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CHALLENGES IN BIOORGANIC AND ORGANIC MEDICINAL CHEMISTRY

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[P1.94]

Tablets on the basis of herbal substance "Limonidin"

G.E. Zhussupova[1], K.B. Murzagulova[2], A.I. Zhussupova*[1], A.V. Gadetskaya[1], Z.A. Abilov[1]

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Isolation of substances from the roots and aerial parts of local medicinal plant *Limonium gmelinii* was conducted using a simple, economically feasible and environmentally friendly technological scheme with a high yield (up to 35 % of the dried raw material weight). Vegetable substances extracted from the test plants in the form of dry extracts are characterized by hygroscopicity; their complex with β-cyclodextrin was obtained in order to reduce this hygroscopicity. The molecular complexation of β-cyclodextrin with the substance was studied using 2 methods: a) method of paste-forming; b) method of briquetting. The process of nano-encapsulation was monitored by observation of changes in shape and size of the particles. The resulting complex of the "Limonidin" substance with cyclodextrin is a light-brown powder with the patches of darker particles with faint odor, moisture content of not more than 3 %, soluble in water, 0.1 N HC1 solution and aqueous solutions of ethyl alcohol (30, 50 %). Bulk density before shrinkage is 0.707 g/cm, after the shrinkage - 0.809 g/cm. The study of the complex was carried out using the methods of IR and UV spectroscopy and diffractometry. The biopharmaceutical properties of the complex were studied: release of the active substance in the amount of not less than 46.0 %, in various environments, Quality specification was designed. On the basis of this complex of the substance and β-cyclodextrin, two sets of granulates were developed. The tablets produced on their basis meet the requirements of pharmacopoeia on the following indicators of quality: compressibility profiles, hardness, friability, friability, disintegration, quantification of the active substance and its release.

Keywords: tablets, herbal, substance, production

[P1.95]

Novel compound from Limonium myrianthum possessing antioxidant activity

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Plants of the *Limonium* Mill genus (*Plumbagenaceae* family) are represented by 300 species world-wide and 18 in Kazakhstan. Two species, *L. gmelinii* and *L. myrianthum,* are present in stocks exceeding 50 thousand tons in Kazakhstan. The current studies are focused on *L. myrianthum*. Specimens of *L. myrianthum* were collected in South Kazakhstan in August 2010. Finely ground, air-dried roots (300 g) were subjected to sequential extraction with *n*-hexane (0.3 L x 2; 48 h), acetone (0.3 L x 3; 48 h) and MeOH (0.3 L x 3; 48 h) at 30 ^{0}C with constant mixing. Extracts were evaporated to dryness under reduced pressure at 35-37 ^{0}C. Acetone extracts of the roots showed the highest antioxidant activities and were combined then subjected to silica gel chromatography with elution successively with 100% CH_2Cl_2, then CH_2Cl_2: MeOH mixtures (5%, 10%, 15%, 25%, 30%, 35%) and finally 100% MeOH to yield 8 fractions. Active fractions were combined and subjected to Sephadex LH-20 chromatography to yield 33 fractions of decreasing molecular mass. A yellow compound isolated from fractions 12 and 13 was identified as epigallocatechin-2-O-*p*-phenoxy ($C_{21}H_{18}O_8$; mol wt 398.36). It showed potent antioxidant activity in assays of liver microsomal lipid peroxidation. At 4 µg/mL. It reduced the LPO level to 62 % of control and at 20 µg/mL, it reduced the level of LPO to 12 % of control. The antioxidant properties of epigallocatechin-2-O-*p*-phenoxy require further investigation. Two-dimensional spectra were obtained on a Bruker DRX-500 spectrometer. GC-MS spectra were obtained using an HP 6890 gas chromatograph.

Keywords: novel compound, antioxidant activity

[P2.69]

Preparation of medical films, based on substances, isolated from the plants of Limonium gmelinii genus

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Substance “Limonidin” extracted from plants of *Limonium* Mill genus in the form of a dry extract, contains a significant amount of flavonoid aglycones quercetin and myricetin, and their glycosides, various forms of flavan-3-ols (mono-, di- or oligomeric), and amino acids, including essential, polyene acids, a wide range of trace elements, vitamins, which, due to their synergistic effect lead to its high therapeutic effect. From different species of *Limonium* Mill genus, six previously not described in literature new compounds were isolated and identified as: 3-O-β-D-glucopiranoside of campesterine, 3,5,7,3',4',6'-hexahydroxyflavon, 3-O-α-L-(2''-galloil)-arabinopiranoside of myricetin, 3,5,7,3',4',6'-hexahydroxyflavan and (-)-epigallocatechine-(4β→8)-(-)-3,5,7,3',4',6'-hexahydroxyflavan and (+)-gallocatechine-(4α→8)-[(-)-epigallocatechine]$_5$-(4β→8)-(-)-epigallocatechinegallat. Preclinical studies of substance «Limonidin», isolated from the roots of *Limonium gmelinii* roots, showed its high antioxidant, hepatoprotective, antimicrobial, antimutagenic and antiviral properties. It is an active modifier of metabolic malfunctions of tumor and tumor-carrying organisms, increases potential possibility for reinforcement of anabolic processes. A new form – polymer “Limonidin” film was developed by its immobilization on a polymer composite substrate. The influence of the concentration of drugs on the dynamics of their release from the gels was studied. Polymer films “Limonidin” have prolonged effect, and, after appropriate clinical trials, might be recommended for use in practical medicine for long-term elimination of the pain syndrome.

Studies were funded under the Technology Commercialization Project, supported by the World Bank and the Government of the Republic of Kazakhstan.

Keywords: polymer films, prolonged effect

[P2.70]

Getting a new herbal remedy in the form of a gel

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Full provision of domestic production of medicines in Kazakhstan is one of the main priorities of socio-economic policy of the Government of Kazakhstan, as well as of the current state program of import substitution and increase of locally produced medicines to 40-50 % by 2014. On the basis of the genus *Limonium gmelinii*, having recoverable reserves in Kazakhstan and entered into the State Pharmacopoeia of the Republic of Kazakhstan, and harmonized with the European Pharmacopoeia, a substance was obtained, permitted for use in medicine as a highly effective anti-inflammatory, antiviral, and hepatoprotective drug, which improves the immune status of the body. This substance is an active principle, using which a new remedy in the form of a gel was developed. As auxiliaries for the obtained phytopreparation, carbomol, propylene glycol, sodium benzoate, and some other permitted for medicinal use ingredients, were studied. Produced phytopreparation was studied by all quality requirements provided for this dosage form in accordance with the regulations of the State Pharmacopoeia of the Republic of Kazakhstan. These indicators include the following: description, genuineness, uniformity, particle size, pH, weight of the package contents, microbiological purity, quantification of the active ingredient. A program for long-term stability studies produced a medicament for its storage in the claimed packaging at a given temperature and relative humidity.

Studies were funded under the Technology Commercialization Project, supported by the World Bank and the Government of the Republic of Kazakhstan.

Keywords: new herbal remedy, improves the immune status

Poster programme

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[P1.02]	**Enantiopure hydroxylated pyrrolidinones modelled on pramanicin: synthesis and antibacterial activity** S.W.B. Tan*[1,2], L.L.C. Chai[2,3], M.G. Moloney[1], [1]*University of Oxford, UK,* [2]*Agency for Science, Technology and Research (A*STAR), Singapore,* [3]*National University of Singapore, Singapore*
[P1.03]	**Synthesis of imidazolone fused quinazolinone analogs as potential anti cancer agents** G. Mariappan*, D. Kumar, A. Theengh, S. Bhutia, *Kamla Nehru Institute of Management and Technology, India*
[P1.04]	**Greener approach in the synthesis of some novel class of isoxazoline derivatives using 1,3-dipolar cycloaddition reactions of dihydropyran derived nitrones and their further applications** B. Chakraborty, *Sikkim Government College, India*
[P1.05]	**One-pot catalyst-free three-component stereoselective synthesis of trans-(4-perfluoroalkyl-1h-benzo[b][1,4]diazepin-3-yl)-phosphonic acid diethyl esters** Y. Shen*[1], J. Han[1], J. Chen[1], H. Zhang[1], W. Cao[1,2], [1]*Shanghai University, China,* [2]*Shanghai Institute of Organic Chemistry, China*
[P1.06]	**Organocatalytic enantioselective cascade reactions of fluorobis(phenylsulfonyl)methane with enals** Y.S. KIM*[1], S.M. KIM[1], B. Wang[2], X. Companyo[3], J. Lic[2], A. Moyanoa[3], S.Y. Im[1], J.W. Yang[1], R. Rios[4], [1]*Sungkyunkwan University, Republic of Korea,* [2]*Nankai University, China,* [3]*Barcelona University, Spain,* [4]*Southampton University, UK*
[P1.07]	**Synthesis, 3D pharmacophore, QSAR and docking studies of novel quinazoline derivatives with nitric oxide release moieties as preferential selective COX-II inhibitors** D.B. Farag[1], N.A. Farag*[1], D.A. Abou El Ella[2], [1]*Misr International University, Egypt,* [2]*Ain Shams University, Egypt*
[P1.08]	**Cyclopeptide-based glycoclusters and biological applications** B. Thomas[1], M. Fiore[1], G.C. Daskhan*[1], N. Berthet[1], J. Garcia[1], O. Renaudet[1,2], [1]*University of Grenoble, France,* [2]*Institut Universitaire de France, France*
[P1.10]	**Intramolecular Povarov reactions in the construction of novel luotonin-inspired heterocyclic hybrids** R.S. Kumar*[1], N. Arumugam[1], A.I. Almansour[1], J.C. Menéndez[2], [1]*King Saud University, Saudi Arabia,* [2]*Universidad Complutense, Spain*
[P1.11]	**Development of a molecular probe for the culture-free screening test for the rapid detection of Staphylococcus aureus within healthcare environments** A.D. Le Gresley, A.J. Sinclair, M. Fielder, L. Mulcahy*, S. Malik, L. Geldeard, *Kingston University, UK*
[P1.14]	**Enantioselective inverse electron demand imino-Diels-Alder reaction provides mitotic modulators** V. Eschenbrenner-Lux*[1,2], P. Küchler[1,2], S. Ziegler[1,2], K. Kumar[1,2], H. Waldmann[1,2], [1]*Max Planck Institute for Molecular Physiology, Germany,* [2]*TU Dortmund, Germany*
[P1.15]	**Facile regioselective cleavage of Kulinkovich cyclopropanols** Y. Wu, *Shanghai Institute of Organic Chemistry, CAS, China*
[P1.16]	**New C-H activation strategy for the synthesis of biologically important molecules** P. Purohit*, K. Seth, A.K. Chakraborti, *National Institute of Pharmaceutical Education and Research, India*
[P1.17]	**Synthesis of pyrido[2,1-a]isoindole derivatives from benzyne** X.X. Zheng*, Y.L. Chen, *Shanghai University, China*
[P1.18]	**Stereoselective synthesis of tricyclo[4,3,1,$0^{1,5}$]decane core of novel marine diterpenoid plumisclerin A with Pauson-Khand reaction and free-radical conjugated addition** Z.J. Yao*[1,2], J.P. Chen[1], Z.Y. Yang[1], [1]*Shanghai Institute of Organic Chemistry, China,* [2]*Nanjing University, China*
[P1.19]	**Design and synthesis of some five membered nitrogen heterocycles** A.S. Hamzah*, Z. Shaameri, M.F. Mohammat, *Universiti Teknologi MARA, Malaysia*
[P1.20]	**The synthesis of a series of fluorinated fullerene[C_{60}] five membered heterocyclic derivatives** S.B. Shen*[1], W. Yang[1], B.Q. Lu[1], X.L. Chen[1], S.S. He[1], Y.H. Zou[1], H.N. Cheng[1], H. Cheng[1], Z.Y. Mi[1], J.M. Zhang[1,2], [1]*Shanghai University, China,* [2]*Shanghai Institute of Organic Chemistry, China*
[P1.21]	**Synthesis of fluorinated fullerene[C_{60}] isoxazole heterocyclic derivatives** S.B. Shen*[1], F. Fang[1], Y.W. Guo[1], Z.Q. He[1], Z.Y. Mi[1], H. Cheng[1], J.M. Zhang[1,2], S.Z. Zhu[2], [1]*Shanghai University, China,* [2]*Shanghai Institute of Organic Chemistry, China*
[P1.22]	**Enantiocomplementary preparation of (S) - and (R)-arylalkylcarbinols by lipase-catalyzed resolution and chemical inversion: impact of lipase amount**

	N. Bouzemi*, I. Grib, Z. Houiene, L. Aribi-Zouioueche, *Badji Mokhtar University Annaba, Algeria*
[P1.23]	**Clusianone derivatives: Separation, semi-synthesis and anticancer evaluation against squamous carcinoma of the nasopharynx and lung adenocarcinoma** T-J. Khoo*[1], C.J. Moody[2], M. Inman[2], C. Wiart[1], S. Vaneesa[1], S-B. Khoo[3], W-L. Kok[1], *[1]University of Nottingham, Malaysia, [2]University of Nottingham, UK, [3]Institute for Medical Research, Malaysia*
[P1.24]	**A new catalytic system for Ru-catalyzed C-H arylation** M. Seki, *API Corporation, Japan*
[P1.25]	**SiO_2 nanoparticles cause metabolic stress via cell cycle dependent EGR1, CCND and E2F1 genes in a human mesenchymal stem cells (hMSC)** A.A. Alshatwi*, A. Jegan, V.S. Periasamy, *King Saud University, Saudi Arabia*
[P1.26]	**Non-classical, donor-acceptor-donor chromophores - novel strategy for high two-photon brightness** D. Firmansyah*[1], A.I. Ciuciu[2], V. Hugues[3], M. Blanchard-Desce[3], L. Flamigni[2], D.T. Gryko[1,4], *[1]Warsaw University of Technology, Poland, [2]CNR, Italy, [3]Université de Bordeaux, France, [4]Polish Academy of Sciences, Poland*
[P1.27]	**Novel phosphine oxides and coumarine-based alpha,beta-unsaturated ketones as initiators for two-photon photopolymerization** M.R. Nazir*[1], P. Danileviciu[2], M. Farsari[2], D.T. Gryko[1,3], *[1]Warsaw University of Technology, Poland, [2]Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology, Greece, [3]Institute of Organic Chemistry, Poland*
[P1.28]	**Photo-responsive supramolecular hydrogels with applications in 3D cell culture and modulation** J. Li, M. He, Y. Zhang*, *Nanjing University, China*
[P1.29]	**Synthesis and biological activity of new pyridine fused A-ring 17-substituted androstane derivatives** J. Ajdukovic*[1], M. Savic[1], M. Sakac[1], K. Penov Gasi[1], D. Jakimov[2], E. Djurendic[1], *[1]University of Novi Sad, Serbia, [2]Institute of Oncology Sremska Kamenica, Serbia*
[P1.30]	**Peptide-based vectors: from the design to the therapeutic applications** A. Grassin[1,2], F. Thoreau[1,2], C.H.F. Wenk[1,3], V. Josserand[1,3], J-L. Coll[1,3], D. Boturyn*[1,2], *[1]University of Grenoble, France, [2]CNRS, France, [3]INSERM, France*
[P1.31]	**An efficient synthesis of 7-methoxy-1-naphthylacetic acid** K. Chinea*, A.K. Banerjee, *Venezuelan Institute of Scientific Research (IVIC), Venezuela*
[P1.32]	**Novel quinolone substituted imidazolidinones as anti-inflammatory, anticancer agents: Synthesis, biological screening and molecular docking** A. Joseph*, S. Kumar, J. Mathew A, S. Kumar Suthar, A. Treasa Alex, *Manipal College of Pharmaceutical Sciences, India*
[P1.33]	**Tandem reaction involving two arynes: highly stereoselective synthesis of dihydronaphtho-fused oxindole** S. Su, N. Wang, B. Song, X. Jia*, *Shanghai University, China*
[P1.34]	**Regioselective carbohydrate protection by steric and stereoelectronic control** H. Dong, *Huazhong University of Science & Technology, China*
[P1.35]	**Structure-based drug design with G protein-coupled receptors** G.A. Brown, M. Pickworth*, *Heptares Therapeutics Limited, UK*
[P1.36]	**Homoallenyl aldehyde as a synthon for useful transformations** M. Potáček*, J. Galeta, M. Buchlovič, *Masaryk University, Czech Republic*
[P1.37]	**Synthesis, molecular modelling and liver X receptor activity of cholestenoic acid analogues** L.D. Alvarez*, M.V. Dansey, D. Grinman, G.A. Samaja, C. del Fueyo, D. Navalesi, A. Pecci, A.S. Veleiro, G. Burton, *CONICET-UBA, Argentina*
[P1.38]	**Synthesis and antimicrobial evaluation of chenodeoxycholic acid amides** P. Charoenying*, P. Sahasyodhin, P. Boonmanumsin, *King Mongkut's Institute of Technology Ladkraban, Thailand*
[P1.39]	**Synthesis and biological evaluation of arachidonyl trifluoromethyl ketone analogues as potential inhibitors of cPLA2** C.Y. Ng*, Y.L. Lam, C-M. Low, *National University of Singapore, Singapore*
[P1.40]	**Synthesis of C4-linked C_0- and C_2-imidazole 2'-deoxyribonucleoside phosphoramidite and imidazole effects on DNA base pairing** S. Harusawa*, H. Yoneyama, Y. Usami, Z. Zhao, *Osaka University of Pharmaceutical Sciences, Japan*
[P1.42]	**Novel convenient method for the synthesis of indans and chromans from different two alcohols in the presence of $NaHSO_4/SiO_2$** T. Aoyama*, T. Takido, M. Kodomari, *Nihon University, Japan*
[P1.43]	**A facile method for preparation of 1-acyloxy- and 1-sulfonyl- 1,2,3-triazoles through copper-catalyzed alkyne-azide cycloaddition**

	A. Cervantes-Reyes*[1,2], E. Cuevas-Yañez[1,2], [1]*Centro Conjunto de Investigación en Química Sustentable, Mexico,* [2]*Universidad Autónoma del Estado de México, Mexico*
[P1.44]	**Chemoselective and repetitive intermolecular cross-acyloin condensation reactions between a variety of aromatic and aliphatic aldehydes using a robust N-heterocyclic carbene catalyst** S.M. Kim*, M.Y. Jin, J.W. Yang, *Sungkyunkwan University, Republic of Korea*
[P1.45]	**Total synthesis of baringolin, preparation of analogues and SAR studies** X. Just-Baringo, P. Bruno, F. Albericio, M. Álvarez*, *University of Barcelona, Spain*
[P1.46]	**A facile high yielding synthesis of some cyclic imide derivatives using trifluoroacetic acid** S.O. Oguntoye*[1,2], G.A. Olatunji[1], D.S. Ogunniyi[1], S. Shoravi[3], I.A. Nicholls[3], [1]*University of Ilorin, Nigeria,* [2]*University of Kwazulu-Natal, South Africa,* [3]*Linnaeus University, Sweden*
[P1.47]	**Biogenetic hypotheses, structural revisions, and synthesis of complex halogenated marine natural products from Laurencia species** D.C. Braddock, *Imperial College London, UK*
[P1.48]	**Sugar-derived amine catalyzed intramolecular diels-alder reactions** T.K.M. Shing*, K.W. Wu, H.T. Wu, *Chinese University of Hong Kong, China*
[P1.49]	**Synthetic and theoretical studies on the first diastereoselective [3+2]cycloaddition reaction of diethyl isocyanomethylphosphonate and maleimides** S. Abas*[1], J. Molina[1], C. Arroniz[1], M. Genis[1], E. Molins[2], J.M. Campanera[1], F.J. Luque[1], C. Escolano[1], [1]*University of Barcelona, Spain,* [2]*CSIC, Spain*
[P1.50]	**Synthesis of norbornane-based cationic amphiphiles as potential antibiotics** S.M. Hickey*, F.M. Pfeffer, T.D. Ashton, *Deakin University, Australia*
[P1.51]	**Design, synthesis and biological evaluation of novel shikonin and alkannin derivatives as potent antitumor agents via a prodrug approach** R. Wang, W. Zhou, Q. Meng, X. Zhang, J. Ding, Y. Xu, H. Song, K. Yang, S. Li*, *Shanghai Jiao Tong University, China*
[P1.52]	**Singlet oxygen initiated one-pot synthesis of 1-azaspirocycles and the tetracyclic framework of the aromatic erythrina alkaloids from simple furans** D. Kalaitzakis, T. Montagnon, E. Antonatou, G. Vassilikogiannakis*, *University of Crete, Greece*
[P1.53]	**Total synthesis of ustiloxin D** A. Brown*, C. Hutton, *University of Melbourne, Australia*
[P1.54]	**Design and synthesis of activity-based probes targeting secreted phospholipase A_2 enzymes** R. Rosseto, A. Keshavarz, J. Hajdu*, *California State University, USA*
[P1.55]	**Shedding light on Brønsted acid catalysis – a photocyclization–reduction reaction for the asymmetric synthesis of tetrahydroquinolines from aminochalcones in batch and flow** H.H. Liao*, C.C. Hsiao, E. Sugiono, M. Rueping, *RWTH Aachen University, Germany*
[P1.56]	**Preliminary investigations into novel 1,2,3-trizole based androgen receptor antagonists for the treatment of prostate cancer** J.M. Altimari*[1], B. Niranjan[2], G.P. Risbridger[2], S.S. Schweiker[3], A. Lohning[3], L.C. Henderson[1], [1]*Deakin University, Australia,* [2]*Monash University, Australia,* [3]*Bond University, Australia*
[P1.57]	**Compounds from Scutellaria indica and their anti-inflammatory activity** D.C. To*[1], J.H. Lee[2], B.S. Min[1], [1]*University of Daegu, Republic of Korea,* [2]*Kangwon National University, Republic of Korea*
[P1.58]	**Silver catalyzed asymmetric 1,3-dipolar cycloaddition of dihydro-2H-pyrrole-2-carboxylates or 4-oxazolecatboxylates with activated alkenes** A. Tada*, S. Watanabe, S. Fukuzawa, *Chuo University, Japan*
[P1.59]	**Inter- and intramolecular carbene cyclization cycloaddition cascade (CCCC) reaction of alfa, beta-unsaturated carbonyl ylides and its application to the total synthesis of anthecularin** Y. Yu*, P. Chiu, *The University of Hong Kong, Hong Kong*
[P1.60]	**Targeting intrinsically disordered protein states: Novel p53-mdm2 inhibitors** A. Dömling[1,4], T. Holak[2], B. Beck[3], C. Camacho[4], D. Neochoritis[1], N. Estrada*[1], A. Casini[1], [1]*RUG, The Netherlands,* [2]*Jagiellonian University, Poland,* [3]*Helmholtz Haematology, Germany,* [4]*University of Pittsburgh, USA*
[P1.61]	**From simple furans to complex N-bearing aromatic polycycles via a flexible and general reaction sequence initiated by singlet oxygen** D. Kalaitzakis*, T. Montagnon, E. Antonatou, N. Bardají, G. Vassilikogiannakis, *University of Crete, Greece*
[P1.62]	**Novel, attractive approach to the synthesis of pyrrolo[3,2-b]pyrrole platform and further modifications towards quadrupolar, emission-tunable π-expanded dyes** A. Janiga*[1], D. Bednarska[1], E. Glodkowska-Mrowka[2], T. Stoklosa[2], D.T. Gryko[1], [1]*polish Academy of Sciences, Poland,* [2]*Center of Biostructure Research, Poland*

[P1.63]	**Novel acyclic phosphonate nucleosides with oxime fragment in the chain: synthesis and antiviral activity** P.N. Solyev*, M.V. Jasko, M.K. Kukhanova, *Russian Academy of Sciences, Russia*
[P1.64]	**Synthesis and biological evaluation of some heterocyclic compounds from salicylic acid hydrazide** E.M. Sarshira, N.M. Hamada*, M.M. Abdelrahman, Y.M. Moghazi, *Alexandria University, Egypt*
[P1.65]	**The synthesis of substituted azaindoles for use as building blocks in drug discovery** M.E.L. Swindlehurst*[1], D.K. Whelligan[1], S. Allin[2], *[1]University of Surrey, UK, [2]Nottingham Trent University, UK*
[P1.66]	**Polymeric organocatalysts derived from cinchona alkaloid quaternary ammonium salt** S. Itsuno*, M.M. Hassan, N. Haraguchi, *Toyohashi University of Technology, Japan*
[P1.67]	**Visible light mediated deiodination: an application in the stereoselective synthesis of 2-deoxy oligosaccharides** H. Wang, J.Y. Tao, X.P. Cai, W. Chen, Y. Xu, Y.Q. Zhao, J. Luo, Q. Wan*, *Huazhong University of Science and Technology, China*
[P1.68]	**Synthesis of side-chain gem-difluorinated acyclic nucleoside phosphonates** K. Pomeisl*, P. Bier, R. Pohl, M. Krecmerova, *Academy of Sciences of the Czech Republic, Czech Republic*
[P1.69]	**Synthesis of a potencial dual binding site inhibitor of acetylcholinesterase to treat Alzheimer's disease** T.P.C. Chierrito, I. Carvalho*, *University of Sao Paulo, Brazil*
[P1.70]	**Synthesis of new sulfonamide xanthones identified as potent alpha-glucosidase inhibitors** F. Ferkous*, S. Lakehal, K. Kraim, O. Attoui Yahia, Y. Saihi, *Badji Mokhtar Annaba University, Algeria*
[P1.71]	**Interaction of synthetic ergosterol analogues with amphotericin B toward understanding drug's selective toxicity** Y. Nakagawa*, Y. Umegawa, K. Nonomura, H. Tsuchikawa, N. Matsumori, M. Murata, *Osaka University, Japan*
[P1.72]	**Synthesis of 2-alkylated tryptophans by Friedel-Crafts alkylation of 3-alkylindoles with dehydroalanine derivatives** M. Mari, F. Bartoccini, S. Lucarini, G. Piersanti*, G. Spadoni, *University of Urbino "Carlo Bo", Italy*
[P1.73]	**Synthesis of acyclic nucleoside phosphonates bearing 5-amino-1,2,4-thiadiazol-3(2H)-one as the nucleobase** A. Chupikova*, M. Otmar, L.P. Slavetinska, M. Krecmerova, *Academy of Sciences of the Czech Republic, Czech Republic*
[P1.74]	**Biological activity of pyrazole and imidazole-dehydroepiandrosterone derivatives on the activity of 5α-reductase and 17β-hydroxysteroid dehydrogenase** M. Cabeza*[1], A. Posadas[2], A. Sánchez-Márquez[1], Y. Heuze[1], J. Soriano[3], M. Garrido[2], F. Cortés[2], E. Bratoeff[2], *[1]Universidad Autónoma Metropolitana, Mexico, [2]Universidad Nacional Autónoma de México, Mexico, [3]Hospital General, Mexico*
[P1.75]	**Design of novel dehydroepiandrosterone benzimidazolyl derivatives as 5α-reductase inhibitors and their binding to androgen and progesterone receptors** M. Cabeza*[1], T. Segura[2], A. Sánchez[1], Y. Heuze[1], J. Soriano[3], E. Bratoeff[2], *[1]Universidad Autónoma Metropolitana, Mexico, [2]Universidad Nacional Autónoma de México, Mexico, [3]Hospital General de México, Mexico*
[P1.76]	**Cycloadition reactions of fullerene C_{60} and estradiol and similar molecules from a theoretical point of view** L. Pérez-Manriquez, E. Ramos, C. Rios, R. Salcedo*, *Universidad Nacional Autónoma de México, Mexico*
[P1.77]	**Strategies towards the synthesis of new (*E*)-2-aryl-3-styryl-4*H*-chromen-4-ones and (*E*)-1-methyl-2-aryl-3-styrylquinolin-4(1*H*)-ones** D.H.A. Rocha, D.C.G.A. Pinto*, A.M.S. Silva, *University of Aveiro, Portugal*
[P1.78]	***De novo* synthesis of ketohexoses promoted by serine-based organocatalysts** O. Popik*[1], J. Mlynarski[1,2], *[1]Polish Academy of Sciences, Poland, [2]Jagiellonian University, Poland*
[P1.79]	**Synthesis of biotin labelled cap analogues modified within triphosphate bridge - molecular tools for investigation of capped mRNAs cellular fate** S. Bednarek*, J. Jemielity, *University of Warsaw, Poland*
[P1.80]	**Asymmetric hydrogenation of tert-alkyl ketones: DMSO effect in unification of stereoisomeric ruthenium complexes** T. Yamamura*, H. Nakatsuka, S. Tanaka, M. Kitamura, *Nagoya University, Japan*
[P1.81]	**Enantioselective organocatalyzed formal [n+2] cycloaddition using allenoates** S. Takizawa, F. Arteaga, Y. Yoshida*, M. Suzuki, T. Nguyen, H. Sasai, *Osaka University, Japan*
[P1.82]	**Synthesis of multi-functional imidazoles via reaction of Morita-Baylis-Hillman acetates of nitroalkenes with amidines** T. Kumar*, D. Verma, I.N.N. Namboothiri, *Indian Institute of Technology Bombay, India*

[P1.83]	**Silver/ThioClickFerrophos catalyzed enantioselective 1,4-conjugate addition of glycine imino ester to aryl- and alkylidene phosphonates** M. Kimura*, S. Fukuzawa, *Chuo University, Japan*
[P1.84]	**N-heterocyclic carbene mediated transformation of cinnamils to vinylfulvenes** C.R. Sinu*, V. Nair, *National Institute for Interdisciplinary Science and Technology, India*
[P1.85]	**Reducing agent promotes hydroxylation of fatty acid by lipoxygenase** T. Itoh*, T. Saito, K. Yamamoto, *Showa Pharmaceutical University, Japan*
[P1.86]	**Design and synthesis of antagonist to prevent the active conformation of vitamin D receptor** A. Kato*, N. Yoshimoto, T. Itoh, K. Yamamoto, *Showa Pharmaceutical University, Japan*
[P1.87]	**Anti-oxidant and tyrosinase inhibitory compounds from the aerial parts of Aruncus dioicus var. kamtschaticus** B.T. Zhao*, S.Y. Jeong, Q.H. Vo, P.H. Nguyen, M.H. Woo, *Catholic University of Daegu, Republic of Korea*
[P1.88]	**Design, synthesis and characterization of selenium-containing inhibitors of activated thrombin-activatable fibrinolysis inhibitor (TAFIa)** K. Yamamoto*, N. Yoshimoto, T. Itoh, H. Ishii, *Showa Pharmaceutical University, Japan*
[P1.89]	**Synthesis of functionalized α-trifluoroethyl amine scaffolds via addition of highly functionalized organomagnesium and zinc reagents to N-aryl hemiaminal ethers** A. Deutsch*, C. Wagner, A. Hoffmann-Röder, *Ludwig Maximilian University of Munich, Germany*
[P1.90]	**Chemistry of antitumor 1,2,3,4-tetrahydroisoquinoline natural productsPreparation of tricyclic model compounds with improved cytotoxicity profiles** N. Saito*, K. Nakai, M. Yokoya, *Meiji Pharmaceutical University, Japan*
[P1.91]	**Novel approach towards the stereoselective synthesis of protected inositols** L.H. Sayer*, G.J. Florence, T.K. Smith, *University of St Andrews, UK*
[P1.92]	**New anti-inflammatory caffeoylglycerides from the grains of Sorghum bicolor** P.H. Nguyen*[1], B.T. Zhao[1], Q.H. Vo[1], J.H. Lee[2], Y.H. Kim[3], M.H. Woo[1], *[1]Catholic University of Daegu, Republic of Korea, [2]Kangwon National University, Republic of Korea, [3]Kyungbuk National University, Republic of Korea*
[P1.93]	**New protein tyrosine phosphatase 1B inhibitors from the aerial parts of Selaginella tamariscina** P.H. Nguyen*[1], B.T. Zhao[1], Q.H. Vo[1], J.S. Choi[2], M.H. Woo[1], *[1]Catholic University of Daegu, Republic of Korea, [2]Pukyong National University, Republic of Korea*
[P1.94]	**Tablets on the basis of herbal substance "Limonidin"** G.E. Zhussupova[1], K.B. Murzagulova[2], A.I. Zhussupova*[1], A.V. Gadetskaya[1], Z.A. Abilov[1], *[1]Al-Farabi Kazakh National University, Kazakhstan, [2]Romat Pharmaceutical Company, Kazakhstan*
[P1.95]	**Novel compound from Limonium myrianthum possessing antioxidant activity** A.V. Gadetskaya[1], G.E. Zhussupova[1], M.K. Murzakhmetova[2], S.A. Ross[3], A.I. Zhussupova*[1], *[1]Al-Farabi Kazakh National University, Kazakhstan, [2]Institute for Human and Animal Physiology MES RK, Kazakhstan, [3]University of Mississippi, USA*
[P1.96]	**Lanostane triterpenoids from Ganoderma lucidum and their biological activities** V.T. Nguyen*[1], J.H. Lee[1], B.S. Min[1], *[1]Catholic University of Daegu, Republic of Korea, [2]Kangwon National University, Republic of Korea*
[P1.97]	**Synthesis and biological evaluation of novel 23-hydroxybetulonic acid derivatives as potential antitumor agents** H-Y. Zhang*, P-Q. Zhu, S-T. Xu, X-M. Wu, J-Y. Xu, *China Pharmaceutical University, China*
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[P2.01]	**Methoxymethyl ether (MOM) as protecting hydroxyl groups of benzyl ß-L-arabinopyranoside** C. Ferris*, M.V. de Paz, B. Begines, E. Galbis, J.A. Galbis, *University of Seville, Spain*
[P2.02]	**Functional N-fused imidazole as building block: a novel efficient entry to biologically relevant versatile heterocyclic-condensed purines** V. Chaudhary*, S. Guchhait, *National Institute of Pharmaceutical Education and Research, India*
[P2.03]	**Development of ERK5 inhibitors for anti-cancer therapy** N.C. Martin[1], *[1]Northern Institute for Cancer research, UK, [2]Cancer Research Discovery Laboratories, UK, [3]The Beatson Institute for Cancer Research, UK*
[P2.05]	**Novel asymmetric catalytic intramolecular approach to bioactive chiral cycloalkanols: comparison of batch and flow-techniques** H. Viana*[1], C. Marques[1], P.H. Seeberger[2], K. Gilmore[2], A.J. Burke[1], *[1]Universidade de Évora, Portugal, [2]Max Planck Institute of Colloids and Interfaces, Germany*
[P2.06]	**Tandem ATRP-Diels Alder synthesis of polyHEMA-based hydrogels**

	E. Galbis*, M.V. de Paz, C. Ferris, B. Begines, J.A. Galbis, *Universidad de Sevilla, Spain*
[P2.07]	**Sugar dienes as novel building blocks for synthesis of bicyclic systems *via* olefin-nitrile oxide cycloaddition reaction** G. Witkowski*, S. Jarosz, *Polish Academy of Sciences, Poland*
[P2.08]	**Electrospray ionization tandem mass spectrometry analysis of a broad spectrum of nucleotides and their synthetic analogs including potential therapeutic agents** D. Strzelecka*, S. Chmielinski, J. Jemielity, J. Kowalska, *University of Warsaw, Poland*
[P2.09]	**Design and synthesis of CrtM transition-state mimetic inhibitors** C-H. Tsai*[1], C-I. Liu[2], A.H.J. Wang[3], J-M. Fang[1,3], *[1]National Taiwan University, Taiwan, [2]Taipei Medical University, Taiwan, [3]Academia Sinica, Taiwan*
[P2.10]	**Zanamivir conjugated with anti-inflammatory drugs for enhanced anti-influenza activity** C-K. Cheng*[1], J-M. Fang[1,2], *[1]National Taiwan University, Taiwan, [2]Academia Sinica, Taiwan*
[P2.11]	**Synthesis of antroquinonol** C-S. Hsu*[1], J-M. Fang[1,2], *[1]National Taiwan University, Taiwan, [2]Academia Sinica, Taiwan*
[P2.12]	**Synthesis, characterization, antitumor activity and safety testing of novel aminophosphonate derivatives** I. Kraicheva*, E. Vodenicharova, I. Tsacheva, M. Topashka-Ancheva, A. Kril, I. Iliev, *Bulgarian Academy of Sciences, Bulgaria*
[P2.13]	**Synthesis of novel macrocycles based on a sucrose scaffold** K. Łęczycka*, S. Jarosz, *Polish Academy of Sciences, Poland*
[P2.14]	**Synthesis and evaluation of novel heterocyclic analogues of aminoflavone for anticancer activity** S. Moorkoth*, A. Joseph, N. Gopalan Kutty, *Manipal University, India*
[P2.15]	**Design and development of novel T. brucei inhibitors inspired by nature** E. Gould*, G. Florence, T. Smith, *University of St Andrews, UK*
[P2.16]	**Chemical probes to study ADP-ribosylation - focusing on the ARTD/PARP family of proteins** A.E.G. Lindgren*[1], T. Karlberg[2], T. Ekblad[2], S. Spjut[1], A-G. Thorsell[2], C.D. Andersson[1], H. Schüler[2], A. Linusson[1], M. Elofsson[1], *[1]Umeå University, Sweden, [2]Karolinska Institutet, Sweden*
[P2.17]	**New synthetic route for polymer-supported preparation of benzo[1,4]-diazepin-5-ones with three diversity positions** V. Fulopova*[1], M. Soural[1], T. Gucky[2], M. Grepl[3], *[1]Palacky University in Olomouc, Czech Republic, [2]Centre of the Region Hana for Biotechnological and Agricultural Research, Czech Republic, [3]Farmak a.s., Czech Republic*
[P2.18]	**Progress toward the total synthesis of phomoidride D** A. Bedermann*, N. Hama, C.M. Schneider, M. Tudesco, J.L. Wood, *Baylor University, USA*
[P2.19]	**Synthetic studies toward citrinadin a: construction of the pentacyclic core** M.E. McCallum*, G.M. Smith, T. Matsumaru, K. Kong, J.A. Enquist, Jr., J.L. Wood, *Baylor University, USA*
[P2.20]	**S-alkylation of the terminal nucleoside thiophosphate moiety as a route to obtain modified dinucleotides** K. Fac*, J. Kowalska, J. Jemielity, *University of Warsaw, Poland*
[P2.21]	**Pd(II)-catalysed controlled switching between oxidative Heck and conjugate addition reactions** S.E. Walker*, A-L. Lee, *Heriot-Watt University, UK*
[P2.22]	**Design, synthesis, 3D pharmacophore, QSAR, and docking studies of carboxylic acid derivatives as antiproliferative agents** M.M.A. Atty*[1], N.A. Farag[1], S.E. Kassab[2], R.A. Serya[3], K.A. Abouzid[3], *[1]Misr International University, Egypt, [2]Damanhur University, Egypt, [3]Ain Shams University, Egypt*
[P2.23]	**Synthesis and reactions of sulfone-substituted dihydropyridones** S.S.P. Chou*, Y.T. Wu, *Fu Jen Catholic University, Taiwan*
[P2.24]	**Synthesis of homologated amino acid derivatives containing three vicinal fluorine atoms placed stereospecifically along the backbone** R. Cheerlavancha*[1], A. Lawer[1], C. Marina[2], B. Mohan[1], L. Hunter[1,2], *[1]University of New South Wales, Australia, [2]The University of Sydney, Australia*
[P2.25]	**Total synthesis of neuraminic acid via an anti,syn-oxazine as a chiral building block** J.C. Kang, W.H. Ham*, *Sungkyunkwan University, Republic of Korea*
[P2.26]	**Novel pyrrolobenzodiazepine derivatives from a soil actinomycetes iaolate, Streptomyces sp.11A057** M. Oh[1,2], J.H. Jang[1,2], J.S. Ahn*[1,2], *[1]Korea Research Institute of Bioscience and Biotechnology (KRIBB), Republic of Korea, [2]Unversity of Science and Technology (UST), Republic of Korea*
[P2.27]	**Design and synthesis of 8-quinolinamine as antimalarial agents** M. Jain*, R.P. Reddy, R. Jain, *National Institute of Pharmaceutical Education and Research, India*
[P2.28]	**Towards the total synthesis of escobarine B; building the ring C** G. Caballero*, M. Romero, *Universidad Autónoma del Estado de México, Mexico*

[P2.29]	**An enzyme-responsive photodynamic nanoparticle for cancer therapy** W. Park*, K. Na, *The Catholic University of Korea, Republic of Korea*
[P2.30]	**6-Deoxyglucose as a DNA base mimic: duplex stability, structure and replication by DNA polymerases** R. Lucas[1], E. Vengut-Climent*[1], P. Peñalver[1], I. Gómez-Pinto[2], M. Arévalo-Ruiz[1], A. Aviñó[2], R. Eritja[2], C. González[2], J.C. Morales[1], *[1]Universidad de Sevilla, Spain, [2]CSIC, Spain*
[P2.31]	**Photosensitizer conjugated polymeric micelles of triblock copolymers for enhanced cellular internalization for photodynamic therapy** H. Park*, K. Na, *The Catholic University of Korea, Republic of Korea*
[P2.32]	**Thermo-sensitive nanoparticle based on natural polymer for anti-cancer drug delivery** H. Park*, K. Na, *The Catholic University of Korea, Republic of Korea*
[P2.33]	**Synthesis of new naphthoxazine-fused heterocycles via the modified Mannich reaction** I. Szatmári*, P. Barta, F. Fülöp, *University of Szeged, Hungary*
[P2.34]	**pH-responsive paramagnetic micelle for cancer diagnosis** K.S. Kim*, K. Na, *Department of Biotechnology, Republic of Korea*
[P2.35]	**Catalyst-free coupling of partially unsaturated β-carboline with indole and naphthol derivatives** J. Sas*, I. Szatmári, F. Fülöp, *University of Szeged, Hungary*
[P2.36]	**Asymmetric oxidation of substituted cyclopentane-1,2-diketones** M. Lopp, *University of Technology, Estonia*
[P2.37]	**Efficient synthesis of MeBmt, the unusual amino-acid of cyclosporin A** A.V. Stachulski*, A. Rolt, *University of Liverpool, UK*
[P2.38]	**Photochemical internalization using stimuli-responsive photodynamic nano-micelle** C-S. Lee*, K. Na, *The Catholic University of Korea, Republic of Korea*
[P2.39]	**Synthesis of potential reactivators of nerve agent inhibited acetylcholinesterase** C. Lindgren*[1], J.M. Hillgren[1], C.D. Andersson[1], F. Ekström[2], A. Linusson[1], *[1]Umeå University, Sweden, [2]Swedish Defence Research Agency, Sweden*
[P2.40]	**Sucrose derivatives as promising complexing agents for chiral cations** N. Gajda*, S. Jarosz, *Polish Academy of Sciences, Poland*
[P2.41]	**Synthetic route development of potent 5-lipoxygenase activating protein (FLAP) inhibitors** A. Dahlén*, J. Broddefalk, O. Davidsson, H. Emtenas, M. Lemurell, M. Swanson, *AstraZeneca R&D, Sweden*
[P2.42]	**Carbohydrate-based polymers with highly differentiated microstructures for drug delivery** B. Begines, M.V. de Paz, E. Galbis, C. Ferris, J.A. Galbis*, *Universidad de Sevilla, Spain*
[P2.43]	**Isolation of phytochemicals from Launaea spinosa and their hepatoprotective effect on HepG2 cells damaged with t-BHP** H.M. Abdallah*[1,2], M.A. Farag[2], S.M. Osman[3], E.A. Abdel-Sattar[2], K. Kang[4], C.H. Pan[4], *[1]King Abdulaziz University, Saudi Arabia, [2]Cairo University, Egypt, [3]October 6 University, Egypt, [4]Korea Institute of Science and Technology, Republic of Korea*
[P2.44]	**Synthesis of biodegradable polymers containing disulfide bonds and preliminary studies as colon-specific drug delivery systems** E.B. Hernández, L.R. Azogil, M.G. García-Martín*, J.A.G. Pérez, M.D. Campiñez, A. Aguilar-de-Leyva, I. Caraballo, *Universidad de Sevilla, Spain*
[P2.45]	**Intra-cell chemical and structural analysis using deep-subwavelength mid-IR absorption imaging** C.C. Phillips, *Imperial College London, UK*
[P2.46]	**Progress towards a total synthesis of (–)-exiguolide** A. Riefert*, M.E. Maier, *University of Tübingen, Germany*
[P2.47]	**Click reactions with azides derived from 5-methyluridine** P. Smyslova*, J. Hlavac, *Palacky University, Czech Republic*
[P2.48]	**Direct arylation of purine on solid phase and its use for chemical libraries synthesis** B.L. Lemrova*, V.K. Krchnak, M.S. Soural, J.H. Hlavac, *Palacky Univesity, Czech Republic*
[P2.49]	**Synthesis, structural characterization and antitumor activity of new copper(II) complex with N-substituted sulphonamide ligand** S. Cetean*[1], A.C. Hangan[1], R.L. Stan[1], B. Sevastre[2], L.S. Oprean[1], *[1]Iuliu Hatieganu University of Medicine and Pharmacy, Romania, [2]University of Agricultural Science and Veterinary Medicine, Romania*
[P2.50]	**Hyperbranched low band-gap semiconducting copolymers for application in high-tech electronics** J. Soloducho*, K. Olech, J. Cabaj, *Wrocław University of Technology, Poland*
[P2.51]	**A photochemical logic gate for cellular imaging** J.B. Grimm*, L.M. Heckman, E.R. Schreiter, C. Kim, M.A. Verdecia, L.D. Lavis, *Janelia Farm Research Campus, Howard Hughes Medical Institute, USA*
[P2.52]	**Flexible, phase-transfer catalyzed approaches to 4-substituted prolines** F.S. McWhinnie*, H.J. Johnston, F. Landi, A.N. Hulme, *University of Edinburgh, UK*

[P2.53]	**Catalysis with block-copolymer micelles: A combinatorial study** K. Bukhryakov[1], V. Desyatkin[2], J-P. O'Shea[1], I.P. Beletskaya[2], V.O. Rodionov*[1], *[1]King Abdullah University of Science and Technology, Saudi Arabia, [2]Lomonosov Moscow State University, Russia*
[P2.54]	**Stereocontrolled synthesis of diastereomers of 3-aminocyclohexane-1,2,4 tricarboxylic acids** M. Palkó*, F. Fülöp, *University of Szeged, Hungary*
[P2.55]	**Novel glycoside mimics from glycosylamines: synthesis by way of 1-C-(2-propynyl) iminosugar derivatives** C. Nicolas*[2], C. Cocaud[1], F. Engo-Ilenga[1], O. Martin[1], *[1]University of Orleans, France, [2]CNRS Orleans, France*
[P2.56]	**N-trifluoromethylthiophthalimide: a stable electrophilic SCF_3 reagent and its application in the catalytic asymmetric trifluoromethylsulfenylation** X. Liu*, T. Bootwicha, R. Pluta, I. Atodiresei, M. Rueping, *RWTH Aachen University, Germany*
[P2.57]	**A new synthetic catalytic approach to Cromakalim analogues: reprofiling for neurodegenerative disease treatment** A.B. Burke*, A.G. Goth, *Universidade de Évora, Portugal*
[P2.58]	**A new diagnostic device to prion diseases** M. Robitzer[1], V. Perrier[2], T. Imberdis[2], A.D. Rodrigues*[1], *[1]ENSCM, France, [2]INSERM, France*
[P2.59]	**Following different paths to DPP-IV inhibitor candidates** D.E. Clark, J.M. Sutton*, *Argenta, UK*
[P2.60]	**Innovative sequential catalytic imine arylation/Suzuki-Miyaura coupling with arylboron reagents: A powerful route to bioactive compounds** C.S. Marques*, A.J. Burke, *University of Évora, Portugal*
[P2.61]	**Efficient solid-phase synthesis of some benzo[e]imidazo[1,2-b][1,2,4]thiadiazin-2-one 5,5-dioxides with diversity in two positions** C.S. McMaster*, V. Fülöpová, M. Soural, *Palacky University, Czech Republic*
[P2.62]	**Synthesis of new epicocconone analogues: Application in fluorescence and proteomics** T. Alle*, S. Leleu, X. Franck, *Université de Rouen UMR 6014, France*
[P2.63]	**Design, synthesis and biological evaluation of new triarylpyrazole derivatives as nonsteroidal antiestrogens** N.S. Habib[1], M.A. Khalil[1], K.A. Ismail[1], H.A. Abd El Razik[1], M.A. Ragab*[2], E.A. Afify[3], *[1]Alexandria University, Egypt, [2]Damanhour University, Egypt, [3]King Abdulaziz University, Saudi Arabia*
[P2.64]	**Synthesis of high fluorescent multi-pyrene/porphyrin-dendrimer** M. Martínez-García*[1], M.E. Martínez-Klimov[1], E. Martinez-Klimova[2], *[1]UNAM, Mexico, [2]Imperial College, UK*
[P2.65]	**Synthesis of multi-target directed ligands against Alzheimer's disease: Acetylcholinesterase inhibitor associated to kinases inhibitor** K. Oukoloff*[1], L. Jean[1], P.Y. Renard[1], J.P. Colletier[2], N. Coquelle[2], S. Routier[3], *[1]University of Rouen, France, [2]IBS, France, [3]University of Orléans, France*
[P2.66]	**A new fluorogenic reporter system to illuminating the DNA replication process based on thiol release 7-hydroxycoumarin** B. Roubinet*[1], P.Y. Renard[1], A. Romieu[2], *[1]UMR 6014, France, [2]UMR 6302, France*
[P2.67]	**Metal-catalysed regioselective functionalisation of enamides** R. Rey-Rodriguez*, G. Caillot, I. Gillaizeau, *ICOA d'Orléans, France*
[P2.68]	**Development of bimodal probes for pet/optical imaging involving xanthenes dyes** X. Brune*[1], D. Camporese[3], A. Romieu[2], P-Y. Renard[1], *[1]Universite de Rouen, France, [2]Universite de Bourgogne, France, [3]Advanced Accelerator Applications, France*
[P2.69]	**Preparation of medical films, based on substances, isolated from the plants of Limonium gmelinii genus** G.E. Temirkhanova, L.T. Tatayeva, G.A. Mun, G.E. Zhussupova, Z.A. Abilov, A.I. Zhussupova*, *Al-Farabi Kazakh National University, Kazakhstan*
[P2.70]	**Getting a new herbal remedy in the form of a gel** G.E. Zhussupova, G.A. Mun, Z.A. Abilov, G.E. Temirkhanova, L.T. Tatayeva, A.I. Zhussupova*, *Al-Farabi Kazakh National University, Kazakhstan*
[P2.71]	**A novel method and a novel catalytic system for selective acid catalysed organic addition and substitution reactions** P. Turhanen, J. Vepsäläinen*, *University of Eastern Finland, Finland*
[P2.72]	**Design, synthesis and application of fluorescent 2,1,3-benzothiadiazole-triazole-linked biologically active lapachone derivatives** E.H.G. da Cruz[1], P.H.P.R. Carvalho[3], J.R. Corrêa[3], D.A.C. Silva[1], E.B.T. Diogo[1], B.C. Guido[3], B.C. Cavalcanti[2], C. Pessoa[2], B.A.D. Neto[3], E.N. da Silva Júnior*[1], *[1]Federal University of Minas Gerais, Brazil, [2]Federal University of Ceará, Brazil, [3]University of Brasilia, Brazil*
[P2.73]	**1,2,3-Triazole-, arylamino- and thio-substituted 1,4-naphthoquinones: Evaluation against cancer cell**