



## Accolades and Newsworthy Notes - New Funding \$\$



### Special Commendation !

Program member, Dr. **Avraham Raz** was lauded by the journal *Neoplasia* for one of the most cited articles in the publication. As senior author, this study helps us to understand how soluble galectin-3 in the bone microenvironment regulates bone remodeling through Notch signaling. The paper can be found here: PMID: 25425968



### HOORAY !

Program member, Dr. **Cecilia Speyer** is one of four researchers from Karmanos Cancer Institute awarded an American Cancer Society Institutional Research Grant. Support provides one year of funding in the amount \$30,000 for her project titled "Fc-folate conjugates for treating triple negative breast cancer". Please recall Dr. Speyer presented her work on April 10 at our Program meeting.



### Laurels of distinction !

Program member, Dr. **Menq-Jer Lee** is the recipient of a new two year grant from the National Cancer Institute. Support provides two years of funding for his project titled "Sphingosine-1-phosphate receptor subtype 3 in oncogenic driven lung adenocarcinoma. Co-investigators are Drs. Young-Hoon Ahn, Fulvio Lonardo and Wei Chen.



### BRAVO !

Program member, Dr. **Assia Shisheva** is the recipient of an 18 month \$308,000 Discovery Award from the Department of Defense. Her study is based on the paradox that type 2 diabetes is largely associated with obesity. The study will characterize different genetic variations within obese and non-obese people.



Drs. **Wei-Zen Wei** and Nerissa Viola-Villegas are the recipients of a new two-year grant from the National Institutes of Health for their project titled “Directing cancer immunotherapy and real time immunePET”. Special thanks to Wayne State for featuring their work on the Division of Research website.

WAYNE STATE UNIVERSITY Academia Directory Contact AIM HIGHER

Search...

Division of Research Menu

## Wayne State University/Karmanos Cancer Institute research team receive NIH funding to expand imaging technology to guide cancer treatment

June 13, 2017

DETROIT – A team of Wayne State University and Barbara Ann Karmanos Cancer Institute researchers recently received funding from the National Cancer Institute of the National Institutes of Health to expand the use of Positron Emission Tomography (PET) in cancer therapy.

PET imaging is a common tool used in cancer diagnosis. Wei-Zen Wei, Ph.D., the Herrick Chair of Cancer Research at the Barbara Ann Karmanos Cancer Institute and professor of oncology and immunology and microbiology in the School of Medicine at Wayne State University, along with Nerissa Viola-Villegas, Ph.D., assistant professor of oncology in Wayne State University’s School of Medicine and the Karmanos Cancer Institute, plan to expand the use of this technology with the help of the two-year, \$368,445 grant, “Directing Cancer Immunotherapy and Real-Time ImmunoPET.”



According to Wei, current immune-based therapies are effective in some patients with existing anti-tumor immunity, but most are not responsive, therefore revealing the need for immune priming and non-invasive monitoring strategies.

Wei and Viola-Villegas will expand PET imaging technology for cancer immunotherapy by imaging dendritic cells — the specialized white blood cells that can trigger tumor-fighting immunity. Cancer treatment that brings more dendritic cells into a tumor is more likely to cure cancer.

“Assessing if cancer treatments are effective is often invasive and difficult,” said Joseph Dunbar, Ph.D., director of special operations in the Office of the Vice President for Research at Wayne State. “Drs. Wei and Viola-Villegas’ method of using PET imaging will be a less invasive, strong indicator of whether cancer treatments are effective.”

The research team will develop new imaging probes to detect dendritic cells in the tumor, which will measure the dendritic cells and predict treatment outcome. Their findings may help develop immunoPET, which, in turn, will guide patient treatment in a non-invasive way.

The award number for this National Cancer Institute of the National Institutes of Health grant is CA216648.

### Our national news

President Donald Trump has selected Dr. Norman (Ned) Sharpless to lead the National Cancer Institute. Dr. Sharpless’ recent publication titled “Senescence in health and disease” can be found here: [PMID: 28575665](#)

The announcement can be found here:

*Cancer Discov.* 2017 Jun 22. doi: 10.1158/2159-8290.CD-NB2017-096. PMID: 28642249

*UNC Cancer Center Director to Lead NCI*



## **HOT OFF THE PRESS – Selection of recent publications**

*...Force implies strength or energy and is incorporated into the work of our Program members whether to understand the dynamics of the invasive cancer process.... or employed as a technology (atomic force microscopy) to help us understand size and composition...or to compel compliance in regulations...*

### **J Cell Sci. 2017 Apr 26**

Transient mechanical strain promotes the maturation of invadopodia and enhances cancer cell invasion in vitro  
Gasparski AN, Ozarkar S, **Beningo KA**  
PMID: 28446539

### **J Proteome Res. 2017 Jun 9. Epub**

**Human Platelet Vesicles Exhibit Distinct Size and Proteome**  
Jena BP, **Stemmer PM**, Wang S, Mao G, Lewis KT, Walz DA  
PMID: 28587468

### **J Pediatr. 2017 May 25**

**Factors Associated with Pediatric Mortality from Motor Vehicle Crashes in the United States: A State-Based Analysis**  
Wolf LL, Chowdhury R, Tweed J, Vinson L, Losina E, Haider AH, **Qureshi FG**  
PMID: 28552450

*...the role of oxidative stress is included within a number of studies...*

### **Oncotarget. 2017 Mar 28;8(13):21834-21851**

**PIF\* promotes brain re-myelination locally while regulating systemic inflammation- clinically relevant multiple sclerosis M.smegmatis model**  
Migliara G, Mueller M, Piermattei A, **Brodie C**, Paidas MJ, Barnea ER, Ria F  
PMID: 28423529

### **Mol Cell Biol. 2017 May 1**

**CREBH Maintains Circadian Glucose Homeostasis by Regulating Hepatic Glycogenolysis and Gluconeogenesis**  
Kim H, Zheng Z, Walker PD, Kapatos G, **Zhang K**  
PMID: 28461393

### **Fertil Steril. 2017 May 5**

**Oxidative stress: a key regulator of leiomyoma cell survival**  
Fletcher NM, Abusamaan MS, Memaj I, Saed MG, Al-Hendy A, Diamond MP, **Saed GM**  
PMID: 28483502

*...our Program members work to understand pain and to demonstrate objective preferences for surgical positioning...*

### **J Robot Surg. 2017 May 3**

**Prospective assessment of positioning-related pain in robotic urologic surgery**  
Ginsburg KB, Pape K, Heilbronn C, Levin M, **Cher ML**  
PMID: 28470407

*...our Program members work to understand the potential benefit of new treatments for patients with renal cell carcinoma...in specific patient populations...and to determine if dose adjustments are needed in patients with renal disease...*

### **Expert Rev Anticancer Ther. 2017 Jul;17(7):577-584**

**Cabozantinib for the treatment of kidney cancer**  
Abdelaziz A, **Vaishampayan U**  
PMID: 28633552

**Cancer Chemother Pharmacol. 2017 Jun;79(6):1067-1076****Pharmacokinetics and safety of carfilzomib in patients with relapsed multiple myeloma and end-stage renal disease (ESRD): an open-label, single-arm, phase I study**Quach H, White D, Spencer A, Ho PJ, **Bhutani D**, White M, Inamdar S, Morris C, Ou Y, Gyger M**PMID: 28424963****Am J Surg Pathol. 2017 Mar;41(3):287-298.****Renal Cell Carcinoma With Chromosome 6p Amplification Including the TFE3 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****Am Soc Clin Oncol Educ Book. 2017;37:319-329****Evolving Treatment Paradigm in Metastatic Renal Cell Carcinoma.**Gill DM, Agarwal N, **Vaishampayan U****PMID: 28561652****Oncotarget. 2017 May 9;8(19):31785-31801****The novel long non-coding RNA TALNEC2, regulates tumor cell growth and the stemness and radiation response of glioma stem cells**Brodie S, Lee HK, Jiang W, Cazacu S, Xiang C, Poisson LM, Datta I, Kalkanis S, Ginsberg D, **Brodie C****PMID: 28423669****Breast Cancer Res. 2017 May 15;19(1):56****Pathomimetic avatars reveal divergent roles of microenvironment in invasive transition of ductal carcinoma in situ**Sameni M, **Cavallo-Medved D**, Franco OE, Chalasani A, Ji K, Aggarwal N, Anbalagan A, Chen X, Mattingly RR, Hayward SW, Sloane BF**PMID: 28506312****BJU Int. 2017 Mar 29****Prostate cancer family history and eligibility for active surveillance: a systematic review of the literature**Telang JM, Lane BR, **Cher ML**, Miller DC, Dupree JM**PMID: 28371016****JAMA Surg. 2017 Jun 21** [Epub ahead of print]**Practice- vs Physician-Level Variation in Use of Active Surveillance for Men With Low-Risk Prostate Cancer: Implications for Collaborative Quality Improvement**Auffenberg GB, Lane BR, Linsell S, **Cher ML**, Miller DC **PMID: 28636713****Urology. 2017 Jun 23****Establishment of a Web-Based System for Collection of Patient-Reported Outcomes after Radical Prostatectomy in a Statewide Quality Improvement Collaborative.**Lucas SM, Kim TK, Ghani KR, Miller DC, Linsell S, Starr J, Peabody JO, Hurley P, Montie J, **Cher ML****PMID: 28652160****Open Forum Infect Dis. 2017 Jan 13;4(1)****Infection-Related Hospital Admissions After Prostate Biopsy in United States Men**Evans R, Loeb A, Kaye KS, **Cher ML**, Martin ET**PMID: 28480258****J Inherit Metab Dis. 2017 May 17****Developmental window of sensorineural deafness in biotinidase-deficient mice**Maheras KJ, Pindolia K, Wolf B, **Gow A****PMID: 28516283**

**Mol Cell Neurosci. 2017 Apr 28****Divergent lactate dehydrogenase isoenzyme profile in cellular compartments of primate forebrain structures**  
Duka T, Collins Z, Anderson SM, Raghanti MA, Ely JJ, Hof PR, Wildman DE, Goodman M, **Grossman LI**, Sherwood CC**PMID: 28461219****J Matern Fetal Neonatal Med. 2017 May 17:1-22****Does vitamin D deficiency affect placental inflammation or Infections among very low birth weight infants?**  
Puthuraya S, Karnati S, Kazzi SNJ, **Qureshi F**, **Jacques SM**, Thomas R**PMID: 28514918****Cell Death Dis. 2017 May 11;8(5)****TXNIP regulates mitophagy in retinal Müller cells under high-glucose conditions: implications for diabetic retinopathy**Devi TS, Somayajulu M, **Kowluru RA**, Singh LP**PMID: 28492550****Biochim Biophys Acta. 2017 May 3****Role of PARP-1 as a novel transcriptional regulator of MMP-9 in diabetic retinopathy**Mishra M, **Kowluru RA****PMID: 28478229****Oncotarget. 2017 Apr 4;8(14):23337-23352****The cyclin-like protein, SPY1, regulates the ER $\alpha$  and ERK1/2 pathways promoting tamoxifen resistance**Ferraiuolo RM, Tubman J, Sinha I, Hamm C, **Porter LA****PMID: 28423577**

*...for our female population...one study seeks new safe treatments for patients with ovarian cancer while another uses a well known sample collection technique similar to a Pap smear lead investigators to better treatments and diagnostics tools...while another seeks to understand the role of metformin...*

**Cancer. 2017 Apr 25****Phase 1 dose-escalation study of mirvetuximab soravtansine (IMGN853), a folate receptor  $\alpha$ -targeting antibody-drug conjugate, in patients with solid tumors**Moore KN, Borghaei H, O'Malley DM, Jeong W, **Seward SM**, Bauer TM, Perez RP, Matulonis UA, Running KL, Zhang X, Ponte JF, Ruiz-Soto R, Birrer MJ**PMID: 28440955****Placenta. 2017 Apr 26. pii: S0143-4004(17)30243-6****Quo vadis, trophoblast? Exploring the new ways of an old cell lineage**Drewlo S, **Armant DR****PMID: 28483162****Gynecol Oncol. 2017 May 22****Synergistic effect of MEK inhibitor and metformin combination in low grade serous ovarian cancer**Mert I, Chhina J, Allo G, Dai J, **Seward S**, Carey MS, Llaurodo M, Giri S, Rattan R, Munkarah AR**PMID: 28545687****Neuropharmacology. 2017 May 19****A novel iron (II) preferring dopamine agonist chelator D-607 significantly suppresses  $\alpha$ -syn- and MPTP-induced toxicities in vivo**Das B, Rajagopalan S, Joshi GS, Xu L, Luo D, Andersen JK, **Todi SV**, Dutta AK**PMID: 28533164****Open Access Med Stat. 2017;7:15-26****Multistate Models on Pleural Effusion after Allogeneic Hematopoietic Stem Cell Transplantation**Lee J, Modi D, Jang H, **Uberti JP**, Kim S **PMID: 28428936**

Approximately April 18, 2017 – July 7, 2017



**Am J Cancer Res. 2017 May 1;7(5):1213-1226**

**HDAC2 overexpression correlates with aggressive clinicopathological features and DNA-damage response pathway of breast cancer**

Shan W, Jiang Y, Yu H, Huang Q, Liu L, Guo X, Li L, Mi Q, **Zhang K**, Yang Z

**PMID: 28560068**

**Eur J Pharmacol. 2017 May 31**

**Phosphoproteome and transcription factor activity profiling identify actions of the anti-inflammatory agent UTL-5g in LPS stimulated RAW 264.7 cells including disrupting actin remodeling and STAT-3 activation.**

Carruthers NJ, **Stemmer PM**, Chen B, Valeriote F, Gao X, Guatam SC, Shaw J

**PMID: 28576409**

**Am J Reprod Immunol. 2017 Jul;78(1)**

**CXCL10 and IL-6: Markers of two different forms of intra-amniotic inflammation in preterm labor**

Romero R, Chaemsathong P, Chaiyasit N, Docheva N, Dong Z, Kim CJ, Kim YM, Kim JS, **Qureshi F, Jacques SM**, Yoon BH, Chaiworapongsa T, Yeo L, Hassan SS, Erez O, Korzeniewski SJ

**PMID: 28544362**

**J Surg Res. 2017 May 8**

**State-level geographic variation in prompt access to care for children after motor vehicle crashes**

Wolf LL, Chowdhury R, Tweed J, Vinson L, Losina E, Haider AH, **Qureshi FG**

**PMID: 28558908**

**Clin Cancer Res. 2017 Jun 12**

**Age and gender associations of virus positivity in Merkel cell carcinoma characterized using a novel RNA in situ hybridization assay**

Wang L, Harms PW, **Palanisamy N**, Carskadon S, Cao X, Siddiqui J, Patel RM, Zelenka-Wang S, Durham AB, Fullen DR, Harms K, Su F, Shukla S, Mehra R, Chinnaiyan AM

**PMID: 28606924**

**Appl Environ Microbiol. 2017 Jun 16**

**Quantifying Vibrio cholerae enterotoxicity in a zebrafish infection model**

Mitchell KC, Breen P, Britton S, **Neely MN**, Withey JH

**PMID: 28625997**

**J Biol Chem. 2017 May 10**

**Pharmacological targeting of Rad6 enzyme-mediated translesion synthesis overcomes resistance to platinum-based drugs**

Sanders MA, Haynes B, **Nangia-Makker P**, Polin LA, Shekhar MP

**PMID: 28490629**

**Small. 2017 May 19**

**Dissolving Microneedle Arrays for Transdermal Delivery of Amphiphilic Vaccines**

An M, **Liu H**

**PMID: 28544329**

**Oncotarget. 2017 May 16**

**HPV-associated differential regulation of tumor metabolism in oropharyngeal head and neck cancer.**

Jung YS, Najy AJ, Huang W, Sethi S, Snyder M, **Sakr W**, Dyson G, Hüttemann M, Lee I, **Ali-Fehmi R**, Franceschi S, Struijk L, Kim HE, Kato I, **Choi Kim HR**

**PMID: 28574836**

**Genet Med. 2017 Jun 22**

**Report on the Banbury Summit Meeting on medical genetics training in the genomic era, 23-26 February 2014.**

Korf BR, Blitzer MG, Demmer LA, **Feldman GL**, Watson MS **PMID: 28640242**



**Mol Metab.** 2017 Apr 5;6(6):471-481

**FGF21 does not require adipocyte AMP-activated protein kinase (AMPK) or the phosphorylation of acetyl-CoA carboxylase (ACC) to mediate improvements in whole-body glucose homeostasis**

Mottillo EP, Desjardins EM, Fritzen AM, Zou VZ, Crane JD, Yabut JM, Kiens B, Erion DM, Lanba A, **Granneman JG**, Talukdar S, Steinberg GR

**PMID: 28580278**

**Oxid Med Cell Longev.** 2017;2017:1534056

**Tissue- and Condition-Specific Isoforms of Mammalian Cytochrome c Oxidase Subunits: From Function to Human Disease**

Sinkler CA, Kalpage H, Shay J, Lee I, Malek MH, **Grossman LI**, Hüttemann M

**PMID: 28593021**

**Am J Obstet Gynecol.** 2017 Jun 12.

**Metformin, the aspirin of the 21st century: its role in gestational diabetes, prevention of preeclampsia and cancer, and the promotion of longevit.**

Romero R, Erez O, Hüttemann M, Maymon E, Panaitescu B, Conde-Agudelo A, Pacora P, Yoon BH, **Grossman LI**

**PMID: 28619690**

**Circ Res.** 2017 Jun 15

**Mitochondrial Complex IV Subunit 4 Isoform 2 Is Essential for Acute Pulmonary Oxygen Sensing**

Sommer N, Hüttemann M, Pak O, Scheibe S, Knöpp F, Sinkler C, Malczyk M, Gierhardt M, Esfandiary A, Kraut S, Jonas FT, Veith C, Aras S, Sydykov A, Alebrahimdehkordi N, Giehl K, Hecker M, Brandes RP, Seeger W, Grimminger F, Ghofrani HA, Schermuly RT, **Grossman LI**, Weissmann N

**PMID: 28620066**

**Chem Commun (Camb).** 2017 Jun 6;53(46):6227-6230

**Synthesis of biotin-labelled core glycans of GPI anchors and their application in the study of GPI interaction with pore-forming bacterial toxins**

Gao J, Zhou Z, Guo J, **Guo Z**

**PMID: 28537279**

**Oncotarget.** 2017 May 9

**Increased expression of calponin 2 is a positive prognostic factor in pancreatic ductal adenocarcinoma**

Qiu Z, Chu Y, Xu B, Wang Q, Jiang M, Li X, Wang G, Yu P, Liu G, Wang H, Kang H, Liu J, Zhang Y, **Jin JP**, Wu K, Liang J

**PMID: 28537879**

**J Cachexia Sarcopenia Muscle.** 2017 Apr 16

**Cardiac troponin T and fast skeletal muscle denervation in ageing**

Xu Z, Feng X, Dong J, Wang ZM, Lee J, Furdui C, Files DC, Beavers KM, Kritchevsky S, Milligan C, **Jin JP**, Delbono O, Zhang T

**PMID: 28419739**

**Patient.** 2016 Apr;9(2):161-9

**Evaluating a Decision Aid for Improving Decision Making in Patients with Early-stage Breast Cancer**

Hawley ST, Newman L, Griggs JJ, **Kosir MA**, Katz SJ

**PMID: 26178202**

**J Comput Biol.** 2017 Jun 26

**An Integrative Approach for Identifying Network Biomarkers of Breast Cancer Subtypes Using Genomic, Interactomic, and Transcriptomic Data**

Firoozbakht F, Rezaeian I, D'agnillo M, **Porter L**, Rueda L, Ngom A

**PMID: 28650678**