

# Psychopharmacognosy: Alcohol Dependence

Sindhu P\*

Department of Pharmacy, Vaageswari Institute of Pharmaceutical Sciences, Thimapur, Karimnagar, Telangana, India

## Review Article

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### \*For Correspondence

Sindhu P, B-pharmacy,  
Vaageswari institute of  
pharmaceutical sciences,  
Thimapur, karimnagar, Telgana,  
India.

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### E-mail:

[sindhureddy.pingili@gmail.com](mailto:sindhureddy.pingili@gmail.com)

## ABSTRACT

Liquor can be an addictive substance. Not everybody who devours liquor will get to be dependent. Be that as it may, certain individuals might be more helpless to enslavement. It ought to be noticed that liquor enslavement and mishandle are not the same. It's imperative to comprehend the truths on liquor manhandle. Liquor habit alludes to a mental and physical reliance on liquor. People who experience the ill effects of liquor compulsion may develop a resilience to the substance, and additionally keep drinking notwithstanding when liquor related issues get to be apparent. Liquor abusers are not really dependent on liquor. Abusers are regularly substantial consumers who keep drinking paying little respect to the outcomes. Abusers of liquor may not drink on a reliable premise. For instance, a person who manhandles liquor may just drink once per week. In any case, when that individual beverage, he places himself into unsafe circumstances or beverages enough to bring about issues, for example, liquor harming. Certain people who manhandle liquor may in the long run get to be subject to it.

## INTRODUCTION

People who experiences the ill effects of liquor mishandle don't generally display similar side effects. The sort of side effects experienced by an individual will rely on upon various elements, for example, the individual's experience and therapeutic history. While liquor manhandles side effects do shift, there are signs and manifestations that can demonstrate an issue [1-5].

Liquor manhandle implies having unfortunate or unsafe drinking propensities, for example, drinking each day or drinking a lot at once. Liquor manhandle can hurt your connections, make you miss work, and prompt to lawful issues, for example, driving while (inebriated). When you manhandle liquor, you keep on drinking despite the fact that you know your drinking is bringing about issues [6-9].

In the event that you keep on abusing liquor, it can prompt to liquor reliance. Liquor reliance is likewise called liquor addiction. You are physically or rationally dependent on liquor. You have a solid need, or longing for, to drink. You have a feeling that you should drink just to get by. You might be dependent on alcohol if you have three or more of the following problems in a year [10-15]:

- You can't stop drinking or control the amount you drink.
- You need to drink more to get a similar impact.
- You have withdrawal indications when you quit drinking. These incorporate feeling debilitated to your stomach, sweating, flimsiness, and tension.
- You invest a considerable measure of energy drinking and recuperating from drinking, or you have surrendered different exercises so you can drink.
- You have attempted to stop drinking or to curtail the sum you drink yet haven't possessed the capacity to.
- You keep on drinking despite the fact that it hurts your connections and causes [16-25].

## SIGNS OF ALCOHOL ABUSE

Liquor abuse is a long haul (endless) sickness. It's not a shortcoming or an absence of resolve. In the same way as other different infections, it has a course that can be anticipated, has known side effects, and is affected by your qualities and your life circumstance [16-18].

- Loss of enthusiasm for work or school.
- Depression.

- Lack of enthusiasm for family or companions.
- Preoccupation with drinking [26-32].



Figure 1: Alcohol is addictive.

## EFFECTS ALCOHOL ABUSE

### Short-term effects

- Nausea.
- Vomiting.
- Headaches.
- Slurred speech.
- Impaired judgment.

### Long-term effects

- Blackouts.
- Memory loss.
- Liver disease.
- Thiamine deficiency.

### Other concerns and risk factors

- Certain cancers.
- Brain damage.
- Immune system obstruction [33-46].

## RECOVERY

As per the National Survey on Drug Use and Health (NSDUH), more than 1 individuals age 12 or more established got substance utilize treatment in 2015 for liquor utilize alone. A hefty portion of the people who are dealt with for liquor addiction and liquor mishandle regularly look for outside assistance from treatment focuses and treatment sessions [47-52]. Liquor treatment focuses are intended to help people who are dependent or who mishandle liquor in various ways. Ordinarily, treatment focuses require a person to remain at the middle for a particular measure of time. Many focuses offer both long-and transient treatment choices. Amid treatment, people experience detoxification. Detoxification is the way toward expelling liquor from the body and disposing of any physical reliance to the substance [53-68]. For somebody battling with liquor abuse to effectively entire a treatment program, he should leave the middle with a full comprehension of his issue. Treatment focuses are intended to give bolster as individual treatment, and gathering treatment [69-72].

Amid treatment sessions, liquor abusers can investigate their purposes behind mishandling the substance, and also what they can do to conquer their damaging conduct. Counselors and advisors at treatment focuses are

prepared to give liquor abusers valuable thoughts and other options to drinking. Amid treatment, liquor abusers are likewise given the instruments expected to proceed onward from mishandling liquor and into a more profitable lifestyle [73-79]. Outpatient treatment is additionally a possibility for some liquor abusers. Outpatient treatment focuses are intended to give abusers a place to investigate their dangerous conduct. Numerous outpatient treatment focuses give unknown gatherings and in addition different projects to help liquor abusers beat their issues. With outpatient treatment, people are not put in a controlled domain and might be helpless against outside allurements amid treatment. Normally, this kind of treatment is perfect for people who have effectively finished an inpatient treatment program [80-87].

## CONCLUSION

Topiramate, a subordinate of the actually happening sugar monosaccharide D-fructose, has been discovered powerful in helping heavy drinkers quit or cut back on the sum they drink. Prove proposes that topiramate alienates excitatory glutamate receptors, restrains dopamine discharge, and upgrades inhibitory gamma-aminobutyric corrosive capacity. A 2008 survey of the adequacy of topiramate presumed that the aftereffects of distributed trials are promising, however starting 2008, information was deficient to bolster utilizing topiramate as a part of conjunction with brief week after week consistence guiding as a first-line specialist for liquor reliance. A 2010 survey found that topiramate might be better than existing liquor pharmacotherapeutic choices. Topiramate viably decreases desiring and liquor withdrawal seriousness and in addition enhancing personal satisfaction evaluations [88-93].

Baclofen, a GABAB receptor agonist, is under study for the treatment of liquor addiction. A 2015 deliberate survey presumed that there is deficient confirmation for the utilization of baclofen for withdrawal side effects in liquor addiction. There is speculative information supporting baclofen in liquor reliance however facilitate trials are required starting 2013 [94-100].

Ondansetron, a 5HT3 foe, seems to have guarantee as a treatment.

## REFERENCES

1. Barbaro M and Locatelli M. The Markers for Alcohol Abuse: The Good, the Bad and the Ugly. *J Alcohol Drug Depend.* 2016;4:242.
2. Shush panova TV, et al. The Effect of Chronic Alcohol Abuse on the Benzodiazepine Receptor System in Various Areas of the Human Brain. *J Psychiatry.* 2016;19:365.
3. Chevalley P, et al. Value of Visual Screening by Medical Doctors in Diagnosing Alcohol Abuse: A Prospective Study. *J Alcohol Drug Depend.* 2015;3:219.
4. Thoma E, et al. Changes of Some Blood Count Variables in Correlation with the Time of Alcohol Abuse. *J Addict Res Ther.* 2015;6:221.
5. Velasco-Contreras Grado ME. Does Smoking and Alcohol Abuse Precipitate and Aggravate the Risk of Metabolic Syndrome? *J Metabolic Syndr.* 2014;3:141.
6. Fleury MJ, et al. Variables Associated with Drug and Alcohol Abuse among Male and Female users with Severe Mental Disorders. *J Addict Res Ther.* 2014;S10:005.
7. Franklin KM, et al. Caffeinated Alcoholic Beverages – An Emerging Trend in Alcohol Abuse. *J Addict Res Ther.* 2013;S4:012.
8. Wang N, et al. Meta-Analysis of Interventions for Reducing Number of Sexual Partners and Drug and Alcohol Abuse among People Living with HIV/AIDS. *J AIDS Clin Res.* 2013;4:213.
9. Liangpunsakul S, et al. Serum Proteomic Profiles in Subjects with Heavy Alcohol Abuse. *J Proteomics Bioinform.* 2009;2:236-243.
10. Johnson SA. Sexual Addiction or Rape. *J Forensic Res.* 2016;7:353
11. Horman Tand Leri F. Neuroscience of Reward: Implications for Food Addiction and Nutrition Policy. *J Nutr Food Sci.* 2016;6:569.

12. Berkun R, et al. Opioid Addiction: Addressing the Crisis of a National Opioid Overdose Epidemic. *J Pain Relief*. 2016;5:271.
13. Eldahshan OA, et al. Medicinal Plants and Addiction Treatment. *Med Aromat Plants*. 2016;5:260.
14. Busari AO. Academic Stress and Internet Addiction among Adolescents: Solution Focused Social Interest Programme as Treatment Option. *J Ment Disord Treat*. 2016;2:114.
15. Wani MA and Sankar R. Impact of Drug Addiction on Mental Health. *J Ment Disord Treat*. 2016;2:110.
16. Basak AK and Chatterjee T. An Insight into the Cellular Mechanisms of Addiction to Psychostimulants. *J Depress Anxiety*. 2016;5:238.
17. Mesrahi T, et al. The Effect of Cognitive-Behavioral Group Therapy on Decrease in Addiction Relapse in Randomly Assigned Addicts under Drug Therapy: A Statistical Analysis. *Int J Neurorehabilitation*. 2016;3:214.
18. Cunningham PM. The Use of Sobriety Nutritional Therapy in the Treatment of Opioid Addiction. *J Addict Res Ther*. 2016;7:282.
19. Venkiteswaran K, et al. Commentary on - Human Embryonic Retinal Pigment Epithelial (Rpe) Cell Transplants for Chronic Refractory Cocaine Addiction. *Health Care: Current Reviews*. 2016;4:165.
20. McGee MD. Contemporary Formulation-based Assessment and Treatment: A Framework for Clinical Discourse. *J Psychol Psychother*. 2016;6:259.
21. Rose JE, et al. The Sensory Impact of Nicotine on Noradrenergic and Dopaminergic Neurons of the Nicotine Reward - Addiction Neurocircuitry. *J Addict Res Ther*. 2016;7:274.
22. Appavu R. Nanovaccine Development for Cocaine Addiction: Immune Response and Brain Behaviour. *J Vaccines Vaccin*. 2016;7:313.
23. Koppel JDS. Evidence-based Drug Crime Policy: Looking beyond the Moral and Medical to a Multi-level Model of Addiction. *J Civil Legal Sci*. 2016;5:175.
24. Attia TH. Behavioral Addiction in Children. *Int J Sch Cog Psychol*. 2016;3:e107.
25. Missaoui SG, et al. Prevalence and Consequences of Internet Addiction in a Cohort of Tunisian Adolescents: A Pilot Study. *J Child Adolesc Behav*. 2016;3:257.
26. Sunder KR. Why Does Mindfulness Create Resilience in Patients with PTSD and Addictions: A Summary of 3,000 Years of Wisdom and Current Evidence Based Science. *J Addict Res Ther*. 2016;7:e134.
27. Alduaij MY and Al- Amari. The Attitude of High School Students in Kuwait towards Internet Addiction and Its Effect on their Health. *Int J Adv Technol*. 2016;7:154.
28. Ayu AP, et al. Illness Perceptions of Addiction and Substance Use Patterns among Psychology Students. *J Child Adolesc Behav*. 2016;4:279.
29. Amiri M, et al. Factors Affecting Tendency for Drug Abuse in People Attending Addiction Treatment Centres: A Quantitative Content Analysis. *J Addict Res Ther*. 2016;7:270.
30. Velmishi V. Antropyloric Duplication Cyst in a Boy with Non Biliary Vomiting. *Pediat Therapeut*. 2016;6:i117.
31. Lai-Tiong F. Chemotherapy-Induced Nausea and Vomiting: An Oncology-Day Unit Experience. *J Integr Oncol*. 2016;5:158.
32. AlJabari A and Massad I. Post-Operative Nausea, Vomiting and Pain Score in Post Anesthesia Care Unit (PACU) at Jordan University Hospital . *J Anesth Clin Res*. 2016;7:595.
33. Caterina Soldà and Davide Pastorelli. Chemotherapy-Induced Nausea and Vomiting (CINV): The Achilles' Heel of Oncologists. *Chemo Open Access*. 2015;4:154.
34. Yu WY, et al. The Prophylaxis and Treatment with Ondansetron for Postoperative Nausea and Vomiting. *Surgery Curr Res*. 2015;5:224.

35. Thomas B, et al. Medication used in Nausea and Vomiting of Pregnancy - A Review of Safety and Efficacy. *Gynecol Obstet (Sunnyvale)*. 2015;5:270.
36. Darmani NA. New Vistas in the Pathophysiology of Vomiting. *Family Med Medical Sci Res*. 2013;2:e105.
37. Menjie K, et al. Efficacy of Intravenous Fluid on Prevention of Post-Operative Nausea and Vomiting at Ayder Referral Hospital Mekelle University, Northern Ethiopia. *J Anesth Clin Res*. 2013;4:374.
38. Ibrahim NAE. Nausea and Vomiting in Cancer Patients: Topic Review. *J Palliat Care Med*. 2015;5:203
39. Kim DH, et al. Antiemetic Prophylaxis with Ondansetron for Post-discharge Nausea and Vomiting after Hip Arthroscopy Performed under Neuraxial Anesthesia: A Prospective, Randomized, Placebo-controlled Trial. *J Anesth Clin Res*. 2013;4:376
40. Usharani RM, et al. Comparison of Yoga vs. Relaxation on Chemotherapy Induced Nausea and Vomiting Outcomes: A Randomized Controlled Trial. *J Integr Oncol*. 2014;3:116.
41. Zhao C, et al. Young Female with Recurrent Postprandial Vomiting for One and a Half Years. *Intern Med*. 2014;4:165.
42. Minghua Q, et al. Study on Short Version of Liver Disease Quality of Life Questionnaire (LDQOL) and Its Reliability and Validity. *Chemo Open Access*. 2016;5:215.
43. Elsheikh E, et al. Non- Hematopoietic Circulating Progenitor Cells and Presence of Coronary Artery Disease in Patients with Non-Alcoholic Fatty Liver Disease. *J Cytol Histol*. 2016;7:423.
44. Manopriya T, et al. Non-alcoholic Fatty Liver Disease (NAFLD) - An Emerging Public Health Problem. *J Metabolic Syndr*. 2016;5:213.
45. Zulfiqar AA, et al. Hypervitaminia B12: A Useful Additional Biomarker for the Diagnosis and Monitoring of Liver Diseases. *J Blood Disord Transfus*. 2016;7:362.
46. Rafferty MJ, et al. Reprioritisation of Liver Export Protein Synthesis in Patients with Decompensated Alcoholic Liver Disease. *J Hepatol Gastroint Dis*. 2016;2:135.
47. Taira J, et al. Relationship between the Status of Blood Supply in the Non-hypervascular Hepatocellular Nodules among Chronic Liver Diseases and the Hypervascular Change. *J Liver*. 2016;5:197.
48. Israt AH and Liaquat A. Nonalcoholic Fatty Liver Disease and its association with Insulin Resistance: A Study from Bangladeshi Newly Diagnosed Impaired Glucose Tolerance Subjects. *J Diabetes Metab*. 2016;7:688.
49. Lebeaupin C, et al. Role of ER Stress in Inflammasome Activation and Non-Alcoholic Fatty Liver Disease Progression. *Single Cell Biol*. 2016;5:140.
50. Sevastianos VA and Dourakis SP. Alcoholic Liver Disease: A Clinical Review. *J Nutr Food Sci*. 2016;6:508.
51. Stärkel P and Schnabl B. Bidirectional Communication between Liver and Gut during Alcoholic Liver Disease. *Semin Liver Dis*. 2016;36:331-339.
52. Gribsholt SB, et al. Rate of Acute Hospital Admissions Before and After Roux-en-Y Gastric Bypass Surgery: A Population-based Cohort Study. *Ann Surg*. 2016;
53. Bullock K, et al. Severity of alcohol dependence is negatively related to hypothalamic and prefrontal cortical gray matter density in heavy drinking smokers. *Am J Drug Alcohol Abuse*. 2016;20:1-10.
54. Mohammadi S, et al. Accessory Spleen in the Splenic Hilum: a Cadaveric Study with Clinical Significance. *Med Arch*. 2016;70:389-391.
55. Thanos PK, et al. Effects of Chronic Methamphetamine on Psychomotor and Cognitive Functions and Dopamine Signaling in the Brain. *Behav Brain Res*. 2016;16:31231

56. Kamarajan C, et al. A KCNJ6 gene Polymorphism Modulates Theta Oscillations during Reward Processing. *Int J Psychophysiol.* 2016;16:30861-30863.
57. Sobell MB and Sobell LC. Individualized Behavior Therapy for Alcoholics. *Behav Ther.* 2016;47:937-949.
58. Gerhant A and Olajosy M. Personality Traits in Alcohol-Dependent Individuals in the Context of Childhood Abuse. *Psychiatr Pol.* 2016;50:973-987.
59. Novo-Veleiro I, et al. A Single Nucleotide Polymorphism in the RASGRF2 Gene Is Associated with Alcoholic Liver Cirrhosis in Men. *PLoS One.* 2016;11:e0168685.
60. Vargas D and Rocha FM. Psychometric Properties of the Attitudes Scale Facing Alcohol and Alcoholism in Nursing Students. *Rev Lat Am Enfermagem.* 2016;24:e2823.
61. Harty SC, et al. Anger-irritability as a Mediator of Attention Deficit Hyperactivity Disorder risk for Adolescent Alcohol Use and the Contribution of Coping Skills. *J Child Psychol Psychiatry.* 2016;
62. Korucuoglu O, et al. Acute Alcohol Effects on Set-Shifting and its Moderation by Baseline Individual Differences: A Latent Variable Analysis. *Addiction.* 2016;
63. Ameri Z, et al. The Relationship Between Religion and Risky Behaviors Among Iranian University Students. *J Relig Health.* 2016;
64. Amir Khanian YA, et al. Predictors of HIV Care Engagement, Antiretroviral Medication Adherence, and Viral Suppression Among People Living with HIV Infection in St. Petersburg, Russia. *AIDS Behav.* 2016;
65. Sarkar R, et al. General Measures and Quality of Life Issues in Psoriasis. *Indian Dermatol Online J.* 2016;7:481-488.
66. Chung T, et al. Brain Mechanisms of Change in Addictions Treatment: Models, Methods, and Emerging Findings. *Curr Addict Rep.* 2016;3:332-342.
67. Buck KJ, et al. Limbic Circuitry Activation in Ethanol Withdrawal is Regulated by a Chromosome 1 Locus. *Alcohol.* 2016;16:30090-30098.
68. Morabito R, et al. SO4 Uptake and Catalase Role in Preconditioning after H2O2-Induced Oxidative Stress in Human Erythrocytes. *Pflugers Arch.* 2016;
69. Ramanathan M, et al. Hiding in Plain Sight, A Case of Ornithine Transcarbamylase Deficiency Unmasked Post-Liver Transplantation. *Am J Transplant.* 2016;
70. Zhang W, et al. The Effects of Di 2-Ethyl Hexyl Phthalate (DEHP) on Cellular Lipid Accumulation in Hepg2 Cells and its Potential Mechanisms in the Molecular Level. *Toxicol Mech Methods.* 2016;20:1-24.
71. Kim RS, et al. The XBP1 Arm of the Unfolded Protein Response Induces Fibrogenic Activity in Hepatic Stellate Cells Through Autophagy. *Sci Rep.* 2016;6:39342.
72. Kwo PY, et al. ACG Clinical Guideline: Evaluation of Abnormal Liver Chemistries. *Am J Gastroenterol.* 2016;
73. Potts JR, et al. Diagnosing Liver Fibrosis; A Narrative Review of Current Literature for Dermatologists. *Br J Dermatol.* 2016;
74. Alwahsh SM, et al. Dietary Fructose as a Risk Factor for Non-Alcoholic Fatty Liver Disease (NAFLD). *Arch Toxicol.* 2016;
75. Khaw KB, et al. Interval Increase in the Prevalence of Symptomatic Cholelithiasis-Associated Non-Alcoholic Fatty Liver Disease Over a Ten-Year Period in an Asian Population. *Singapore Med J.* 2016;
76. Mwinyi J, et al. NAFLD is Associated with Methylation Shifts with Relevance for the Expression of Genes Involved in Lipoprotein Particle Composition. *Biochim Biophys Acta.* 2016;16:30334-30341.
77. du Plessis J, et al. Pro-Inflammatory Cytokines but Not Endotoxin-Related Parameters Associate with Disease Severity in Patients with NAFLD. *PLoS One.* 2016;11:e0166048.

78. Yokoyama A, et al. Platelet Counts and Genetic Polymorphisms of Alcohol Dehydrogenase-1B and Aldehyde Dehydrogenase-2 in Japanese Alcoholic Men. *Alcohol Clin Exp Res.* 2016;
79. Kosmidou M and Milionis H. Diabetes Mellitus and Non-Alcoholic Fatty Liver Disease: The Thread of Ariadne. *Minerva Endocrinol.* 2016;
80. Zhang N, et al. Salvianolic Acid B Protects Against Chronic Alcoholic Liver Injury Via SIRT1-Mediated Inhibition of CRP and ChREBP in Rats. *Toxicol Lett.* 2016;16:33344-33346.
81. de la Monte SM. Insulin Resistance and Neurodegeneration: Progress Towards the Development of New Therapeutics for Alzheimer's Disease. *Drugs.* 2016;
82. Wu HT, et al. Corrigendum to "The role of Hepassocin in the Development of Non-alcoholic Fatty Liver Disease". *J Hepatol.* 2016;16:30653-30655.
83. Giovanis P, et al. Sorafenib for the Treatment of Patients with Advanced Hepatocellular Carcinoma and Alcoholic Cirrhosis. *J Clin Oncol.* 2011;29:352.
84. Maheswaran R, et al. Investigation of the Association Between Alcohol Outlet Density and Alcohol-Related Hospital Admission Rates in England: Study Protocol. *JMIR Res Protoc.* 2016;5:e243.
85. Doan QD, et al. Prevalence of Risk Factors among Patients with Hepatocellular Carcinoma (HCC) and the General Population in an Employer Group Database. *J Clin Oncol.* 2012;30:190.
86. Martin RC, et al. Second Interim Analysis of GIDEON (Global Investigation of Therapeutic Decisions in Unresectable HCC and of Its Treatment with Sorafenib): U.S. Versus Global Perspective on Patient and Disease Characteristics, Treatment History, and Sorafenib Use. *J Clin Oncol.* 2012;30:278.
87. Leggio L and Lee MR. Treatment of Alcohol Use Disorder in Patients with Alcoholic Liver Disease. *Am J Med.* 2016;16:31068-31073.
88. Li C, et al. Effect of Curcumin on Visfatin and Zinc-A2-Glycoprotein in a Rat Model of Non-Alcoholic Fatty Liver Disease. *Acta Cir Bras.* 2016;31:706-713.
89. Huang K, et al. PARP1-Mediated PPAR $\alpha$  Poly(ADP-ribosyl)ation Suppresses Fatty Acid Oxidation in Non-alcoholic Fatty Liver Disease. *J Hepatol.* 2016;16:30697-30703.
90. Tsai SY, et al. Alpha-Mangostin from Mangosteen (*Garcinia Mangostana* Linn.) Pericarp Extract Reduces High Fat-Diet Induced Hepatic Steatosis in Rats by Regulating Mitochondria Function and Apoptosis. *Nutr Metab (Lond).* 2016;13:88.
91. Mitchell MC, et al. Medical Management of Severe Alcoholic Hepatitis: Expert Review from the Clinical Practice Updates Committee of the AGA Institute. *Clin Gastroenterol Hepatol.* 2017;15:5-12.
92. Afarideh M, et al. Serum 25-Hydroxyvitamin D, Non-alcoholic Fatty Liver Disease and Type 2 Diabetes. *Nutr Metab Cardiovasc Dis.* 2016;16:30163-30166.
93. Della Corte C, et al. Docosahexanoic Acid Plus Vitamin D Treatment Improves Features of NAFLD in Children with Serum Vitamin D Deficiency. *PLoS One.* 2016;11:e0168216.
94. Sun Z and Zhou JY. Mechanism of Action of the SIRT1-FoxO1-AdipoR2 Signaling Pathway in Alcoholic Fatty Liver Disease. *Zhonghua Gan Zang Bing Za Zhi.* 2016;24:877-880.
95. Cui MX, et al. Alleviative Effect of Ciliary Neurotrophic Factor Analogue on High Fat-Induced Hepatic Steatosis is Partially Independent of the Central Regulation. *Clin Exp Pharmacol Physiol.* 2016;
96. Eshraghian A. Bone Metabolism in Non-Alcoholic Fatty Liver Disease: Vitamin D Status and Bone Mineral Density. *Minerva Endocrinol.* 2016;
97. Papanastasiou L, et al. Adrenal Disorders and Nonalcoholic Fatty Liver Disease. *Minerva Endocrinol.* 2016;
98. Petta S, et al. Pathophysiology of Non Alcoholic Fatty Liver Disease. *Int J Mol Sci.* 2016;17:E2082.

99. Sanyal AJ, et al. Retrospective Claims Database Analysis of Elderly Compared with Nonelderly Patients (pts) with Newly Diagnosed Hepatocellular Carcinoma (HCC). *J Clin Oncol.* 2009;27:9552.
100. Zhong S, et al. CD36 Deficiency Aggravates Macrophage Infiltration and Hepatic Inflammation by Up-regulating MCP-1 Expression of Hepatocytes through HDAC2-Dependant Pathway. *Antioxid Redox Signal.* 2016;