Poster Program

Poster Session 1
Monday, September 26, 2016, 13:15-15:00

[P1.01]	**Small molecule efficiently reprogram human astroglial cells into functional neurons** L.Z. Zhang*[1], J.Y. Yin[1], H.Y. Yeh[1], N.M. Ma[1], G.L. Lee[1], X.C. Chen[1], Y.W. Wang[1], P.J. Jin[3], G.W. Wu[2], G.C. Chen[1], *[1]Pennsylvania State University, USA, [2]South China Normal University, China, [3]Emory University School of Medicine, USA*
[P1.02]	**Forebrain organoids generated using mini-bioreactors for modeling Zika virus exposure and microcephaly** X. Qian*[1], H.N. Nguyen[1], M.M. Song[1], S.C. Ogden[2], C. Hammack[2], B. Yao[3], J. Peng[3], H. Tang[2], H. Song[1], G-L. Ming[1], *[1]Johns Hopkins University, USA, [2]Florida State University, USA, [3]Emory University, USA*
[P1.03]	**Development of a new antiarrhythmic therapeutic for long qt syndrome type 3** W.L. McKeithan*[1,2], K.J. Okolotowicz[3], D.A. Ryan[3], A. Savtchenko[4], R.S. Kass[5], J.R. Cashman[3], M. Mercola[1], *[1]Stanford University, USA, [2]Sanford Burnham Prebys Medical Discovery Institute, USA, [3]The Human BioMolecular Research Institute, USA, [4]University of California, San Diego, USA, [5]Columbia University, USA*
[P1.04]	**Human astrocyte complexity and function recapitulates in a novel three dimensional neuron coculture system** R. Krencik[1], K. Seo*[1], J.V. Van Asperen[1], M.E. Ward[2], D.H. Rowitch[1], E.M. Ullian[1], *[1]University of California, San Francisco, USA, [2]National Institute of Neurological Disorders and Stroke, USA*
[P1.05]	**Reprogramming potential is an inheritable trait** A.M. Yunusova*[1], V.S. Fishman[1,2], N.R. Battulin[1,2], *[1]Federal Research Center Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Russia, [2]Novosibirsk State University, Russia*
[P1.06]	**New directions in pluripotent stem cells image analysis - a systematic review** A. Skrzypczyk*[1], N. Scherf[2], S. Giri[1], A. Bader[1], *[1]Leipzig University, Germany, [2]Dresden University of Technology, Germany*
[P1.07]	**Genome-wide knockout screening for the identification of genes detrimental or essential for iPSC generation** K. Kaji*[1], D. Kaemena[1], M. Beniazza[1], K. Yusa[2], *[1]University of Edinburgh, UK, [2]Wellcome Trust Sanger Institute, UK*
[P1.08]	**Two histone variants TH2A and TH2B facilitate human iPS cell generation** L.M. Huynh*[1,2], T. Shinagawa[1,2], S. Ishii[1,2], *[1]RIKEN Tsukuba Institute, Japan, [2]Tsukuba University, Japan*
[P1.09]	**First, large-scale, patient-derived iPSC initiative with iPSCs banked from over 1500 donors in 2 years (and counting)** A. Mack*, C. Kannemeier, E. Nuwaysir, W. Wang, A. Bosch, M. Collins, T. Novak, *Cellular Dynamics International- a Fujifilm Company, USA*
[P1.10]	***In vivo* hematopoietic engraftment from human induced pluripotent stem cells** L.A. Guyonneau-Harmand*[1,2], L. Douay[1,3], *[1]UPMC, France, [2]EFS Ile de France, France, [3]AP-HP, Hôpital St Antoine/Trousseau, France*
[P1.11]	**Glutamine oxidation plays a key role for cell survival of human pluripotent stem cells** S. Tohyama*, J. Fujita, T. Hishiki, S. Tanosaki, S. Someya, F. Hattori, M. Suematsu, K. Fukuda, *Keio University School of Medicine, Japan*
[P1.12]	**Exploring the functional role of non coding RNA during motor neuron degeneration** J.A. Chen, *Academia Sinica, Taiwan*
[P1.13]	**Studying endocrine aspects of premature aging through cell reprogramming-based approach** S. Atashpaz*, S. Samadi Shams, V. Costanzo, *IFOM- The FIRC Institute of Molecular Oncology, Italy*
[P1.14]	**Live subtype identification during cardiac differentiation using genetically encoded voltage sensors** A. Goedel*[1], Z. Chen[1], I. My[1], K.L. Laugwitz[1,3], P. Lipp[2], D. Sinnecker[1], A. Moretti[1,3], *[1]Technical University of Munich, Germany, [2]Saarland University, Germany, [3]DZHK (German Centre for Cardiovascular Research), Germany*
[P1.15]	**The significance of HLA matching in allogeneic human iPS cell-derived neural stem/progenitor cell transplantation for spinal cord injury** M. Ozaki*, A. Iwanami, J. Kohyama, N. Nagoshi, G. Itakura, H. Iwai, M. Matsumoto, H. Okano, M. Nakamura, *Keio University School of Medicine, Japan*
[P1.16]	**Single-step induction of functional human GABAergic and glutamatergic neurons permit neuronal subtype-specific interrogation and cortical network analysis in vitro** A. Sun*[1,2], Q. Yuan[3], S. Tan[3], Y. Xiao[3], D. Wang[3], H. Hui Ng[2], B. Lim[2], H. Shawn Je[3], *[1]National Neuroscience Institute, Singapore, [2]Genome Institute of Singapore, Singapore, [3]Duke-NUS Medical School, Singapore*

[P1.17]	**Patient-specific iPSC derived endothelial cells uncover protective pathways of the BMPR2 mutation in pulmonary arterial hypertension** M. Gu*, N. Shao, S. Sa, D. Li, V. Termglinchan, M. Ameen, I. Karakikes, J. Wu, M. Snyder, M. Rabinovitch, *Stanford, USA*
[P1.18]	**Notch signal inhibition as a promising new therapeutic approach to human iPS cell-derived transplantation therapy for spinal cord injury** T. Okubo*, A. Iwanami, J. Kohyama, N. Nagoshi, G. Itakura, M. Matsumoto, H. Okano, M. Nakamura, *Keio university, Japan*
[P1.19]	**An ipsc model of pulmonary arterial hypertension reveals novel gene expression and patient specificity** S. Sa*, M. Gu, J. Chappell, N.Y. Shao, D. Li, M. Ameen, F. Grubert, C.G. Li, S. Taylor, A. Cao, *Stanford University, USA*
[P1.20]	**Uncovering the impact of *TBR1* autism-associated mutations on cortical development utilizing patient-derived cerebral organoids** B.A. DeRosa*, R.A. Barnard, B.J. O'Roak, *Oregon Health and Science University, USA*
[P1.21]	**Differentiation of lung epithelial cells from iPSCs with mRNA for cystic fibrosis treatment development** Y. Zhao[1], Y. Ni[1], J. Higginbotham[1,2], F. Ye[1], J. Wang*[1,2], [1]*Allele Biotechnology & Pharmaceuticals, USA,* [2]*Scintillon Institute, USA*
[P1.22]	**Differentiation of pancreatic beta cells from iPSCs with mRNA for drug development and cell therapy** Y. Ni[1,2], C. Ji[1], Y. Zhao[1,2], A. Wong[1], J. Higginbotham[2,3], J. Wang*[1,2], [1]*Nanjing Medical University/Children's and Women's Health Hospital, China,* [2]*Allele Biotechnology & Pharmaceuticals, USA,* [3]*Scintillon Institute, USA*
[P1.23]	**Robust human pluripotent cell reprogramming using an automated cell culture system** T. Guo*[1], S. Boutet[1], J. Gibson[2], M. Watson[1], N. Devaraju[1], G. Harris[1], Y. Lu[1], M. Unger[1], C. Nelson[2], N. Li[1], [1]*Fluidigm corporation, USA,* [2]*University of Connecticut, USA*
[P1.24]	**Establishing co-culture system of human iPS-derived cells to model spinal muscular atrophy** Y.C. Chen*[1], T.H. Chen[1,2], Y.T. Tung[1], Y.J. Jong[2,3], J.A. Chen[1], [1]*Academia Sinica, Taiwan,* [2]*Kaohsiung Medical University, Taiwan,* [3]*National Chiao Tung University, Taiwan*
[P1.25]	**Modeling tissue-specific effects of Fanconi anemia using targeted differentiation of induced pluripotent stem cells** S.J. Ruiz-Torres*, M.G. Brusadelli, T.M. Chlon, S.I. Wells, *Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA*
[P1.26]	***Mir-17~92* governs the regional vulnerability of motor neuron subtypes in amyotrophic lateral sclerosis** K.C. Peng*[1,2], Y.T. Tung[1], Y.C. Chen[1], Y.P. Yen[1], Y.L. Lu[1], M. Chang[1], S. Thams[3], H. Wichterle[3], J.A. Chen[1], [1]*Academia Sinica, Taiwan,* [2]*National Yang-Ming University, Taiwan,* [3]*Columbia University Medical Center, USA*
[P1.27]	**Taiwan human disease induced pluripotent stem cells consortium-a resource center for in vitro disease modeling and drug screening** C.Y. Huang*[1], H.E. Lu[2], C.H. Wen[2], S.H. Syu[2], C.Y. Lu[3], Y.C. Tsai[4], W.T. Hsu[1], C.H.H. Cho[1], P.J. Hsu[6], C.Y.T. Yen[1], [1]*Academia Sinica, Taiwan,* [2]*Food Industry Research and Development Institute, Taiwan,* [3]*National Taiwan University, Taiwan,* [4]*Taipei Veterans General Hospital, Taiwan,* [5]*National Yang-Ming University, Taiwan,* [6]*National Health Research Institutes, Taiwan,* [7]*National Chung Hsing University, Taiwan*
[P1.28]	**Assessment of toxicities in the neural differentiation of hESCs using molecular endpoints** H.Y. Kang*, E.B. Jeung, *Chungbuk National University, Republic of Korea*
[P1.29]	**Role of DAND5 in the control of cardiomyocyte proliferation in disease and regenerative medicine.** F. Cristo[1,2], J.M. Inácio[1], S. de Almeida[3], P. Mendes[4], D.S. Martins[5], J. Maio[4], R. Anjos[5], J.A. Belo*[1], [1]*CEDOC, NOVA Medical School, Portugal,* [2]*CBMR, Universidade do Algarve, Portugal,* [3]*Medical Genetics Service, Centro Hospitalar Lisboa Central, Portugal,* [4]*Centro Hospital do Algarve, Portugal,* [5]*Hospital de Santa Cruz, Portugal*
[P1.30]	**Patient-specific iPSC disease model revealed defects of mural cells in stabilising angiogenic capillary structures in genetic vascular dementia CADASIL** J. Kelleher, A. Dickinson, S. Kimber, T. Wang*, *The University of Manchester, UK*
[P1.31]	**Novel stem cell growth factor NME7AB dramatically improves iPSC generation, expansion and differentiation** M.G. Carter, B.J. Smagghe, A.K. Stewart, J.A. Rapley, E. Lynch, K.J. Bernier, K.W. Keating, V.M. Hatziioannou, E.J. Hartman, C.C. Bamdad*, *Minerva Biotechnologies, USA*
[P1.32]	**Astroglial defects revealed using Parkinson patient derived iPSCs** L. Caetano-Davies*, N. Scott, N. Seo, M. Lacagnina, K. Bisciotti, A. Campbell, M. Mayer-Proschel, C. Proschel, *University of Rochester, USA*
[P1.33]	**Transporting mammalian cells at ambient temperature: A viable alternative to dry ice** S.H. Han*, Y.I. Jeon, P. Hwang, D. Ho, S-J. Chung, *HeMemics Biotechnologies Inc, USA*
[P1.34]	**Targeted CpG island methylation in human pluripotent stem cells** Y. Takahashi*[1,2], K. Suzuki[1], P. Martinez Redondo[1], J. Wu[1], M. Li[1], H. Liao[1], M. Wu[1], T. Hishida[1], M.N. Shokhirev[1], J.C. Izpisua Belmonte[1], [1]*Salk Institute, USA,* [2]*University of Tsukuba, Japan*

[P1.35]	**A specialized proteostasis network protects stem cells from stress and protein aggregation** T.K. Rainbolt*[1], W.I. Vonk[1,2], A. Brunet[3], J. Frydman[1], *[1]Stanford University, USA, [2]Utrecht University, The Netherlands, [3]Stanford University School of Medicine, USA*
[P1.36]	**Epigenetic variation between human induced pluripotent stem cell lines is an indicator of differentiation capacity** M. Nishizawa*, K. Chonabayashi, A. Takaori-Kondo, S. Yamanaka, Y. Yoshida, *Kyoto University, Japan*
[P1.37]	**Mechanical induction of trophoblast-like differentiation in human iPS cells** K.O. Okeyo*, O. Kurosawa, S. Yamazaki, H. Oana, M. Washizu, *The University of Tokyo, Japan*
[P1.38]	**OVOL2 maintains the transcriptional program of human corneal epithelium by suppressing epithelial-to-mesenchymal transition** S.M. Masui, *Kyoto University, Japan*
[P1.39]	**Automated cell culture system for large-scale production of human induced pluripotent stem cells** S. Konagaya*[1], T. Ando[2], H. Kotera[3], H. Iwata[1], *[1]Kyoto University, Japan, [2]Panasonic Corporation, Japan*
[P1.40]	**The role of CUL9 in regulating mitosis in pluripotent cells** N.A. Ortolano*, K.P. Park, V. Gama, *Vanderbilt University, USA*
[P1.41]	**Low cell-matrix adhesion microenvironment promote maintaining of high-pluripotency state stem cells** L. Yu[1], J. Li[1], J. Hong[2], Y. Takashima[1], K. Okita[1], F. Tang[2], Y. Chen[3,1], C. Tang[2], H. Kotera[1], L. Liu*[1] *[1]Kyoto University, Japan, [2]CenPeking University, China, [3]Ecole Normale Supérieure, Paris, France*
[P1.42]	**Development and functional applications of human iPSC-derived spinal motor neurons** J. Liu*, C. Chavez, B. Meline, E. Jones, C. McMahon, W. Wang, *Cellular Dynamics International, FUJIFILM, USA*
[P1.43]	**Human iPSCs-engineered anisotropic cardiac tissue-like construct for drug assessment and cardiac disease repairing** J. Li*[1], I. Minami[1], L. Yu[1], M. Shiozaki[4], Y. Shiba[2], S. Yajima[4], S. Fukushima[4], N. Morone[1], H. Kotera[1], S. Miyagawa[4] et al, *[1]Kyoto University, Japan, [2]Shinshu University, Japan, [3]Ecole Normale Supérieure, France, [4]Osaka University Graduate School of Medicine, Japan*
[P1.44]	**Neofunction of ACVR1 in fibrodysplasia ossificans progressiva (FOP)** K. Hino[1,2], M. Ikeya*[1], K. Horigome[1,2], Y. Matsumoto[1,3], H. Ebise[2], K. Sekiguchi[1], S. Matsuda[1], J. Toguchisa[1], *[1]Kyoto University, Japan, [2]Sumitomo Dainippon Pharma Co., Ltd, Japan, [3]Nagoya City University, Japan*
[P1.45]	**Determining the interaction partners of Dot1L and their role in reprogramming** D. Ugurlu*, N. Ozkan, D. Demirtas, N. Ozlu, T. Onder, *Koc University, Turkey*
[P1.46]	**Three congruent human Schwann cell models of CMT1A reveal a converged phenotype** B. Mukherjee-Clavin[1], Y.J. Kim[1,4], H. Lim[1], I.Y. Choi[1], Y. Oh[1], B. Lannon[2], K. Eggan[2], A. Hoke[1], L. Studer[3], G. Lee*[1], *[1]Johns Hopkins School of Medicine, USA, [2]Harvard University, USA, [3]Sloan Kettering Institute, USA, [4]Kyung Hee University, Republic of Korea*
[P1.47]	**The role of patient advocacy in iPSC science and medicine** A.L. Jakimo*[1,2], B. Siegel[3], *[1]Hofstra University, USA, [2]Sidley Austin LLP, USA, [3]Regenerative Medicine Foundation, USA*
[P1.48]	**Clinical-grade culture medium for expansion and large-scale 2D and 3D suspension culture of human pluripotent stem cells** L. Quinn*[1], A. Aspegren[2], M. Serra[3], P.M. Alves[3], M. Butron[2], F. Wessberg[2], A. Wigander[2], *[1]Clontech, USA, [2]Takara Bio Europe AB, Sweden, [3]IBET, Portugal*
[P1.49]	**A dynamic gene expression profiling of mouse embryonic stem cell derivation from blastocyst** M. Totonchi*[1], S.N. Hassani[1], A. Sharifi Zarchi[1], N. Tapia[2], K. Adachi[2], M. Araúzo-Bravo[2], B. Greber[2], D. Sabour[2], H. Schöler[2], H. Baharvand[1], *[1]Royan Institute, Iran, [2]Max Planck Institute, Germany*
[P1.50]	**Generation of hiPSC-based model of progerin-induced aging** S. Raman*, D. Brafman, *Arizona State University, USA*
[P1.51]	**Sox9 reprogrammed dermal fibroblasts undergo hypertrophic differentiation in vitro and trigger endochondral ossification in vivo** W.L. Tam*[1], D. O[1], S.J. Roberts[1], N. Tsumaki[2], F.P. Luyten[1], *[1]KULeuven, Belgium, [2]Kyoto University, Japan*
[P1.52]	**A kit to standardize the efficiency of cardiomyocyte differentiation across multiple iPSC cell lines** F. Rinaldi*, J. Sabat, M. Freeman, J. Aho, *Bio-Techne, USA*
[P1.53]	**Endogenous factors self-regulate high-efficiency human cell reprogramming in microfluidics** C. Luni*[1], S. Giulitti[2,3], E. Serena[2,3], L. Ferrari[2,3], A. Zambon[2,3], O. Gagliano[2,3], G. Giobbe[2,3], F. Michielin[2,3], S. Knobel[4], A. Bosio[4], N. Elvassore[1], *[1]ShanghaiTech University, China, [2]University of Padova, Italy, [3]Venetian Institute of Molecular Medicine, Italy, [4]Miltenyi Biotec, Germany*
[P1.54]	**Modeling epigenetic features of the C9orf72 mutation and therapeutic development for ALS using iPSC-derived motor neurons.** R. Esanov*, N. Andrade, M. Benatar, C. Wahlestedt, Z. Zeier *University of Miami, USA*

[P1.55]	**Novel interactions between Parkinson's risk genes and alpha-synuclein reveal new disease mechanisms and pathway-based therapies** R.M. Mehrotra, I.M. Mehrotra* *Lynbrook, USA*
[P1.56]	**Epigenetic regulation in cellular reprogramming** H. Zhang, S. Gayen, S. Kalantry, Y. Dou* et al *University of Michigan, USA*
[P1.57]	**Using stem cell derived colonic organoids as a model to investigate role of CF genetic modifiers** S. Xia*[1,2], S. Ahmadi[1,2], M. Di Paola[1,2], L. Greenfield[1,2], M. Abdullah[1,2], N.L. Jones[1,2], C.E. Bear[1,2] *[1]Hospital for Sick Children, Canada, [2]University of Toronto, Canada*
[P1.58]	**Histones modifications in hypertrophic cardiomyocytes derived from iPSC** W.R.R. Rosales[1,2], L.D. Daheron[2], F.L. Lizcano*[1] *[1]Universidad de La Sabana, Colombia, [2]Harvard Stem Cell Institute, USA*
[P1.59]	**The National Institute of Neurological Disorders and Stroke Human Cell and Data Repository (NHCDR) offers both research grade and GMP grade iPSC cell lines** M.L. Sutherland*[1], J.A. Tischfield[2], M. Sheldon[2], J.C. Moore[2], S. Saccone[3] *[1]National Institute of Neurological Disorders and Stroke, USA, [2]Rutgers University, USA, [3]Washington University, USA*

Poster Session 2
Tuesday, September 27, 2016, 13:15-14:45

[P2.01]	**Human neural organoids: "NexGen" predictive and personalized medicine models of brain diseases** R. Anand*[1,2], S. McKay[1], *[1]The Ohio State University, USA, [2]Neurxstem, USA*
[P2.02]	**Using hESCs/iPSCs for discovery of a drug that targets a diabetes gene identified through GWAS** S. Chen, *Weill Cornell Medical College, USA*
[P2.03]	**HMGA2 is a regulator of DNA topology - implications for chromatin organization and genome stability in stem and cancer cells** R.P. Dharshanna[1], S.M. Ahmed[1], X. Zhao[1], S. Peter[1], J. Yan[1], P. Droge*[1], *[1]Nanyang Technological University, Singapore, [2]National University of Singapore, Singapore*
[P2.04]	**Induced pluripotent stem cell line derived from human articular cartilage with an allele conditional knock down of GDF5 displays a distinct phenotype** A. Lindahl*, S. Simonsson, A. Forsman, J. Ekholm, C. Brantsing, *University of Gothneburg, Sweden*
[P2.05]	**Cytoskeletal dynamics during in vitro neurogenesis of induced pluripotent stem cells (iPSCs).** C. Compagnucci*[1], E. Piermarini[1], A. Sferra[1], R. Borghi[1,2], A. Niceforo[1,2], S. Petrini[1], F. Piemonte[1], E. Bertini[1], *[1]Ospedale Pediatrico Bambino Gesù, Italy, [2]Università degli Studi Roma Tre, Italy*
[P2.06]	**Silencing of *FMR1* alleles with expanded CGG-repeats occurs very early in embryonic stem cells and is dependent on the repeat size** Y. Zhou[1], D. Kumari*[1], N. SciaScia[2], K. Usdin[1], *[1]National Institute of Diabetes, Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD, USA, [2]National Cancer Institute, National Institutes of Health, Bethesda, MD, USA*
[P2.07]	**Naturally induced totipotent stem cells from somatic cells in different organisms, and the process responsible for their programming** M. Kazemie, *University of Kabul, Afghanistan*
[P2.08]	**Regulation of metabolism in direct neuronal reprogramming** G.L. Russo*[1,2], S. Schmitt[3], D. Lamp[4], U. Ohmayer[3], S. Hauck[3], M. Jastroch[4], H. Zischka[3], G. Masserdotti[1], M. Götz[1,5], *[1]Institute for Stem Cell Research, Helmholtz Center Munich, Germany, [2]Ludwig Maximilians University, Germany, [3]German Research Center for Environmental Health, Germany, [4]Technische University Munich, Germany, [5]Excellence Cluster of Systems Neurology (SYNERGY), Germany*
[P2.09]	**Direct conversion of human fibroblasts into neural progenitors using transcription factors enriched in human ESC-derived neural progenitors** H.C. Kuo*, P.S. Hou, C.Y. Chuang, *ICOB, Academia Sinica, Taiwan*
[P2.10]	**A pluripotent stem cell-based platform to discover gene-environment interactions that impact human pancreatic β -cell survival** T. Zhou*, C.N. Chong, L. Tan, S. Amin, C.L. Robinson, S. Mukherjee, Z. Ghazizadeh, H. Zeng, M. Guo, M. Crespo, *Weill Cornell Medical College, USA*
[P2.11]	**Drug repositioning using patient iPSCs for neurodegenerative disease therapy** T. Kondo, *Center for iPS Cell Research and Application (CiRA), Kyoto University, Japan*

[P2.12]	**Omics-analysis of an iPSC derived model for Alzheimer's disease (APP V717I) exposed to low-energy diet reveals disease specific metabolic changes** J. Schuser[1,2], L. Laan*[1,2], J. Klar[1,2], L. Lorenzo[1,2], J. Nordlund[1,2], M. Shahsavani[3], A. Falk[3], N. Dahl[1,2], *[1]Uppsala University, Sweden, [2]Science for Life Laboratory, Sweden, [3]Karolinska Institute, Sweden*
[P2.13]	**Identifying the molecular players of reprogramming to totipotent state** S. Samadi Shams*[1], S. Atashpaz[1], E. Allievi[1], E. Sebestyen[1], F. Ferrari[1], M. Gherardi[2], M. Cosentino Lagomarsino[2], G. Falco[3], V. Costanzo[1], *[1]IFOM- The FIRC Institute of Molecular Oncology, Italy, [2]UMR 7238 CNRS "Microorganism Genomics", France, [3]Istituto di Ricerche Genetiche Gaetano Salvatore Biogem scarl, Italy*
[P2.14]	**Histone chaperone APLF regulates induction of pluripotency in murine fibroblasts** S. "Joseph", K.M. "Syed", D. "Dutta"*, *Rajiv Gandhi Centre for Biotechnology, India*
[P2.15]	**Priming of neuron diversity in human pluripotent stem cells** A. Almenar-Queralt*, D. Merkurjev, G. Woodruff, H-S. Kim, J.E. Young, C. Allegue, L.K. Fong, C. Mackintosh, L.S. Goldstein, I. Garcia-Bassets, *UCSD, USA*
[P2.16]	**Insights from induced pluripotent stem cell models of frontotemporal dementia** S. Almeida*[1], R. Lopez-Gonzalez[1], B.L. Miller[2], F-B. Gao[1], *[1]University of Massachusetts, USA, [2]University of California San Francisco,USA*
[P2.17]	**Use of non-modified rnas for the derivation of clinically relevant ips cell lines from human blood, urine and skin cells using gmp-compliant reagents** S. Eminli-Meissner*[1], K. Yi[1], J-I. Moon[1], M. Poleganov[3], T. Beissert[2], U. Sahin[2,3], C. Huang[4], N. Morell[4], A. Rana[1], B. Hamilton[1], *[1]Stemgent, USA, [2]TRON - Translational Oncology at University Medical Center Mainz, Germany, [3]BioNTech RNA Pharmaceuticals GmbH, Germany, [4]University of Cambridge, UK*
[P2.18]	**Excitatory cortical neurons (iCell GlutaNeurons) derived from iPS cells create functional macro networks in vitro** C. Kannemeier*, R. Lewis, E. Enghofer, L. Harms, L. Norkosky, B. Swanson, *Cellular Dynamics Internation, a FUJIFIL company, USA*
[P2.19]	**Direct conversion of heart muscle into fat in arrhythmogenic right ventricular cardiomyopathy** T. Dorn*[1], E. Parrotta[1,2], H. Ayetey[3,5], J. Haas[1], N. Fusaki[4], A. Grace[3,5], D. Sinnecker[1], K.L. Laugwitz[1], A. Smith[3,5], A. Morretti[1], *[1]Klinikum rechts der Isar – Technical University of Munich, Germany, [2]University of Magna Grecia, Italy, [3]Papworth Hospital NHS Foundation Trust, UK, [4]DNAVEC Corporation, Japan, [5]University of Cambridge, UK*
[P2.20]	**Differentiation of Hepatocytes from iPSCs with mRNA for Drug Development** Y. Ni[2], Y. Zhao[2], F. Ye[2], A. Wong[2], A. Chammas[2], J. Wang*[1,2], *[1]Scintillon Institute, USA, [2]Allele Biotechnology & Pharmaceuticals, USA*
[P2.21]	**Dynamic function of histone Methyltransferase SETD7 in cardiac lineage commitment.** J. Lee*, N. Shao, H. Wu, V. Termglinchan, J. Churko, C. Lam, S. Ong, K. Wilson, I. Karakikes, J. Wu, *Stanford University, USA*
[P2.22]	**Biosensors-based stem cell models for familial migraine and epilepsy drug discovery.** A. Huang, *Tempo Bioscience Inc, USA*
[P2.23]	**The primate long noncoding RNA BANCR regulates human cardiomyocyte development** K.D. Wilson*[1], M.A. Ameen[1], O.J. Abilez[1], C. He[2], N.Y. Shao[1], J. Churko[1], I. Karakikes[1], J.C. Wu[1], *[1]Stanford University, USA, [2]Wuhan University, China*
[P2.24]	**Mutational landscape of human somatic and iPS cells** F. Rouhani*[1,2], S. Nik-Zainal[1], L. Vallier[1,2], K. Yusa[1], A. Bradley[1], *[1]Wellcome Trust Sanger Institute, UK, [2]University of Cambridge, UK*
[P2.25]	**ALS disrupts spinal motor neuron maturation and aging pathways within gene co-expression networks** R. Ho*[1], S. Sances[1], G. Gowing[1], M.W. Amoroso[2], J.G. O'Rourke[1], A. Sahabian[1], H. Wichterle[3], R.H. Baloh[1], D. Sareen[1], C.N. Svendsen[1], *[1]Cedars-Sinai Medical Center, USA, [2]Harvard University, USA, [3]Columbia University, USA*
[P2.26]	**Modeling retinitis pigmentosa using 3D retina derived from patient-iPSCs** M.L. Gao*, W.L. Deng, X.L. Lei, X.F. Huang, Z.B. Jin, *Wenzhou Medical University, China*
[P2.27]	**H1foo has a pivotal role in qualifying induced pluripotent stem cells** K. Fukuda, A. Kunitomi*, T. Seki, S. Tohyama, J. Fujita, S. Yuasa, *Keio University School of Medicine, Japan*
[P2.28]	**Early maturity of induced pluripotent stem cell-derived neural precursors with the N279K tau mutation** J.L. Ostick*, J.A. Santivanez, L. Calo, M.G. Spillantini, *University of Cambridge, UK*
[P2.29]	**An iPSC derived model of *ZEB2* haploinsufficiency and Mowat-Wilson syndrome reveals key factors for neuropathogenesis and germ layer specification** A. Khalfallah*, J. Schuster, L. Laan, M. Petkova, J. Nordlund, J. Klar, N. Dahl, *Uppsala University, Sweden*

[P2.30]	**Unravelling the molecular synergism of adult human brain pericyte reprogramming into induced GABAergic neurons by Sox2 and Ascl1** M. Karow[2,1], G. Camp[4], A. Pataskar[2], C. Schichor[2], V.K. Tiwari[3], B. Treutlein[4], B. Berninger*[1], [1]*University Medical Center Johannes Gutenberg University Mainz, Germany,* [2]*Ludwig Maximilians University Munich, Germany,* [3]*Institute of Molecular Biology Mainz, Germany,* [4]*Max Planck Institute for Evolutionary Anthropology, Germany*
[P2.31]	**Neurophysiological characterisation of human induced pluripotent stem cell-derived neurons with wild-type, mutated or overexpressed α-synuclein** J.A. Santiváñez-Pérez*[1], M. Parmar[2], G. Kouroupi[3], R. Matsas[3], O. Paulsen[1], M.G. Spillantini[1], [1]*University of Cambridge, UK,* [2]*Lund University, Sweden,* [3]*Hellenic Pasteur Institute, Greece*
[P2.32]	**Dendritic remodeling and synaptic alterations in c9orf72 induced pluripotent stem cells differentiated into neurons.** I. Lorenzini*[1], T. O'Donnell[2], J. Levy[1], I. Varela[2], X. Tang[2], R. Sattler[1], [1]*Barrow Neurological Institute, USA,* [2]*Johns Hopkins University, USA*
[P2.33]	**Tuning the stem cell microenvironment: Oxygen and pressure are key players in iPSC generation and differentiation** Z. Pappalardo*[1,2], L. Cassereau[1], B. Downie[1], B. Adams[1], J. Lim[1], [1]*XCell Biosciences, USA,* [2]*San Francisco State University, USA*
[P2.34]	**SDF-1/CXCR4/CXCR7 role in human iPS cell-based therapies** D.K. Ceholski[2], I.C. Tumbull[2], A.A. Jarrah[2], C. Kho[2], A. Lee[2], L. Hadri[2], K.D. Costa[2], R.J. Hajjar[2], S.T. Tarzami*[1], [1]*Howard University, USA,* [2]*Icahn School of Medicine at Mount Sinai, USA*
[P2.35]	**Changes in the microenvironment influences cellular behavior of iPSCs** A. Kathuria*, R. Meleckyte, D. Danovi, F. Watt, *King's College London, UK*
[P2.36]	**In vivo forced expression of Sox2 transcription factor in an animal model of demyelination transdifferentiates reactive astrocytes into OPCs** S. Farhangi[1], S. Dehghan[1], M. Totonchi[2], M. Javan*[1,2], [1]*Tarbiat Modares University, Iran,* [2]*Royan Institute for Stem Cell Biology and Technology, ACECR,Iran*
[P2.37]	**SCN1A induced pluripotent stem cell-derived neurons** M. Paonessa*[1,2], E. Parrotta[1], M.T. De Angelis[1], M.G. Spillantini[2], G. Cuda[1], JA. Santiváñez-Pérez[2], [1]*University of Magna Graecia, Italy,* [2]*University of Cambridge, UK*
[P2.38]	**Closed-channel culture system for efficient and reproducible differentiation of human pluripotent stem cells into islet cells** S. Konagaya[1], K. Hirano*[2], A. Turner[2], Y. Noda[2], S. Kitamura[2], H. Kotera[1], H. Iwata[1], [1]*Kyoto University, Japan,* [2]*Arkray, Inc., Japan*
[P2.39]	**Altered differentiation of cells with AMPA receptors from human and mouse fragile X neural progenitors** V.S. Achuta*, T. Moykkynen, G. Turconi, U.K. Peteri, K. Keinänen, M. Castrén, *University of Helsinki, Finland*
[P2.40]	**FA-iPSC derived neurons and cardiomyocytes as an oligonucleotide screening platform and assessing its potential for in-vivo predictability** D. Parekh*, J. Liao, S. Dias, P. Lewis, J. Cherry, N. Chau, *RaNA Therapeutics, USA*
[P2.41]	**Study the role of piwi in non-small cell lung cancer** X. Song*, Z. Pan, H. Lin, *Shanghai Tech University, China*
[P2.42]	**Physiological maturation and pharmacological responses in long-term cultured human iPS cell-derived cortical neuronal networks** R.J. Arant*[2], A. Odawara[1], N. Matsuda[1], I. Suzuki[1], [1]*Tohoku Institute of Technology, Japan,* [2]*Alpha MED Scientific, Japan*
[P2.43]	**Screening of human cDNA library reveals two differentiation-related genes, *HHEX* and *HLX*, as promoters of early phase reprogramming toward pluripotency** T. Yamakawa*[1], Y. Sato[1], Y. Matsumura[1], Y. Kobayashi[1], Y. Kawamura[2], N. Goshima[3], S. Yamanaka[1,4], K. Okita[1], [1]*Center for iPS cell research and application, Japan,* [2]*Biological Informatics Consortium, Japan,* [3]*National Institute of Advanced Industrial Science and Technology, Japan,* [4]*Gladstone Institute of Cardiovascular Disease, USA*
[P2.44]	**Disease modeling with patient derived iPSCs** K. Muguruma, *RIKEN, Japan*
[P2.45]	**Systems level analysis of cellular diversity and neuronal activity in long-term cultures of human cerebral organoids** G. Quadrato*[1], T. Nguyen[1], E. Macosko[2], J. Sherwood[1], N. Maria[1], D. Berger[1], J. Lichtman[1], S. McCarrol[2], Z. Williams[2], P. Arlotta[1], [1]*Harvard University, USA,* [2]*Harvard Medical School, USA*
[P2.46]	**Cell-type dependent Alzheimer's disease phenotypes: Probing the biology of selective neuronal vulnerability** C.R. Muratore[1,2], C. Zhou*[2], M. Liao[1], H.C. Rice[1,2], D.G. Callahan[1,2], T. Shin[1], C. Love[3], T.L. Young-Pearse[1], [1]*Brigham and Women's Hospital, USA,* [2]*Harvard Medical School, USA,* [3]*MIT, USA*

[P2.47]	**Efficient generation of functional human hepatocytes and pancreatic beta cells from fibroblasts** S.Y. Zhu, *Zhejiang University, China*
[P2.48]	**Targeting Mll1 H3K4 methyltransferase activity to guide cardiac lineage specific reprogramming of fibroblasts** L. Liu*[1], I. Lei[1], K. Hacer[1], Y. Li[1], L. Wang[2], L. Gnatovskiy[1], Y. Dou[4], S. Wang[1], L. Qian[2], Z. Wang[1] *[1]University of Michigan, USA, [2]McAllister Heart Institute, USA, [3]University of North Carolina, Chapel Hill, USA, [4]University of Michigan, USA*
[P2.49]	**SOX2-VP16 increases reprogramming of human fibroblasts to iPS cells and the activities of newly created enhancers** S. Narayan*, G. Bryant, S. Shah, M. Ptashne, *Memorial Sloan Kettering Cancer Center, USA*
[P2.50]	**Functional connection with cardiac tissues confers maturation phenotypes in hPSC-derived PHOX2B::eGFP expressing sympathetic neurons** Y. Oh*, G-S. Cho, Z. Li, I. Hong, R. Zhu, M-J. Kim, Y.J. Kim, E. Tampakakis, L. Tung, R. Huganir, *Johns Hopkins University School of Medicine, USA*
[P2.51]	**A lncRNA activated during reprogramming links metabolism and differentiation** D. Kim, *University of California, Santa Cruz, USA*
[P2.52]	**Utilising residual epigenetic memory to improve the culture of striatal medium spiny neurons** O. Bartley*[1], N. Choompoo[2], N. Vinh[1], S. Precious[1], C. Kelly[3], A. Rosser[1], *[1]Cardiff University, UK, [2]Naresuan University, Thailand, [3]Cardiff Metropolitan University, UK*
[P2.53]	**RNA processing deregulation during malignant progenitor aging represents a unique therapeutic vulnerability in acute myeloid leukemia stem cells** L.A. Crews*[1], L. Balaian[1], N.P. Delos Santos[1], H.S. Leu[1], A.C. Court[1], E. Lazzari[1], A. Sadarangani[1], M.A. Zipeto[1], M.D. Burkart[1], C.H. Jamieson[1] et al *[1]University of California, San Diego, USA, [2]Fred Hutchinson Cancer Research Center, USA*
[P2.54]	**iPS-Derived cardiomyocytes for safety pharmacology assessment: Support of the comprehensive in vitro Proarrhythmia assay** G. Luerman[1], R. Kettenhofen[1], E. Kfoury*[1], H. Horai[2], J.M. D'Angelo[3] *[1]Axiogenesis AG, Germany, [2]Hamamatsu Photonics, Japan, [3]Hamamatsu Photonics,, France*
[P2.55]	**16p11.2 deletion and duplication endophenotypes in induced pluripotent stem cells** A. Deshpande*[1], S. Yadav[1], D.Q. Dao[1], Z.Y. Wu[2], Y-N. Jan[1], E.M. Ullian[1], L.A. Weiss[1] *[1]University of California San Francisco, USA, [2]Cleave Biosciences, Inc., USA*
[P2.56]	**The New York Blood Center - RheinCell Therapeutics Allogeneic iPSC Haplobank** A. Meffert[1], K. Bielec[1], A. Beermann[1], H. Zaehres[2], H. Schöler[2], G. Kögler[3], J. Adjaye[4], K. Reichert[5], P. Rubinstein[6], P. Wernet*[1] et al *[1]RheinCell Therapeutics, Germany, [2]Max Planck Institute for Molecular Biomedicine, Germany, [3]ITZ, Heinrich-Heine-University, Germany, [4]Institut für Stammzellforschung und Regenerative Medizin, HHU, Germany, [5]H. Milstein Foundation, USA, [6]New York Blood Center, USA*
[P2.57]	**Genetic correction of SOD1 and FUS mutations reveals activation of key signaling pathways that are associated with neurodegeneration in an iPSC model of amyotrophic lateral sclerosis (ALS).** A. Bhinge, L.W. Stanton* *Genome Institute of Singapore, Singapore*
[P2.58]	**A continuous molecular roadmap of reprogramming to iPSCs by high-throughput single cell RNA-seq** J. Shu*[1,2], E. Lander[1], R. Jaenisch[2] *[1]Broad Institute, USA, [2]Whitehead Institute, USA*