LUNG CANCER TRANSLATIONAL SCIENCE FROM THE BENCH TO THE CLINIC

January 4-7, 2016 • Hard Rock Hotel • San Diego, CA

Poster Session A, Tuesday, January 5, 2016, 12:30 p.m.-2:30 p.m.

Small Cell Lung Cancer

- A01 Small cell lung cancer is dependent upon mTOR and amino-acid sensing Ragulator complex for chemotherapy resistance. Milind D Chalishazar, Anandaroop Mukhopadhyay, Matthew Guthrie, Zeping Hu, Ralph DeBerardinis, Trudy G Oliver.
- **A02** Validation of L-Myc as a viable therapeutic target in small cell lung cancer. <u>Dong-Wook Kim,</u> Colin Thomas Dunn, Julien Sage, Kwon-Sik Park.
- A03; PR02 Loss of somatostatin receptor 2 expression reduces small cell lung cancer growth and alters cellular metabolism. <u>Jonathan Merle Lehman</u>, Megan Hoeksema, Jun Qian, Chen Heidi, Chanjuan Shi, Rosana Eisenberg, Pierre Massion.
- A05 Myxomavirus (MYXV) therapy for small cell lung cancer (SCLC) using patient samples and a genetically engineered SCLC mouse model. <u>Daniil E Shabashvili</u>, Masmudur Rahman, Patrick Kellish, Harald Messer, Mary Reinhard, Grant McFadden, Frederic Kaye, Maria Zajac-Kaye.

Drug Resistance

- A06 A novel patient-derived cell line originated at the time of crizotinib resistance displays a mesenchymal phenotype. Karinna Almodovar-Garcia, Yingjun Yan, Yuanyuan Wang, Zhongming Zhao, Xingyi Guo, Yaomin Xu, Christine M Lovly.
- A07 A pilot study utilizing integrated approaches to treating lung adenocarcinoma resistant to targeted therapy. Jin Jen.
- A08 Single cell analyses reveal heterogeneity in EGFR mutant cancers resistant to TKI. Matthew Niederst, Zofia Piotrowska, Huidan Zhang, Haichuan Hu, Angel Garcia, Hillary Mulvey, Elizabeth Lockerman, Dana Lee, Anuj Kalsy, Dave Weitz, Lecia Sequist, Jeffrey Engelman.

Animal Models

- A09; PR01 Novel epidermal growth factor receptor inhibitor accumulates in the brain and inhibits the growth of brain metastatic non-small cell lung cancer. Christina A. Jamieson, Michelle Muldong, Yun Oliver Long, Ida Deichaite, Alan Lewis, David W Anderson, Nicholas A. Cacalano.
- A10 Determination of real-time tumor oxygenation changes following high dose radiotherapy in orthotopic and subcutaneous lung cancers in mice. Changhoon Song, Beom-Ju Hong, Seoyeon Bok, Chan-Ju Lee, Young-Eun Kim, Sang-Rok Jeon, Yun-Sang Lee, Gi Jeong Cheon, Jin Chul Paeng, G-One Ahn, Hak Jae Kim.

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A11 Single-cell mRNA-seq analysis of mucinous lung tumor. Yutaka Maeda.

A12; PR07 Regulation of lung adenocarcinoma differentiation and growth by the transcription factors Nkx2-1/TTF1, Foxal and Foxa2. Shrivatsav Pattabiraman, <u>Eric L Snyder</u>.

A13 Characteristics, oncogene dependency, and response to ponatinib of a novel transgenic mouse model of KIF5B-RET-induced lung adenocarcinoma. Qingling Huang, Valentina E. Schneeberger, Noreen Luetteke, Roha Afzal, Mikalai M Budzevich, Rikesh Makanji, Gary V Martinez, Domenico Coppola, <u>Jie Wu</u>.

Diagnostics and Biomarkers

- A14 Gold nanorod immunoassay to quantify C-Met expression in NSCLC patients selected for anti-EGFR therapy. Chuck Caldwell, Raghuraman Kannan, Gerald Arthur, Dmitry Shin, Ilker Ersoy, Richard Hammer.
- A15 Quantitative mass spectrometry-based proteomics identifies FRalpha and GARFT as predictive biomarkers in tissues of non-squamous NSCLC patients treated with pemetrexed. Alshehri Abdulrahman, Eunkiung An, Fabiola Cecchi, Adele Blackler, Shankar Sellappan, Matt Smolkin, Todd Hembrough, Manish Monga.
- A16 Detection of a novel RET gene fusion in a non-small cell lung cancer patient using AMP chemistry. Peng Fang, Zhenyu Yan, Weihua Liu, Jennifer Biroschak, Paul Labrousse, Jennifer Wright, Cindy Spittle, Chad Galderisi, Jin Li.
- A17 Mutational profile of non-small cell lung cancer by targeted next-generation sequencing in the Mexican population. Giovanny Socca, Carmen Alaez, Norma Hernandez-Pedro, Pedro A Barrios-Bernal, Karol Carrillo-Sanchez, Alejandro Aviles, Oscar Arrieta.
- A18 Detection of viral induced double-stranded RNA intermediates in archival paraffin blocks. Galen Hostetter, Eric Collins, Bree Berghius, Lisa Turner, Eric Hudson, Lorenzo Sempere, Scott Jewell.
- A19 Prediction of distant recurrence-free survival in resectable lung adenocarcinoma. Beatrice Aramini, Christian Casali, Alessandro Stefani, Stefania Bettelli, Susanne Wagner, Zaina Sangale, Elisha Hughes, Jerry Lanchbury, Antonino Maiorana, Uliano Morandi.
- **A20** Constitution of ALK fusion variants in East Asian lung adenocarcinoma. Ju Cheng, Yoon-La Choi, Fan Yang, Weijie Zhao, Lili Jiang, Qing Xu, Feng Zhang, Qingyang Gu, Jhingook Kim, Caicun Zhou, Mao Mao.
- A21 Optimized NGS panel and data analysis enable high sensitivity of detecting colon and lung cancer associated mutations from plasma. Lina Ma, Feng Zhang, Qing Xu, Xiannian Tang, Mao Mao.

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- A22; PR03 Piwi-interacting RNA transcriptome analyses identify cancer type-specific expression and signatures predicting lung tumor behavior. <u>Victor D Martinez</u>, Katey SS Enfield, Emily A Vucic, Natalie Firmino, Kevin L Bennewith, Stephen Lam, Wan L Lam.
- **A23** Whole blood FPR1 mRNA expression identifies both non-small cell and small cell lung cancer. Scott M Morris, Anil Vachani, Harvey I Pass, William N Rom, Glen J Weiss, D Kyle Hogarth, George Runger, Robert J Penny, Kirk Ryden, Donald Richards, W Troy Shelton, David W Mallery.
- A24 Serum glutathione peroxidase 3 as a biomarker of postoperative relapse in patients with lung cancer. In-Jae Oh, Hyun-Ju Cho, Tae-Ok Kim, Chul-Kyu Park, Jung-Hwan Lim, Young-Chul Kim, Ju-Sik Yoon, Sang-Yun Song, Kook-Joo Na, Yoo-Duk Choi, Byung-Chul Ahn, Seung-Won Lee.
- Liquid biopsies could be superior to tumor biopsy to provide a molecular profile in non-small cell lung cancer (NSCLC) patients. <u>Jordi Remon</u>, Ludovic Lacroix, David Planchard, Chloe Pannet, Cecile Jovelet, Andrew Lawson, Sarah Smalley, Kevin Howarth, David Gale, Emma Green, Vincent Plagnol, Nicolas Rosenfeld. Jean-Charles Soria. Beniamin Besse.
- A26 Gene expression classifier for prognosis of early stage squamous cell carcinoma of the lung. Rintaro Noro, Naomi Walsh, Teruhide Ishigame, Kouya Shiraishi, <u>Ana I Robles</u>, Bríd M Ryan, Elise Bowman, Judith A Welsh, Aaron J Schetter, Vidar Skaug, Steen Mollerup, Aage Haugen, Jun Yokota, Takashi Kohno, Curtis C Harris.
- A27; PR06 MET:GRB2 complexes define a subset of lung cancer with potential vulnerability to MET inhibition. Matthew A Smith, Thomas Licata, Aliya Lakhani, Mariella Varella-Garcia, Hans-Ulrich Schildhaus, Vincent Vuaroqueaux, Heinz-Herbert Fiebig, Eric B Haura.
- A28 Routine molecular testing of resected early stage lung adenocarcinoma with targeted next-generation sequencing demonstrates a high rate of actionable mutations. Brendon M Stiles, Abu Nasar, Mohamed Kamel Hussein, Galal Rafik Ghaly, Mohamed Rahouma Ahmed, Jeffrey L Port, Paul C Lee, Andrew B Nguyen, Eugene Shostak, Alain C Borczuk, Michael J Kluk, Nasser K Altorki.
- **A29** Magnetic nanocubes for selective capture of circulating tumor cells in NSCLC. <u>Dhananjay</u> Suresh, Anandhi Upendran, Raghuraman Kannan.
- A30 Characterization of programmed cell death-1 ligand (PD-L1) expression in circulating tumor cells (CTCs) of lung cancer. Rachel Krupa, David Lu, Ryon Graf, Jessica Louw, Lyndsey Dugan, Adam Jendrisak, Kelly Bethel, Yipeng Wang, Dena Marrinucci, Ryan Dittamore.
- Validation of DNA methylation marker SHOX2 and PTGER4 for detection of lung cancer in plasma. Anne Schlegel, Oliver Hasinger, Thomas König, <u>Gunter Weiss</u>.
- A32 Control for stochastic sampling variation and qualitative sequencing error in next-generation sequencing analysis of KRAS actionable mutations. Jiyoun Yeo, Thomas M Blomquist, Xiaolu Zhang, Erin L Crawford, James C Willey.

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Other

- A33 Deregulated SOX2 drives dysplasia in a novel 3D organotypic model of bronchial dysplasia. Lúcia L Correia, Trevor D Littlewood, Gerard Evan, Frank McCaughan.
- A34 Strong pharmacological activity of locally administered next generation antisense oligonucleotides (ASOs) in orthotopic lung cancer mouse models. Minji Jo., Joanna Schmidt, Tianyuan Zhou, Xuefeng Wu, Jeffrey R Crosby, Emily Brand, Youngsoo Kim, A Robert MacLeod.
- A35 Prognostic nomogram for predicting survival of non-small-cell lung cancer patients. <u>Jeong Seon Ryu</u>, Bo-Rim Yi, Jung Soo Kim.

Novel Targets and Pathways

A36 Targeting tumor metabolism to improve radio-sensitivity in non-small cell lung cancer (NSCLC). Theodoros Tsakiridis, Linda Villani, Michael Troncone, Stephanie Gargnelli, Laura Szychla, Gregory Pond, Gregory Steinberg.