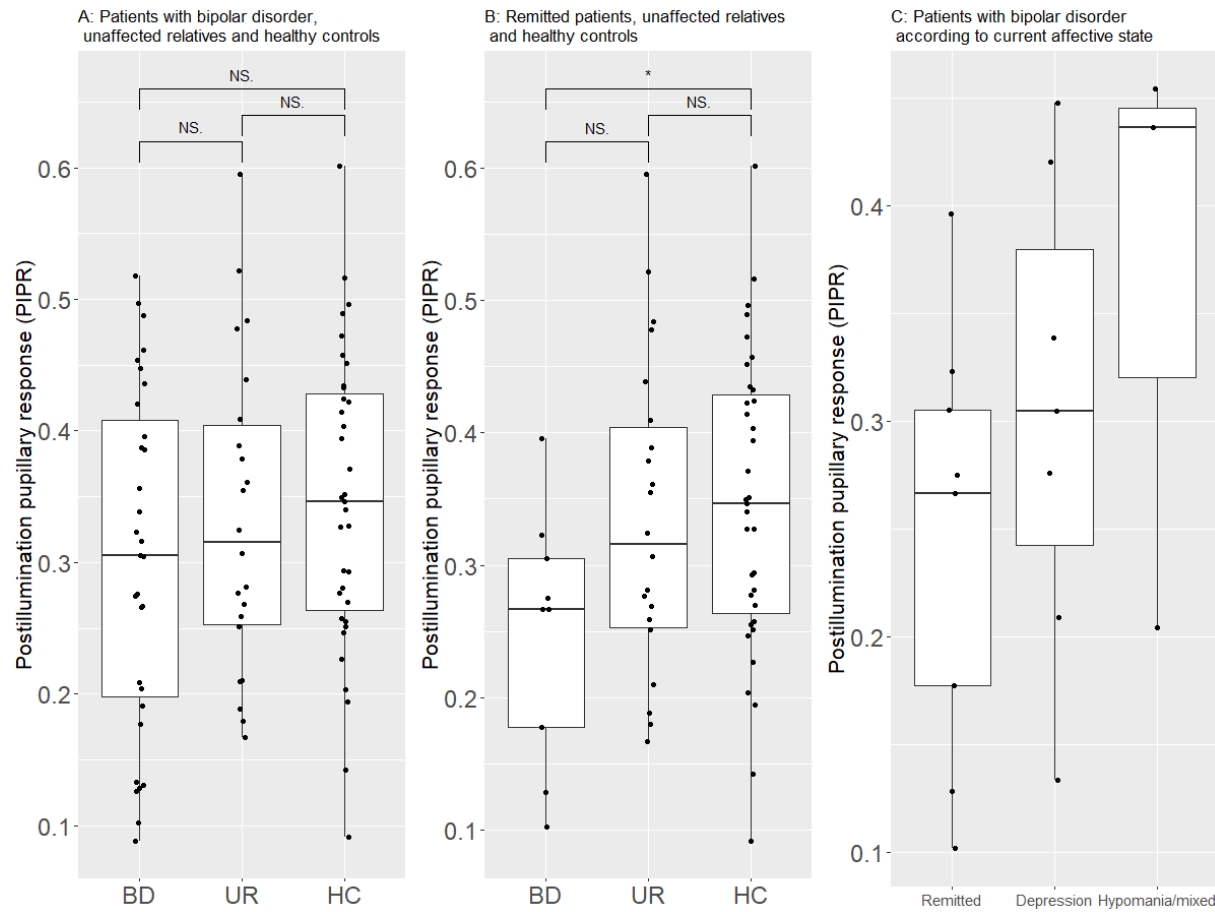
IpRGC følsomhed i bipolar lidelse

RESEARCH

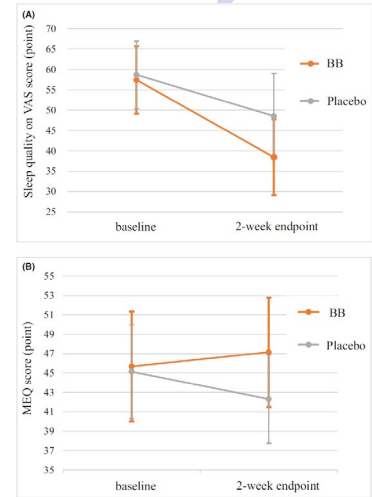
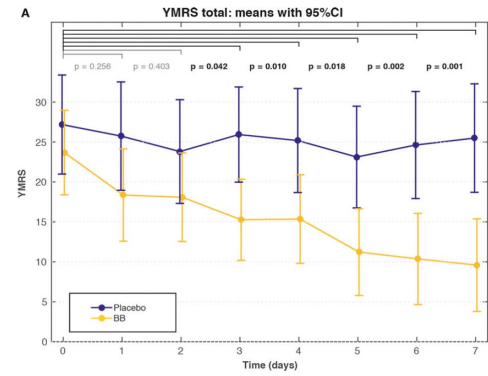
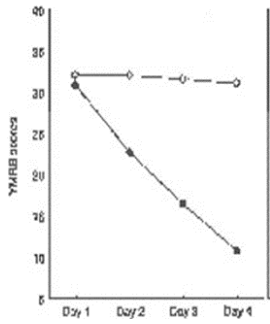
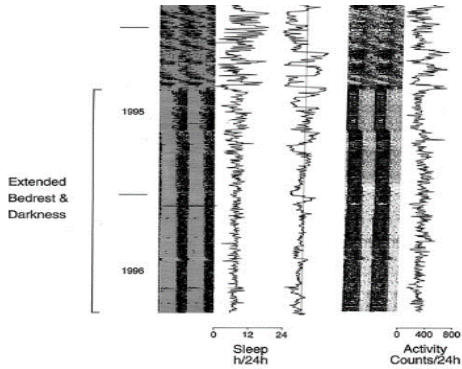
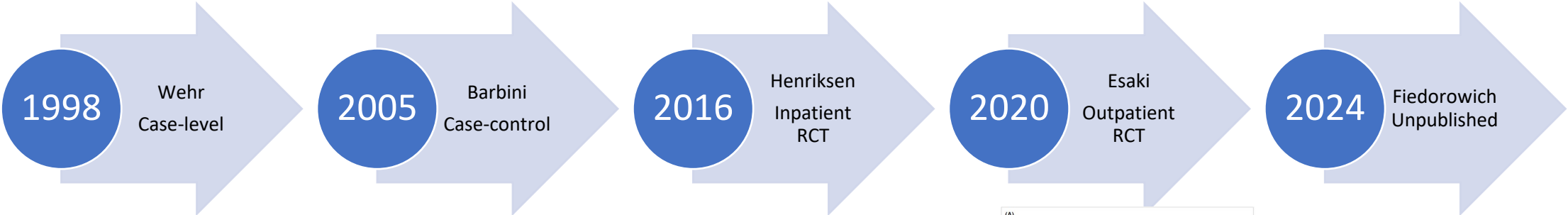
Open Access

Melanopsin-mediated pupillary responses in bipolar disorder—a cross-sectional pupillometric investigation

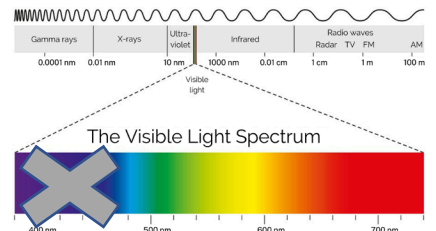
Helle Østergaard Madsen^{1*}, Shakoor Ba-Ali², Steffen Heegaard², Ida Hageman³, Ulla Knorr¹, Henrik Lund-Andersen², Klaus Martiny¹ and Lars Vedel Kessing¹



Mørketerapi



Ingen fund...



BLUES – stabiliserende effekter af blå-blokerende briller i ambulant behandling af bipolar lidelse



- 7-dages akut antimanisk intervention
- 3-måneders stabiliserende intervention
mod stemnings- og aktivitetsinstabilitet

Setting

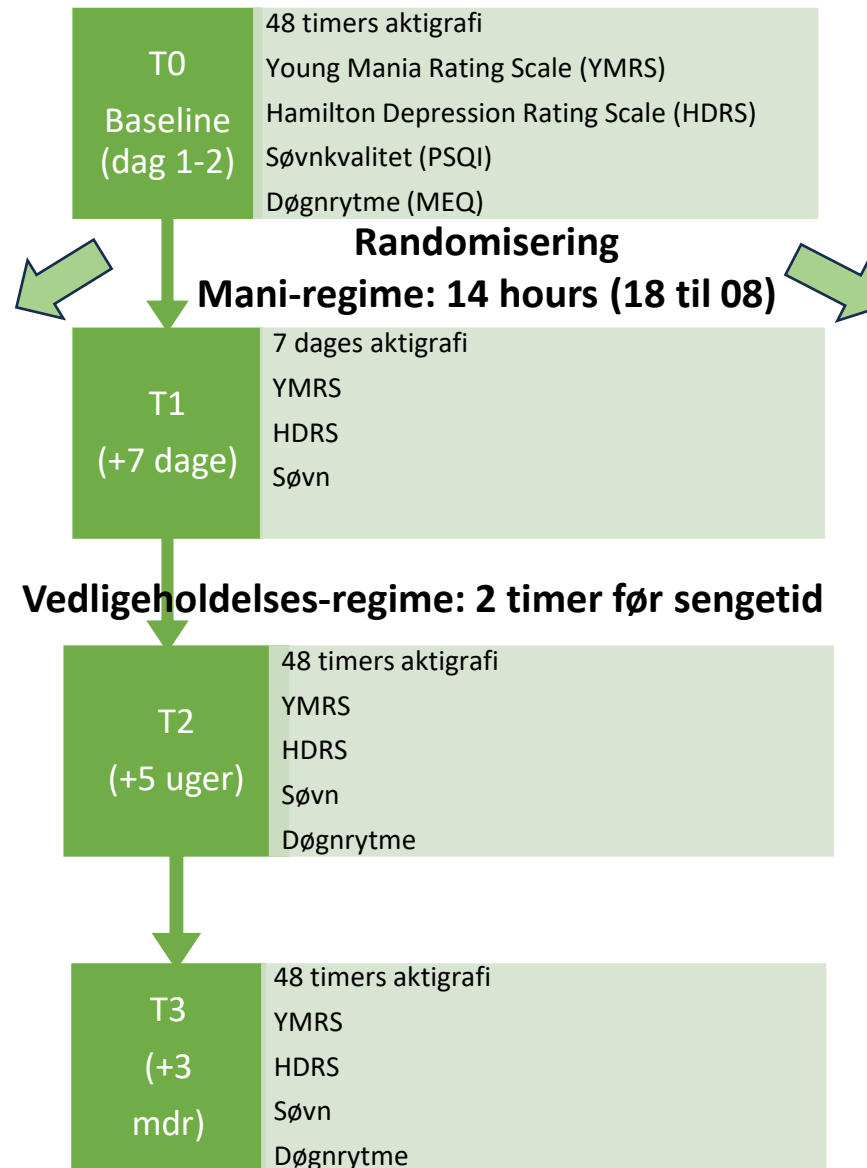
- April 2024
- PCK bipolar ambulatorier: Ambulatorium for affektive lidelser (AAL) + KAG bipolar
- Randomized controlled trial (RCT)
 - BB eller klare (lav filtration) briller
- n = 150

- **Inklusionskriterier**

- Bipolar lidelse
- YMRS >13
- 18-60 år
- dansktalende

- **Eksklusionskriterier**

- Skifteholdsarbejde, natarbejde
- Graviditet
- Øjensygdom/øjentraumer
- Anden søvnforstyrrelse (søvnapnø, restless legs, døgnrytmeforstyrrelse)
- Aktivt misbrug
- Tidligere brug af søvnbriller
- Betablokker
- Selvmordsfare
- Uvillighed til at anvende Monsenso App



Elektronisk selvmonitorering - Monsenso App

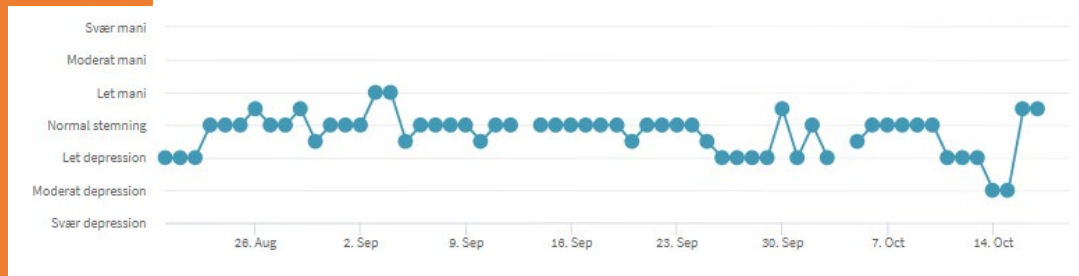


MOOD

SELECT ON THE SCALE

- 3 Severe mania ✓
- 2 Moderate mania
- 1 Mild mania
- 1/2 Elevated mood
- 0 Neutral mood
- 1/2 Lowered mood
- 1 Mild depression
- 2 Moderate depression
- 3 Severe depression

Save



Outcomes T1
(after 7 dages
intervention)

Primært mål:

Young Mania Rating Scale Score

Sekundære mål:

Objektive søvnsmål (aktigrafi)

Sekundære/tertiære
mål efter 5 and 15
uger

Stemningsinstabilitet: dag-til-dag variation i
selvregistreret stemningsleje

Aktivitetsinstabilitet: -

Subjektive og objektive søvnmaal (aktigrafi + PSQI)

Subjektive og objektive døgnrytmemaal (aktigrafi + MEQ)

Medicinforbrug, indlæggelser, episoder

Pupillometri

Status, udfordringer, perspektiver



Status

- 12...



Udfordringer

- Rekruttering
- Adherence
- Blinding



Perspektiver

- Selvadministreret behandling
- Lave omkostninger
- Hurtigt indsættende effekt
- Minimale bivirkninger



Blues Projektgruppe

- Lars Vedel Kessing
- Klaus Martiny
- Maria Faurholt-Jepsen
- Ida Hageman
- Tone Henriksen
- Miriam Kolko



Funding

- Jascha Fonden
- Region Hovedstaden
- Region Hovedstadens Psykiatri

Tak for opmærksomheden

Status – udfordringer - perspektiver

N = 12

...vinter

Udfordringer

- Rekruttering
- Adherence
- Blinding

Lys og mørke som trigger og behandling i bipolar lidelse

THE LANCET

LETTERS TO THE EDITOR | [VOLUME 317, ISSUE 8216, P383-384, FEBRUARY 14, 1981](#)

MANIC-DEPRESSIVE PATIENTS MAY BE SUPERSENSITIVE TO LIGHT

[Alfred J. Lewy](#) • [Thomas A. Wehr](#) • [Frederick K. Goodwin](#) • [David A. Newsome](#) • [Norman E. Rosenthal](#)

Published: February 14, 1981 • DOI: [https://doi.org/10.1016/S0140-6736\(81\)91697-4](https://doi.org/10.1016/S0140-6736(81)91697-4)

Lys og mørke som behandling af bipolar lidelse

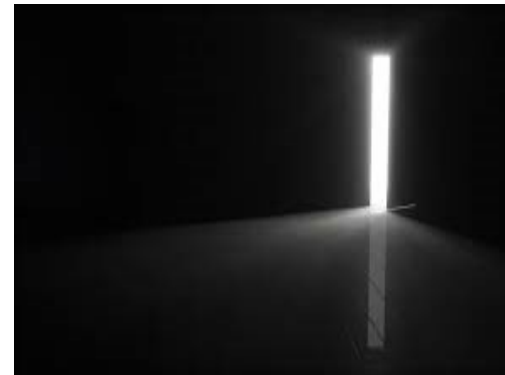
Lysterapi

- Bipolar depression
- Solid evidens



Mørketerapi

- Mani
- Cases, 1 kontrolleret studie (n=32), 1 RCT (n=32)



Light Therapy for Patients With Bipolar Depression: Systematic Review and Meta-Analysis of Randomized Controlled Trials

Photothérapie pour les patients souffrant de dépression bipolaire: Revue systématique et méta-analyse d'essais randomisés contrôlés

Raymond W. Lam, MD¹ , Minnie Y. Teng, MOT¹, Young-Eun Jung, MD^{1,2}, Vanessa C. Evans, BSc¹, John F. Gottlieb, MD³, Trisha Chakrabarty, MD¹, Erin E. Michalak, PhD¹, Jill K. Murphy, PhD¹, Lakshmi N. Yatham, MBBS, MBA(Exec)¹, and Dorothy K. Sit, MD³

The Canadian Journal of Psychiatry /
La Revue Canadienne de Psychiatrie
2020, Vol. 65(5) 290-300
© The Author(s) 2019
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/0706743719892471
TheCJP.ca | LaRCP.ca

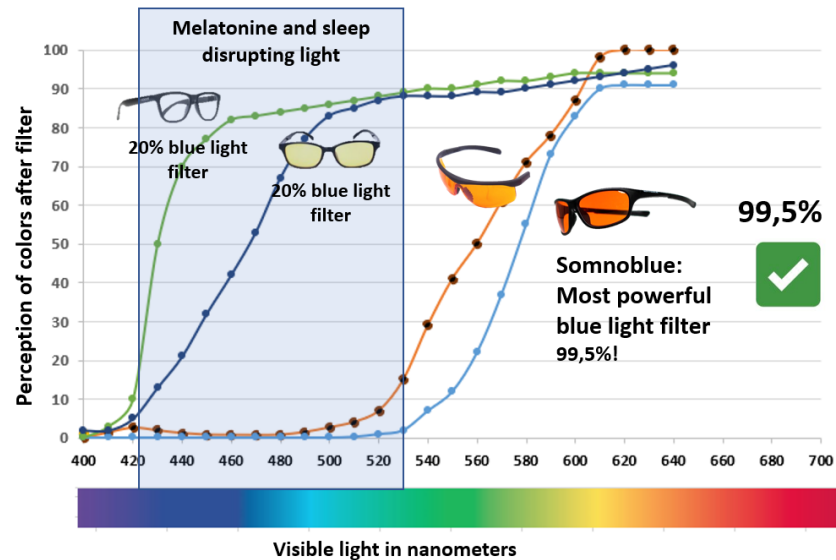


er l
by

Philipp Ritter, Bettina Soltmann, Cathrin Sauer, Abdulbaki Yakac, Lynn Boekstaegers, Mirjam Reichard, Konstanze Koenitz, Michael Bauer, Henry Güldner, Stefanie Neumann, Falk Wieland, and Debra J. Skene

Udfordringer

- N = 150
- Compliance – registrere brug i Monsenso
- Manglende blinding af deltagere
 - risiko for dropout ved mistanke om placebo

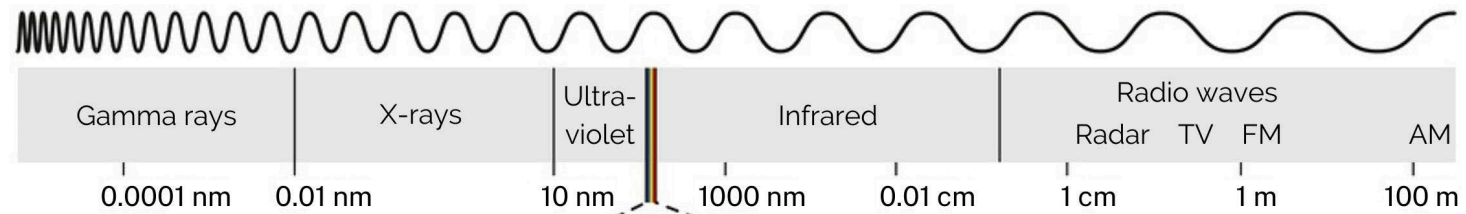


Most powerful blue light filter

The Somnoblue sleep glasses filter 99,5% of the blue light spectrum. It makes it the most effective blue blocker on the market.

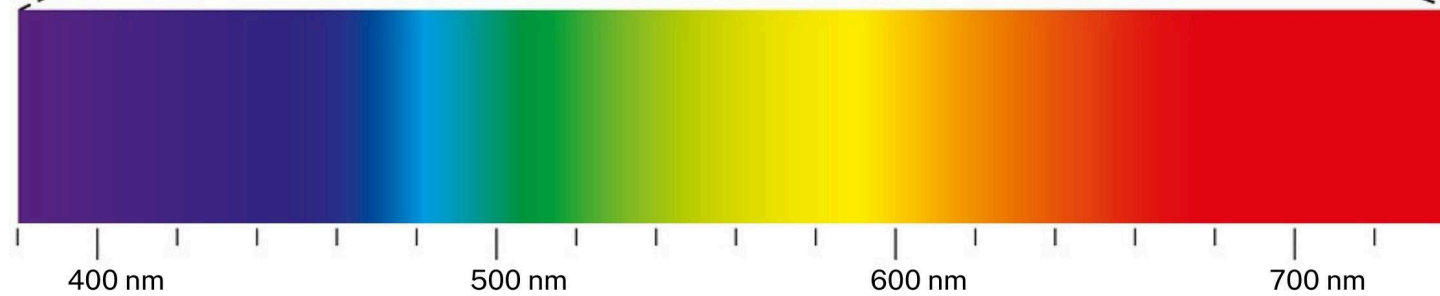


somno blue



Visible
light

The Visible Light Spectrum



Kronoterapi – behandling som retter sig mod døgnrytmesystemet



REVIEW ARTICLE

The chronotherapeutic treatment of bipolar disorders: A systematic review and practice recommendations from the ISBD task force on chronotherapy and chronobiology

John F. Gottlieb ✉, Francesco Benedetti, Pierre A. Geoffroy, Tone E. G. Henriksen, Raymond W. Lam, Greg Murray, James Phelps, Dorothy Sit, Holly A. Swartz, Marie Crowe, Bruno Etain ... See all authors ▾

First published: 14 October 2019 | <https://doi.org/10.1111/bdi.12847> | Citations: 115

Kronoterapi ved bipolar lidelse

Lysterapi



Anbefaling ved
bipolar
depression

Mørketerapi



Lille anbefaling
ved indlagt
mani

Søvndeprivation



Kan afprøves
ved depression
ved svigt af
anden
behandling

Interpersonal Social rhythm therapy



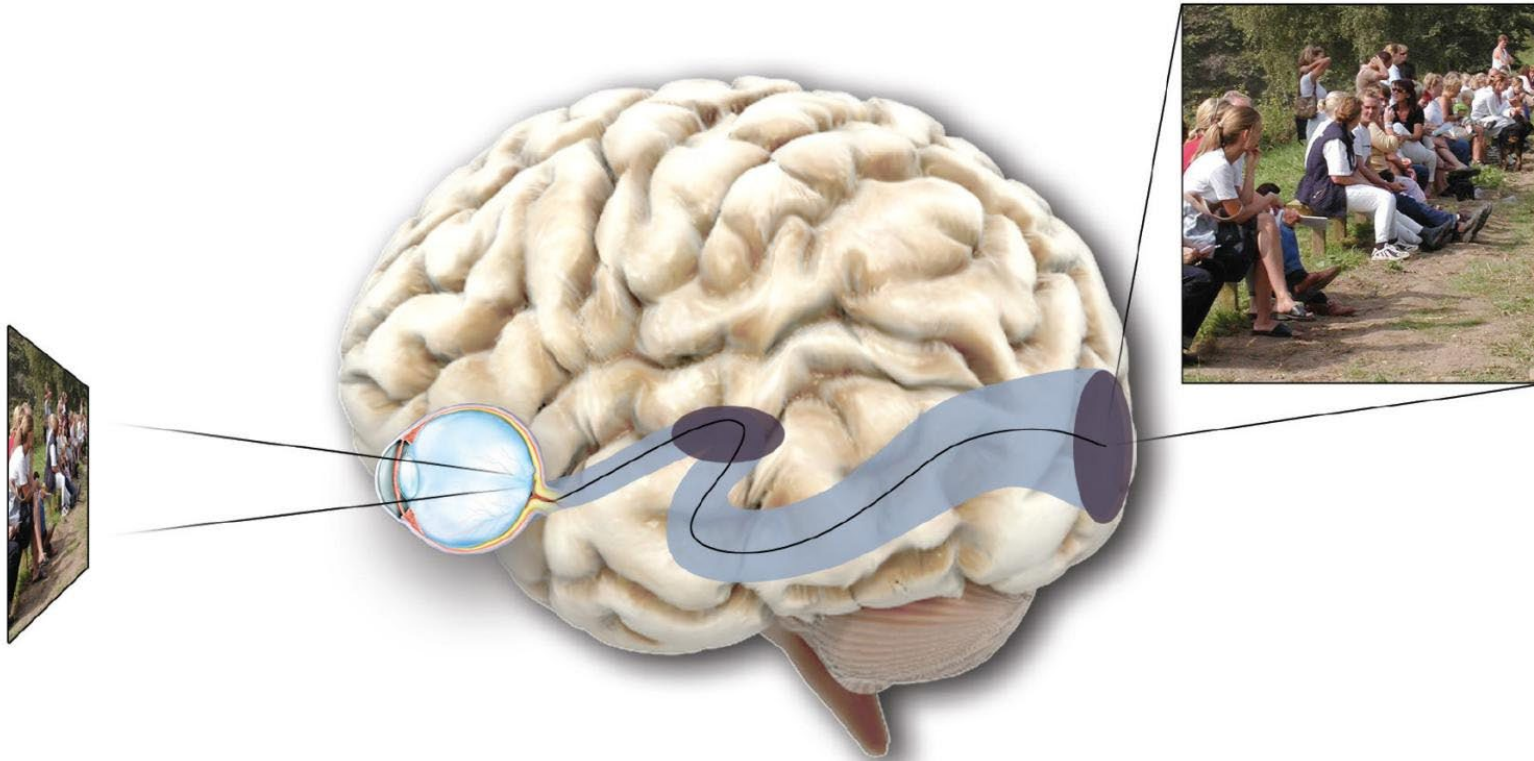
Anbefaling ved
bipolar
depression og
som
forebyggende for
mani/depression

Melatonin agonister

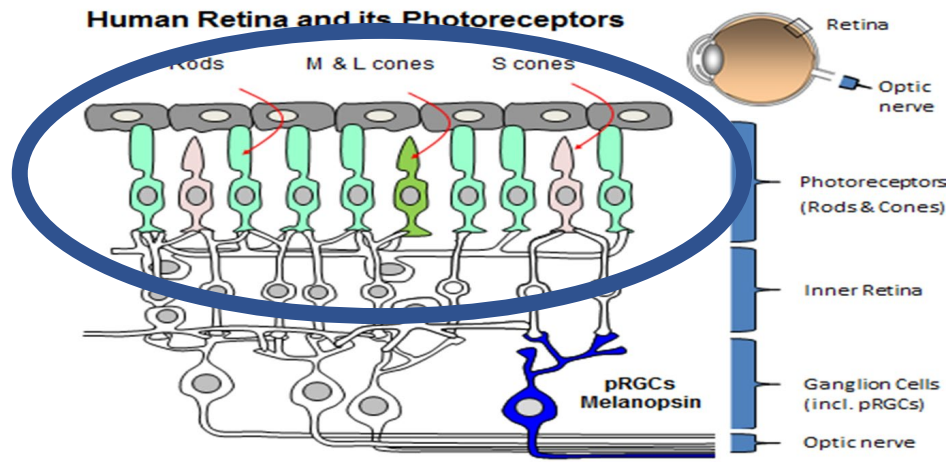


Ingen
anbefaling

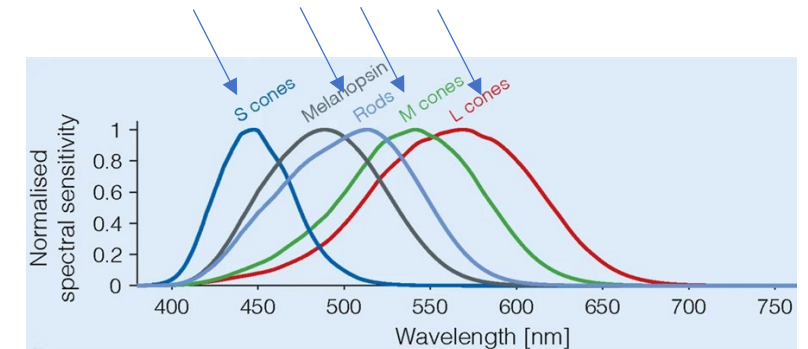
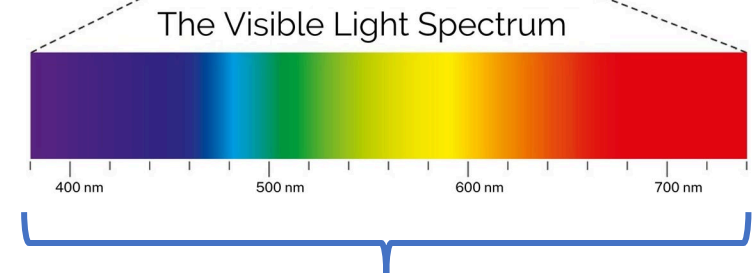
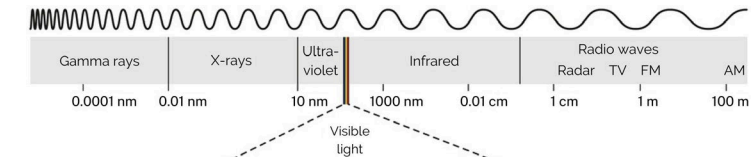
Billeddannelse



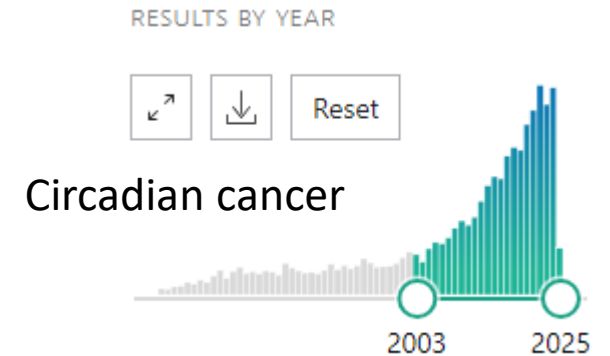
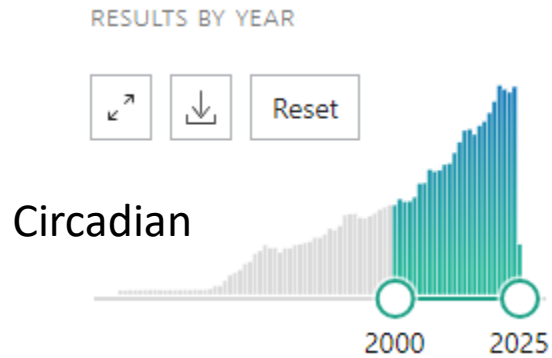
Stave og tappe



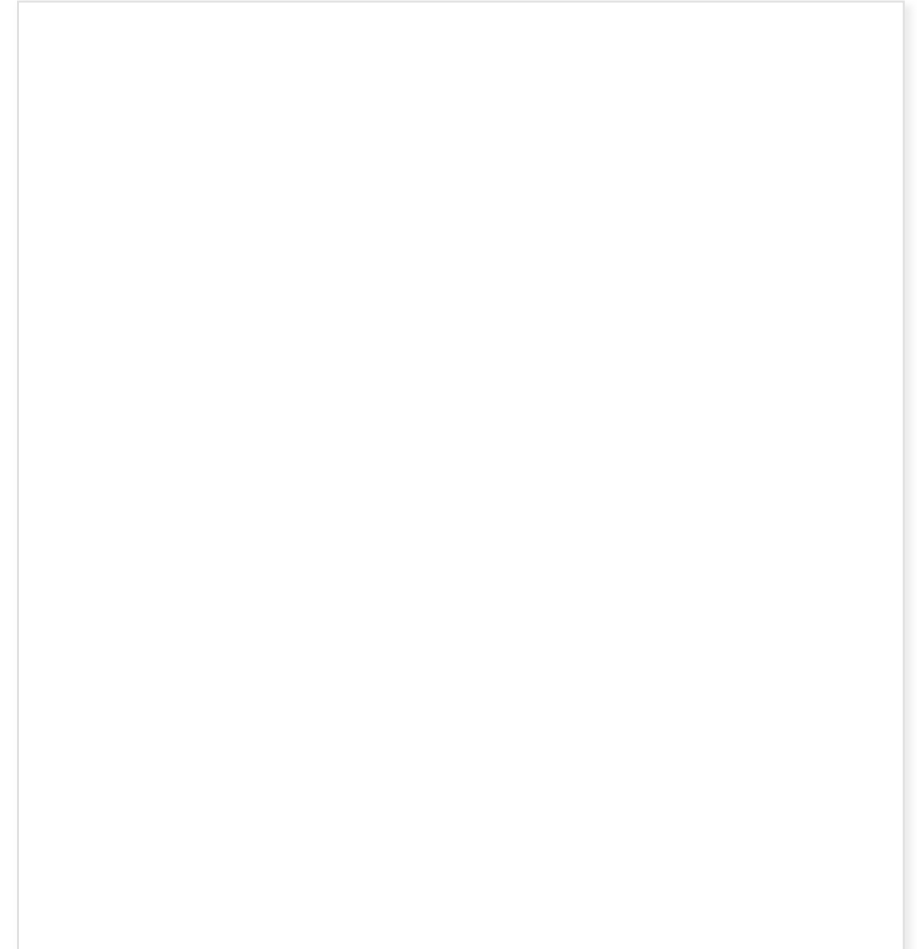
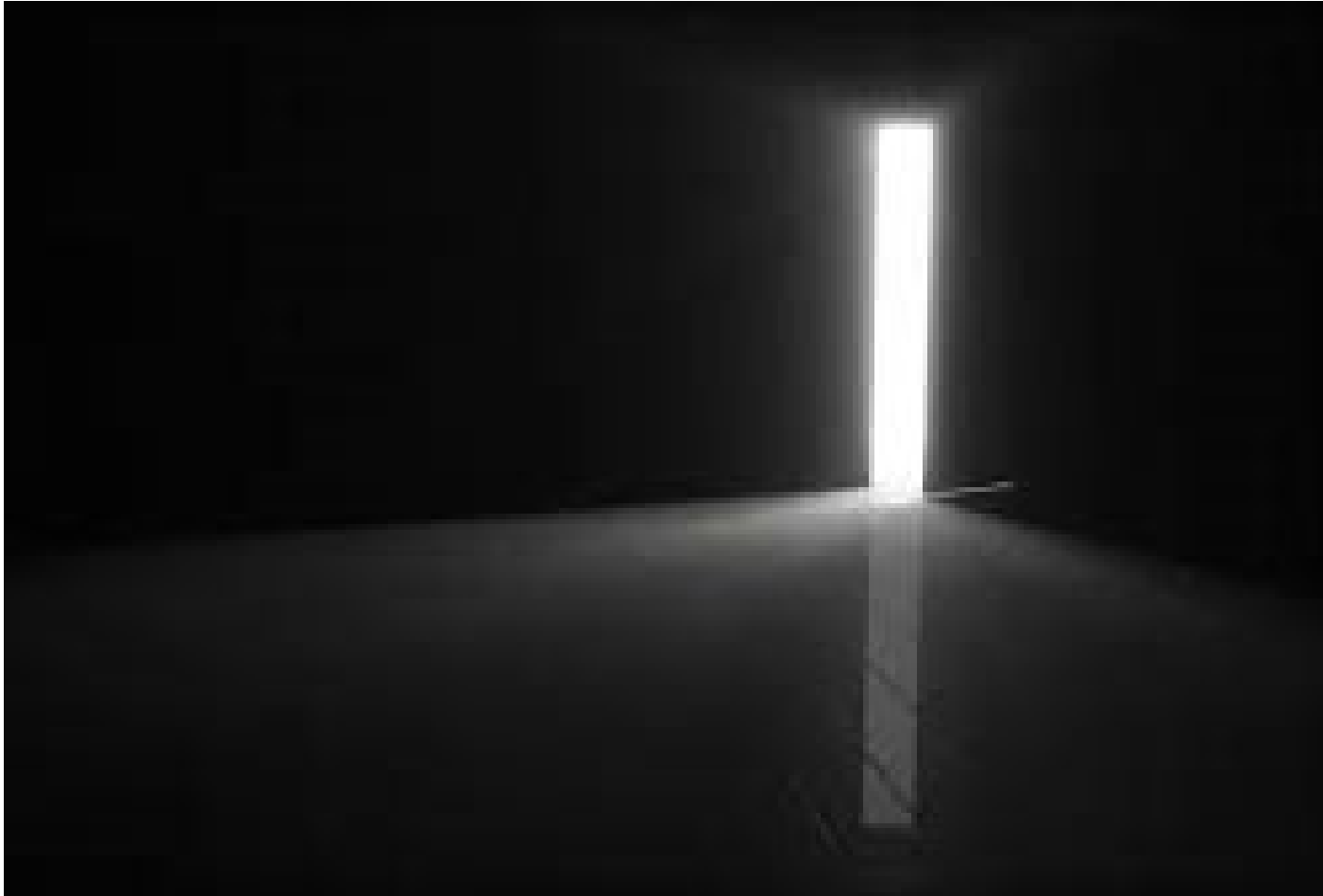
>100 millioner stave - natlysceller
6 millioner tappe – dagslysceller/farvesyn - centralt



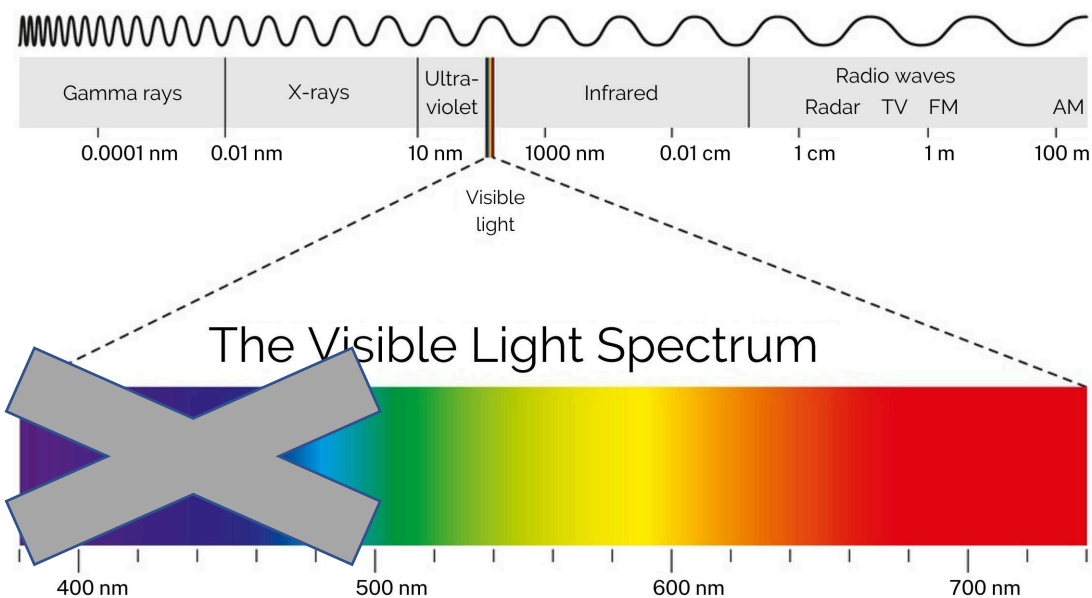
Publications on the circadian system



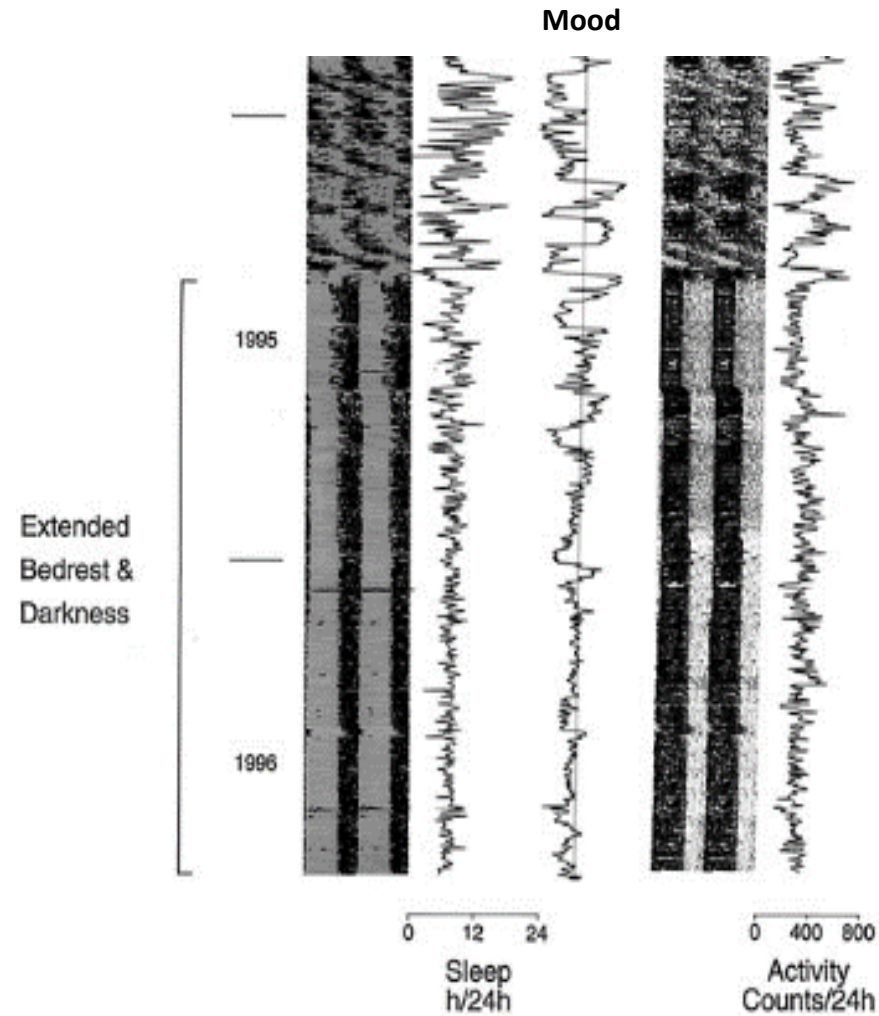
Lys, mørke og ipRGC i bipolar lidelse



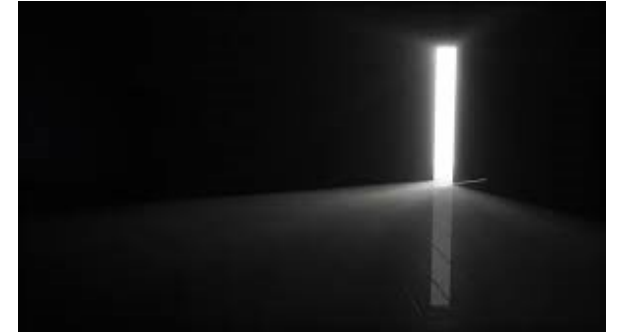
Blå-blokerende(BB) briller – biologisk mørke



Mørketerapi – case report



Wehr 1998

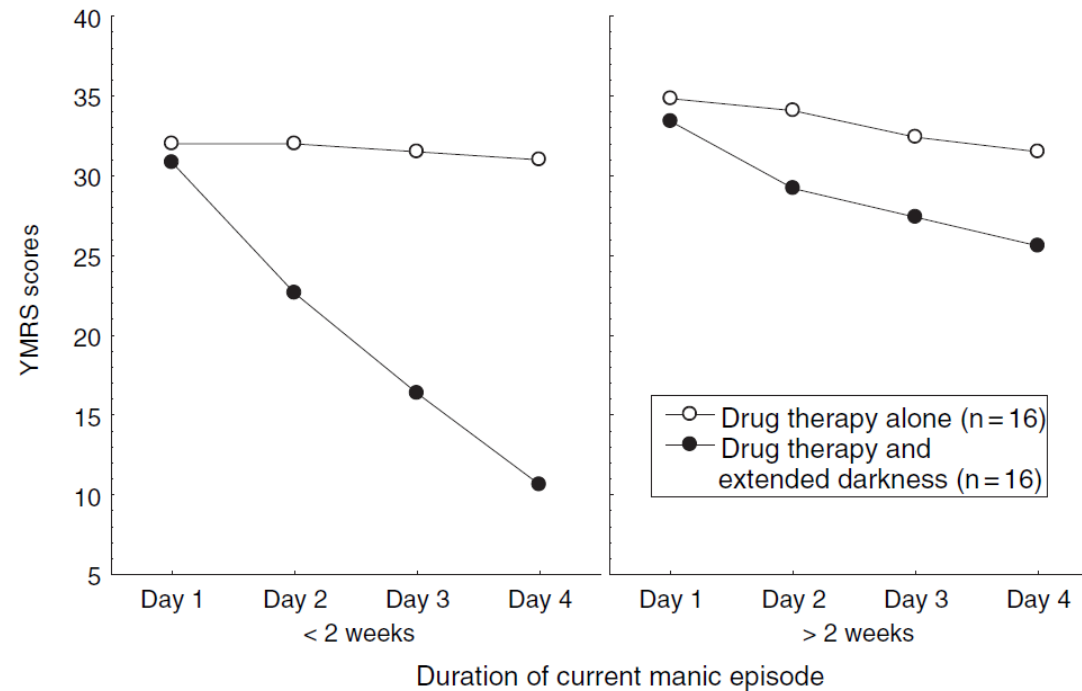
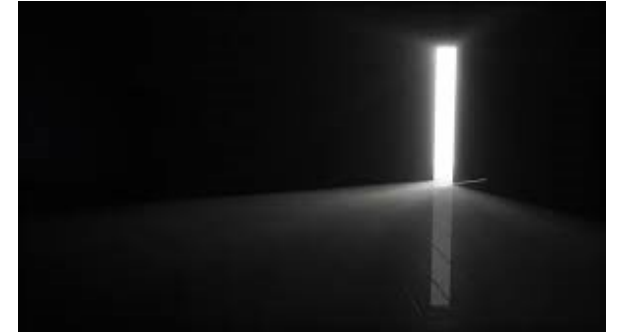


Brief Report

Dark therapy for mania: a pilot study

Barbini B, Benedetti F, Colombo C, Dotoli D, Bernasconi A, Cigala-Fulgosi M, Florita M, Smeraldi E. Dark therapy for mania: a pilot study. Bipolar Disord 2005; 7: 98–101. © Blackwell Munksgaard, 2005

**Barbara Barbini^a,
Francesco Benedetti^{a,b},
Cristina Colombo^{a,b}, Danilo Dotoli^b,
Alessandro Bernasconi^b,**

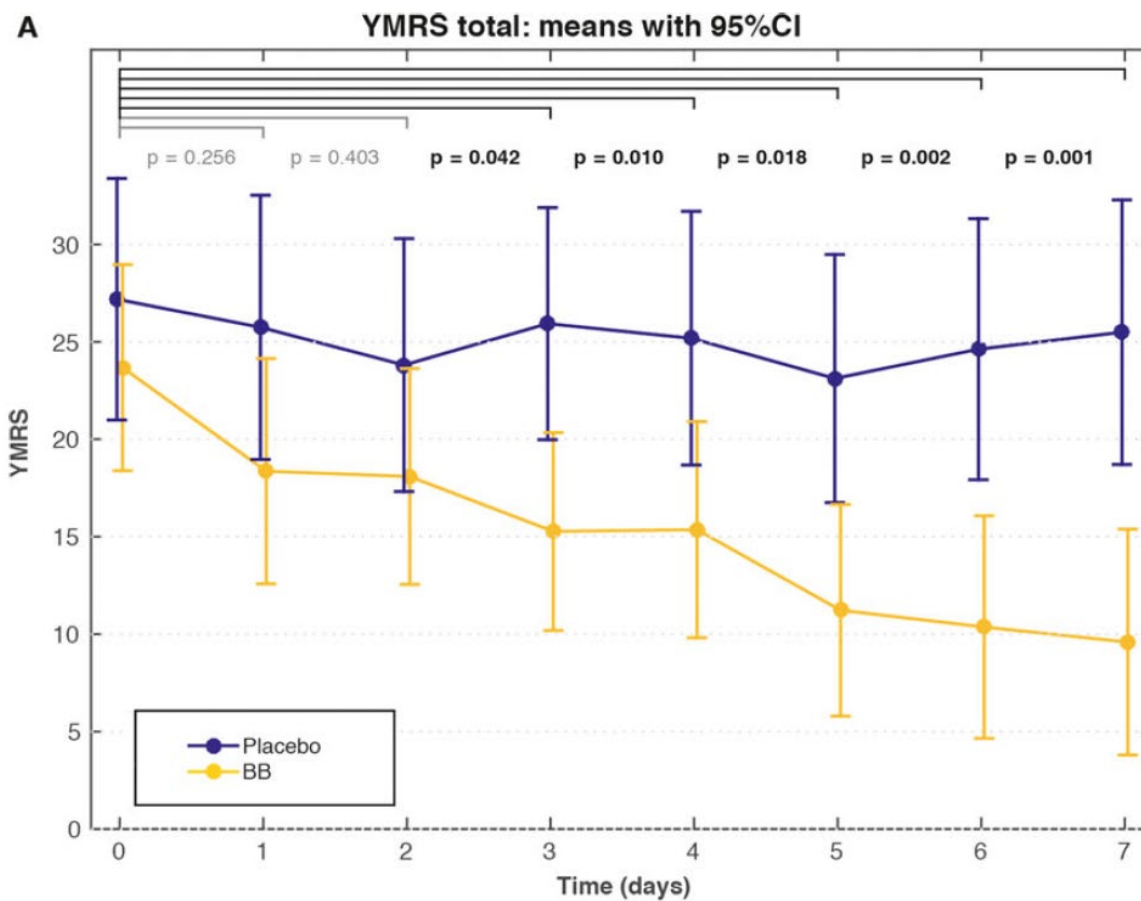
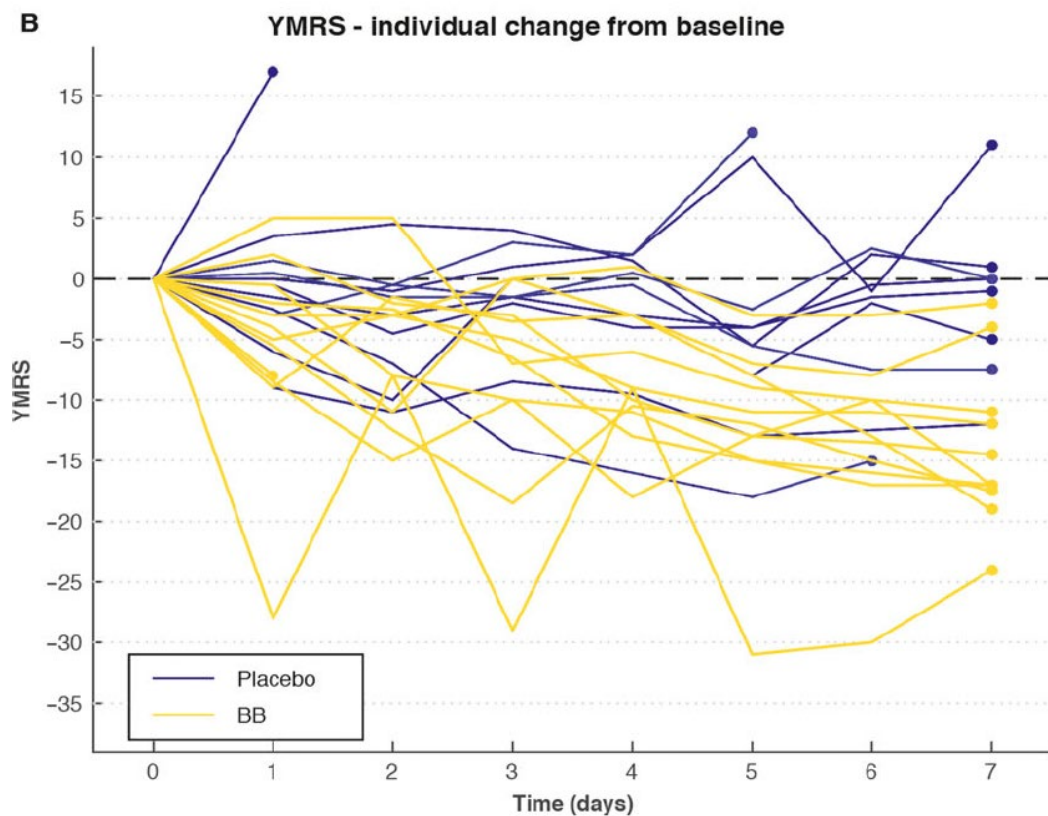


Original Article

Blue-blocking glasses as additive treatment for mania: a randomized placebo-controlled trial

Henriksen TEG, Skrede S, Fasmer OB, Schoeyen H, Leskauskaitė I, Bjørke-Bertheussen J, Assmus J, Hamre B, Grønli J, Lund A. Blue-blocking glasses as additive treatment for mania: a randomized placebo-controlled trial. *Bipolar Disord* 2016; 18: 221–232. © 2016 The Authors. *Bipolar Disorders* Published by John Wiley & Sons Ltd.

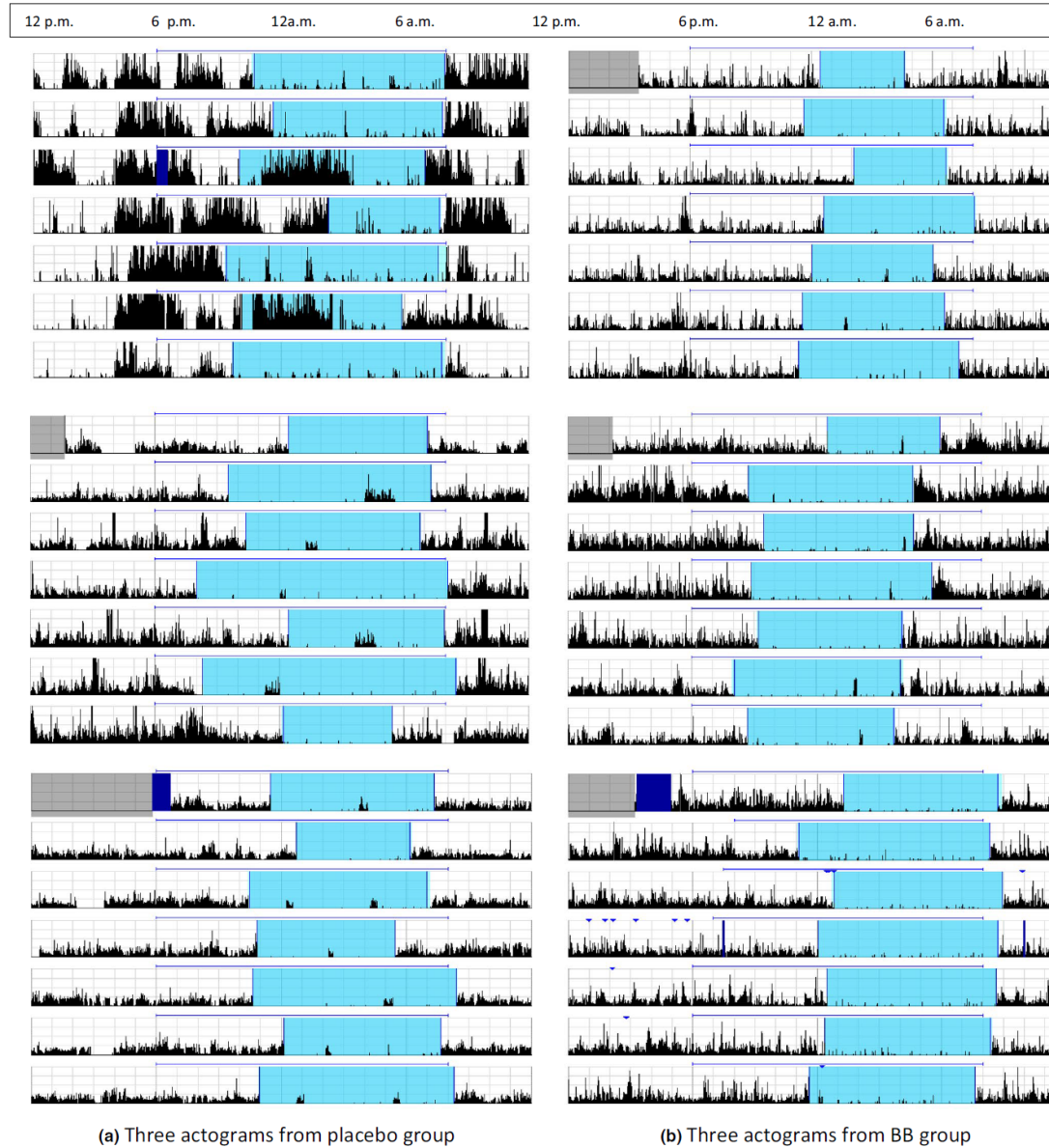
Tone EG Henriksen^{a,b,c}, Silje Skrede^{d,e}, Ole B Fasmer^{a,c,f}, Helle Schoeyen^{a,c,g}, Ieva Leskauskaitė^h, Jeanette Bjørke-Bertheussen^g, Jörg Assmusⁱ, Borge Hamreⁱ, Janne Grønli^{k,l} and Anders Lund^{a,c}



Blue-blocking glasses as additive treatment for mania: Effects on actigraphy-derived sleep parameters

Tone E. G. Henriksen^{1,2,3} | Janne Grønli⁴ | Jörg Assmus⁵ | Ole Bernt Fasmer^{1,3} | Helle Schoeyen^{1,6} | Ieva Leskauskaitė⁷ | Jeanette Bjørke-Bertheussen⁶ | Kjersti Ytrefhus² | Anders Lund^{1,3}

- Søvn effektivitet ↑
- Medicinforbrug ↓

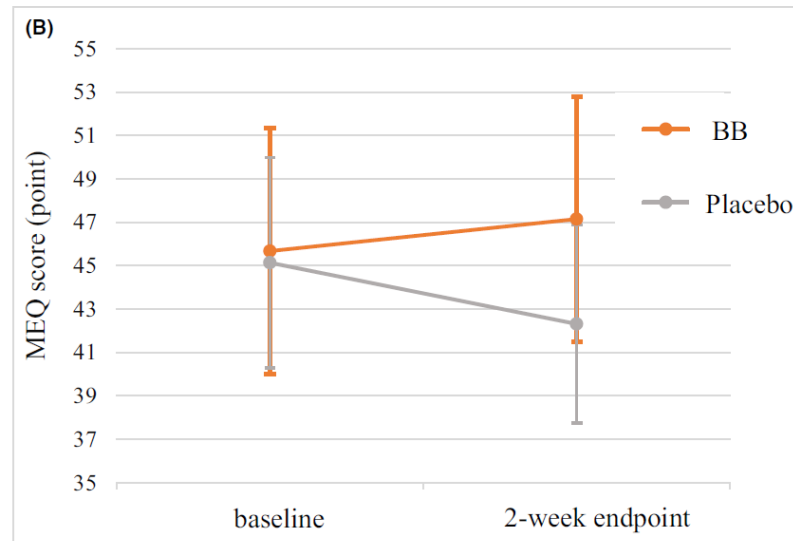
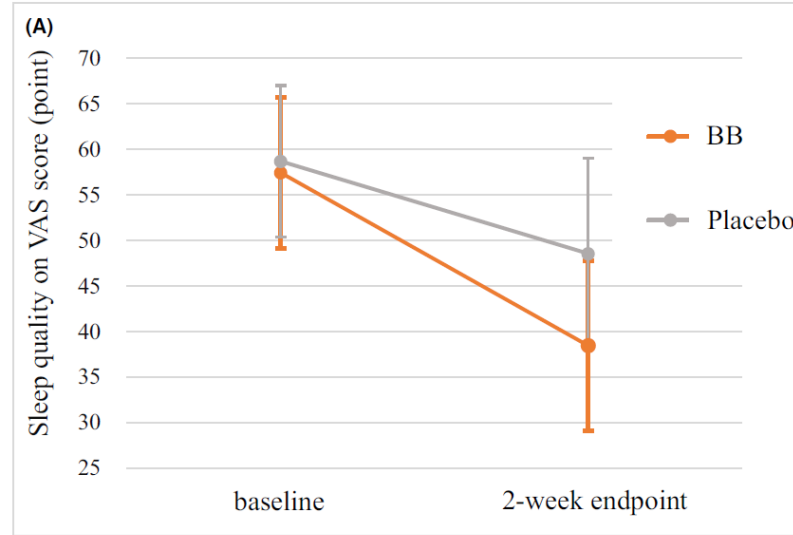


A double-blind, randomized, placebo-controlled trial of adjunctive blue-blocking glasses for the treatment of sleep and circadian rhythm in patients with bipolar disorder

Yuichi Esaki^{1,2}  | Ipei Takeuchi¹ | Soji Tsuboi¹ | Kiyoshi Fujita^{1,3} | Nakao Iwata² | Tsuyoshi Kitajima² 

Bipolar lidelse + insomnia, n=43

BB or placebo briller i 2 uger, 2 timer før sengetid



Endnu ikke publiceret – Ottawa 2024



Sekundære/
tertiære
outcomes
ved T2 og T3
(5 og 15 uger)

Stemningsinstabilitet: dag-til-dag variation i
selvregistreret stemningsleje

Aktivitetsinstabilitet: -

Subjektive og objektive søvnmaal

Subjektive og objektive døgnrytmemaal

Medicinformbrug, indlæggelser, episoder

Pupillometri

Sekundære/tertiære outcomes T2 og T3 (5 and 15 uger)

