

pineal melatonin in optimizing mitochondrial function being mediated by the circadian gene, *Bmal1*.<sup>2</sup> The interactions of melatonin and *Bmal1* in the regulation of cocaine-driven changes in mitochondrial function will be important to determine.

Cocaine also significantly alters immune system responses, generally increasing the activity of most immune cell subsets.<sup>3</sup> Immune cell activation is powerfully regulated by the shift in mitochondrial metabolism from oxidative phosphorylation to glycolysis, with the shift back to an anti-inflammatory phenotype being driven by the autocrine effects of melatonin, as first shown by Regina Markus and colleagues in Brazil.<sup>4</sup> The effects of melatonin – including via *Bmal1* – in the mitochondria of immune cells on the regulation of cocaine's effects is an important avenue for future investigation.

Cocaine has significant effects on the gut microbiome, with the locomotor-inducing effects of cocaine being significantly modulated by the gut microbiome. This research suggests that increasing the levels of gut microbiome-derived short-chain fatty acids, especially butyrate, could have clinical utility. Butyrate effects include the induction of melatonin and the optimization of mitochondrial function, which may underpin its dampening effects on immune cell activity.<sup>5</sup> Whether optimizing the gut microbiome with probiotics or with the nutraceutical sodium butyrate would afford additional clinical efficacy to melatonin in the management of cocaine addiction has yet to be clarified.

Such lines of research should considerably help to clarify the biological underpinnings to melatonin's interaction with cocaine, as well as help optimize treatment.

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## References

- Barbosa-Méndez S, Salazar-Juárez A. Melatonin decreases cocaine-induced locomotor activity in pinealectomized rats. *Braz J Psychiatry*. 2020;42:295-308.
- Anderson G, Rodriguez M, Reiter RJ. Multiple sclerosis: melatonin, orexin, and ceramide interact with platelet activation coagulation factors and gut-microbiome-derived butyrate in the circadian dysregulation of mitochondria in glia and immune cells. *Int J Mol Sci*. 2019;20:5500.
- Zaparte A, Schuch JB, Viola TW, Baptista TA, Beidacki AS, do Prado CH, et al. Cocaine use disorder is associated with changes in Th1/Th2/Th17 cytokines and lymphocytes subsets. *Front Immunol*. 2019;10:2435.
- Muxel SM, Pires-Lapa MA, Monteiro AW, Cecon E, Tamura EK, Floeter-Winter LM, et al. NF- $\kappa$ B drives the synthesis of melatonin in

RAW 264.7 macrophages by inducing the transcription of the arylalkylamine-N-acetyltransferase (AA-NAT) gene. *PLoS One*. 2012;7:e52010.

- Anderson G. Gut dysbiosis dysregulates central and systemic homeostasis via decreased melatonin and suboptimal mitochondria functioning: pathoetiological and pathophysiological implications. *Melatonin Res*. 2019;2:70-85.

## Forensic psychiatry assessment during parental alienation claims: two cases with different outcomes

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When a forensic psychiatrist is appointed to assess parental alienation in child custody cases, the implications of this duty must be recognized. Firstly, parental alienation is not a diagnosis,<sup>1</sup> but a legal term (described, in the Brazilian context, in Law 12,318/10).<sup>2</sup> The expert should focus on evaluating the child's functionality within family relationships and to investigate if any mental disorder is present. This brief communication discusses the underlying forensic logic involved in two claims of parental alienation in divorce litigation.

In the first case, the child was 5 years old when her parents divorced after 8 years of marriage. The parents shared custody uneventfully for the first year, until conflicts regarding visitation arose. After an attempt by the father to regulate the situation, the mother made a series of allegations of child sexual abuse and domestic violence, backed by reports from the child's new psychologist. Following nearly a decade of multiple forensic psychological, psychiatric, and social assessments, all evidence of abuse was found to be fabricated by the mother, who was diagnosed with histrionic personality disorder, and the child was placed in the custody of the father. Moreover, parental alienation was not verified, since the child never perpetrated the mother's speech about the father. The mother lost custody due to psychological and physical child abuse and now maintains contact with her daughter solely through supervised visits.

The second case involved twins, who were 13 years old when their parents divorced after 16 years of marriage. The mother had an extramarital affair and moved in with her new partner, while the adolescent twins decided to live with their father. After some visits were canceled, the mother claimed that the boys were behaving distantly as a result of their father's manipulation. After evaluations by a forensic psychiatrist and social worker (including interviews with the school staff), there was evidence of difficulties in the relationship between the boys and the mother. Furthermore, they did not perpetrate any speech against the mother as a result of the father's influence. No psychiatric disorder was diagnosed in any family member,

### Box 1 Challenges in examining parental alienation in child custody cases

1. The child is too young
2. Much time has passed since the allegations were made
3. Presence of severe personality disorders (PD) in parents
4. Dysfunctional personality traits in parents or children/adolescents
5. Delusional disorders in parents
6. Severe PD or delusional disorders in evaluatees with high intelligence

the twins continued to live with their father, and psychotherapy was recommended to all evaluatees.

These cases demonstrate that the assessment of parental alienation demands attentive study of the legal process, multiple evaluations carried out with different family members, and collateral sources of information. In a context of conjugal disputes and possible psychiatric disorders (in parents or children), it is mandatory to characterize the child behavior as consistent in rejecting one parent due to manipulation and indoctrination performed by the other – therefore, identifying incorporation of the alienating parent's speech. It is also important to identify in the child a phenomenon known as the “independent thinker”: the child consistently claims that his resistance to the unfavored parent is due to his own independent thought, and not the result of the other parent's influence.<sup>3</sup>

Additional challenges are listed in Box 1.<sup>4</sup> Moreover, the distinction between parental alienation and estrangement (justified rejection of one parent following a real history of neglect, physical and sexual abuse, or domestic violence)<sup>3</sup> must be made. Finally, the most important factor according to expert recommendations refers to a “potential harm to the child” criterion, related to developmental and psychological maladaptation.<sup>5</sup>

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### References

- 1 Bernet W, Baker AJ. Parental alienation, DSM-5, and ICD-11: response to critics. *J Am Acad Psychiatry Law*. 2013;41:98-104.
- 2 Brasil, Código Civil. Lei nº 12.318, de 26 de agosto de; 2010. [www.crpsp.org.br/interjustica/pdfs/Lei-12318\\_10-Alienacao-Parental.pdf](http://www.crpsp.org.br/interjustica/pdfs/Lei-12318_10-Alienacao-Parental.pdf)

- 3 von Boch-Galhau W. Parental alienation (syndrome) – a serious form of psychological child abuse. *Ment Health Fam Med*. 2018;14:725-39.
- 4 Dutton DG, Denny-Keys MK, Sells JR. Parental personality disorder and its effects on children: a review of current literature. *J Child Custody*. 2011;8:268-83.
- 5 Zumbach J, Wetzels P, Koglin U. Predictors of psychological recommendations in child protection evaluation. *Child Abuse Negl*. 2018;84:196-204.

## Multimodal treatment for a Brazilian case of *hikikomori*

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*Hikikomori* is defined as a condition of severe and prolonged social withdrawal apparently not explained by other severe psychiatric disorders, lasting for at least 6 months, in which the individual – usually a young adult – remains a recluse in his own house.<sup>1-3</sup> Initially described in Japan in the late 1990s as a cultural syndrome, *hikikomori* has been recently recognized as a prevalent pathological phenomenon worldwide, with reports from several countries.<sup>4-6</sup>

We report the case of a 35-year-old man who was referred to outpatient psychiatric treatment during his second *hikikomori* episode, which started soon after he left university. During the preceding 14 months, he reported barely leaving his apartment, having no friends nor romantic relationships, neglecting hygiene and self-care, spending 14 hours/day playing computer games and an additional 3-5 hours/day watching gameplay videos on internet websites. He complained of depressive symptoms of moderate to severe intensity (Hamilton Depression Rating Scale [HAM-D] = 26) for the last 3 months, precipitated by a switch in antidepressant from sertraline 200 mg/day to desvenlafaxine 100 mg/day, which was part of a treatment trial aiming to increase his energy levels. During the first 11 months of this second *hikikomori* episode, he did not complain about depression symptoms, using a combination of OROS methylphenidate 54 mg/day (started in 2011 as treatment for hypersomnolence) and sertraline 200 mg/day (started in 2009 for recurrent depressive disorder).

He described a normal neuro-developmental, social, and educational history, having friends, good grades at school, and even a girlfriend. His psychiatric history (as reported by himself and his mother) was negative until age 19, when he developed hypersomnolence and mild depressive symptoms. At that time, he was enrolled in university, and despite both problems, he maintained good social involvement and participated in many activities.

Around age 26, after breaking up a romantic relationship, he entered the most pronounced period of social withdrawal to date, which corresponded to the first episode of *hikikomori*. During that episode, he developed