ABSTRACT BOOK
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Contents

ePOSTER ABSTRACT PRESENTATIONS

P01-01 Pilot study of liraglutide on weight and enzymes of obese patients with NAFLD ....... 8
P01-02YI RIP3-dependent signalling impacts on lipid metabolism and halts disease progression in experimental non-alcoholic fatty liver disease ................................................................. 9
P01-03YI Co-creating comics to communicate non-alcoholic fatty liver disease - A participatory research approach ...................................................................................................................... 10
P01-04YI Decreased expressions of p70S6K in NK cells of NAFLD patients inhibited F-actin and was correlated with their impaired function ........................................................................... 11
P01-05 High prevalence of fatty liver in diabetes: comparison between ecographic and biochemical diagnostic methods ............................................................................................................. 12
P01-06 High risk of non-alcoholic fatty liver disease and significant liver fibrosis in patients with hidradenitis suppurativa ................................................................................................. 13
P01-07YI Hyperferritinemia and long-term outcomes in NAFLD patients. A longitudinal multicenter study .......................................................................................................................... 14
P01-08YI High fat-high sucrose diet promotes liver disease progression and defective metabolic adaptation ................................................................................................................................. 16
P01-09YI Liver fibrosis but not PNPLA3 mutation is associated with decreased renal function in non-alcoholic fatty liver disease ........................................................................................... 17
P01-10YI Plasma glycine concentration is inversely associated to hepatic and anabolic insulin resistance in subjects with NAFLD ........................................................................................................ 19
P01-11YI Increased hepatic Angiopoietin-Like Protein 3 is associated with NAFLD and with liver expression of vitamin D receptor and vitamin D hydroxylases ........................................ 20
P01-12 The role endothelial lipase in patients with non-alcoholic fatty liver disease and hypertension depending on the performance of the lipid profile ........................................................................ 21
P01-13YI The genetic background strongly influences the development of steatohepatitis and metabolic syndrome in a novel experimental model of dual ASH/NASH ........................................ 22
P01-14YI Selective modulation of mGlu5 receptor affects oleic and palmitic acid-induced steatosis in HepG2 cells ...................................................................................................................... 23
P01-15 Liraglutide improves NASH and metabolic disorders in a 3-week diet-induced NASH mouse model ...................................................................................................................... 24
P01-16YI Genes involved in the bile acid transport and metabolism and their contribution to disease predisposition in a cohort of children with biopsy-proven NAFLD ......................... 25
P01-18 In patients with Non-alcoholic Fatty Liver Disease significant fibrosis and the active non-alcoholic steatohepatitis is associated with a moderate-high cardiovascular risk at 10 years ........................................................................................................................................ 26
P01-19 Efficacy and safety of saroglitazar in management of NAFLD patients using transient elastography: A single center observational study ........................................................................... 27
P01-20YI Utility of applying age-adjusted FIB-4 cutoffs in patients with type 2 diabetes ...... 28
P01-21 Impact of FAT10 on PPAR-alpha downregulation during NASH progression ........ 29
P01-22 Similarity of risk factors among individuals with fatty liver with or without harmful alcohol consumption in a healthy population
P02-01YI Berberis Aristata, Elaeis Guineensis and Coffea Canephora extracts modulate the insulin receptor expression and improve hepatic steatosis in NAFLD patients: a pilot study.
P02-02 The economic burden of patients diagnosed with non-alcoholic steatohepatitis in France, Germany, Italy, Spain and the United Kingdom in 2018
P02-03 Cardiovascular risk assessment in a non-alcoholic fatty liver disease group of romanian patients
P02-04YI Is diabetes mellitus associated with hepatocellular carcinoma in patients with chronic liver disease of non viral etiology?: A case control study
P02-05YI Picroside II protects FFA-induced lipid accumulation and lipotoxicity in an in-vitro model of NAFLD
P02-06YI Liver damage in non-alcoholic fatty liver disease: Changes in stearoyl-CoA-desaturase index and metalloproteinase activity
P02-07 Effect of obeticholic acid on liver function in patients with fibrosis due to NASH
P02-08YI Differential effects of palmitic acid on the development of NASH and related metabolic disorders
P02-09YI Deletion of Keap1 and L-selectin in mice protects from NAFLD progression
P02-10YI The relationship of systemic inflammation and endothelial dysfunction with blood lipid spectrum and adipokines levels in patients with NAFLD
P02-11 Effect of elafibranor treatment and dietary intervention in the Gubra Amylin NASH (GAN) diet-induced obese mouse model of biopsy-confirmed non-alcoholic steatohepatitis
P02-12 Mitochondrial GNMT-complex II interaction is recovered by miR-873-5p targeting in NAFLD
P02-13YI Impact of BMI and Ethnicity on histology as assessed by automated quantitation in liver biopsies of patients with NAFLD
P02-14 A translational mouse model for NASH and advanced fibrosis in association with atherosclerosis
P02-15YI Gut microbiota composition in patients with non-alcoholic fatty liver disease
P02-16 Propionic acid intervention in obese Ldlr-/-,Leiden mice attenuates NASH development, but negatively affects cognition
P02-17 Comparing computerized tomography indices and liver biopsy in liver transplantation donors for hepatosteatosis
P02-18YI Transcriptomic and epigenetic characterization of a NAFLD murine model
P02-19YI Osteopontin deficiency promotes liver senescence mediating the onset of non-alcoholic fatty liver disease during aging
P02-20 Actions of the protease fibroblast activation protein alpha (FAP) on collagens and FGF21 and roles in chronic liver injury
P02-21 The Vanin 1-Cysteamine pathway regulates immune tolerance upon lipid-induced oxidative stress in non-alcoholic fatty liver disease
P02-22 Risk stratification of patients with non-alcoholic fatty liver disease in primary care using a reflex testing algorithm of FIB-4 and enhanced liver fibrosis score

NAFLD Summit 2019, 26-28 September 2019, Seville, Spain
P03-03 Estimated GFR is associated with PNPLA3 risk variant p.I148M in patients with non-alcoholic fatty liver disease

P03-04 Yi Cannabis consumption prevents hepatic steatosis in psychosis patients

P03-05 Yi Triple targeting of nuclear receptors protects against diet-induced NAFLD in mice

P03-06 Mitochondrial DNA analysis in NASH patients

P03-07 High-throughput sequencing identified miR-193a as a potential biomarker of non-alcoholic fatty liver disease activity

P03-08 BTT-105 ameliorates non-alcoholic steatohepatitis on diet-induced animal models and attenuated lysophosphatidic acid-induced hepatic stellate cell activation

P03-09 Saroglitazar, a potential treatment for Non-Alcoholic Fatty Liver Disease/Non-Alcoholic Steatohepatitis: Preliminary evidence from pre-clinical, clinical and real world studies

P03-10 Yi Validation of a simple 2-step strategy involving FIB4 and mre in evaluation of non-alcoholic fatty liver disease

P03-11 Yi Fasting refeeding HFD mice accumulate hepatic lipid and develop metabolic dysfunction which control by NQO1 enzymatic action

P03-12 Yi HSD17B13 and PNPLA3 gene variants exert opposite effects on non-alcoholic fatty liver phenotypes: results from the "real life" FLAG cohort

P03-13 Yi Urea cycle enzymes dysregulation is linked to a more aggressive NAFLD phenotype

P03-14 Yi The features of gut microbiota composition in patients with NAFLD

P03-15 Yi Nuclear NFATc1 regulates pro-apoptotic ER stress signaling protein CHOP, and progresses NAFLD to NASH

P03-18 Yi Differential therapeutic effects of single and pan-PPAR agonists on experimental steatohepatitis and hepatic macrophage biology

P03-19 Yi GLI-3 mutation influences weight gain, glucose tolerance and hepatic innate immune populations in a model of non-alcoholic fatty liver disease

P03-20 Yi Effect of treatment with dulaglutide on metabolic function and liver tests in patients with NAFLD and diabetes mellitus type 2

P03-21 Yi Effect of metformin therapy on the clinical and functional state of the liver in patients with metabolic syndrome associated with non-alcoholic fatty liver disease

P03-22 Yi High cholesterol diet and high saturated fatty acid diet: Which is worse for the liver

P04-01 Yi A multidisciplinary approach to non-alcoholic fatty liver disease (NAFLD) improves cardiovascular risk factors

P04-02 Yi Risk factors in type 2 diabetic mellitus patients

P04-03 Yi Psoriasis and liver damage in HIV-infected subjects

P04-04 Yi Predictive circulating hormone biomarkers for NAFLD patient stratification

P04-05 Yi Relationship of semiquantitative scoring systems with computer-aided digital image analysis for quantification of histological features in NAFLD

NAFLD Summit 2019, 26-28 September 2019, Seville, Spain
The role of adipocyte-derived extracellular vesicles in the development of NAFLD

PNPLA3 gene polymorphism (rs738409) and non-alcoholic fatty liver disease risk in women with polycystic ovary syndrome

Metagenomics and molecular phenomics of obesity and hepatic steatosis

Physical activity removes the harmful effects of sedentary behaviours: a prospective look to the Horizon 2020 'Foie Gras' project in Southern Italy

miRNAs as non-invasive biomarkers in Non-alcoholic Fatty Liver Disease (NAFLD)

Inhibition of alpha 2A adrenergic receptors reduces liver inflammation and fibrosis in experimental NASH

Early diagnosis of fibrosis in non-alcoholic fatty liver disease

S-adenosylmethionine alleviates hepatic steatosis via alternation of lipid- and bile acid-metabolism and microbiota

Moderate alcohol consumption is associated with higher grade of liver fibrosis in patients with non-alcoholic fatty liver disease

Circulating pcsk9 levels correlated with advanced disease in patients with biopsy-proven non-alcoholic fatty liver disease

The co-stimulatory signals mediated by icos-icosl dyad promote the evolution of non-alcoholic steatohepatitis (NASH)

FAST score for identification of patients with non-alcoholic steatohepatitis (NASH), NAS≥4 and significant (F≥2) or advanced (F≥3) fibrosis

Ablation of High mobility group box-1 in intestinal epithelial cells causes intestinal lipid accumulation and reduced non-alcoholic steatohepatitis

Fibrosis impact on quality of life in non-alcoholic fatty liver disease (NAFLD)

Metabolic characterization of hepatocellular cancer cells related to non-alcoholic fatty liver disease

Genotyping rs738491 in the SAMM50 Gene May Increase Accuracy of Non-invasive Assessment for Non-Alcoholic Steatohepatitis

Results of life style modification on weight loss and factors of failure in NAFLD

Suboptimal metabolic control is a risk factor for liver disease progression in patients with type 2 diabetes mellitus

Alcohol and other contributing factors to the burden of liver disease among patients with type-2 diabetes mellitus: a retrospective longitudinal study

Changes in individual free fatty acids during an oral glucose tolerance test in non-alcoholic fatty liver disease subjects stratified by body mass index

Early immunological modifications of the intestinal barrier in response to a non-alcoholic steatohepatitis-inducing diet

The efficacy of L-carnitine administration in non-alcoholic fatty liver disease patients

A deep learning algorithm to quantify liver fat content in humans
P05-06YI The effect of subclinical hypothyroidism on cardiovascular aging in individuals with non-alcoholic fatty liver disease.................................................................115
P05-07 Omitted liver disease screening in acute screening coronary syndrome hides prevalence of high levels of severe liver fibrosis .................................................................116
P05-08YI Obese patients carrying NAFLD-associated genetic variants present specific serum and liver lipidomic profiles: identification of a lipidomic signature in serum to estimate the liver fat content..............................................................................................................117
P05-09YI IncRNA-H19 as an epigenetic biomarker of liver cancer stem cells.................118
P05-10YI NAFLD population in Northern and Southern Italy. A longitudinal and epidemiological study in four tertiary centers.................................................................119
P05-11YI Differences in anxiety and depressive symptomatology of NAFLD/NASH patients according to fibrosis stage............................................................................................120
P05-12 Nover 3D Human NASH model for high-throughput compatible efficacy testing...121
P05-13YI Elevated expressions of Sodium taurocholate co-transporting polypeptide (NTCP) on NK cells impaired their function and contribute to liver fibrosis in NAFLD patients.....122
P05-14 Combined treatment with L-carnitine and nicotinamide riboside improves hepatic metabolism and attenuates obesity, hepatic peroxidation and steatosis.................................123
P05-15YI acNASH Index: a novel screening tool for non-alcoholic steatohepatitis patients with persistent normal alanine aminotransferase .........................................................124
P05-16 PNPLA3 could help the clinicians to individuate NAFLD subjects at major risk of disease progression: a single center cohort study.................................................................126
P05-17 IDL-2965: A selective, highly potent, clinical stage integrin antagonist for the treatment of NASH...........................................................................................................127
P05-18YI NEDDylation inhibition as a new potential therapy for Non-alcoholic Fatty Liver Disease ..........................................................................................................................128
P05-19 Predictors of high shear wave elastography (SWE) measurements among non-alcoholic fatty liver disease (NAFLD) patients in primary care .........................................................129
P05-20 Establishment of an novel non-alcoholic steatohepatitis model using a high fat and cholesterol diet in young rabbits .................................................................130
P05-21 Positive Results from REGENERATE: A Phase 3 International, Randomized, Placebo-Controlled Study Evaluating Obeticholic Acid Treatment for NASH...............132
P05-22YI Burden of non-alcoholic fatty liver disease in helicobacter pylori infected dyspeptic patients, is it a far reaching implication?.................................................................134
P06-01YI miR-34a is strongly activated in human and experimental NAFLD, correlating with key disease hallmarks.................................................................136
P06-02 Serum adenosine deaminase values are associated with advanced liver disease in patients with Non-Alcoholic Fatty Liver Disease.........................................................137
P06-03 Diagnostic performance of three non-invasive fibrosis scores (Hepamet, Fib-4, Nafld Score) on NAFLD in a mixed Brazilian population.........................................................138
P06-05 Establishment of a 3D human liver model to recapitulate NASH progression in vitro
P06-06YI Evaluating accuracy of serum steatosis and fibrosis scores in a cohort of morbid obese patients ................................................................. 141
P06-07YI Circulating mir-192-5p as a novel biomarker for liver fibrosis progression to cirrhosis .................................................................................. 142
P06-08 Non-electrophilic activation of the NRF2 pathway ameliorated experimental Non-alcoholic Steatohepatitis ......................................................... 143
P06-09 Dietary switch and exercise differentially resolve NASH and fibrosis .......... 144
P06-10YI Oxidized-LDL as a marker of oxidative stress is strongly related to NASH irrespectively of insulin resistance and liver fibrosis .................... 145
P06-11 Elafibranor, a drug candidate for first line NASH monotherapy and a universal backbone for drug combination treatment ............................. 147
P06-12 A high-cholesterol diet promotes steatohepatitis and liver tumorigenesis in HCV core gene transgenic mice ...................................................... 148
P06-13YI Changes in autophagic flux in diet-induced non-alcoholic fatty liver disease and hepatic fibrosis models in C57Bl/6 mice .............................. 149
P06-14 The smoking-hemoglobin interaction and risk for advanced fibrosis in patients with biopsy-proven non-alcoholic fatty liver disease .... 150
P06-15YI Ductular reaction predicts the progression of non-alcoholic fatty liver disease... 151
P06-16YI Coping strategies and fibrosis: a psychological approach to NAFLD ........ 153
P06-17YI Network-based drug-repositioning platform identifies pharmacological compounds with anti-steatogenic mode of action .................. 154
P06-19YI PNPLA3 rs738409 Gene Variant Aggravates Kidney Tubular Injury Among NAFLD Population with Persistent Normal Alanine Aminotransferase .......... 156
P06-20 Myeloid cells-derived osteopontin protects from diet-induced non-alcoholic fatty liver disease in mice ................................................................. 160
P06-21 Intervention with HE-700 reduces the development of liver inflammation in obese HFD-treated Ldlr-/- Leiden mice by ameliorating the build-up of hepatic cholesterol .... ... 161
P06-22 A preclinical study on the effect of an oral edaravone formula on NASH in a rabbit model ...................................................................................... 162

ACKNOWLEDGEMENTS .................................................................... 171
ePOSTER ABSTRACT PRESENTATIONS
P01-12 The role endothelial lipase in patients with non-alcoholic fatty liver disease and hypertension depending on the performance of the lipid profile

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**Background and aims:** Non-alcoholic fatty liver disease (NAFLD) and hypertension are among the most common diseases in the world. One of the negative factors contributing to the formation of cardiovascular risk in patients with NAFLD affected with hypertension is the low level of HDL cholesterol. Since endothelial lipase (EL) is directly related to the metabolism of HDL, we analyzed EL in accordance with the levels of HDL.

**Method:** 50 patients with NAFLD on the backdrop of hypertension and overweight were examined. Group distribution was performed according to HDL values: group 1 low values (<1.04 mmol/l), n = 10; group 2-moderately reduced (1.04-1.54 mmol/l), n = 27; group 3-protective values (>1.55 mmol/l), n = 13. The patients were comparable by gender and age. The average age was [53 ± 7.5]. The severity of steatosis was determined by the NAFLD index liver fat score. The concentration of EL serum was determined by ELISA using kits of reagents "Aviscera Bioscience INC" (USA).

**Results:** Analysis of the lipid profile shows a significant difference between all groups in terms of HDL. The concentration of total cholesterol was not significantly different in the groups. At the same time, significantly lower levels of triglycerides and LDL in individuals with high levels of HDL. The results are presented in table 1. Regression analysis demonstrates a significant positive (p = 0.04) correlation between EL level with total cholesterol and the negative with LDL level.

**Conclusion:** It turns out that in patients with more pronounced non-alcoholic liver steatosis there is a proatherogenic type dislipidemia with high levels of triglycerides and low levels of protective HDL. The concentration of EL did not show a direct relationship with the level of HDL. However EL was found to depend on LDL and total cholesterol levels, which can determine its complementary role in LDL metabolism in conditions of liver steatosis.

**Figure:**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Group 1 HDL &lt;1.04 mmol/l n = 10</th>
<th>Group 2 HDL 1.04-1.54 mmol/l n = 27</th>
<th>Group 3 HDL &gt;1.55 mmol/l n = 13</th>
<th>p value &lt;0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cholesterol, mmol/l</td>
<td>Mean 5.58 (SD 1.02)</td>
<td>Mean 5.65 (SD 1.34)</td>
<td>Mean 5.87 (SD 1.30)</td>
<td></td>
</tr>
<tr>
<td>Triglycerides, mmol/l</td>
<td>Mean 2.24 (SD 1.48)</td>
<td>Mean 1.64 (SD 0.80)</td>
<td>Mean 1.29 (SD 0.34)</td>
<td>13</td>
</tr>
<tr>
<td>HDL, mmol/l</td>
<td>Mean 0.91 (SD 0.10)</td>
<td>Mean 1.28 (SD 0.16)</td>
<td>Mean 1.78 (SD 0.19)</td>
<td>12</td>
</tr>
<tr>
<td>LDL, mmol/l</td>
<td>Mean 3.67 (SD 0.75)</td>
<td>Mean 3.57 (SD 1.32)</td>
<td>Mean 3.41 (SD 1.23)</td>
<td>13</td>
</tr>
<tr>
<td>VLDL, mmol/l</td>
<td>Mean 1.01 (SD 0.67)</td>
<td>Mean 0.80 (SD 0.39)</td>
<td>Mean 0.58 (SD 0.15)</td>
<td>13</td>
</tr>
<tr>
<td>Endothelial lipase, ng/ml</td>
<td>Mean 11.39 (SD 2.74)</td>
<td>Mean 11.99 (SD 4.49)</td>
<td>Mean 12.33 (SD 4.19)</td>
<td>13</td>
</tr>
<tr>
<td>NAFLD liver fat score</td>
<td>Mean 3.41 (SD 4.29)</td>
<td>Mean 2.96 (SD 3.19)</td>
<td>Mean 0.43 (SD 1.47)</td>
<td>13</td>
</tr>
</tbody>
</table>

Tab. 1. Lipid profile and NAFLD liver fat score depending on HDL levels.