



Accolades and Newsworthy Notes

We were superbly pleased to know Dr. **Sree Chinni** represented Karmanos Cancer Institute and the Tumor Biology and Microenvironment Program in New Mexico ! Dr. Chinni was selected to give an oral presentation on his work titled "P13K pathways in immunology, growth disorders and cancer".

The Keystone Symposia series are highly regarded as scientific environments to promote exchange of knowledge. The selection process is highly competitive with an advisory board representatives from government, academics and industry.

New Funding \$\$\$\$

In a very humble manner these funding successes were announced:
Awarded.

NIH/NCI R21CA216648 -01 (PI: **Wei-Zen Wei** and Nerissa Viola-Villegas) 4/1/17 – 3/31/19
Directing Cancer Immunotherapy with Real-time ImmunoPET
Ranked at 1% by NCI study section in October, 2016.

Submitted and scored. Final decision pending.

NIH/NCI 1 R21 CA216650-01 (PI: **MJ Lee**)

We submitted a R21 on July 2016, and scored well (3 percentile).

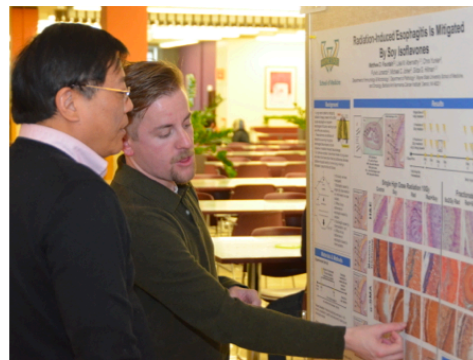
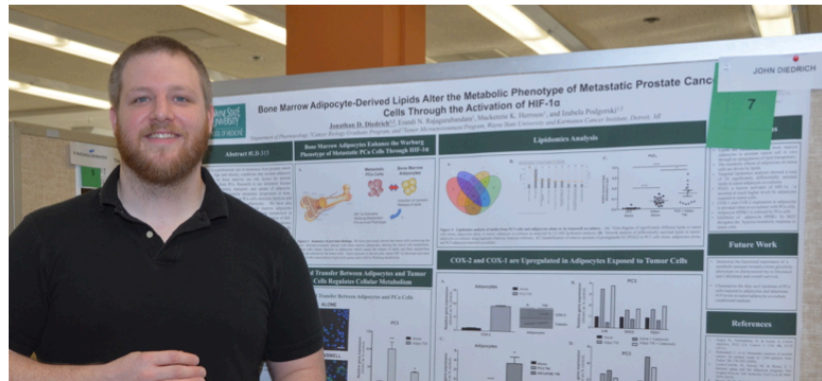
Sphingosine-1-phosphate receptor subtype 3 in oncogenic K-Ras mutant-driven lung adenocarcinoma

Co-investigators: Fulvio Lonardo, Young-Hoon Ahn, Wei Chen

A tribute to our Cancer Biology Program Warrior Scholars !

Congratulations to John Diedrich !

Recipient of the coveted F31 Ruth L. Kirschstein National Research Service Award



The works of Lisa Abernathy and Matthew Fountain are highlighted below.

NOTE: Photos courtesy of Wayne State website graduate exhibition and Program retreats



Our Warrior scholar **John Diedrich**, mentored under Dr. **Izabela Podgorski**, received the coveted F31 Ruth L. Kirschstein National Research Service Award. John will study how tumor cells become resistant to therapies to survive in the bone marrow by using lipids provided by fat cells. John's story was highlighted on our WSU SOM website:

<https://www.med.wayne.edu/news/2017/01/06/cancer-biologys-john-diedrich-wins-nih-f31-training-grant-for-prostate-cancer-research/>

Lisa M. Abernathy and **Matthew D. Fountain**, mentored under Dr. **Gali Hillman**, received notice their manuscript had been accepted in the Journal for ImmunoTherapy of Cancer. This prestigious journal of the Society for Immunotherapy of Cancer (SITC) has high visibility. They appreciate their funding (past) from the French company Transgene (part of the Institut Mérieux) who had already tested the combination MVA-MUC1-IL-2 vaccine with chemotherapy for advanced NSCLC patients and shown the safety of the vaccine. Their studies in the mouse model demonstrate the potential of combining this vaccine with radiotherapy leading to complete anti-tumor immune responses and specific immunity which are not observed if either therapy is used as a single modality. These studies are in the frontline of the field because of a great interest about combining radiotherapy and immunotherapy/cancer vaccine approaches with over 40 ongoing national trials.

A second manuscript was accepted by Frontiers in Oncology. Lisa M. Abernathy, as first author, has her second publication with Dr. Hillman's team. Titled: Innate immune pathways associated with lung radioprotection by soy isoflavones. See below for details. <https://doi.org/10.3389/fonc.2017.00007>

Hot off the Press – SELECTION OF PUBLICATIONS

Dr. **Shijie Sheng** and her team received news -- they have a paper accepted in Cancer Research ! Sijana Dzinic, a co-author on the paper, and Shijie shared joy, laughter and hugs as they recounted the tremendous effort over seven years for this work. Let's take a moment and thank all the mice who have helped in our research efforts (squeak squeak). PMID: 27923833

Cancer Res. 2016 Dec 6

An essential role of maspin in embryogenesis and tumor suppression

Dzinic SH, Bernardo MM, Li X, **Fernandez-Valdivia R**, Ho YS, Mi QS, **Bandyopadhyay S, Lonardo F**, Vranic S, Oliveira D, Bonfil RD, Dyson G, Chen K, Omerovic A, Sheng X, Han X, Wu D, Bi X, Cabaravdic D, Jakupovic U, Wahba M, Pang A, Harajli D, **Sakr W, Sheng S**

PMID: 27923833

Oncotarget. 2016 Nov 11

The secretion and biological function of tumor suppressor maspin as an exosome cargo protein

Dean I, Dzinic SH, **Bernardo MM**, Zou Y, Kimler V, Li X, Kaplun A, **Granneman J**, Mao G, **Sheng S**

PMID: 28009978

Dr. **Kang Chen**'s team received notice their work is to be published in the respected journal Nature Medicine with co-authors **Wei-Zen Wei** and Bihui Huang. Please note Dr. Bihui Huang served as a Judge during our poster competition and we appreciate his interaction with our students. <http://www.nature.com/nm/journal/vaop/ncurrent/full/nm.4244.html>

Nat Med. 2017 Jan;23(1):128-135

Interleukin-33-induced expression of PIBF1 by decidual B cells protects against preterm labor

Huang B, Faucette AN, Pawlitz MD, Pei B, Goyert JW, Zhou JZ, El-Hage NG, Deng J, Lin J, Yao F, Dewar RS 3rd, Jassal JS, Sandberg ML, Dai J, Cols M, Shen C, **Polin LA**, Nichols RA, Jones TB, Bluth MH, Puder KS, Gonik B, Nayak NR, Puscheck E, **Wei WZ**, Cerutti A, Colonna M, **Chen K**

PMID: 27918564

...Two is our lucky number... as noted in these doublet examples...

Dr. **Gali Hillman** started the new year with news of TWO papers for her team.

Front. Oncol., 23 January 2017

Innate Immune Pathways Associated with Lung Radioprotection by Soy Isoflavones

Lisa M. Abernathy, Matthew D. Fountain, Michael C. Joiner and **Gilda G. Hillman**

<https://doi.org/10.3389/fonc.2017.00007>



J Immunother Cancer. 2017 Jan 17;5:4

Radiotherapy and MVA-MUC1-IL-2 vaccine act synergistically for inducing specific immunity to MUC-1 tumor antigen

Hillman GG, Reich LA, Rothstein SE, Abernathy LM, Fountain MD, Hankerd K, Yunker CK, Rakowski JT, Quemeneur E, Slos P. PMID: 28116088

...in addition to being a co-investigator on the new grant above, Dr. Ahn has two papers to note...

Org Biomol Chem. 2016 Nov 22;14(46):10886-10893

Clickable glutathione using tetrazine-alkene bioorthogonal chemistry for detecting protein glutathionylation

Kekulandara DN, Samarasinghe KT, Munkanatta Godage DN, Ahn YH. PMID: 27812596

J Biol Chem. 2016 Dec 30;291(53):27343-27353

TGF- β /SMAD3 Pathway Stimulates Sphingosine-1 Phosphate Receptor 3 Expression: IMPLICATION OF SPHINGOSINE-1 PHOSPHATE RECEPTOR 3 IN LUNG ADENOCARCINOMA PROGRESSION

Zhao J, Liu J, Lee JF, Zhang W, Kandouz M, VanHecke GC, Chen S, Ahn YH, Lonardo F, Lee MJ. PMID: 27856637

...two must be our lucky number as Dr. Hendrickson also notes two papers to share....

FEBS Lett. 2016 Dec;590(23):4180-4191

OB or Not OB: Idiosyncratic utilization of the tRNA-binding OB-fold domain in unicellular, pathogenic eukaryotes

Kapps D, Cela M, Théobald-Dietrich A, Hendrickson T, Frugier M. PMID: 27714804

FEBS Lett. 2016 Sep;590(18):3122-32

Characterization of tunnel mutants reveals a catalytic step in ammonia delivery by an aminoacyl-tRNA amidotransferase

Zhao L, Rathnayake UM, Dewage SW, Wood WN, Veltri AJ, Cisneros GA, Hendrickson TL. PMID: 27500385

...Dr. Grannenman inked two papers here and one above with Dr. Sheng....

Biol Sex Differ. 2016 Dec 9;7:67

Sex differences in sympathetic innervation and browning of white adipose tissue of mice

Kim SN, Jung YS, Kwon HJ, Seong JK, Granneman JG, Lee YH. PMID: 27990249

Sci Rep. 2017 Jan 3;7:39794

Metabolic heterogeneity of activated beige/brite adipocytes in inguinal adipose tissue

Lee YH, Kim SN, Kwon HJ, Granneman JG. PMID: 28045125

.... And Dr. Nangia-Makker's quill splattered our minds with insight sharing two papers with us...

World J Stem Cells. 2016 Sep 26;8(9):279-87

Racial disparity in colorectal cancer: Gut microbiome and cancer stem cells

Goyal S, Nangia-Makker P, Farhana L, Yu Y, Majumdar AP. PMID: 27679684

Stem Cell Res Ther. 2016 Dec 1;7(1):181

Bile acid: a potential inducer of colon cancer stem cells

Farhana L, Nangia-Makker P, Arbit E, Shango K, Sarkar S, Mahmud H, Hadden T, Yu Y, Majumdar AP. PMID: 27908290

... and Dr. Palanisamy offers two new studies...

Am J Surg Pathol. 2016 Dec 22

Renal Cell Carcinoma With Chromosome 6p Amplification Including the TFEB Gene: A Novel Mechanism of Tumor Pathogenesis? Williamson SR, Grignon DJ, Cheng L, Favazza L, Gondim DD, Carskadon S, Gupta NS, Chitale DA, Kalyana-Sundaram S, Palanisamy N. PMID: 28009604

Cell Rep. 2016 Dec 6;17(10):2620-2631

Inflammation-Induced Oxidative Stress Mediates Gene Fusion Formation in Prostate Cancer

Mani RS, Amin MA, Li X, Kalyana-Sundaram S, Veeneman BA, Wang L, Ghosh A, Aslam A, Ramanand SG, Rabquer BJ, Kimura W, Tran M, Cao X, Roychowdhury S, Dhanasekaran SM, Palanisamy N et al. PMID: 27926866



.. and two for the road as Dr. Chunying Li finishes his work with us...

AIMS Biophys. 2017;4(1):1-18

New open conformation of SMYD3 implicates conformational selection and allostery

Spellmon N, Sun X, Xue W, Holcomb J, Chakravarthy S, Shang W, Edwards B, Sirinupong N, **Li C**, Yang Z. **PMID: 28050603**

AIMS Biophys. 2016;3(4):450-455

SMYD proteins in immunity: dawning of a new era

Doughan M, Spellmon N, **Li C**, Yang Z. **PMID: 27790639**

...dare I say Dr. Todi also offers two new papers....

Sci Rep. 2016 Dec 5;6:38510

Inhibition of alpha-synuclein aggregation by multifunctional dopamine agonists assessed by a novel in vitro assay and an in vivo Drosophila synucleinopathy model

Yedlapudi D, Joshi GS, Luo D, **Todi SV**, Dutta AK. **PMID: 27917933**

Biol Open. 2016 Dec 15;5(12):1770-1775

Polyglutamine length-dependent toxicity from α 1ACT in Drosophila models of spinocerebellar ataxia type 6

Tsou WL, Qiblawi SH, Hosking RR, Gomez CM, **Todi SV**. **PMID: 27979829**

...and it's not really about the numbers...we have a examples of excellent work from our Program members this cycle...touching upon our themes of Prostate cancer, development of small molecule anti-tumor agents, epigenetics, signaling and more...also reaching from the laboratory to the clinic...

Curr Diab Rep. 2016 Dec;16(12):133

MicroRNAs in Type 1 Diabetes: Complex Interregulation of the Immune System, β Cell Function and Viral Infections

Isaacs SR, Wang J, Kim KW, Yin C, Zhou L, **Mi QS**, Craig ME. **PMID: 27844276**

J Biol Chem. 2017 Jan 6;292(1):64-79

Phosphorylation of Cytochrome c Threonine 28 Regulates Electron Transport Chain Activity in Kidney:

IMPLICATIONS FOR AMP KINASE

Mahapatra G, Varughese A, Ji Q, Lee I, Liu J, Vaishnav A, Sinkler C, Kapralov AA, Moraes CT, Sanderson TH, Stemmler TL, **Grossman LI**, Kagan VE, Brunzelle JS, Salomon AR, Edwards BF, Hüttemann M. **PMID: 27758862**

Sci Transl Med. 2016 Nov 2;8(363):363re4

Fetal genome profiling at 5 weeks of gestation after noninvasive isolation of trophoblast cells from the endocervical canal

Jain CV, Kadam L, van Dijk M, Kohan-Ghadr HR, Kilburn BA, Hartman C, Mazzorana V, Visser A, Hertz M, Bolnick AD, Fritz R, **Armant DR**, Drewlo S. **PMID: 27807286**

Infect Drug Resist. 2016 Dec 7;9:291-300

Isavuconazole for the treatment of invasive aspergillosis and mucormycosis: current evidence, safety, efficacy, and clinical recommendations

Natesan SK, **Chandrasekar PH**. **PMID: 27994475**

Mol Cancer. 2016 Nov 3;15(1):68

Pharmacological targeting of CXCL12/CXCR4 signaling in prostate cancer bone metastasis

Conley-LaComb MK, Semaan L, Singareddy R, Li Y, Heath EI, Kim S, **Cher ML**, **Chinni SR**. **PMID: 27809841**

Oncol Lett. 2016 Dec;12(6):4949-4956

The biological significance of methylome differences in human papilloma virus associated head and neck cancer

Worsham MJ, Chen KM, **Datta I**, Stephen JK, Chitale D, Gothard A, Divine G. **PMID: 28101231**

Exp Cell Res. 2016 Dec 20

**Convergence of eicosanoid and integrin biology: Role of Src in 12-LOX activation**

Dilly AK, Tang K, Guo Y, Joshi S, Ekambaram P, Maddipati KR, Cai Y, Tucker SC, **Honn KV**. PMID: 28011194

Clin Genitourin Cancer. 2016 Dec 1**Role of Molecular Profiling in Diagnosis of Papillary Renal-cell Cancer Presenting as Cancer of Unknown Primary Site**

Nagasaka M, Kukreja G, Abdulfatah E, **Vaishampayan U**, Sukari A. PMID: 28024951

Biochemistry. 2016 Nov 1;55(43):6046-6055**Deletion of Calponin 2 in Mouse Fibroblasts Increases Myosin II-Dependent Cell Traction Force**

Hossain MM, Zhao G, Woo MS, Wang JH, **Jin JP**. PMID: 27733037

Oncotarget. 2016 Nov 29;7(48):79203-79216**Spatio-temporal regulation of EGFR signaling by the Eps15 homology domain-containing protein 3 (EHD3)**

Amessou M, Ebrahim AS, Dilly A, Joseph M, Tabolina M, Chukkapalli S, Meroueh L, Syed JT, Liddane A, Lang SL, Al-Katib A, **Kandouz M**. PMID: 27811356

J Biol Chem. 2016 Dec 9;291(50):25983-25998**The Amino-terminal Domain of the Androgen Receptor Co-opts Extracellular Signal-regulated Kinase (ERK) Docking Sites in ELK1 Protein to Induce Sustained Gene Activation That Supports Prostate Cancer Cell Growth**

Rosati R, Patki M, Chari V, Dakshnamurthy S, McFall T, Saxton J, **Kidder BL**, Shaw PE, Ratnam M. PMID: 27793987

Free Radic Biol Med. 2017 Feb;103:155-164**Epigenetic regulation of redox signaling in diabetic retinopathy: Role of Nrf2**

Kowluru RA, Mishra M. PMID: 28012783

FEBS J. 2016 Nov 21**The role of type II transmembrane serine protease-mediated signaling in cancer**

Tanabe LM, **List K**. PMID: 27870503

Exp Cell Res. 2016 Dec 10;349(2):310-319.**GAPDH binds Akt to facilitate cargo transport in the early secretory pathway**

Tisdale EJ, Talati NK, Artalejo CR, **Shisheva A**. PMID: 27818247

Open Biol. 2016 Dec;6(12)**Primate-specific oestrogen-responsive long non-coding RNAs regulate proliferation and viability of human breast cancer cells.**

Lin CY, Kleinbrink EL, Dacht F, Cai J, Ju D, Goldstone A, Wood EJ, Liu K, Jia H, Goustin AS, **Kosir MA**, Thepsuwan P, Lipovich L. PMID: 28003470

BJU Int. 2016 Nov 8**Management and outcomes of patients with renal medullary carcinoma: a multicentre collaborative study**

Shah AY, Karam JA, Malouf GG, Rao P, Lim ZD, Jonasch E, Xiao L, Gao J, **Vaishampayan UN**, et al. PMID: 27860149

J Clin Oncol. 2017 Jan 10;35(2):157-165**Evaluation of BGJ398, a Fibroblast Growth Factor Receptor 1-3 Kinase Inhibitor, in Patients With Advanced Solid Tumors Harboring Genetic Alterations in Fibroblast Growth Factor Receptors: Results of a Global Phase I, Dose-Escalation and Dose-Expansion Study**

Nogova L, Sequist LV, Perez Garcia JM, Andre F, Delord JP, Hidalgo M, Schellens JH, Cassier PA, Camidge DR, Schuler M, **Vaishampayan U et al**. PMID: 27870574

Clin Genitourin Cancer. 2016 Oct 29**Impact of Sequencing Targeted Therapies With High-dose Interleukin-2 Immunotherapy: An Analysis of Outcome and Survival of Patients With Metastatic Renal Cell Carcinoma From an On-going Observational IL-2 Clinical Trial: PROCLAIMSM.**

Clark JI, Wong MK, Kaufman HL, Daniels GA, Morse MA, McDermott DF, Agarwala SS, Lewis LD, Stewart JH, **Vaishampayan U**, et al.

PMID: 27916626



J Clin Cell Immunol. 2016 Oct;7(5)

ER Stress-induced Inflammasome Activation Contributes to Hepatic Inflammation and Steatosis

Zhang J, **Zhang K**, Li Z, Guo B. **PMID: 27942420**

Lancet. 2017 Jan 7;389(10064):67-76

Atezolizumab as first-line treatment in cisplatin-ineligible patients with locally advanced and metastatic urothelial carcinoma: a single-arm, multicentre, phase 2 trial

Balar AV, Galsky MD, Rosenberg JE, Powles T, Petrylak DP, Bellmunt J, Loriot Y, Necchi A, Hoffman-Censits J, Perez-Gracia JL, Dawson NA, van der Heijden MS, Dreicer R, Srinivas S, Retz MM, Joseph RW, Drakaki A, **Vaishampayan UN**, et al. **PMID: 27939400**

Cancer Med. 2016 Dec 20

Venous thromboembolism in metastatic urothelial carcinoma or variant histologies: incidence, associative factors, and effect on survival

Ramos JD, Casey MF, Crabb SJ, Bamias A, Harshman LC, Wong YN, Bellmunt J, Giorgi U, Ladoire S, Powles T, Pal SK, Niegisch G, Recine F, Alva A, Agarwal N, Necchi A, **Vaishampayan UN**, et al. **PMID: 28000388**

Invest New Drugs. 2017 Jan 9

First-in-human trial of an anti-5T4 antibody-monomethylauristatin conjugate, PF-06263507, in patients with advanced solid tumors

Shapiro GI, **Vaishampayan UN**, LoRusso P, Barton J, Hua S, Reich SD, Shazer R, Taylor CT, Xuan D, Borghaei H
PMID: 28070718

Public link to abstracts on Pub Med TBM Program, Q1, 2017:

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