

01. Inborn errors of metabolism in adults

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- P-002** Updates in lysinuric protein intolerance, a multi-faceted disease
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- P-003** Ambulatory performance in adolescents and adults with hypophosphatasia treated with asfotase alfa: data from a phase II, randomized, dose-ranging, open-label, multi-center study
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- P-005** *ELOVL4* mutation in a family with dominant cerebellar and brainstem atrophy (SCA34): clinical, radiological, and metabolic findings
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- P-006** Transition in patients with inborn errors of metabolism: a continuous challenge
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- P-007** French cohort of maple syrup urine disease: assessment of neuropsychiatric outcome
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- P-008** Cerebrospinal fluid neurotransmitter depletion in adult PKU patients
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- P-009** A coordinated transition model for patients with cystinosis in Spain: from pediatric to adult care
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- P-011** Transition from pediatric to adult care in patients with inborn errors of metabolism in Spanish referral centers
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- P-012** Intrafamilial phenotypic variations in adult onset classical homocystinuria
C Tran, C Buerer, M R Baumgartner, D Ballhausen
- P-013** Clinical characteristics of adult patients with inborn errors of metabolism from Spanish referral centers

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- P-030** A sensitive LC-MS/MS method for the quantification of urinary 8-*iso*-prostaglandin F_{2α} (8-*iso*-PGF_{2α}) as an oxidative stress biomarker
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- P-032** A new multiplex method for the diagnosis of peroxisomal disorders allowing simultaneous determination of plasma very-long-chain fatty acids, phytanic, pristanic, docosahexaenoic and bile acids by LC-MS/MS with atmospheric pressure chemical ionization
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- P-033** Analysis of bile acid profiles by liquid chromatography–tandem mass spectrometry (LC-MS/MS)
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- P-034** A new optimization approach for liquid chromatography ion mobility–mass spectrometry untargeted metabolomics method using experimental design
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- P-035** Mass spectrometry based metabolomics: a promising tool for the diagnosis of inborn errors of metabolism
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- P-038** Targeted next generation sequencing in patients with inborn errors of metabolism

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- P-039** The effectiveness of whole exome sequencing in unsolved patients with the clinical suspicion of mitochondrial disease
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- P-040** Quantification of plasma lysosphingolipids using LC-MS/MS: a new tool for diagnoses of sphingolipidoses
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- P-041** Diagnosis of cerebrotendinous xanthomatosis using untargeted mass spectroscopy-based metabolomics—next generation metabolic screening (NGMS)
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- P-055** Measurement of cellular glycolytic flux by liquid chromatography tandem mass spectrometry
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- K Bhattacharya, K Carpenter, G Ho, B Devanapalli, B Wilcken, V Wiley*
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- P-129** Phenylketonuria phenotype-genotype scoring and global phenotype differences
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- P-132** Phenylketonuria intestinal microbiota: insights from *Pah^{enu2}* mice fed amino acid, glycomacropeptide and casein diets
D M Ney, E A Sawin, B M Stroup, S G Murali
- P-133** Neuropsychiatric comorbidities and concomitant medications in individuals with phenylketonuria: findings from the PKUDOS registry
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- P-135** Study of group-I metabotropic receptors in a mouse model of phenylketonuria (PKU)
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- P-136** Phenylalanine hydroxylase genotype phenotype association in the United States: a single center study
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- P-137** Molecular study of the PAH gene in PKU patients of the Canary Islands
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B Cochrane, S Adams, J Wildgoose

- P-141** Neurological and psychiatric disorders in a French cohort of adults with phenylketonuria
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- P-142** Novel biomarkers to monitor trace element status in children with phenylketonuria
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- P-143** Is the gut microbiota associated with clinical phenotype in phenylketonuria patients?
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- P-152** Monitoring the renal functions of patients with phenylketonuria
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- P-155** Living with phenylketonuria: the relationship between executive functioning, quality of life and adherence to protein substitutes
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- P-156** Case-control study of neuropsychological results in patients with mild hyperphenylalaninemia (MHP)
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- P-157** Evaluation of obesity and abdominal obesity in adult PKU patients
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C Florindo, M Barroso, E Alves, C Costa, P Janeiro, A Gaspar, I Tavares de Almeida
- P-159** Multicenter study on long-term growth in patients with phenylketonuria
A Belanger-Quintana, S Stanescu, K Dokoupil, K Ahring, J C Rocha, H GokmenOzel, M Robert, E Van Dam, A M Lammardo, A MacDonald
- P-160** Vulnerability and resilience to phenylalanine in PKU patients
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- P-161** Alterations of myelin basic protein in juvenile PKU mice
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- P-162** Neuropsychological and quality of life outcomes in untreated adults with mild hyperphenylalaninemia with phenylalanine levels between 360 and 600 $\mu\text{mol/L}$
A Feigenbaum, A Wilson, L Nagy, K Siriwardena, E Nasr, E Kerr
- P-163** Control status of phenylketonuria (PKU) patients born after 1995: a single center experience in Japan
E Ogawa, M Ishige, C Takano, H Usui, M Owada, T Fuchigami, S Takahashi

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- P-164** Preliminary results of the study relevant to 'evaluating neurocognitive functions of untreated children with hyperphenylalaninemia'
S G Evinc, D Foto Ozdemir, E Pektas, F Oktem, Y Yildiz, A Tokatli, T Coskun, Y Karaboncuk, H S Sivri

- P-165** Effects of irregular amino acid mixture intake on macro- and micronutrient status of adult patients with phenylketonuria
M Hochuli, S Bollhalder, C Thierer, M R Baumgartner
- P-166** Role of the Phe/Tyr ratio in assessment of tetrahydrobiopterin—responsiveness in phenylketonuria
A Smon, U Groselj, M Zerjav Tansek, B Repic Lampret, H Kobe, T Battelino
- P-167** Sapropterin dihydrochloride toxicity on developing reaggregated rat brain cell cultures
N Remacle, H P Cudre-Cung, S Do Vale Perreira, O Braissant, D Ballhausen
- P-168** Genotype and basal blood phenylalanine predict BH₄ responsiveness in phenylalanine hydroxylase (PAH) deficient patients
F K Trefz, N Blau, A C Muntau, F Feillet, A Belanger-Quintana, F J Van Spronsen, G Frauendienst-Egger, G F Hoffmann
- P-169** Lipid profile status and other cardiovascular risk factors in patients with hyperphenylalaninaemia
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- P-170** Episomal minicircle-vectors expressing liver phenylalanine hydroxylase from its endogenous promoter for therapy of phenylketonuria
H M Viecelli, A Schlegel, T Scherer, G M Allegri, R Heidelberger, M Schleaf, H O Cary, J Haeberle, B Thony
- P-171** Neurological complications of PKU—not so rare
K M Stepien, D Green, S Ripley, S McDarby, E J S Silk, C J Hendriksz
- P-172** Phase 3 PRISM-1 and PRISM-2 clinical trial results: to evaluate the efficacy and safety of pegvaliase for the treatment of adults with phenylketonuria (PKU)
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- P-173** Phase 3 PRISM-2 long-term extension evaluating efficacy and safety of pegvaliase for treatment of adults with phenylketonuria
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- P-174** The sixth interim analysis of the Kuvan[®] Adult Maternal Paediatric European Registry (KAMPER): 9 pregnancies in PKU patients
F Feillet, F B Lagler, J Alm, A C Muntau, A B Burlina, A Belanger Quintana, I Alvarez, A Champigneulle, F K Trefz
- P-175** The sixth interim analysis of the Kuvan[®] Adult Maternal Paediatric European Registry (KAMPER): interim results in PKU and BH₄ deficiency patients
A C Muntau, F B Lagler, F Feillet, J Alm, A B Burlina, A Belanger Quintana, I Alvarez, A Champigneulle, F K Trefz, F J Van Spronsen
- P-176** Pharmacological chaperones as an alternative treatment for phenylketonuria
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- P-177** A German multi-centre study of pregnancies of women with phenylketonuria (PKU) between 2000 and 2013—what do we know, what do we do, what comes out?
K Grohmann, E Maier, C Muehlhausen, U Ploeckinger, P Freisinger, A M Das, S Vom Dahl, F Rutsch, M Schwarz, M Leichsenring, U Spiekerkoetter, P Schick, C Buerger, F Gleich, P Burgard
- P-178** Aggresomes formation and negative gain of function as alternative molecular mechanism in patients affected by phenylketonuria: implications for the therapy
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- P-179** Neurobiological and functional benefits of a specific nutrient combination in phenylketonuria (PKU): proof of concept in the PKU mouse model
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J Kolling, E B Scherer, C Siebert, T M Dos Santos, A Longoni, A T S Wyse
- P-182** Case report: potential hazards of betaine by a pyridoxine nonresponsive CBS deficiency
H Stepman, M D'Hooghe, V Stove, P Verloo
- P-183** Characterization of a novel transgenic mouse model of CBS-deficient homocystinuria carrying the most common Qatari mutation p. R336C (c.1006C>T)
L Gallego-Villar, S Gupta, L Wang, L Hyung-Ok, G K Nasrallah, T Ben-Omran, J Haberle, H J Blom, W D Kruger
- P-184** Methylation of S-adenosyl-L-homocysteine hydrolase by PRMT1 impacts on the protein's functional and structural properties
C Florindo, J Vieira, R Esse, F V Ventura, I Tavares de Almeida, R Castro, P Leandro
- P-185** Glucose-6-phosphate expression and activity is reduced by S-adenosylhomocysteine accumulation in HUVEC
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- P-186** Molecular investigation of glutaric aciduria type 1 in Iran
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- P-187** Mitochondrial D-loop variants and copy number in Pompe patients
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E Sanjari, F Bahreini, M Akrami, M Houshmand

- P-189** Oral glucose tolerance tests in Japanese citrin-deficient siblings before and after MCT-oil supplementation
H Otsuka, H Sasai, M Nakama, Y Aoyama, E Abdelkreem, N Kawamoto, M Kawamoto, H Ohnishi, C Numakura, K Hayasaka, T Fukao
- P-190** Pyridoxine-dependent epilepsy (PDE): α -amino adipic semialdehyde (AASA) levels and development with triple therapy from day six onwards
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- P-191** Executive dysfunction in MSUD school-age patients
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- P-192** Clinical spectrum and outcome of patients with tyrosinemia type 1 from India and Pakistan
K V Kudalkar, A B Jalan, R A Jalan, D H Shinde, M M Joshi, M A Borugale, S M Shirke, A P Mahamunkar, R J Tawde, A M Das
- P-193** Leucine levels in maple syrup urine disease (MSUD) from a single centre in the United Kingdom
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M A Preece, C Hardy, T Hutchin, S Santra, S Vijay, T Antoniadi, D McMullan
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M Duarte, A Moreira, D Antunes, C Ferreira, H Correia, S Sequeira, M Marques
- P-196** A novel BCAT2 mutation causes hypervalinaemia/hyperleucine–isoleucinaemia in a boy with a developmental disorder with autism
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- P-197** Hyperglycinemia as diagnostic marker for iron-sulfur cluster pathway anomaly in two sisters with severe encephalocardiomyopathy and a novel *GLRX5* missense mutation: a case report
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- P-198** Resistant dystonia in cognitively normal child
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- P-199** *In vivo* evidence that glycine disturbs MAPK signaling pathways and decreases Tau protein phosphorylation and synaptophysin content in rat brain
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- P-200** Evaluation of dynamic thiol/disulfide homeostasis as a novel indicator of oxidative stress in maple syrup urine disease patients under treatment
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- P-201** Evolution of hereditary tyrosinemia type I: description of eight cases
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- P-202** Effect of chronic administration of L-tyrosine on brain-derived neurotrophic factor and nerve growth factor levels in the brain of rats treated with antioxidants
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- P-203** Chronic administration of L-tyrosine alters energy metabolism parameters in brain of rats treated with docosahexaenoic acid
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- P-204** Behaviour and quality of life in tyrosinemia type 1 patients compared to phenylketonuria patients and healthy controls
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- P-205** Polymorphism of *MTHFR A1298C*, a reliable marker in north Indian mothers with down syndrome and its association with serum, rbc folate and serum homocysteine as risk factor and congenital heart defects
S K Polipalli, P K Mohanty, S K Pandey, S Kapoor
- P-206** Update on glutamine synthetase deficiency, eleven years after the first reported case
M Spodenkiewicz, C Diez-Fernandez, J Haberle
- P-207** Dominant spastic paraplegia SPG9 is due to mutations in the *ALDH18A1* gene, which encodes for Δ^1 -pyrroline-5-carboxylate synthetase (P5CS)
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- P-208** Management of acute liver failure in tyrosinaemia type 1: urgent liver transplant or wait for nitisinone response?
V Pagliardini, P L Calvo, M Dellepiane, T Ceglie, E Biamino, M Pinon, F Porta, F Tandoi, R Romagnoli, M Spada
- P-209** A novel homozygous *LIAS* mutation that causes glycine encephalopathy
C L Salvador, A Stray-Pedersen, B Woldseth, P H Backe, H Hoyer, M Svendsen, M Rasmussen, L Morkrid
- P-210** High prevalence of tyrosinemia type I in Chechen Republic in Russia
G M Radzhabova, G V Baydakova, L P Melikyan, I O Bychkov, L L Dzhunidova, E Y Zakharova
- P-211** Executive functions and social cognition in transplanted versus NTBC treated tyrosinemia type 1 patients
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- P-212** Evaluation of choline acetyltransferase and acetylcholinesterase activities in brain of rats submitted to chronic administration of L-tyrosine and treated with antioxidants
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- P-213** Maple syrup urine disease as a neurodegenerative disease: pathophysiological mechanisms
E L Streck, G Scaini, T Tonon, C F M Souza, A V Margutti, J S Camelo Jr, T Amorin, J Seda, I V D Schwartz
- P-214** Effect of docosahexaenoic acid administration during pregnancy or postnatal period on DNA damage in brain of rats submitted to chronic administration of branched-chain amino acid
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- P-215** Maple syrup urine disease (MSUD)—metabolic decompensation after liver transplantation (LTx)
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- P-216** Investigation of inflammatory profile in MSUD patients: benefit of L-carnitine supplementation
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- P-217** Inherited disorders of proline metabolism—update
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- P-218** Improved neurodevelopmental outcomes in patients with urea cycle disorders after liver transplantation.
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- P-219** Neonatal intrahepatic cholestatis caused by citrin deficiency in a Southeast Asian hospital
T W Ting, K B Phua, J S C Lim, E S Tan
- P-220** Clinical and molecular investigations in five Turkish patients with citrin deficiency and identification of a novel mutation on *SLC25A13*
M Kose, M Kagnici, B Erdur, G Erdemir, M Karakoyun, E Berksoy, O Bag, S Ceylaner, F Genel, A Unalp
- P-221** Raised urinary orotic acid and uracil levels before hyperammonemia during repeated acute episodes in 3 late onset OTC males in Greece
E Drogari, E Paramera
- P-222** Newborn screening may improve the neurological outcome in urea cycle disorders—data from the E-IMD registry
R Posset, A Garcia-Cazorla, V Valayannopoulos, A Chakrapani, E L Teles, C

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- P-223** Clinical characteristics, mutation spectrum and outcomes of 32 patients with urea cycle disorders: a single center experience from Turkey
A C Aktuglu-Zeybek, E Kiykim, T Zubarioglu, M S Cansever
- P-224** Spectrum and outcome of urea cycle defects in India
M M Joshi, S M Shirke, A P Mahamunkar, A B Jalan, K V Kudalkar, R A Jalan, D H Shinde, R J Tawde, M A Borugale, J Haeberle
- P-225** A simple method for *in vivo* measurement of ureagenesis by GC-MS using stable isotopes and dried blood spots on filter paper
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- P-226** Towards gene therapy using non-viral minicircle-DNA vectors to treat hepatic ornithine transcarbamylase deficiency in the *spf-ash* mouse
S Deplazes, H M Viecelli, A Schlegel, S Cunningham, I Alexander, J Haeberle, B Thony
- P-227** A potential novel treatment for CPS1 deficiency based on pharmacological chaperones
C Diez-Fernandez, M Spodenkiewicz, J Underhaug, A Martinez, J Haeberle
- P-228** N-acetyl-L-glutamate synthase deficiency revisited: update on the mutational spectrum, impact of clinical mutations on enzyme functionality, and structural considerations
E Sancho-Vaello, C Marco-Marin, N Gougeard, L Fernandez-Murga, V Rufenacht, M Mustedanagic, V Rubio, J Haeberle
- P-229** Mild orotic aciduria in *UMPS* heterozygotes: a metabolic finding without clinical consequences
S B Wortmann, M Chen, R A Wevers, G Tiller
- P-230** Linear growth is reduced in patients with urea cycle disorders
L Assatourian, M Trinh, E Macleod, K Simpson, D Park, N Ah Mew, Members of the Urea Cycle Disorders Consortium
- P-231** Continuous renal replacement therapy for inherited metabolism disorders in infancy: report of 14 cases
F Aygun, T Zubarioglu, F D Aygun, M S Cansever, E Kiykim, A C Aktuglu-Zeybek, H Cam
- P-232** Unusual presentation of carbonic anhydrase VA deficiency in a ten-year-old male under medication with sultiam
K Harnacke, S Leiz, T B Haack, H Prokisch, J Haeberle, A C Muntau, R Santer
- P-233** Withdrawn
- P-234** Deciphering carbamoyl phosphate synthetase (CPS1) deficiency and urea cycle regulation by determining the structures of human CPS1 in the absence and in the presence of N-acetyl-L-glutamate
S De Cima, L M Polo, C Diez-Fernandez, A I Martinez, J Cervera, I Fita, V Rubio
- P-235** Targeted mass spectrometry-based metabolomics for the study of urea cycle enzymes and liver function

M F Moedas, M A Farelo, A A A Adam, A Van Cruchten, L IJlst, R A F Chamuleau, R Hoekstra, R J A Wanders, M F B Silva

- P-236** Studies on drug-induced modulation of urea cycle and nitrogen metabolism in human hepatoma HepaRG cells
M A Farelo, M F Moedas, J P Ferreira, E Micaelo, A Van Cruchten, L IJlst, R J A Wanders, M F B Silva
- P-237** Incidence of behavior and emotional problems in urea cycle disorders
K Simpson, N Ah Mew, Members of the Urea Cycle Disorders Consortium

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- P-238** New *in vitro* model derived from brain conditional *Mut^{-/-}* mice confirms cerebral ammonium accumulation in methylmalonic aciduria
N Remacle, P Forny, H P Cudre-Cung, S Do Vale Perreira, O Braissant, M R Baumgartner, D Ballhausen
- P-239** Outcomes of patients with cobalamin C disease identified through newborn screening: a 16-year experience
R Ahrens-Nicklas, A Whitaker, T S Aleman, S Cuddapah, P Kaplan, M Yudkoff, C Ficicioglu
- P-240** Redox and energy homeostasis disruption in rat heart caused by the major accumulating metabolites in 3-hydroxy-3-methylglutaryl-CoA lyase deficiency
M S Da Rosa, B Seminotti, C A J Ribeiro, M Grings, B Parmeggiani, F Ben, M Wajner, G Leipnitz
- P-241** Investigation of diet-induced metabolic decompensation in novel mouse models of methylmalonic aciduria
M Lucienne, P Forny, M Mustedanagic, R Fingerhut, M Hersberger, S Koelker, D S Froese, M R Baumgartner
- P-242** Identification of biomarkers associated with disease state of propionic acidemia patients
J J M Jans, A Stellingwerf, M L Pras-Raves, H C M Prinsen, M Van der Ham, N M Verhoeven-Duif, P M Van Hasselt, M G M De Sain-van der Velden, G Visser
- P-243** Methylmalonic aciduria: clinical and biochemical characterization of patients
H Majid, A H Khan, N A Sherazi, L Jafri, A Jamil, N A Khan, M Fatimah, B Afroze
- P-244** Advances in the identification of the complex interaction between the propionate pathway and Krebs cycle
J Cabrera-Luque, E Pumbo, G Cunningham, F Lee, M L Summar, K A Chapman
- P-245** Optic neuropathy: a rare, late complication in methylmalonic acidemia
Y Yildiz, D Kalayci, B Bilginer Gurbuz, E Pektas, A Dursun, H S Sivri, T Coskun, A Tokatli
- P-246** Functional characterization of missense mutations identified in methylmalonic aciduria *cblB* type and rescue by pharmacological chaperone therapy
S Brasil, A Briso-Montiano, J Underhaug, B Merinero, R L Desviat, M Ugarte, A Martinez, B Perez

- P-247** Propionic acidemia: altered cellular and molecular pathways related to mitochondrial function in the animal model
E Alonso-Barroso, A Rivera-Barahona, B Perez, L R Desviat, E Richard
- P-248** Regulation of proteins and cellular processes by branched-chain amino acids revealed by large-scale proteomics of fibroblasts from classic maple syrup urine disease patients
P Fernandez-Guerra, L Cheng, R A Fenton, P Bross, P Rodriguez-Pombo, J Palmfeldt
- P-249** Effect of carginic acid on hyperammonaemia in acute decompensation episodes of organic acidurias
V Valayannopoulos, N Garcia Segarra, M Del Toro, M A Donati, A Garcia-Cazorla, M J Gonzales, C Plisson, J Le Mouhaer, E Brachet, A Chakrapani
- P-250** Disruption of 17 β -hydroxysteroid dehydrogenase type 10 activity by amyloid- β peptide interaction in brain homogenates and in the recombinant protein
J Garcia-Villoria, R Pascual, A Ferrer, A Ribes
- P-251** Incidence of pancreatitis in classical organic acidurias: single centre review
J E Davison, M A Cleary, M Dixon, R Skeath, D Petkovic, M McSweeney, S Grunewald
- P-252** Developmental delay in a patient with mild isovaleric acidemia
C Pontoizeau, J B Arnoux, F Habarou, A Brassier, A S Guemann, A Chabli, C Vianey-Saban, B Chadeaux-Vekemans, C Acquaviva, M H Read, P De Lonlay, C Ottolenghi
- P-253** Endocrinological aspects in propionic acidemia
S Stanescu, A Belanger-Quintana, F Arrieta, C Perez-Cerda, B Merinero, M Martinez-Pardo
- P-254** Maple syrup urine disease in the Marmara region of Turkey
M C Balci, M Karaca, T Zubarioglu, I Ozer, S Dorum, M Demirkol, G Gokcay
- P-255** Renal impairment in methylmalonic aciduria: a review of six cases
B Seker Yilmaz, F D Bulut, D Kor, A Karabay Bayazit, D Yildizdas, A Anarat, N Onenli Mungan
- P-256** Maple syrup urine disease: consensus for nutritional treatment from the Marmara region of Turkey
T Saglam, M C Balci, M Karaca, T Zubarioglu, I Ozer, S Doruk, C A Zeybek, M Demirkol, G Gokcay
- P-257** Behavioral phenotype in a liver transgenic mouse model of methylmalonic acidemia
J L Fraser, M L Arnold, J Gagne, C P Venditti

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- P-258** Development and validation of a quality of life questionnaire for paediatric patients with intoxication-type inborn errors of metabolism
N A Zeltner, M A Landolt, M R Baumgartner, R Ensenuer, D Karall, S Koelker, C Muehlhausen, S Scholl-Buergi, E Thimm, J Quitmann, P Burgard, M Huemer

- P-259** Quinolinic acid provokes histopathological alterations associated with a neuroinflammatory response in striatum of *Gcdh*^{-/-} mice: possible contribution of the kynurenine pathway in GA I neuropathology
A U Amaral, J C Silva, R T Ribeiro, F H De Oliveira, B Seminotti, G Leipnitz, A L Colin-Gonzalez, A Santamaria, D O G De Souza, M Wajner
- P-260** Mevalonolactone disturbs mitochondrial homeostasis in brain of young rats: a potential mechanism of brain damage in mevalonic aciduria?
C Cecatto, J C Silva, A U Amaral, A Wajner, L H R Silva, R C Nunes, R T Ribeiro, K S Godoy, G Leipnitz, M Wajner
- P-261** Unravelling 5-oxoprolinuria (pyroglutamic aciduria) due to bi-allelic *OPLAH* mutations: 20 new mutations in 14 families
J O Sass, C Gemperle-Britschgi, M Tarailo-Graovac, N Patel, M Walter, A Jordanova, M Alfadhel, I Baric, M Coker, A Damli-Huber, E A Faqeih, N Garcia Segarra, M T Geraghty, B M Jatun, S Kalkan Ucar, M Kriewitz, M Rauchenzauner, K Bilic, I Tournev, C Till, B Sayson, D Beumer, C X Ye, L H Zhang, H Vallance, A S Alkuraya, C D M Van Karnebeek
- P-262** Impact of age at onset and newborn screening on outcome in organic acidurias
N Boy, J Heringer, V Valayannopoulos, A Garcia-Cazorla, A M Lund, A Chakrapani, F A Wijburg
- P-263** Phenotype and genotype of a Spanish cohort with isovaleric acidaemia
M J De Castro, M L Couce, L Aldamiz-Echevarria, M A Bueno, P Barros, A Belanger, J Blasco, T Garcia Silva, A Marquez, I Vitoria, I Vives, A Fernandez-Marmiesse, B Perez, C Perez-Cerda
- P-264** 3D organotypic *Gcdh*^{-/-} brain cell cultures generate GA and 3-OHGA, and show histomorphological alterations under high lysine exposure
H P Cudre-Cung, N Remacle, S Do Vale Perreira, J Schmiesing, J Ivanisevic, C Muehlhausen, O Braissant, D Ballhausen
- P-265** Persistent finding of suberic acid, azelaic acid and pimelic acid in organic acid profiles from a patient subsequently diagnosed with Wolman's disease
C E Hart, H Y Wu, M Sharrard, K Tylee, H Church, S A Jones
- P-266** Early neurodevelopment in children with cblC defect
D Martinelli, M L Gambardella, G Ferrantini, S Lucibello, D Diodato, C Dionisi-Vici, E Mercuri, D Ricci
- P-267** Dysregulated proteins in a cellular model of methylmalonic acidemia
M Caterino, M Costanzo, G Minopoli, L Santorelli, L Del Vecchio, M Raia, M Ruoppolo
- P-268** Further evidence that D-glycerate kinase (GK) deficiency may be a non-disease
A Kalim, P E Fitzsimons, C Till, M Fernando, P D Mayne, J O Sass, E Crushell
- P-269** Two novel cases of Chiari malformation associated with glutaric aciduria type 1
N Enright, S Glackin, J Caird, N Murphy, M D King, P D Mayne, A A Monavari
- P-270** 3-Methylcrotonyl Co-A carboxylase deficiency detected by newborn screening as a cause of cardiomyopathy—case report
J Taybert, E Jablonska, T Polawski, K Kusmierska, A Kowalik, M Brzezinska, B

Werner, M Oltarzewski, R Ploski, M Rydzanicz, J Sykut-Cegielska

- P-271** 15 years' experience: diagnosis of organic acidemias at Quest Diagnostics Biochemical Genetics Laboratory
R Sharma, D Z Salazar, R Bonilla-Guerrero, A Davoodi-Semiromi, R M Lobo, J E Lee, J A Neidich, K Zhang, C M Strom
- P-272** Ethylmalonic encephalopathy without ethylmalonic aciduria
D Yucel-Yilmaz, R K Ozgul, E Pektas, E Serdaroglu, D Yalnizoglu, A Dursun
- P-273** Clinical and molecular features of patients with glutaric aciduria type 1 in Malaysia
H Y Leong, S A Abd Wahab, Y Yakob, N A Abd Azize, M K N Mohd Khalid, L H Ngu
- P-274** Clinical, neuroimaging, and genetic features of L-2-hydroxyglutaric aciduria: case series
E Canda, M Kose, C Eraslan, S K Ucar, S Habif, E Karaca, H Onay, F Ozkinay, M Coker
- P-275** New symptomatic patients with glutaric aciduria type 3: further evidence of high prevalence of the c.1006C>T (p.Arg336Trp) mutation
A Skaricic, M Zekusic, K Fumic, K Bilic, D Petkovic Ramadza, V Sarnavka, A Suman Simic, J Zschocke, I Baric
- P-276** N-acetylcysteine (NAC) therapy in ethylmalonic encephalopathy: the importance of changing the route of administration
A B Burlina, G Polo, C Cazzorla, G Giordano, M Zeviani
- P-277** Some cases of elevation of 3-hydroxy-isovaleryl carnitine are caused by a defect in biotin transport
V Bobrinina, O Vitsyna, G Baydakova, E Zakharova
- P-278** 3-Methylglutaconic (3-MGA) aciduria in neonates—molecular study
M Wojtylo, J Trubicka, M Pajdowska, D Rokicki, D Piekutowska-Abramczuk, M Oltarzewski, E Jablonska, E Pronicka

12. Carbohydrate disorders

- P-279** Successful treatment of an adolescent with glycogen storage disease type Ib and severe Crohn-like colitis with elemental nutrition and an anti-TNF α -agent
J Spenger, W Sperl, J A Mayr, S B Wortmann
- P-280** Glycogen storage disease type IX in a boy with 3-methylglutaconic aciduria previously suspected of Barth syndrome
E Szymanska, D Rokicki, E Ciara, M Pronicki, M Pajdowska, J Trubicka, K Pronicka-Iwanicka, S Szymanska, M Pasnicka, A Tylki-Szymanska, E Pronicka
- P-281** Novel *SLC37A4* mutations and molecular characterization in Korean patients with glycogen storage disease Ib
H D Park, R Choi, J M Ko, J Lee, D H Lee, S J Hong, Y H Choe
- P-282** Intracerebroventricular D-galactose injection provokes motor coordination impairment and cerebellar damage in Wistar rats
A F Rodrigues, H Biasibetti, P Pierozan, F Schmitz, B S Zanotto, E F Sanches, D D

Dal Magro, C A Netto, A T S Wyse

- P-283** International clinical guidelines for the management of classical galactosemia: diagnosis, treatment and follow-up
L Welling, L E Bernstein, G T Berry, A B Burlina, F Eyskens, M Gautschi, S Grunewald, C S Gubbels, I Knerr, P Labrune, J H Van der Lee, A MacDonald, E Murphy, P A Portnoi, K Ounap, N L Potter, M E Rubio-Gozalbo, J B Spencer, I Timmers, E P Treacy, S C Van Calcar, S E Waisbren, A M Bosch
- P-284** Systematic review and meta-analysis of intelligence quotient in early-treated individuals with classical galactosemia
L Welling, K M Antshel, H Colhoun, M Gautschi, S Grunewald, R Holman, J H Van der Lee, E P Treacy, S E Waisbren, A M Bosch
- P-285** Bone health in classic galactosemia: systematic review and meta-analysis
L Welling, B Van Erven, S C Van Calcar, A Doulgeraki, F Eyskens, J Gribben, E P Treacy, R Vos, S E Waisbren, M E Rubio-Gozalbo, A M Bosch
- P-286** Infertility and low natural pregnancy rates in female patients with classical galactosaemia in the Republic of Ireland
E Losty, E Crushell, J Hughes, A A Monavari, E P Treacy, G Connolly, I Knerr
- P-287** Atypical manifestation of classic galactosemia with succinylacetone excretion
T A Shkurko, Y Doronina, S Kormoz, N Trofimova, G Baydakova, N A Pichkur, N V Olkhovych, N Gorovenko
- P-288** Hepcidin, interleukin-6 levels and iron metabolism parameters in patients with hepatic glycogen storage diseases
T Nalin, F Sperb-Ludwig, M Siebert, D A Weinstein, T G J Derks, C F M De Souza, I V D Schwartz
- P-289** Complete reversal of glycogen storage disease type 1a complications after liver transplantation
D C Gomes, N Gaibino, A Guerra, A Oliveira
- P-290** The use of indirect calorimetry for energy requirement measurements in children with hepatic glycogen storage disease type I
E Szymanska, E Ehmke vel emczynka Seliga, D Rokicki, A Tylki-Szymanska, J Ksiazek
- P-291** The variable clinical phenotype of hepatic glycogen synthase deficiency
C Kasapkara, Z Aycan, E Acoglu, S Senel, M M Oguz, S Ceylaner
- P-292** A case of a rapidly progressive renal impairment in glycogen storage disease type 1a—the management and preparation for the renal transplant
K M Stepien, L Solomon, M Duncan, B Nair, C J Hendriksz
- P-293** Plasma acylcarnitines and urine organic acids profiles provide evidence for possible mitochondrial dysfunction in glycogen storage disease type Ia
A Rossi, M Ruoppolo, P Formisano, G Villani, L Albano, G Gallo, A Moccia, G Parenti, P Strisciuglio, D Melis
- P-294** Alglucosidase alfa enzyme replacement therapy as a therapeutic approach for glycogen storage disease type IV

- B Sun, H Yi, F Gao, C Yang, S Austin, P S Kishnani*
- P-295** Growth hormone therapy in glycogen storage disease Ib (GSD Ib)
M Ruiz Pons, J M Rial Rdguez, E Valerio
- P-296** Study of gonadal, brain and bone damage in a zebrafish model for classic galactosemia
B Van Erven, J M Vanoevelen, J Bierau, A I Coelho, M E Rubio-Gozalbo
- P-297** Cytosolic phosphoenolpyruvate carboxykinase deficiency (cPEPCK) presenting with gastrointestinal hemorrhage
T Tangeraas, K Tveten, H Astrup, T Rootwelt, P H Backe, B Woldseth
- P-298** Endogenous synthesis of galactose in galactosemics with galactose restricted diet
U Mahmood, M Imran, H A Cheema, H Suleman, S Mahmood
- P-299** Images from F-DOPA PET scan in congenital hyperinsulinism: not always a clue for diagnosis
E Maines, L Giacomello, R Gaudino, M D'Onofrio, M Salgarello, G Gugelmo, A Bordugo
- P-300** Phenotypic and genotypic features and long term follow-up of 36 Turkish galactosemia patients
D Kor, B Seker Yilmaz, F D Bulut, M Oktem, P Kolasin, N Onenli Mungan
- P-301** Type Ib glycogen storage disease presenting as severe hypertrygliceridemia
P S Buonomo, E Ponzi, F R Lepri, A Maiorana, M Macchiaiolo, S Ceccarelli, M Scalzone, I Rana, F Saura, S Calandra, A Novelli, A Bartuli
- P-302** New cases of PRKAG2 mutations presenting in infancy: a possible therapeutic approach using alglucosidase alfa (Myozyme) enzyme replacement therapy
S L Austin, R Torok, C Phornphutkul, A Buckley, B Sun, K Govendrageloo, H Perrin, P S Kishnani
- P-303** Hypoglycemia in children: uncovering the genetic basis of related metabolic disorders by custom gene panel in an Italian cohort
E Ponzi, A Maiorana, F R Lepri, A Novelli, C Dionisi-Vici
- P-304** The association of the c.-119_-116delGTCA mutation and the c.940A>G variant of *GALT* gene in Taiwanese newborns
Y H Chiu, J H Chen, Y N Liu, M Y Liu, S H Chiang, C C Chiang, H C Ho, T T Liu, K J Hsiao
- P-305** Unveiling the mutational spectrum of classic galactosemia in Croatia
I Rivera, S Angelo, H Pavlu-Pereira, M J Silva, I Tavares de Almeida, D Petkovic Ramadza, V Sarnavka, J Vukovic, K Fumic, V Krzelj, B Lozic, S Puseljic, I Baric
- P-306** Safety and acute complications of dietary management in patients with hepatic glycogen storage disease
F Peeks, T A H Steunenbergh, J J Mitchell, C M A Lubout, H Mundy, F De Boer, C F De Souza, D A Weinstein, T G J Derks
- P-307** Adaptive and maladaptive behavior in hyperinsulinism
S Caviglia, P Bazzu, A Maiorana, C Dionisi-Vici
- P-308** Free fatty acid composition in Brazilian patients with type IA glycogen storage

disease

D L Vallejo, S Grunert, S Tucci, C F M De Souza, T Nalin, I D Schwartz

- P-309** Clinical utility of a next generation sequencing panel in the genetic diagnosis of glycogen storage diseases
M N Kyriss, K Bliven
- P-310** Urinary biomarkers measured through NMR spectroscopy and clinical aspects in four patients with galactose-1-phosphate uridyltransferase deficiency
R Vulturar, A Nicolescu, T L Pop, S Tatar, C Deleanu
- P-311** Patterns of growth in glycogen storage disease type III
A Ben Chehida, H Mansouri, R Ben Abdelaziz, H Hajji, H Boudabous, M S Abdelmoula, H Ben Turkia, N Kaabachi, H Azzouz, N Tebib
- P-312** Polyol levels in the diagnosis of transaldolase deficiency
T J Stradomska, A Tylki-Szymanska, J Pawlowska, E Ryciak, A Dobrzanska, P Socha
- P-313** Anthropometric and metabolic indices in adults with glycogen storage disease types I, III and IX
G Wilcox, K M Stepien, C J Hendriks, B J Strauss
- P-314** Unusual evolution in glycogen storage disease type VI due to growth hormone deficiency
A Ben Chehida, S Ben Massoued, R Ben Abdelaziz, H Hajji, H Boudabous, H Ben Turkia, M S Abdelmoula, N Kaabachi, H Azzouz, N Tebib

13. Disorders of fatty acid oxidation and ketone body metabolism

- P-315** Morbidity and mortality among exclusively breastfed neonates with medium-chain acyl-CoA dehydrogenase deficiency
C Ficicioglu, R Ahrens-Nicklas, L Pyle
- P-316** Monocarboxylate transporter 1 deficiency: a novel heterozygous mutation resulting in acute ketoacidosis
S Paquay, J O Sass, U Finckh, M Melchior, C Gobert, Y Sznajder, M C Nassogne
- P-317** The effect of riboflavin is limited in Japanese patients with multiple acyl-CoA dehydrogenase deficiency (MADD)
K Yamada, H Kobayashi, Y Hasegawa, S Yamaguchi
- P-318** Evaluation of natural or synthetic AMPK activators for correction of inborn fatty acid oxidation defects in patient cells.
J Bastin, C Le Bachelier, A Boutron, F Djouadi
- P-319** Acute cardiac failure in LCHADD patients caused by parvovirus B19 infection
D Haas, S Koelker, T Opladen, M Gorenflo, U Gottschalk, R Santer, C Muehlhausen
- P-320** Experimental evidence that long-chain 3-hydroxylated fatty acids accumulating in LCHAD deficiency disrupt bioenergetics without altering redox homeostasis in heart, liver and skeletal muscle of adolescent rats

J C Silva, C Cecatto, A U Amaral, F H Hickmann, A Wajner, K S Godoy, A M Goncalves, B Milnitsky, G Leipnitz, M Wajner

- P-321** Interim results from an open-label phase 2 study assessing the safety and clinical effects of investigational UX007 (triheptanoin) in subjects with long-chain fatty acid oxidation disorders (LC-FAOD)
J Vockley, B Burton, G T Berry, N Longo, J Phillips, A Sanchez-Valle, P Tanpaiboon, S Grunewald, E Murphy, A Bowden, L Zhang, J Cataldo, D Marsden, E Kakkis
- P-322** The effect of newborn screening on clinical outcome in very-long-chain acyl-CoA dehydrogenase deficiency (VLCADD)
J C Bleeker, S Ferdinandusse, R H Houtkooper, R J A Wanders, W L Van der Pol, G Visser
- P-323** Expanded newborn screening for VLCAD deficiency (VLCADD): four years' experience
B Merinero, P Alcaide, A Morais, M T Garcia-Silva, E Martin Hernandez, P Quijada, C Pedron, E Dulin, R Yahyaoui, J M Egea, A Belanger, J Blasco, I Ferrer-Lopez, F Leal, M Ugarte, P Ruiz-Sala, B Perez, C Perez-Cerda
- P-324** Clinical and biochemical outcome of patients with medium-chain acyl-CoA dehydrogenase deficiency
N Longo, D R Anderson, K Viau, M Pasquali
- P-325** Compensatory mechanisms in OCTN2 deficient mice, a murine model of primary carnitine deficiency (PCD)
N Mingirulli, S Tucci, L Melchionda, U Spiekerkoetter
- P-326** Hypoparathyroidism in mitochondrial trifunctional protein deficiency
D Diodato, R Taurisano, A Maiorana, S Boenzi, C Rizzo, E Bellacchio, M Semeraro, C A Carducci, V Leuzzi, E Bertini, C Dionisi-Vici
- P-327** Phenotypic variability and clinical, biochemical, histological and molecular genetic characteristics of 17 patients with multiple acyl-CoA dehydrogenase deficiency
A Tokatli, Y Yildiz, B Talim, B Bilginer Gurbuz, E Pektas, A Dursun, H S Sivri, T Coskun
- P-328** Mitochondrial bioenergetics disturbance and increased superoxide production in very-long-chain acyl-CoA dehydrogenase deficient fibroblasts
B Seminotti, A W Mohsen, A Karunanidhi, V Y Roginskaya, B Van Houten, P Wipf, J Vockley
- P-329** Clinical and genetic aspects of 50 Japanese cases of VLCAD deficiency
S Yamaguchi, Y Hasegawa, M Furui, K Yamada, R Bo, H Kobayashi, T Taketani, S Fukuda, T Fukao, I Nishino
- P-330** An c.IVS9-9T>A substitution identified in beta-ketothiolase deficient patients results in exon 10 skipping in most transcripts of ACAT1 gene
T Fukao, H Sasai, H Otsuka, Y Aoyama, A Elsayed, M Nakama, T Hori, H Ohnishi, L Turner, L Sweetman
- P-331** Fatty acid oxidation (VLCADD) defect presenting with ketonuria: two case reports
C Galimberti, S Gasperini, A Brambilla, M Pasetti, S Tursi, R Pretese, M Rigoldi, R

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- P-332** A systematic review and meta-analysis of case reports in ketone-utilization defects
F Molema, P M Hasselt
- P-333** Early detection of myocardial diastolic dysfunction in patients with LCHADD—a pilot study
M Michel, S Scholl-Buergi, K Pichler, M Zlamy, T Karall, D Karall
- P-334** Clinical, biochemical and molecular characterization of very-long-chain acyl-CoA dehydrogenase deficiency (VLCADD) in Saudi Arabia
M Alsayed, A Edrees, Z AlHassnan, H AlZaidan
- P-335** Identification of a novel mutation in Turkish infant with early-onset monocarboxylate transporter 1 (MCT1) deficiency as a cause of recurrent ketoacidosis
I Okur, A Inci, E Keles, A Karaoglu, S Ceylaner, G Biberoglu, F S Ezgu, L Tumer

14. Mitochondrial disorders: nuclear encoded, disorders of pyruvate metabolism and the Krebs cycle

- P-336** A novel mutation in three siblings with MNGIE disease from Pakistan
B Afroze, B C Chen, Y Yusnita
- P-337** Clinical, molecular, radiological investigations in patients with SURF1 mutations and muscle biopsy findings
M Kose, M Kagnici, E Canda, C Eraslan, G Diniz, G Akinci, A Unalp, U Yilmaz, S Ceylaner, S Kalkan Ucar, R Taylor, M Coker
- P-338** Improving the diagnosis of leucoencephalopathy with brain stem and spinal cord involvement and lactate elevation (LBSL) caused by mutations in *DARS2* gene
M I Mendes, D E Smith, L Licht, E A Struys, N I Wolf, M J Van der Knaap, G S Salomons
- P-339** A prospective evaluation of whole-exome sequencing as the most effective diagnostic strategy in children with suspected mitochondrial disorders
M Krajewska-Walasek, D Piekutowska-Abramczuk, E Ciara, J Trubicka, D Rokicki, A Karkucinska-Wieckowska, M Pajdowska, E Jurkiewicz, P Halat, J Kosinska, A Pollak, M Ryzanicz, P Stawinski, M Pronicki, R Ploski, E Pronicka
- P-340** Mitochondrial infantile liver disease due to *TRMU* gene mutations: two cases with different outcome
L Cimbalistiene, B Burnyte, J Songailiene, V Urbonas, E Grabhorn, M Hempel, R Santer, T Haack, H Prokisch
- P-341** The fetal and neonatal presentation of CLPB deficiency—a study in 29 patients
E Pronicka, J Trubicka, D Piekutowska-Abramczuk, D Rokicki, E Ostergaard, C Saunders, C Van Karnebeek, J Yaplito-Lee, F Distelmaier, K Ounap, S Rahmans, J A Mayr, K Iwanicka-Pronicka, E Ciara, S B Wortmann
- P-342** Pyruvate kinase as a novel metabolic regulator of beta cell loss in diabetes
Y Kim, T Zee, G Karsenty, L Sussel

- P-343** *NDUFB8* mutations are a novel cause of mitochondrial complex I deficiency in a patient with basal ganglia and white matter brain changes
D Piekutowska-Abramczuk, L Matakovic, J A Mayr, R G Feichtinger, H Prokisch, E Jurkiewicz, J Trubicka, E Ciara, M Pronicki, D Rokicki, R Ploski, M Krajewska-Walasek, E Pronicka
- P-344** Two sibling cases of aspartate-glutamate carrier deficiency: identifying increased 2-hydrobutyrate and decreased glycolate, glyoxylate and 5-oxoproline in CSF
S Yano, H Saitsu, A Partikian, K Moseley, S Bluml, Y Watanabe, N Matsumoto
- P-345** *FARS2* mutations: from early-onset malignant hyperthermia to childhood epilepsy partialis continua and adult intellectual disability
S Paquay, F Renaldo, D Germanaud, L Perrin, A C Tabet, A Slama, S Auvin, C Mignot, M Schiff
- P-346** Pathogenic mutations in *FARS2* in a patient with motor regression and epilepsy as first signs, later evolving to spastic paraplegia associated with autonomic disturbances
E Vantroys, J Smet, A Vanlander, B De Paepe, S Vergult, T Sante, B Menten, R Van Coster
- P-347** A new mutation of mitochondrial DNAJC19 in a Turkish patient with 3-methylglutaconic aciduria, dysmorphic feature, dilated cardiomyopathy, dystonia, anemia, male genital anomalies and deafness
S Kalkan-Ucar, S B Wortmann, J A Mayr, W Sperl, E Canda, M Coker
- P-348** Clinical, biochemical and genetic spectrum of mitochondrial disorders in Egyptian children: a study of 19 cases
L A Selim, D Mehaney, R Vancoster, S A Hassan, I G Mahmoud, A I ElBadawy, A Vanlander, J Smet, E De Letter, K Vandemeulebroecke, D Abdoh, G A Nakhla, M Mostafa, D Habets, J Bakker, A Abdel Barry
- P-349** The simultaneous presence of the somatic-specific PDHA1 and the testis-specific PDHA2 proteins in somatic cells of a pyruvate dehydrogenase complex deficient patient
I Rivera, H Pavlu-Pereira, M J Silva, B Marques, H Correia, I Tavares de Almeida
- P-350** Clinical, molecular and genetic characteristics of mitochondrial hepatopathy in Japan
M Shimura, K Murayama, T Fushimi, K Ichimoto, A Matsunaga, M Mori, Y Kishita, Y Tokuzawa, M Kohda, Y Okazaki, A Ohtake
- P-351** High ROS content and biochemical defect of complex I due to a novel mutation in the molecular chaperon NDUFAF4 is partially reversed by the use of antioxidant compounds
A Torraco, M Di Nottia, D Verrigni, S Petrillo, T Rizza, D Martinelli, D Diodato, F Piemonte, C Dionisi-Vici, E Bertini, R Carrozzo
- P-352** Mutations in *MRPL57* are associated with OXPHOS defects in a patient with fatal hypertrophic cardiomyopathy
F Tort, X Ferrer-Cortes, M Massana, L Matalonga, N Bujan, E Lopez-Gallardo, W Lissens, J Montoya, J Mesa, M Fernandez-Burriel, P Briones, A Ribes

- P-353** The spectrum of disease and functional implications of *TRNT1* mutations
Y Wedatilake, R Niazi, E Fassone, C A Powell, S Pearce, J W Saldanha, R Kleta, W K Chong, E Footitt, P B Mills, V Plagnol, J W Taanman, M Minczuk, P T Clayton, S Rahman
- P-354** Lethal early-onset cardiomyopathy caused by TK2 and AARS2 deficiency
S Mazurova, M Magner, V Kucerova-Vidrova, A Vondrackova, V Stranecky, A Pristoupilova, J Zamecnik, H Hansikova, J Zeman, M Tesarova, T Honzik
- P-355** Characterization of the impairment of mitochondrial bioenergetics and dynamics in fibroblasts from patients with complex I deficiency
G Leipnitz, A W Mohsen, A Karunanidhi, B Seminotti, V Y Roginskaya, D M Markantone, B Van Houten, J Vockley
- P-356** A patient with mitochondrial disorder and mutation in *MRPS22* gene
M Kilic, E Kilic, R K Ozgul, D Yucel-Yilmaz, P Kavak, B Yuceturk, H Demirci, O Dedeoglu, D Yuksel, M S Sagiroglu
- P-357** The new autosomal recessive phenotype of mitochondrial disease caused by *DNA2* gene mutations
Y S Itkis, T D Krylova, N L Pechatnikova, V S Kakaulina, N A Polyakova, P G Tsygankova, I O Bychkov, E Y Zakharova
- P-358** Unexpected findings from next generation sequencing (NGS) panel suggesting mitochondrial disorder in two patients
K Simenson, S Pajusalu, T Kahre, R Zordania, R Rein, R J Rodenburg, K Ounap
- P-359** Two novel pathogenic variants in *KARS* unveil a new phenotype associated with cardiomyopathy and defects of mitochondrial respiratory chain
M Di Nottia, D Verrigni, D Diodato, A Torraco, E Bellacchio, T Rizza, E S Bertini, R Carrozzo
- P-360** Subcomplexes of complex V in a patient with Perrault syndrome due to pathogenic mutations in *C10orf2*
P Verloo, J Smet, E Vantroys, A Vanlander, S Vergult, T Sante, B Menten, R Van Coster
- P-361** Novel homozygous mutation in *TUFM* associated with leukodystrophy and defective mitochondrial DNA translation
T Rizza, M Di Nottia, D Verrigni, A Montanari, E Fernandez-Vizarra, D Diodato, R Oliva, A Torraco, F Piemonte, S Francisci, M Zeviani, C Dionisi-Vici, E S Bertini, R Carrozzo
- P-362** *SPATA5* deficiency in three patients with suspected mitochondrial disease characterized by global developmental delay, hearing loss, visual impairment, and epilepsy
R Kovacs-Nagy, U Kotzaeridou, C Makowski, B Alhaddad, M Braunisch, C Wilson, G F Hoffmann, T B Haack
- P-363** A novel mutation in the human *MPV17* gene is responsible for the high incidence of mitochondrial neurohepatopathy in Black South Africans
S Meldau, R De Lacy, G Riordan, K Pillay, G F Van der Watt
- P-364** *ECHS1* and *HIBCH* mutations: valine metabolism disorders or multiple

mitochondrial dysfunction syndromes?

E Lebigot, C Mehler-Jacob, M C Noughes, P Gaignard, L Drira, P Therond, C Sevin, A Slama, A Boutron

- P-365** Could arginine aspartate be a promising treatment for fumaric aciduria?
P L Pinto, P Janeiro, T Moreno, S Mexia, I Jardim, M Grazina, L Vilarinho, I T Almeida, A Gaspar
- P-366** Imitating the pretender: inborn errors of metabolism mimicking mitochondrial disorders
N Flynn, S L Hogg, A P J Parker, M Chitre, J Calvin
- P-367** Two sibling cases of aspartate-glutamate carrier 2 (citrin) deficiency: does diet affect prognosis?
Y Watanabe, K Fukui, N Harada, K Tashiro, T Inokuchi, S Yano, Y Yamashita
- P-368** Severe infantile epileptic encephalopathy with cerebellar cysts associated with *COQ4* mutations and primary coenzyme Q10 deficiency
U Ahting, S Leiz, S Petrova, M Baethmann, B Alhaddad, B Rolinski, T Haack, P Freisinger, T Meitinger
- P-369** Severe motor neuronopathy: a clinical hallmark in two young brothers with *SUCLG1* mutations
A Kuster, G Caillaux, N Benbrik, I Ceballos, J F Benoist, Y Pereon, A S Lebre
- P-370** *UQCRC2* mutation in a patient with mitochondrial complex III deficiency with recurrent hepatic failure, lactic acidosis and hypoglycemia
P Gaignard, D Eyer, E Lebigot, C Oliveira, P Therond, A Boutron, A Slama
- P-371** *COX5* related complex IV deficiency: primary pulmonary hypertension, failure to thrive, and lactic acidosis
F Al-Murshedi, K Al-Sineidi, N Joshi, K Al-Thihli, Z Bruwer, K Al Kharusi, A Al-Mawali, R Rodenburg
- P-372** Two cases with *ELAC2* mutations presenting with isolated infancy-onset cardiomyopathy
E Mastantuono, H Seidel, A Eichinger, B Alhaddad, H Prokisch, T Haack
- P-373** Functional characterization of a novel mitochondrial translation defect
T Gardeitchik, M Mohamed, D Dalloyaux, U Brandt, S Guerro Castillo, D Karall, E Morava, R A Wevers
- P-374** Personalized medicine approach confirms a new case of *ABAT* deficiency
P E Bonnen, A Besse, V Appadurai, S Lalani, M K Koenig

15. Mitochondrial disorders: mtDNA

- P-375** Sarcopenic obesity frequently occurs in adult patients with mitochondrial disease
H E E Zweers, L A Van de Vorst, S Huisman, S Leij, G J A Wanten, M C H Janssen
- P-376** Acyl-carnitine profile mimicking multiple acyl-CoA dehydrogenase deficiency in a patient with mitochondrial myopathy and a mutation in the *MT-CO2* gene
G Kollberg, J Asin-Cayueta, C Hedberg-Oldfors, A Oldfors, M Tulinius

- P-377** Unusual intragenic *MT-ND1* inversion detected in the eye lens sample from patient with Leigh-like presentation
E Ciara, M Pelc, P Kowalski, E Jurkiewicz, D Piekutowska-Abramczuk, J Trubiccka, M Prost, P Halat, D Rokicki, D Jurkiewicz, D Siestrzykowska, M Pajdowska, K Iwanicka-Pronicka, P Stawinski, R Ploski, M Krajewska-Walasek, E Pronicka
- P-378** Mitochondrial network properties in cultured myoblasts from patients with mitochondrial disorders
H Hansikova, J Krizova, J Sladkova, M Capek, M Tesarova, T Honzik, J Martinek, J Zamecnik, O Kostkova, J Langer, J Zeman
- P-379** 3-Methylglutaconic aciduria in a patient with fatal infantile cardiomyopathy due to a m.3303C>T *MT-TL1* mutation
K Joost, H Poder, K Kall, R W Taylor, E L Blakely, T Jalas, R Zordania
- P-380** A review of anaesthetic outcomes in a cohort of patients with genetically confirmed mitochondrial disorders
A Smith, E Dunne, M Mannion, C O'Connor, I Knerr, A Monavari, J Hughes, N Eustace, E Crushell
- P-381** MELAS-like presentation of mitochondrially-encoded tRNA(Trp) deficiency
M A Lines, C A Rupar, M T Geraghty
- P-382** Evidence of multiple carboxylase deficiencies in seven unrelated patients with mutations in *MT-ATP6*
J D Weisfeld-Adams, B A Heese, N Hauser, S Balasubramaniam, J Christodoulou, E Glamuzina, C Van Karnebeek, A Mattman, L A Kluijtmans, A L Williamson, G A Diaz, S L Rutledge, J K L Van Hove, A Larson
- P-383** Mitochondrial optic neuropathies—optimization of diagnosis and management strategy
H Kolarova, P Liskova, M Forgac, V Dvorakova, P Havrankova, M Tesarova, T Honzik, J Zeman
- P-384** Whitdrawn

16. Disorders of purines, pyrimidines, nucleic acids and porphyrias

- P-385** Hypoxanthine intrastratial administration alters redox status and provokes DNA damage in striatum of infant and young adult rats
H Biasibetti, P Pierozan, A F Rodrigues, C A Prezzi, V Manfredini, A T S Wyse
- P-386** Development of a LC-MS/MS method for the quantitation of purine and pyrimidine metabolites in human urine
A Cremonesi, N Perkins, J Haeberle, M Hersberger
- P-387** Altered pre-mRNA splicing due to a novel intronic mutation c.1443+5G>A in the dihydropyrimidinase (*DPYS*) gene
Y Nakajima, J Meijer, C Zhang, X Wang, T Ito, A B P Van Kuilenburg
- P-388** Preparation of individual intermediates of *de novo* purine synthesis as standards for LC-MS/MS
M Krijt, V Skopova, V Baresova, O Souckova, M Zikanova

P-389 Genetic and transcriptomic approaches of Lesch-Nyhan disease
I Ceballos-Picot, L Mockel, M Ledroit, L Dauphinot, C Petitgas, M C Potier, F Auge, A Olivier-Bandini

17. Peroxisomal, sterol, bile acid, lipid and lipoprotein

- P-390** Blood lysophosphatidylcholine: a diagnostic marker for X-linked adrenoleukodystrophy
R Mashima, M Tanaka, E Sakai, T Kumagai, M Kosuga, T Okuyama
- P-391** Successful living donor liver transplantation (LDLT) for a Korean infant with oxysterol 7 α -hydroxylase deficiency
H W Yoo, B H Lee, S H OH, J M Namgung, D Y Kim, S Hwang, K M Kim
- P-392** Long term outcome of early liver transplantation for a peroxisome biogenesis defect: 15 years follow up
L Van Maldergem, X Stephenne, D Fagnart, C Kestens, P Deltenre, A Bosschi, S Ferdinandusse, N Deggouj, F G Debray, M C Nassogne, A Moser, R J Wanders, E Sokal
- P-393** Lipidomic analysis of fibroblasts from Zellweger spectrum disorder patients identifies disease-specific phospholipid ratios
K Herzog, M L Pras-Raves, M A T Vervaart, A C M Luyf, A H C Van Kampen, R J A Wanders, H R Waterham, F M Vaz
- P-394** The role of C26:0-lysophosphatidylcholine in the diagnosis of Zellweger spectrum disorders
F C C Klouwer, S Ferdinandusse, H Van Lenthe, B T Poll-The, R J A Wanders, H R Waterham, F M Vaz
- P-395** Clinical diversity of cerebrotendinous xanthomatosis between pediatric and adult patients: report of 7 cases
T Zubarioglu, E Kiykim, A Gunduz, G Yesil, M S Cansever, S Saip, U Uygunoglu, C Yalcinkaya, A C Aktuglu-Zeybek
- P-396** Evaluation of a single-centre monitoring programme and outcomes for children with X-linked adrenoleukodystrophy (X-ALD)
N Keshavan, J Davison
- P-397** ID2STOP Orphan: InDividualized Drug Selection Technology for Orphan Patients
C Moreau, A Jeoual, G Briand, B Deprez, D Dobbelaere, T Beghyn
- P-398** Identification of a novel mutation in *PEX10* in a patient with attenuated Zellweger spectrum disorder
M K Blomqvist, K Ahlberg, J Lindgren, S Ferdinandusse, J Asin-Cayuela
- P-399** Apheresis therapy in patients with homozygous familial hypercholesterolemia
I Kecec, B Seker Yilmaz, D Kor, F D Bulut, F Tekinturhan, H Eren, N Onenli Mungan
- P-400** Glycerol-3-phosphate dehydrogenase 1 deficiency presenting with hepatosplenomegaly and pseudohypertriglyceridemia
P Verloo, R De Bruyne, K Vanhouteghem, J Delanghe

- P-401** Homozygous missense mutations in *GPD1* presenting with ichthyosis, hepatosteatorrhea, and hyperlipidemia
T Zubarioglu, A C Aktuglu Zeybek, E Kiykim, G Yesil
- P-402** D-bifunctional protein deficiency: expanding the phenotypic spectrum
Y E Landau, G Heimer, N Shalva, D Marek-Yagel, A Veber, B Ben-Zeev, Y Anikster
- P-403** Clinical and neuroradiological findings of X-ALD patients
M Yildiz, M Karaca, C Balci, E Cakar, M Demirkol, G Gokcay
- P-404** Cerebrotendinous xanthomatosis: response to treatment in late diagnosed cases
M Karaca, C Balci, E Cakar, M Demirkol, G Gokcay

18. Lysosomal disorders: mucopolysaccharidoses, oligosaccharidoses

- P-405** Clinical, biochemical, and genetic findings in 8 infants affected with Sandhoff disease
T Z Zaman, S H Moarefian, A S Fazeli, M H Sanati, M Hushmand, R Aryan
- P-406** Clinical, radiographic, and genetic features of Korean patients with Morquio A syndrome
S Y Cho, J S Kim, E K Cho, H D Park, D K Jin
- P-407** Design and rationale of the clinical study programs for BMN 250, a novel investigational enzyme replacement therapy for Sanfilippo B syndrome
A Shaywitz, M Oh, S Kent
- P-408** Clinical features, molecular analysis and outcome of ERT in Korean patients with mucopolysaccharidosis type VI
E K Cho, K Wichajarn, J S Kim, A R Yang, Y B Sohn, S J Kim, S W Park, S Y Cho, D K Jin
- P-409** Mucopolysaccharidoses and oligosaccharidoses: biochemical diagnosis in clinically suspected Egyptian children
M M Ibrahim, E M Fateen, A M Radwan
- P-410** The reduction of heparan sulfate level in the cerebrospinal fluid and of heparan sulfate content in the brain tissue of *IDS* knockout mice by an intracerebroventricular injection of idursulfase-beta are correlated
Y B Sohn, A Ko, S Y Cho, M Sakaguchi, T Nakazawa, M Kosuga, J H Seo, T Okuyama, D Jin
- P-411** Molecular analysis of 24 patients with mucopolysaccharidosis IIIA from Ukraine
N S Trofimova, N V Olkhovych, N I Mytsyk, N A Pichkur, N G Gorovenko
- P-412** Nitrosative stress and protein damage in mucopolysaccharidosis type II patients is correlated with dermatan sulphate
G S Ribas, C Jacques, B Donida, D Marchetti, M Deon, C Mescka, R Giugliani, C R Vargas
- P-413** Multiplex MS/MS method to measure MPS II, MPS IIIB, MPS IVA, MPS VI and MPS-VII enzyme activities in dried blood spots
J R Rehnberg, A Potier, J Cournoyer, J Trometer, M Schermer, A Vranish, J

DiPerna, F Yi, N Chennamaneni, Z Spacil, A B Kumar, H C Liao, M H Gelb, C R Scott, F Turecek

- P-414** Dramatic mobility improvement on galsulfase ERT: a case report
J Zakharchuk
- P-415** Genistein: an effective oral substrate reduction therapy for MPS III
A B Jalan, K V Kudalkar, R A Jalan, D H Shinde, M A Borugale, M M Joshi, S M Shirke, A P Mahamunkar, R J Tawde, S Eichler, K Schmidt, S Zielke, A Giese, A Rolf
- P-416** Mucopolysaccharidosis type 2: information on 19 Hunter syndrome patients in Iran
F Hadipour, A Rolf, Y Shafeghati, F W Verheijen, Z Hadipour
- P-417** 34 Maroteaux-Lamy (mucopolysaccharidosis type 6) patients diagnosed in Iran
F Hadipour, A Rolf, Y Shafeghati, F W Verheijen, Z Hadipour
- P-418** Mucopolysaccharidosis: orofacial findings in a series of 35 cases
S Kalkan-Ucar, D Cogulu, E Canda, E Atila, A R Alpoz, M Coker
- P-419** Mucopolysaccharidosis type I from the perspective of phenotype-genotype-therapeutical response correlation
M Coker, E Canda, B Ozkaya, E Ben, H Onay, F Ozkinay, E Sozmen, S Kalkan-Ucar
- P-420** Sialidosis type I with nonspecific biochemical and enzymatic patterns caused by two novel, compound heterozygous variants in *NEU1* gene
U Muetze, F Buerger, J Hoffmann, H Tegetmeyer, P Nickel, J R Lemke, S Syrbe, S Beblo
- P-421** Iminosugar based pharmacological chaperones: selecting new leads to target Gaucher, Morquio A and Hunter diseases
C Matassini, G D'Adamio, C Parmeggiani, S Catarzi, A Goti, A Morrone, F Cardona
- P-422** Evaluation of chitotriosidase and high sensitivity C-reactive protein levels in mucopolysaccharidosis
A Inci, B Genc, C Y Demirtas, B Udgu, A Karaoglu, I Okur, F S Ezgu, G Biberoglu, L Tumer
- P-423** Type 1 hypersensitivity reaction and desensitization with elosulfase alpha
A Inci, A Kan, B Topuz, I Okur, F S Ezgu, A Bakirtas, L Tumer
- P-424** Bone marrow transplantation from heterozygous donors improve IDS deficiency in mucopolysaccharidosis type II mice
K Akiyama, Y Shimada, T Higuchi, T Yokoi, K Yokoi, T Fukuda, S Iizuka, H Kobayashi, M Ishii, H Ida, T Ohashi
- P-425** Sulfated disaccharides improve iduronate-2-sulfatase function in fibroblasts from patients with mucopolysaccharidosis type II
H Hoshina, Y Shimada, T Higuchi, H Kobayashi, H Ida, T Ohashi
- P-426** From clinical to biochemical—genetic characterisation of Morquio B disease
A Caciotti, R Tonin, S Catarzi, M Vasarri, G La Marca, G Forni, A Paoli, S Bechini, E Procopio, M A Donati, M Rigoldi, M Di Rocco, A Andaloro, D Antuzzi,

A Rampazzo, M Scarpa, G Renzo, A Morrone

- P-427** Could propionylcarnitine and free carnitine be used as antioxidative markers in mucopolysaccharidosis?
A Inci, G Biberoglu, B Genc, A Karaoglu, I Okur, F S Ezgu, L Tumer
- P-428** High-throughput determination of urinary hexosamines in newborns of 2-3 days of age: application for the early diagnosis of mucopolysaccharidoses
N Volpi, F Maccari, F Galeotti, D Concolino, R L Marchesiello, T Galeazzi
- P-429** Determination of total and single species of all uronic acid-bearing glycosaminoglycans in urine of newborns of 2-3 days of age for a possible early diagnosis of mucopolysaccharidoses
N Volpi, F Maccari, F Galeotti, R Tomanin, C Monachesi, T Galeazzi, C Catassi
- P-430** Development of a routine LC-MS/MS method for the analysis of underivatized urinary oligosaccharides for the diagnosis of oligosaccharidoses
M Piraud, M Pettazoni, L Menegaut, R Froissart, C Vianey-Saban
- P-431** Spinal magnetic resonance imaging findings in mucopolysaccharidoses type IVA
E Canda, C Eraslan, H Yazici, S K Ucar, M Coker
- P-432** Multidetector computed tomography for the evaluation of the trachea in patients affected by mucopolysaccharidoses
M Grimaldi, D Di Marco, M Rigoldi, A Piperno, A Biondi, S Gasperini, C Galimberti, R Parini
- P-433** Short-term outcome of surgical correction of genu valgum in four patients with mucopolysaccharidosis type IV-A
H S Sivri, M C Aksoy, G Yilmaz, Y Yildiz, B Bilginer Gurbuz, E Pektas, A Dursun, A Tokatli, T Coskun
- P-434** Mucopolysaccharidosis type I due to maternal uniparental disomy of chromosome 4
M Gurner, S Chin, G Owens, T Pyragius, K Brion, M Trinh, K Friend, S Yu, D Ketteridge, S Stark, J Fletcher
- P-435** Do cytokine levels play a role in pathogenesis of mucopolysaccharidosis patients?
A Inci, L Tumer, C Y Demirtas, A Karaoglu, I Okur, A Olgac, F S Ezgu, G Biberoglu
- P-436** Early initiation of investigational enzyme replacement therapy in a nine-month-old infant with mucopolysaccharidosis type VII
A Karaoglu, A Inci, G Biberoglu, I Okur, A Kilickaya, L Tumer, B King, C Haller, F S Ezgu
- P-437** EEG features in patients with mucopolysaccharidoses III at different disease stages
R Barone, M D Cocuzza, C Guida, G Miano, V Sofia, A Fiumara
- P-438** Mucopolysaccharidosis type II in 44 Czech, Slovak, Serbian and Croatian patients: clinical manifestation and analysis of mutational spectrum
L Dvorakova, H Vlaskova, A Sarajlija, D P Ramadza, H Poupetova, E Hrubá, A Hlavata, V Bzduch, K Peskova, G Storkanova, B Kecman, M Diordjevic, I Baric, K Fumic, I Barisic, M Reboun, J Kulhanek, J Zeman, M Magner
- P-439** Increase of serum levels of matrix metalloproteinase-2 in four paediatric MPS II

patients

M Magner, B Asfaw, J Kulhanek, H Poupetova, J Langer, J Zeman, I Svandova

- P-440** Effect of enzyme replacement therapy in a 5-year-old boy with mucopolysaccharidosis IV A
M Magner, I Marik, J Kulhanek, S Svecova, M Tesarova, B Asfaw, H Poupetova, J Bartl, J Zeman
- P-441** Four-years study in 137 Russian patients with mucopolysaccharidosis (MPS)
A A Pushkov, K V Savostyanov, A K Gevorkyan, L M Kuzenkova, T V Podkletnova, A V Pakhomov, L S Namazova-Baranova, A A Baranov
- P-442** Mutation analysis for mucopolysaccharidosis gene's cluster in a southwestern Colombian affected population
A Sanchez, L M Moreno, J M Satizabal
- P-443** Outcome of haematopoietic stem cell transplantation in two mucopolysaccharidosis type II severe patients
R Parini, M Spada, S Gasperini, C Galimberti, F Bertola, E Biamino, M Pasetti, F Nichelli, A Biondi, A Rovelli
- P-444** Hematopoietic stem cell transplantation in a patient with mucopolysaccharidosis II
L H Moey, H B Chew, P T Winnie Ong, H Y Leong, H Muzhirah, G S Chng, W T Keng, M I Hishamshah, S O Ida, L H Ngu
- P-445** Dermatan sulfate and heparan sulfate quantification in CSF, plasma and dried urine spots by UPLC-MS/MS
S P Young, H Zhang, P I Dickson, J A Beasley, A H Chen, S Le, M Weetall, D S Millington
- P-446** Characteristics of patients aged 5 years and older at first signs and symptoms of mucopolysaccharidosis type II: data from the Hunter Outcome Survey (HOS)
P Harmatz, S P Lin, J Muenzer, R Giugliani, N Guffon, V Jego, B Burton
- P-447** Bone crisis in atypical localization in GD patients under long-term enzyme replacement therapy
M Andrade Campos, I Sancho Val, I Garcia, M Roca Espiau, P Giraldo
- P-448** Assessment of microvascular endothelial function in children and adolescents with mucopolysaccharidosis type VI
B Ozturk-Hismi, B Kumru, T Kilic, S Sezer, M Keskin, C Bagci
- P-449** Health-related quality of life of transplanted MPS I Hurler children
L Scalone, R Ciampichini, L G Mantovani, G Cesana, F Scordo, S Gasperini, C Galimberti, A Biondi, A Rovelli, R Parini
- P-450** Clinical and biochemical spectrum of mucopolysaccharidosis type III (Sanfilippo syndrome) in Morocco
H Talbaoui, S Dahri, Y Kriouile, F Z Oudghiri, R Froissart, C Saban, L Chabraoui
- P-451** Targeted population screening for mucopolysaccharidoses—an efficient tool for the diagnosis of patients
S Murko, P Nieves Cobos, A Gal, R Santer, Z Lukacs
- P-452** Using a mathematical–structural model in prediction of pubertal spurt in patients

with MPS I and MPS II

A Rozdzynska-Swiatkowska, J Cieslik, A Tylki-Szymanska

- P-453** Four novel mutations in the N-acetylgalactosamine-6-sulfate sulfatase gene among Egyptian patients with Morquio A disease
E M Fateen, H A El Mawgoud, M L Essawi, M S Aglan, M M Ibrahim, N R Eissa
- P-454** Enzyme replacement therapy for mucopolysaccharidosis type VI: experience from a Brazilian reference center
M A Curiati, C S C Mendes, M H Rand, P Feliciano, C S Aranda, A M Martins
- P-455** Epileptic seizures profile in patients with mucopolysaccharidosis (MPS) types I, II and VI
C S C Mendes, M H Rand, M A Curiati, P Feliciano, C S Aranda, A M Martins
- P-456** Nitrate and inflammatory status in long-term idursulfase-treated mucopolysaccharidosis type II patients
C E D Jacques, H M De Souza, N M M Forest, A M B Mathias, C F M De Souza, R Giugliani, C R Vargas

19. Lysosomal disorders: sphingolipidoses

- P-457** The spectrum of Niemann-Pick type C disease in Greece
I Mavridou, E Dimitriou, M T Vanier, L Vilageliu, D Grinberg, P Latour, A Xaidara, L Lycopoulou, S Bostantjopoulou, D Zafeiriou, H Michelakakis
- P-458** Natural course of classical and non-classical Fabry disease: a large multicenter cohort study
M Arends, C Wanner, D Hughes, A Mehta, M Biegstraaten, C E M Hollak
- P-459** Acid sphingomyelinase deficiency: diverse clinical manifestations and heterogeneous natural history
M McGovern, R Avetisyan, B J Sanson, O Lidove
- P-460** A novel mutation in *NPC1* associated with neonatal cholestasis and neurological deterioration despite normal oxysterol and cholesterol esterification findings
S Santra, S Vijay, S Sreekantam, L M Simmons, T Hutchin, J Blundell, E Wright, S Kearney, J Raiman
- P-461** High frequency of p.His281Tyr mutation in *GLB1* gene in patients with GM1-gangliosidosis in Ukraine
N I Mytsyk, N V Olkhovych, N S Trofimova, N A Pichkur, N G Gorovenko
- P-462** Functional analysis of common splicing mutations detected in *HEXB* gene causing Sandhoff disease
J Mugnaini, S Brasil, L Desviat, R Dodelson de Kremer, C E Argarana, B Perez, A M Oller Ramirez
- P-463** Multiplex ligation-dependent probe amplification assay: screening for deletions/duplications in the *GBA1* gene in Gaucher disease patients
M Siebert, S P Basgalupp, F P Vairo, I V D Schwartz
- P-464** Molecular mechanism of autophagic pathway in Gaucher cells

S Dokmeci (Emre), O Oral, A Yuce, D Gozuacik

- P-465** Consensus recommendation on a diagnostic guideline for acid sphingomyelinase deficiency
R Giugliani, C Dionisi-Vici, P Hwu, O Lidove, Z Lukacs, E Mengel, P K Mistry, E Schuchman, M Wasserstein, M McGovern
- P-466** Technical difficulties in the diagnosis of Krabbe leucodystrophy by enzyme analysis
T Hutchin, F Terry, S Santra, C Egerton, H Church, M A Preece
- P-467** International Niemann-Pick Disease Registry Project
S Bolton, T Hiwot
- P-468** Diagnostic utility of chitotriosidase activity, CCL18/PARC and 7-ketocholesterol concentrations in Gaucher, Niemann-Pick A/B/C and lysosomal acid lipase deficiency
P Irun, J J Cebolla, P Alfonso, I De Castro-Oros, L Lopez de Frutos, P Giraldo
- P-469** Evaluation of bone quality in patients with type 1 Gaucher disease with microindentation. Preliminary results
J Perez-Lopez, S Herrera, M Molto, R Guerri-Fernandez, E Cabezudo, S Novelli, J Esteve, A Hernandez, I Roig, X Solanich, D Prieto-Alhambra, X Nogues, A Diez-Perez
- P-470** Assessment of diagnostic parameters and disease biomarkers for detecting early-stage Fabry disease and monitoring its progression—results from the SOPHIA study
F Weidemann, M Beer, M Kralewski, C Kampmann
- P-471** Study of comorbidities in a Spanish cohort of Gaucher disease type 1 patients
J Perez-Lopez, V Giner, M A Torralba-Cabeza, S J Perez, M Molto-Abad, I Roig, L Vicente, A Luana-Galan, E Cabezudo, X Solanich, B Roig-Espert, E Patera, M L Lozano-Almela, R Hurtado-Garcia, M Reyes, N Revilla, S Novelli, J Esteve
- P-472** Characteristics of 27 patients with type 3 Gaucher disease: a descriptive analysis from the Gaucher Outcome Survey
I V D Schwartz, O Goker-Alpan, P Kishnani, A Zimran, L Renault, Z Panahloo, P Deegan
- P-473** Clinical use of plasma oxysterols for rapid diagnosis of Niemann-Pick type C
I Lay, D Ardicli, A Samadi, F Akbiyik, E Serdaroglu, G Haliloglu, A Yuce, T Coskun, M Topcu
- P-474** Cardiac dysfunction and troponin I levels in patients with Fabry disease followed at Hospital de Clinicas de Porto Alegre, Brazil
F Vairo, J Angrezani, A Teixeira, R Giugliani
- P-475** Metabolic progression to clinical phenotype in classic Fabry disease
M Spada, D Kasper, V Pagliardini, S Giachero, E Biamino, F Porta
- P-476** The ENCORE trial: outcomes in adult patients with Gaucher disease type 1 previously stabilized on enzyme therapy after 4 years of treatment with eliglustat
T M Cox, G Drelichman, R Cravo, M Balwani, T A Burrow, A M Martins, E Lukina, B Rosenbloom, O Goker-Alpan, N Watman, A El-Beshlawy, P S Kishnani, M L Pedroso, S J M Gaemers, R Tayag, M J Peterschmitt

- P-477** Combination therapy using miglustat and ketogenic diet for treatment of gangliosidoses: overall survival in 10 infants
J R Jarnes Utz, C B Whitley
- P-478** Development of a suspicion index tool to help diagnosis of Gaucher disease
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- P-479** Novel LIPA mutations resulting in lysosomal acid lipase deficiency
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- P-480** Identification of 14 novel mutations in 45 Iranian Niemann-Pick type C (NP-C) patients
M Houshmand, S H Tonekaboni, O Aryani, P Karimzadeh, K Rahmanifar, A R Tavasoli, T Zaman, M Ashrafi, S H Salehpour, M Dehghan Manshadi, V Ghodsinejad, E Khalili, B Kamalidehghan
- P-481** Expert opinion on the management of CLN2 disease
N Specchio, R Williams, H Adams, M Blohm, J Cohen-Pfeffer, E De los Reyes, J Denecke, K Drago, C Fairhurst, M Frazier, N Guelbert, S Kiss, A Kofler, J Lawson, L Lehwald, M Leung, S Mikhailova, J Mink, M Nickel, R Shediach, K Sims, M Topcu, I Von Lobbecke, A West, A Schulz
- P-482** Cardiac manifestations and cardiovascular autonomic functions of 64 Fabry patients
H Goto, K Tsuboi, H Yamamoto
- P-483** Severe dilated cardiomyopathy as an unusual clinical presentation in an infant with mucopolidosis type 1
F J M Eyskens, F Marchau, M De Sain, S Ferdinandusse, A B P Van Kuilenburg
- P-484** Monitoring oculomotor abnormalities in children with Niemann-Pick type C
J Blundell, S Frisson, A Chakrapani, P Gissen, S Vijay, S Santra, A Olson
- P-485** Whitrdawn
- P-486** Expert recommendations for the laboratory diagnosis of neuronal ceroid lipofuscinosis type 2 (CLN2 disease): diagnostic algorithm and best practice guidelines for a timely diagnosis
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- P-487** A rare lysosomal storage disease: neuronal ceroid lipofuscinosis type 14
T Zubarioglu, G Yesil, E Kiykim, M S Cansever, A C Aktuglu-Zeybek, C Yalcinkaya
- P-488** Mesenteric lymphadenopathy and hepatic Gaucheroma in Algerian GD children
A Hadji, N Benali Khoudja, S Sokhal, R Belbouab, F Hassoun, R Boukari
- P-489** GAA de novo mutation in infantile Pompe disease
A Fiumara, A C Arena, F Raudino, M C Balistreri, G Del Campo, S Catarzi, A Morrone

- P-490** A cost-effective case finding study in Fabry disease
O Dursun, S F Bulbul
- P-491** Clinical presentation and molecular characterization of children with neuronal ceroid lipofuscinosis (NCL I & II) from India
R Bhavsar, M Mistri, M Kamate, R Shah, S Mehta, H Shah, F Sheth, J Sheth
- P-492** Pathophysiology of Niemann-Pick type C revisited: altered protein trafficking is mutation-specific
H Shammas, E M Kuech, A M Das, H Y Naim
- P-493** Intracranial hypertension in pediatric patients with cystinosis
M Del Toro, N Martin-Begue, A Felipe, E Lara, J A Arranz, G Ariceta
- P-494** New method for molecular genetic diagnosis of glycogen storage disease in Russian patients using next-generation sequencing (NGS)
K V Savostyanov, A A Pushkov, A N Surkov, S I Polyakova, A G Nikitin, L S Namazova-Baranova, A A Baranov
- P-495** The activity of chitotriosidase in blood of patients with lysosomal diseases: ten years of laboratory experience
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- P-496** Plasma metabolomic profile in Spanish patients with lysosomal acid lipase deficiency
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- P-497** Wolman disease—a misdiagnosed case with hemophagocytic lymphohistiocytosis
C Caseiro, E Silva, I Ribeiro, F Laranjeira, E Pinto, T Oliva, L Lacerda
- P-498** Interpreting cognitive function in children with rapid loss of vision—lessons from the early phase of CLN3 disease
W F E Kuper, M M Van Genderen, P M Van Hasselt
- P-499** Selective screening for Pompe disease in high-risk Russian patients
K V Savostyanov, A A Pushkov, E N Basargina, N V Zhurkova, N D Vashakhmadze, L S Namazova-Baranova, A A Baranov
- P-500** Global consensus on barriers to early diagnosis of Gaucher disease
A Mehta, S Salek, D Kuter
- P-501** Early diagnosis in Gaucher disease: findings from a global consensus initiative
A Mehta, S Salek, D Kuter
- P-502** Alpha glucosidase on dried blood spot: simple assay in Pompe disease
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- P-503** Evaluation of different approaches to lysosomal acid lipase deficiency screening
J J Cebolla, P Irun, M Pocovi, P Giraldo
- P-504** Dried blood spot screening of lysosomal acid lipase deficiency (LALD) and confirmatory studies in Spanish LALD suspected patients
J J Cebolla, P Irun, L Gonzalez-Diequez, P Del Valle Loarte, M A Barba-Romero, I Garcia-Jimenez, I Ros Arnal, D Ortega Gil, R Tomasini, P Giraldo

- P-505** Familial analysis of clinical consequences of type I Gaucher disease
U Mahmood, H A Cheema, M Suleman, S Bukhari, S Mahmood
- P-506** Urine dicarboxylic acids and other biomarkers for diagnosis and follow-up of Wolman disease
M R Heiner-Fokkema, K E Niezen-Koning, F J Van der Sluijs, A B Bontekoe, J Janssens-Puister, T J De Koning, T G J Derks, H P J Van der Doef, F J Van Spronsen
- P-507** Limb-girdle muscular dystrophy mimicking Pompe disease
E Y Zakharova, G V Baydakova
- P-508** Spectrum of mutations and biochemical characteristics of 21 Russian patients with lysosomal lipase deficiency
E A Kamenets, G V Baydakova, T Y Proshlyakova, S V Mikhaylova, T V Strokova, M V Maevskaya, M S Zharkova, E Y Zakharova
- P-509** A rare presentation of Gaucher type 2 disease in a neonate
N Zdraveska, A Kostovski
- P-510** Renal arteries' involvement in Pompe disease: a case report
E Pappa, C Papadopoulos, P Grimbert, G Bassez, P Laforet
- P-511** CLN8p is involved in spatial distribution of lysosomes
F Pesaola, G Quassollo, M Remedi, I Noher de Halac, M Bisbal

21. Lysosomal disorders: treatment, enzyme replacement therapy

- P-512** Expert opinion on the management of intracerebroventricular (ICV) drug delivery
I Slavic, J Cohen-Pfeffer, S Gururangan, E Jurecki, J Krauser, T Lester, D Lim, M Maldaun, C Schwering, A Shaywitz, M Westphal
- P-513** Long-term galsulfase enzyme replacement therapy in Taiwanese mucopolysaccharidosis VI patients: a case series
H Y Lin, S P Lin, C K Chuang, C H Wang, Y H Chien, Y M Wang, F J Tsai, Y Y Chou, S J Lin, H P Pan, D M Niu, W L Hwu, Y Y Ke
- P-514** A national pilot study to investigate the effects of sub-maximal aerobic exercise in adults with late-onset Pompe disease: Salford Royal NHS Foundation Trust (SRFT) cohort results
E J S Silk, M E Roberts, M Meehan, C J Hendriksz
- P-515** Efficacy of lentivirus-mediated gene delivery to treat Fabry disease
J R A Lambert, D G Burke, S J Howe, A A Rahim, S J R Heales
- P-516** Canadian Fabry Disease Initiative Study (CFDI): 8 year outcomes of a randomized controlled trial of enzyme replacement therapy (ERT)
S Sandra, D Bichet, R Casey, J T R Clarke, R M Iwanochko, A Khan, C Morel, C Auray-Blais, S Doucette, K Lemoine, M L West
- P-517** Outcomes of 453 pregnancies in patients with Gaucher disease: an analysis from the Gaucher Outcome Survey
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- P-518** Very early treatment for infantile-onset Pompe disease contributes to better outcomes
C F Yang, C C Yang, H C Liao, L Y Huang, C C Chiang, H C Ho, C J Lai, T H Chu, T F Yang, T R Hsu, W J Soong, D M Niu
- P-519** Long-term efficacy and safety results of taliglucerase alfa through 5 years in adult treatment-naïve patients with Gaucher disease
A Zimran, G Duran, P Giraldo, H Rosenbaum, F Giona, M Petakov, S E Solorio-Meza, P A Cooper, S Alon, R Chertkoff
- P-520** Sub-analysis of long-term elosulfase alfa treatment outcomes in adults with Morquio A syndrome
D Hughes, R Giugliani, N Guffon, A S Jones, K E Mengel, R Parini, R Matousek, E Jurecki, A Quartel
- P-521** Impact of bortezomib treatment on GAA function in missense murine model of Pompe disease
Y Shimada, T Fukuda, N Ishii, H Hoshina, H Kobayashi, T Higuchi, H Ida, T Ohashi
- P-522** Literature review of the prevalence of Fabry disease in dialysis, kidney transplant and chronic kidney disease populations
G Sunder-Plassmann, M Cybulla, S Feriozzi, P Neumann, K Nicholls, M West, J Torras, A Gurevich
- P-523** Enzyme replacement therapy for lysosomal acid lipase deficiency: a report of two Japanese patients
J Murakami, N Kuranobu, K Fukushima, R Nishimura, K Amano, Y Eto, S Kanzaki
- P-524** Olipudase alfa for the treatment of acid sphingomyelinase deficiency (ASMD): 18-month safety and efficacy data
R Lachmann, M Wasserstein, M H Jouvin, I Nandy, A J Ji, H Inguilizian, A C Puga
- P-525** Long-term efficacy and safety of reveglucosidase alfa in subjects with late-onset Pompe disease: 144-week follow-up of the POM-001/002 studies
T Geberhiwot, B Byrne, B A Barshop, R Barohn, D Hughes, D Bratkovic, C Desnuelle, P Laforet, E Mengel, M Roberts, P Haroldsen, L Smith, K Yang, L Walsh
- P-526** Morquio A Registry Study (MARS): design and baseline characteristics of enrolled patients
N Guffon, G Baujat, M B Bober, B K Burton, L Clarke, P Garcia, R Giugliani, C J Hendriksz, C Lavery, J Raiman, E Jurecki, Z Sisic, A Waite
- P-527** Switch of enzyme replacement therapy (ERT) in the Canadian Fabry Disease Initiative Study (CFDI): intermediate follow-up at 3.5 years
C F Morel, D Bichet, R Casey, J T Clarke, M Iwanochko, A Khan, S Sirrs, C Auray-Blais, S Doucette, K LeMoine, M L West
- P-528** Prompt agalsidase alfa therapy initiation is associated with improved renal and cardiovascular outcomes in the Fabry Outcome Survey
D Hughes, A Linhart, A Gurevich, A Joseph, M Thakur, S Feriozzi

- P-529** 30 Infantile Pompe patients with 40 mg/kg/biweekly enzyme replacement treatment and 23 out of 30 survivors: a single center experience from Turkey
N Onenli Mungan, D Kor, B Seker Yilmaz, F D Bulut, S Erdem, F Demir, H Eren, N Ozbarlas
- P-530** Autophagy induction as a potential treatment for lysosomal diseases
L Matalonga, J Farrera-Sinfreu, R Pascual, A Arias, F Tort, J Garcia-Villoria, A Ferrer Montiel, B Ponsati, L Gort, A Ribes
- P-531** Estimating the value of treatment for Fabry disease: a discrete choice experiment
A Lloyd, K Gallop, A MacCulloch, D Hughes
- P-532** Survival in idursulfase-treated and untreated patients with mucopolysaccharidosis type II: data from the Hunter Outcome Survey (HOS)
B K Burton, V Jago, J Mikl, S A Jones
- P-533** Real-world treatment patterns from 647 patients with Gaucher disease: an analysis from the Gaucher Outcome Survey
P Deegan, D Fernandez-Sasso, P Giraldo, H Lau, Z Panahloo, A Zimran
- P-534** Non-neuronopathic Gaucher disease: a retrospective review comparing clinical outcomes of 2 weekly and 4 weekly enzyme replacement therapy
H Heales, U Ramaswami, D Hughes, M Mckie, A Mehta
- P-535** Early treatment with Sebelipase-alfa of two young LAL-D siblings: first outcome data
A Tummolo, F Ortolani, M Masciopinto, L Melpignano, A M Di Mauro, E Piccinno, F Papadia
- P-536** Long-term data from patients with Gaucher disease: a descriptive analysis from a single center in the Gaucher Outcome Survey
D Elstein, A Zimran
- P-537** Galactosialidosis: moving a step closer towards the development of enzyme replacement therapy with recombinant human protective protein/cathepsin a
V Koppaka, J Cadaoas, S Cullen, E Gomero, C Guzman, C Haller, H Hu, K Jayashankar, M Machado, G Morris, R Mosca, A Natesan, A Schatz, M Vellard, A D'Azzo
- P-538** Abnormalities of cellular membranes can be reversed by substrate reduction in Fabry disease
G Brogden, H Shammass, K Maalouf, S L Naim, G Wetzels, M Amiri, M Von Koeckritz Blickwede, A M Das, H Y Naim
- P-539** Successful desensitization to enzyme replacement therapy using omalizumab in a patient with late-onset Pompe disease
A Sechi, M De Carli, D Macor, K Bianchi, A Dardis, S Zampieri, G Ciana, S Tripodi, S Galosi, B Bembi
- P-540** Efficacy and safety of migalastat, an oral pharmacological chaperone for Fabry disease: results from two randomized phase 3 studies
U Feldt-Rasmussen, R Giugliani, D P Germain, D Hughes, W R Wilcox, R Schiffmann, D G Bichet, A Jovanovic, D Bratkovic, J Castelli, N Skuban, J Barth

- P-541** Migalastat improves gastrointestinal symptoms in patients with Fabry disease: results from a double-blind, placebo-controlled phase 3 trial (FACETS)
R Schiffmann, D G Bichet, D Hughes, R Giugliani, W Wilcox, S P Shankar, D P Germain, C Viereck, J Castelli, M Yao, N Skuban, J Barth
- P-542** A novel delivery platform for intracellular and extralysosomal targeting of enzyme-replacement therapeutics
D D Armstrong
- P-543** Comparison of α -galactosidase A activity in white blood cells of patients with Fabry disease after 2 weeks of exposure to migalastat, agalsidase beta, or agalsidase alfa
F K Johnson, K J Valenzano, J Castelli
- P-544** Adaptive functioning and parental stress in patients with lysosomal storage diseases treated with enzymatic replacement therapy
S Caviglia, A Bottari, I Tondo, F Deodato, R Taurisano, C Dionisi-Vici
- P-545** Lysosomal acid lipase deficiency (LAL-D; Wolman disease): diagnosed at 2 months needing 3 months to really improve on sebelipase alpha
F J Van Spronsen, T G J Derks, T J De Koning, M Van Rijn, K E Niezen-Koning, M R Heiner-Fokkema, S A Jones, R Scheenstra
- P-546** Efficacy of migalastat in a cohort of male patients with the classical form of Fabry disease in a phase 3 study
D P Germain, R Giugliani, D G Bichet, W Wilcox, D Hughes, H M Amartino, R Schiffmann, C Viereck, M Yao, N Skuban, J Castelli, J Barth
- P-547** The validation of pharmacogenetics in the identification of patients with Fabry disease for treatment with migalastat
E R Benjamin, C Della Valle, X Wu, E Katz, K J Valenzano, D G Bichet, D P Germain, R Giugliani, D Hughes, R Schiffmann, W R Wilcox, J Yu, J Kirk, J Barth, J Castelli
- P-548** Clinical history of a cohort of Gaucher type 1 patients treated with ERT from childhood to adulthood
A Moro, S Cecchinell, D Macor, G Ciana, M R Da Rioli, A Dardis, B Bembi
- P-549** Phenotype of Fabry disease in patients with mutations amenable to migalastat
D Hughes, D G Bichet, D P Germain, R Giugliani, R Schiffmann, W Wilcox, J Castelli, E R Benjamin, N Skuban, J Barth

22. Glycosylation disorders/CDG, protein modification disorders

- P-550** Evaluation of the global coagulation balance among PMM2-congenital disorder of glycosylation patients, using the thrombin generation assay
T Pascreau, F Cathala, D Lasne, N Seta, A S Guemann, P De Lonlay, D Borgel
- P-551** Liver involvement in congenital disorders of glycosylation (CDG): literature review
D Marques-da-Silva, M Monticelli, V Dos Reis Ferreira, T Ferro, P Janeiro, P A Videira, J Jaeken, D Cassiman
- P-552** CCDC115 deficiency causes a disorder of Golgi homeostasis with abnormal protein glycosylation

- J C Jansen, S Cirak, M Van Scherpenzeel, F Foulquier, T Marquardt, D J Lefeber*
- P-553** Exome sequencing of patients with positive screening of congenital disorders of glycosylation (CDG) type I revealed mitochondrial diseases due to *POLG* and *Twinkle* mutations
S Vuillaumier-Barrot, T Dupre, A Bruneel, P De Lonlay, L Servais, S Moore, N Seta
- P-554** Facile CDG diagnostics via mass spectrometry and clinical exome sequencing
M Van Scherpenzeel, A AbuBakar, K Huijben, F Zijlstra, A Ashikov, D J Lefeber
- P-555** NGS: a new strategy for the molecular diagnosis of α -dystroglycanopathies
C Bouchet-Seraphin, M Chelbi, M Reocreux, S Gazal, S Vuillaumier-Barrot, C Boileau, N Seta
- P-556** Transferrin and total serum glycoprofiling for diagnosis and therapy monitoring in phosphoglucomutase 1 deficiency
A AbuBakar, N C Voermans, E Morava, M Van Scherpenzeel, D J Lefeber
- P-557** A population based study on congenital defects of protein N-glycosylation experience in clinical and genetic diagnosis
C Perez-Cerda, M L Giros, M Serrano, M J Ecaj, L Gort, B Perez Duenas, C Medrano, A Garcia-Alix, R Artuch, P Briones, B Perez
- P-558** Galactose supplementation in SLC35A2-CDG: results after 24 weeks of treatment in an Italian patient
R Barone, P Striano, L Sturiale, D Garozzo, A Messina, J Jaeken, E Morava, A Fiumara
- P-559** Metabolic insights into the pathomechanism of orofacial malformation: prevalence and clinical variability of cleft palate and other congenital malformations among PGM1-CDG patients
S Y Wong, D Rymen, L Beamer, S J Perez, T Kozicz, E Morava
- P-560** Clinical description and long-term outcome in PMM2—congenital disorder of glycosylation: a series of 96 French patients
P De Lonlay, C Roda, M L Monin, T Dupre, S Vuillaumier-Barrot, C De Barace, C Francannet, D Heron, N Seta, N French Metabolic Disease Health Network
- P-561** Diminished convergent extension and disturbed TGF- β /BMP and FGF signaling in *Xenopus* Pmm2-CDG morphants
N Himmelreich, B Dimitrov, L T Kaufmann, C R Bartram, G F Hoffmann, C Thiel
- P-562** A new case of SLC35A2-CDG with relatively mild phenotype and our experience with D-galactose treatment
K Ounap, M A Vals, S Pajusalu, D J Lefeber, E Morava, T Reimand
- P-563** Screening of FDA approved drugs in fibroblasts derived from PMM2-CDG patients
G Andreotti, C Cimmaruta, V Citro, L Liguori, N Minopoli, M V Cubellis
- P-564** Assessment of a CDT kit for screening of congenital disorders of glycosylation and its comparison with transferrin isoform analysis by HPLC
M B Dave, A J Dherai, V P Udani, A U Hegde, N Desai, T F Ashavaid
- P-565** Beware of abnormal capillary electrophoretic patterns of serum transferrin: congenital disorder of glycosylation (CDG) type I can be associated with a protein

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A Bruneel, T Dupre, T Chaabouni, A Dupont, H Mansour, N Seta

- P-566** New insights into glycosylation and Na⁺/Ca²⁺ exchangers in human cells
C A Amorosi, M B Bistue Millon, M Papazoglu, M Siravegna, G Elso-Berberian, C G Asteggiano
- P-567** Evaluating galactose treatment in vivo and in vitro in TMEM165-CDG
P Witters, S Y Wong, D Cassiman, G Matthijs, F Foulquier, E Morava
- P-568** Expanding phenotype variability in RFT1-CDG: absence of deafness in two patients with novel mutations
A Bandeira, A M Fortuna, D Quelhas, J Jaeken, G Matthijs, E Martins
- P-569** Exuberant myopathic phenotype in a DPAGT1-CDG patient
D Quelhas, M Santos, J Jaeken, G Matthijs, L Lacerda, E Martins

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- P-570** Challenges in diagnosis and treatment of dopa-responsive dystonia due to tyrosine hydroxylase deficiency in a single patient in Indonesia
C N Hafifah, D R Sjarif
- P-571** Dopamine and serotonin turnover in neuronal cell models of mitochondrial complex I deficiency and Gaucher disease
C De La Fuente Barrigon, M Garcia Gomez, D G Burke, S Eaton, S J R Heales
- P-572** Brain development in qdpr (dihydrobiopterin reductase)-deficient zebrafish
M Breuer, T Opladen, M Carl, S W Sauer
- P-573** Secondary brain creatine deficiency and neurological impairment in BDL rats, an *in vivo* model of chronic cholestatic liver disease
V Rackayova, M Loup, H Henry, V A McLin, C Cudalbu, O Braissant
- P-574** IPSCs from a patient suffering from tyrosine hydroxylase deficiency
S Jung-Klawitter, A Sebe, N Shen, G F Hoffmann, N Blau, T Opladen
- P-575** Two siblings with a new genotype of GAMT deficiency and response to sodium benzoate therapy
L Fiori, V Leuzzi, C L Carducci, C A Carducci, C Uggetti, A F Podesta'
- P-576** Safety and efficacy of rotigotine in 7 patients with monoaminergic neurotransmitter deficiency
M Mastrangelo, M T Giannini, C L Carducci, C A Carducci, V Leuzzi
- P-577** Analyses of cerebrospinal fluid neopterin: inborn errors of metabolism versus neuroinflammatory diseases
M Molero-Luis, A Ormazabal, C Sierra, D Cuadras, A Garcia-Cazorla, Y Jordan, B Perez-Duenas, R Artuch Iriberry
- P-578** Two new cases with hereditary dopamine transporter deficiency syndrome
A Tokatli, Y Yildiz, E Pektas, G Haliloglu
- P-579** Substantial psychiatric symptoms and reduced quality of life in well-treated patients with GTP-cyhydrolase deficient dopa-responsive dystonia

A Kuiper, M Smit, E R Timmers, A L Bartels, M A J Tijssen, T J De Koning

- P-580** Expanded phenotype in creatine transporter deficiency: identification of two novel mutations correlated with mild clinical presentation
M M Mancardi, R Battini, M C Schiaffino, M G Alessandri, M Gherzi, V Viglione, F M Battaglia, C L Carducci, F Moro, C Carducci, G Morana, M Tosetti, G Cioni, V Leuzzi
- P-581** Glomerular filtration rate (GFR) strongly influences guanidinoacetic acid (GAA) in plasma and urine
C L Salvador, A D Rowe, A Bjerre, C Tondel, A Brun, D Brackman, L Morkrid
- P-582** 5-Oxoprolinase deficiency: report of three siblings and a case with two new compound heterozygous mutations and clinical diversity in the same family
N Onenli Mungan, B Seker Yilmaz, F D Bulut, M Oktem, D Kor, G Ceylaner, O Herguner
- P-583** Abnormal CSF phenylalanine level in patients presenting with disorders of tetrahydrobiopterin (BH₄) metabolism with hyperphenylalaninemia
A Celato, M Mastrangelo, A P Burlina, G Polo, C Carducci, C Carducci, V Leuzzi, A B Burlina

24. Disorders of vitamins, cofactors and trace elements

- P-584** Biodistribution of copper with disulfiram administered perorally in Menkes disease model mouse: new potential treatment to avoid subcutaneous injection
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- P-585** Secondary coenzyme Q₁₀ deficiencies in mitochondrial and non-mitochondrial diseases
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- P-586** Rare inborn error of cobalamin metabolism (cobalamin J deficiency) presenting as deficiency of vitamin B₁₂
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- P-587** Molecular characterization of the cblC disease reveals new pathways in pathogenesis
L Hannibal, S Behringer, M Klenzendorf, D W Jacobsen, U Spiekerkoetter, H J Blom
- P-588** Disruption of the metabolome in a zebrafish model of PNPO deficiency
M Albersen, S M C Savelberg, M Bosma, J Gerrits, M Willemsen, M G M De Sain-van der Velden, H C M Prinsen, M Van der Ham, M L Pras-Raves, J Bakkers, F G Tessadori, J J M Jans, G Van Haafte, N M Verhoeven-Duif
- P-589** Vitamin B₆ is essential for serine *de novo* biosynthesis
R J Ruben, M L Pras-Raves, J Gerrits, M Bosma, H C M Prinsen, J J M Jans, N M Verhoeven-Duif

- P-590** Long-term visual and electrophysiological follow-up in early onset cblC patients
N Garcia Segarra, F Rigaudiere, J F Benoist, E Delouvrier, S Pichard, H Ogier De Baulny, M Schiff
- P-591** Role of intramuscular levofolate in treatment of hereditary folate malabsorption
E Manea, P Gissen, S Pope, S J R Heales, S Batzios
- P-592** Early onset of cobalamin C deficiency in 3 neonates: clinical and biochemical features following parenteral hydroxycobalamin dose intensification strategy
E Scalais, E Osterheld, D Amrom, C Geron, C Pierron, L Bindl, V Schlessner, L Regal, G Martens, L De Meirleir
- P-593** Bone mineral density and vitamin D status in inborn errors of metabolism
A Olgac, L Tumer L, A Inci, B Karaoglu, I Okur, F S Ezgu
- P-594** Evaluation of genetic and biochemical profiles of patients with biotinidase deficiency
E Kose, H Onay, O Unal, M Gunduz, S Bulbul, N Arslan
- P-595** Abnormal folate metabolism is associated with metabolic syndrome components in spontaneous hypertensive rats (SHR)
V Kozich, M Pravenec, J Krijt, L Kazdova, J Sokolova
- P-596** Postnatal hepatocyte transplantation in a child with molybdenum cofactor deficiency type B
B C Schwahn, S Bansal, E Fitzpatrick, H Lemonde, M Champion, C Turner, L Fairbanks, R Mitry, S Lehec, C Filippe, K Chong, F White, E V E Okokon, A Dhawan
- P-597** Preponderance of c.394C>T mutation in *MMACHC* gene in Indian patients with combined methylmalonic aciduria and homocystinuria due to cobalamin C deficiency
S Bijarnia-Mahay, D Gupta, R D Puri, S Kohli, R Saxena, Y Shigematsu, S Yamaguchi, O Sakamoto, R Deb, V Udani, I C Verma
- P-598** The challenge of treatments in three patients affected by pyridoxine dependent epilepsy (PDE)
A Celato, I Fasan, E Zanonato, C Cazzorla, I Toldo, S Sartori, G Polo, A B Burlina

25. Miscellaneous/new disease group

- P-599** Recessive pathogenic variants in the *MICU1* gene: expanding the phenotypic and genotypic spectrum
T Ben-Omran
- P-600** *MBTPS2* mutations in X-linked osteogenesis imperfecta
U Lindert, W A Cabral, S Ausavarat, S Tongkobetch, K Ludin, A M Barnes, P Yeetong, M Weis, B Krabichler, C Srichomthong, E Makareva, A R Janecke, S Leikin, B Roethlisberger, M Rohrbach, I Kennerknecht, D R Eyre, K Suphapeetiporn, C Giunta, J C Marini, V Shotelersuk
- P-601** Clinical and biochemical spectrum of metabolic cardiomyopathies in Egyptian children

N M Al Menabawy, R I Ismail, M A Mohamed, D Mehany, S ElSaeedy, I Abdel Sattar, R Amar, L A Selim, Z S Seliem

- P-602** Mutations in *PYCR2* define a lethal syndrome of failure to thrive, microcephaly, and brain atrophy in 10 Egyptian families
M S Zaki, G Bhat, M Y Issa, E Dikoglu, L A Selim, I Gamal, M S Abdel Hamid, I Marin-Valencia, J G Gleeson
- P-603** Asfotase alfa treatment in a prematurely born baby with hypophosphatasia
H Niinikoski, K Nanto-Salonen, K Korhonen
- P-604** Gene therapy for Canavan disease in the knockout mouse using rAAVs at a 20-fold lower dose
R Matalon, S Ahmed, Q Su, J Trapasso, G Gao
- P-605** Increase in the diagnostic rate by exome sequencing in patients with neurometabolic disorders
E Kilic, M Kilic, R K Ozgul, D Yucel-Yilmaz, P Kavak, B Yuceturk, H Demirci, M S Sagioglu
- P-606** A floppy infant with slit ventricles on brain imaging—absence of *SLC4A10* may cause the first human cerebrospinal fluid synthesis disorder
S B Wortmann, J A Mayr, J Spenger, D Mayr, W Sperl, J Koch, B Alhaddad, T Meitinger, H Prokisch, C Huebner, N Wolf, T B Haack
- P-607** Rotavirus: the implications in children with inherited metabolic disorders
M A Mannion, A Smith, J Hughes, I Knerr, A Monavari
- P-608** High incidence of hereditary liver diseases as an indication for pediatric liver transplant in Saudi Arabia: comparison to the Hungarian data
M A Barr, J Burkholder, M A Shagrani, T Algoufi, A Dezsöfi, L Szonyi
- P-609** Glycolysis and the formation of building blocks in proliferating epithelial cells
S A Fuchs, I Schene, P M Hasselt, R H L Houtkooper, N M Verhoeven-Duif, E E S Nieuwenhuis
- P-610** Diagnostic biochemical abnormalities masked by early testing or prospective treatment in newborns at risk of multiple acyl-coA dehydrogenase deficiency and maple syrup urine disease
H Aitkenhead, A A J Lam, H Prunty, M A Cleary, J Davison
- P-611** Developing next-generation pharmacological chaperones by fragment screening and crystallography
S R Mackinnon, J Kopec, F Von Delft, P E Brennan, W W Yue
- P-612** Follow-up of a patient with cobalamin F deficiency
M El Habbas, C Sechter, M Joncquel, M Fontaine, G Morin, D Dobbelaere, J F Benoist, K Mention
- P-613** Minimal prevalence and incidence of inherited metabolic disorders in Austria
D Karall, S Herbst, S Scholl-Buergi, M Brunner-Krainz, J Emhofer, M Huemer, S G Kircher, J Koch, V Konstantopoulou, F Lagler, W N Loescher, E M Maier, J A Mayr, D Moeslinger, G Sunder-Plassmann, W Sperl, T M Stulnig, S B Wortmann, J Zschocke

- P-614** Artefactual increase in urine thymine concentration affecting GC-MS but not HPLC analysis
E Mozley, L Fairbanks, R Carling
- P-615** GMP isolation and biodistribution of human amnion epithelial cell for clinical therapy
C Raghuraman Srinivasan, K Kannisto, C Hammarstedt, M Zabulica, C S Strom, R Gramignoli, U Askelof
- P-616** Congenital myopathy associated with splice mutation in *PAX7* gene
U Ahting, C Makowski, H Juenger, B Schoser, J Mayr, B Alhaddad, H Prokisch, B Rolinski, T Haack, P Freisinger, T Meitinger
- P-617** *HACE1* deficiency mimicking mitochondrial disorder
D Petkovic Ramadza, J A Mayr, T Haack, H Prokisch, K Zarkovic, K Fumic, I Baric
- P-618** Bi-allelic variants in *PRUNE* cause early manifestation of severe epileptic encephalopathy with muscular hypotonia
B Alhaddad, A Schossig, T Haack, R Kovacs-Nagy, W Sperl, H Prokisch, J Mayr, J Senderek, J Zschocke, F Distelmaier, J Koch
- P-619** Mutations in *RC3H1* in a boy with ethylmalonic aciduria and hemophagocytic lymphohistiocytosis
P Verloo, D Bogaert, F Haerynck, A Vanlander, B Menten, R Van Coster, M Dullaers
- P-620** Diagnosis and discovery of treatable neurometabolic diseases via an integrated -omics approach
C D Van Karnebeek, R Salvarinova, G Horvath, S Stockler, H Vallance, G Sinclair, W Wassermann, M Tarailo-Graovac
- P-621** Screening for treatable inborn errors of metabolism in 500+ intellectual developmental disorder patients
C Van Karnebeek, R Salvarinova, G Horvath, G Sinclair, A Ghani, H Vallance, S Stockler
- P-622** Analysis of intensive care service (ICU) utilisation for metabolic patients over a 9-year period
T Dalkeith, K Bhattacharya, A Biggin, J Christodoulou, Y Zurynski
- P-623** The burden endured by caregivers of metabolic patients: mucopolysaccharidoses compared to intoxication disorders
F Nichelli, P Meregalli, S Gasperini, C Galimberti, E Schivalocchi, R Parini
- P-624** A homozygous splice mutation in *SLC25A42*, encoding a mitochondrial transporter of coenzyme A and adenosine 3',5'-diphosphate, causes metabolic crises and epileptic encephalopathy
A Iuso, A Bader, T Meitinger, H Prokisch, T M Strom, C Weigel, T B Haack
- P-625** Modulation of sirtuins under ketogenic diet
A B Potthast, A M Das
- P-626** Influence of altered ROS levels on expression and activity of sirtuins
A B Potthast, A Fitter, A M Das

- P-627** Sirtuin 4 is up-regulated in the HELLP-syndrome
M Sandvoss, A B Potthast, A M Das
- P-628** Basal ganglia in neurometabolic disorders
J Paprocka, M Machnikowska-Sokolowska, B Rzepka
- P-629** Synthetic cyclic pyranopterin monophosphate (scPMP) rescues the lethal phenotype of molybdenum cofactor (MoCo) deficient mice: relationship of scPMP doses, liver sulfite oxidase activity, body weight, and the detoxification of sulfite in vivo
S Liu-Chen, E Watsky, D Devore, N Kuklin, A Marozsan, Y Wang