

Genomics and Proteomics Studies of Zolpidem, Necopidem, Alpidem, Saripidem, Miroprofen, Zolimidine, Olprinone and Abafungin as Anti-Tumor, Peptide Antibiotics, Antiviral and Central Nervous System (CNS) Drugs

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Editorial

Zolpidem, Necopidem, Alpidem, Saripidem, Miroprofen, Zolimidine, Olprinone and Abafungin (Figure 1) have served as rich sources of variety of medicinal, pharmaceutical, anti-tumor, antibiotics and antiviral drugs (Figure 2) and biological properties [1-18]. These compounds represent an important class of Nitrogen, Oxygen, Phosphorus and Sulfur heterocyclic and they constitute useful intermediates in organic synthesis [19-39]. Zolpidem, Necopidem, Alpidem, Saripidem, Miroprofen, Zolimidine, Olprinone and Abafungin have proven to be very versatile reagents for heterocyclization and many diverse products can be prepared from the addition of these compounds to Nitrogen, Oxygen, Phosphorus and Sulfur containing compounds.

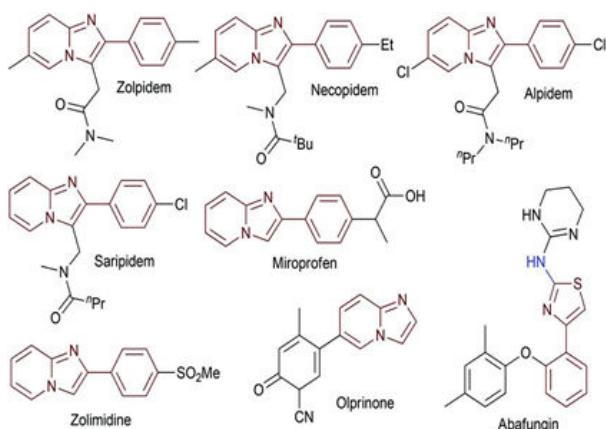


Figure 1: Molecular structure of Zolpidem, Necopidem, Alpidem, Saripidem, Miroprofen, Zolimidine, Olprinone and Abafungin.

In addition, Zolpidem, Necopidem, Alpidem, Saripidem, Miroprofen, Zolimidine, Olprinone and Abafungin are an important group of heterocyclic systems, found in many bio-active molecules, specifically in vitamins B1 (Thiamine), B2 (Riboflavin), B3 (Niacin), B5 (Pantothenic Acid), B6, B7 (Biotin), B12 and Folic Acid. Compounds containing these heterocyclic nucleuses are also found in many bio-active substrates such as Zolpidem, Necopidem, Alpidem, Saripidem, Miroprofen, Zolimidine, Olprinone and Abafungin natural products, Zolpidem, Necopidem, Alpidem, Saripidem, Miroprofen, Zolimidine,

Olprinone and Abafungin based amino acids, peptide antibiotics and so on.

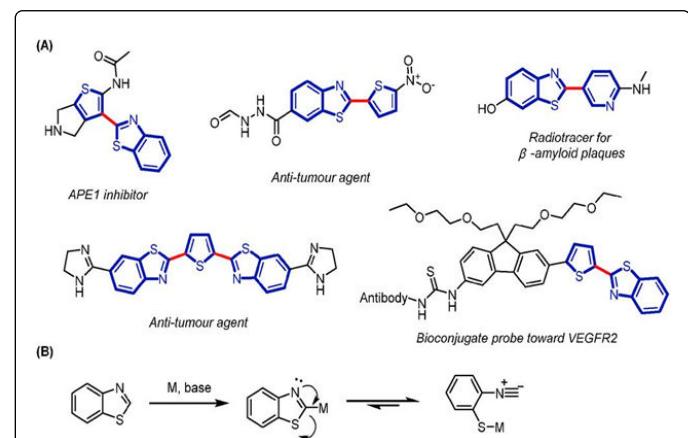


Figure 2: Blueprint of variety of medicinal, pharmaceutical, anti-tumor, antibiotics and antiviral drugs and biological properties of Zolpidem, Necopidem, Alpidem, Saripidem, Miroprofen, Zolimidine, Olprinone and Abafungin.

Furthermore, Zolpidem, Necopidem, Alpidem, Saripidem, Miroprofen, Zolimidine, Olprinone and Abafungin are endogenous indole present in mammalian tissues and fluids. Zolpidem, Necopidem, Alpidem, Saripidem, Miroprofen, Zolimidine, Olprinone and Abafungin have shown wide variety of biological such as Central Nervous System (CNS) drugs in medicinal chemistry and antiviral, antibiotics and anti-tumor activities.

References

1. Amorim E, McDade EM (2016) Rapidly-progressive catatonia responsive to zolpidem in a patient with ovarian teratoma-associated paraneoplastic encephalitis. Journal of Clinical Neuroscience 30: 136-138.
2. Anilanmert B, Çavus F, Narin I, Cengiz S, Sertler S, et al. (2016) Simultaneous analysis method for GHB, ketamine, norketamine, phenobarbital, thiopental, zolpidem, zopiclone and phenytoin in urine, using C18 poroshell column. Journal of Chromatography 1022: 230-241.
3. John N, Booth, Behring M, Cantor RS, Colantonio LD, et al. (2016) Zolpidem use and motor vehicle collisions in older drivers. Sleep Medicine 20: 98-102.

4. Mierzejewski P, Kolaczkowski M, Marcinkowska M, Wesolowska A, Samochowiec J, et al. (2016) Antipsychotic-like effects of zolpidem in Wistar rats. *Eur J Pharmacol* 773: 51-58.
5. Shibasaki M, Mori T, Suzuki T (2016) Chapter 31 - The K⁺-Cl⁻ Cotransporter KCC2 and Zolpidem, In: Preedy VR (ed.) *Neuropathology of Drug Addictions and Substance Misuse*. San Diego pp: 317-324.
6. Wan JP, Hu D, Liu Y, Li L, Wen C (2016) Copper-catalyzed intramolecular oxidative amination of enaminone C-H bond for the synthesis of imidazo[1,2-a] pyridines. *Tetrahedron Letters* 57: 2880-2883.
7. Xing MM, Ming Xin, Chao Shen, Gao J, Jia JH, et al. (2016) Iodine-promoted oxidative coupling reaction: a simple and efficient process to access imidazo[1,2-a]pyridines from 2-aminopyridines and chalcones. *Tetrahedron* 72: 4201-4204.
8. Shakoor SM, Agarwal DS, Anil Kumar, Sahuja R (2016) Copper catalyzed direct aerobic double-oxidative cross-dehydrogenative coupling of imidazoheterocycles with aryl acetaldehydes: an articulate approach for dicarbonylation at C-3 position. *Tetrahedron* 72: 645-652.
9. Dobashi S, Watanabe I, Matsumoto S, Yabe T, Nakanishi R, et al. (2016) Comparative effects of milrinone and olprinone in patients with congestive heart failure. *Journal of the American College of Cardiology* 67: 1420.
10. Huang MH, Poh KK, Tan HC, Welt F, Lui CY (2016) Therapeutic synergy and complementarity for ischemia/reperfusion injury: β1-adrenergic blockade and phosphodiesterase-3 inhibition. *International Journal of Cardiology* 214: 374-380.
11. Pulpiti L, Sridevi PJ, Yogeeshwari P, Sriram D, Kantevari S (2016) Synthesis and antitubercular evaluation of novel dibenzo [b,d] thiophene tethered imidazo [1,2-a] pyridine-3-carboxamides. *Bioorganic & Medicinal Chemistry Letters* 26: 3135-3140.
12. Batenko N, Kricka A, Belyakov S, Turovska B, Valters R (2016) A novel method for the synthesis of benzimidazole-based 1,4-quinone derivatives. *Tetrahedron Letters* 57: 292-295.
13. Swami S, Devi N, Agarwala N, Singh V, Shrivastava R (2016) ZnO nanoparticles as reusable heterogeneous catalyst for efficient one pot three component synthesis of imidazo-fused polyheterocycles. *Tetrahedron Letters* 57: 1346-1350.
14. Aggarwal R, Singh G, Sanz D, Rosa M (2016) NBS mediated one-pot regioselective synthesis of 2,3-disubstituted imidazo[1,2-a]pyridines and their unambiguous characterization through 2D NMR and X-ray crystallography. *Tetrahedron* 72: 3832-3838.
15. Cheng K, McClory K, Walker W, Xu J, Zhang H, et al. (2016) Strecker approach to 2-substituted ethyl 5-aminothiazole-4-carboxylates. *Tetrahedron Letters* 57: 1736-1738.
16. Vardanyan R, Hraby V (2016) *Antifungal Drugs: In Synthesis of Best-Seller Drugs*. Academic Press, pp: 677-686.
17. Das D, Sikdar P, Bairagi M (2016) Recent developments of 2-aminothiazoles in medicinal chemistry. *European Journal of Medicinal Chemistry* 109: 89-98.
18. Priyadarshani G, Amrutkar S, Nayak A, Uttam C (2016) Scaffold-hopping of bioactive flavonoids: Discovery of aryl-pyridopyrimidinones as potent anticancer agents that inhibit catalytic role of topoisomerase IIa. *European Journal of Medicinal Chemistry* 122: 43-54.
19. Sun Y, Lin CC, Lu CJ, Hsu CY, Kao CH (2016) Association Between Zolpidem and Suicide: A Nationwide Population-Based Case-Control Study. *Mayo Clinic Proceedings* 91: 308-315.
20. King SA, Goldstein I, Pfaus J (2016) 020 Mechanism of Action and Preliminary Clinical Experience with Zolpidem, a Non-Benzodiazepine Indirect GABA A Receptor Agonist, for Symptomatic Treatment of Persistent Genital Arousal Disorder (PGAD). *The Journal of Sexual Medicine* 13: S247-S248.
21. Jansen M, Merante D, Currie A, Velinova M, Brown K, et al. (2016) (403) Co-administration of mirogabalin and zolpidem in healthy subjects: results from a randomized, double-blind, drug-drug interaction study. *The Journal of Pain* 17: S75.
22. Sellami R, Messedi N, Feki I, Baati I, Zahaf A, et al. (2016) Zolpidem abuse: About a case. *European Psychiatry* 33: S309.
23. Teive H, Arruda W, Silva M, Bertholdo D (2016) Zolpidem in movement disorder after cardiac arrest. *Parkinsonism & Related Disorders* 22: e139.
24. Cardinali DP, Golombok DA, Rosenstein RE, Brusco LI, Vigo DE (2016) Assessing the efficacy of melatonin to curtail benzodiazepine/Z drug abuse. *Pharmacological Research* 109: 12-23.
25. Graville MC (2016) Activation-induced regulation of GABA receptors: Is there a link with the molecular basis of benzodiazepine tolerance?. *Pharmacological Research* 109: 92-100.
26. Sánchez Bruni SF, Acosta GB (2016) Argentinean Society of Experimental Pharmacology: Brief history and main scientific contributions to the discipline. *Pharmacological Research* 109: 4-11.
27. Martínez-Ramírez JA, Strien J, Walther G, Peters FT (2016) Search for fungi-specific metabolites of four model drugs in postmortem blood as potential indicators of postmortem fungal metabolism. *Forensic Science International* 262: 173-178.
28. Dear JW, Bateman DN (2016) Benzodiazepines. *Medicine* 44: 145.
29. Couper FJ (2016) Substance Misuse: Sedatives. In *Encyclopedia of Forensic and Legal Medicine*. Elsevier, pp: 418-421.
30. Murray SL, Thimigan MS (2016) Chapter 15 - Compounds that alter sleep and wakefulness. In *Human Fatigue Risk Management*. Academic Press, pp: 219-234.
31. Kantor S, Varga J, Morton AJ (2016) A single dose of hypnotic corrects sleep and EEG abnormalities in symptomatic Huntington's disease mice. *Neuropharmacology* 105: 298-307.
32. Tjaderborn M, Jönsson AK, Sandström TZ, Ahlner J, Hägg S (2016) Non-prescribed use of psychoactive prescription drugs among drug-impaired drivers in Sweden. *Drug and Alcohol Dependence* 161: 77-85.
33. Micallef J, Frauger E, Mestre ML (2016) Chapter 102 - Misuse of Benzodiazepines in France. In *Neuropathology of Drug Addictions and Substance Misuse*, edited by Victor R Preedy. Academic Press, pp: 1101-1111.
34. Jiao DL, Liu Y, Long JD, Du J, Ju Y, et al. (2016) Involvement of dorsal striatal a1-containing GABA_A receptors in methamphetamine-associated rewarding memories. *Neuroscience* 320: 230-238.
35. Hoizey G, Chèze M, Muckensturm A, Pépin G, Deveaux G (2016) Chemical submission: description of several atypical cases the procedure. *Toxicologie Analytique et Clinique* 28: S13-S14.
36. Devine JK, Wolf JM (2016) Determinants of cortisol awakening responses to naps and nighttime sleep. *Psychoneuroendocrinology* 63: 128-134.
37. Davis DM, Roma PG, Hienz RD (2016) A rodent model of the human psychomotor vigilance test: Performance comparisons. *Journal of Neuroscience Methods* 259: 57-71.
38. Anil Kumar, Chanana P, Choudhary S (2016) Emerging role of orexin antagonists in insomnia therapeutics: An update on SORAs and DORAs. *Pharmacological Reports* 68: 231-242.
39. Mauras T, Marcel JL, Capron J (2016) Catatonia in all its forms, Medico-Psychological Annals. *Psychiatric Review* 174: 115-123.