

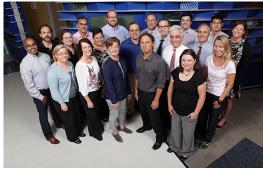
Oncology

Division Details

RESEARCH AND TRAINING DETAILS

Faculty	26
Joint Appointment Faculty	3
Research Fellows and Post Docs	6
Research Graduate Students	4
Total Annual Grant Award Dollars	\$2,428,147
Total Annual Industry Award Dollars	\$851,654
CLINICAL ACTIVITIES AND TRAINING	
Staff Physicians	8
Clinical Fellows	8
Inpatient Encounters	1,266





Row 1: M O'Brien, K Burns, R Norris, M Absalon, L Privette Vinnedge

Row 2: R Nagarajan, E Breese, J Mangino, R Drissi, P de Blank, J Perentesis, J Pressey, S Wells

Row 3: B DasGupta, R Salloum, T Hummel, J Geller, L Lee, B Mizukawa, C Phillips

Division Publications

- Dombi E; Baldwin A; Marcus LJ; Fisher MJ; Weiss B; Kim A; Whitcomb P; Martin S; Aschbacher-Smith LE; Rizvi TA. Activity of Selumetinib in Neurofibromatosis Type 1-Related Plexiform Neurofibromas. The New England journal of medicine. 2016; 375:2550-2560.
- 2. Cavalli FMG; Remke M; Rampasek L; Peacock J; Shih DJH; Luu B; Garzia L; Torchia J; Nor C; Morrissy AS. Intertumoral Heterogeneity within Medulloblastoma Subgroups. Cancer Cell. 2017; 31:737-754.e6.
- 3. Torchia J; Golbourn B; Feng S; Ho KC; Sin-Chan P; Vasiljevic A; Norman JD; Guilhamon P; Garzia L; Agamez NR. Integrated (epi)-Genomic Analyses Identify Subgroup-Specific Therapeutic Targets in CNS Rhabdoid Tumors. Cancer Cell. 2016; 30:891-908.
- 4. Lin S; Luo RT; Ptasinska A; Kerry J; Assi SA; Wunderlich M; Imamura T; Kaberlein JJ; Rayes A; Althoff MJ. Instructive Role of MLL-Fusion Proteins Revealed by a Model of t(4;11) Pro-B Acute Lymphoblastic Leukemia. Cancer Cell. 2016; 30:737-749.
- 5. von Stackelberg A; Locatelli F; Zugmaier G; Handgretinger R; Trippett TM; Rizzari C; Bader P; O'Brien MM; Brethon B; Bhojwani D. Phase I/Phase II Study of Blinatumomab in Pediatric Patients With Relapsed/Refractory Acute Lymphoblastic Leukemia.

- Ramaswamy V; Hielscher T; Mack SC; Lassaletta A; Lin T; Pajtler KW; Jones DTW; Luu B; Cavalli FMG; Aldape K. Therapeutic Impact of Cytoreductive Surgery and Irradiation of Posterior Fossa Ependymoma in the Molecular Era: A Retrospective Multicohort Analysis. Journal of Clinical Oncology. 2016; 34:2468-2477.
- 7. Tiao G; Geller J; Timchenko NA. Generation of Pediatric Liver Cancer Patient-Derived Xenograft Platforms for Pediatric Liver Cancer: A Critical Stage in the Development of Anticancer Treatments. *Hepatology*. 2016; 64:1017-1019.
- 8. Geoerger B; Bourdeaut F; DuBois SG; Fischer M; Geller JI; Gottardo NG; Marabelle A; Pearson ADJ; Modak S; Cash T. A Phase I Study of the CDK4/6 Inhibitor Ribociclib (LEE011) in Pediatric Patients with Malignant Rhabdoid Tumors, Neuroblastoma, and Other Solid Tumors. Clinical Cancer Research. 2017; 23:2433-2441.
- Ooms AHAG; Gadd S; Gerhard DS; Smith MA; Guidry Auvil JM; Meerzaman D; Chen QR; Hsu CH; Yan C; Nguyen C. Significance
 of TP53 Mutation in Wilms Tumors with Diffuse Anaplasia: A Report from the Children's Oncology Group. Clinical Cancer
 Research. 2016; 22:5582-5591.
- 10. Fernandez CV; Perlman EJ; Mullen EA; Chi Y-Y; Hamilton TE; Gow KW; Ferrer FA; Barnhart DC; Ehrlich PF; Khanna G. Clinical Outcome and Biological Predictors of Relapse After Nephrectomy Only for Very Low-risk Wilms Tumor A Report From Children's Oncology Group AREN0532. Annals of Surgery. 2017; 265:835-840.
- 11. Cheng P; Wang J; Waghmare I; Sartini S; Coviello V; Zhang Z; Kim SH; Mohyeldin A; Pavlyukov MS; Minata M. **FOXD1-ALDH1A3 Signaling Is a Determinant for the Self-Renewal and Tumorigenicity of Mesenchymal Glioma Stem Cells.** *Cancer Research.* 2016; 76:7219-7230.
- 12. Goyama S; Shrestha M; Schibler J; Rosenfeldt L; Miller W; O'Brien E; Mizukawa B; Kitamura T; Palumbo JS; Mulloy JC. **Protease-activated receptor-1 inhibits proliferation but enhances leukemia stem cell activity in acute myeloid leukemia.** *Oncogene: Including Oncogene Reviews.* 2017; 36:2589-2598.
- 13. Milewski D; Pradhan A; Wang X; Cai Y; Le T; Turpin B; Kalinichenko VV; Kalin TV. FoxF1 and FoxF2 transcription factors synergistically promote rhabdomyosarcoma carcinogenesis by repressing transcription of p21(Cip1) CDK inhibitor.

 Oncogene: Including Oncogene Reviews. 2017; 36:850-862.
- 14. Padovan-Merhar OM; Raman P; Ostrovnaya I; Kalletla K; Rubnitz KR; Sanford EM; Ali SM; Miller VA; Mossé YP; Granger MP. Enrichment of Targetable Mutations in the Relapsed Neuroblastoma Genome. *PLoS genetics*. 2016; 12:e1006501.
- 15. Fouladi M; Pfister SM. **MEK and RAF inhibitors: time for a paradigm shift in the treatment of pediatric low-grade gliomas?.** *Neuro-Oncology.* 2017; 19:741-743.
- 16. Lulla RR; Goldman S; Yamada T; Beattie CW; Bressler L; Pacini M; Pollack IF; Fisher PG; Packer RJ; Dunkel IJ. Phase 1 trial of p28 (NSC745104), a non-HDM2-mediated peptide inhibitor of p53 ubiquitination in pediatric patients with recurrent or progressive central nervous system tumors: A Pediatric Brain Tumor Consortium Study. Neuro-Oncology. 2016; 18:1319-1325.
- 17. Huibregtse KE; Vo KT; DuBois SG; Fetzko S; Neuhaus J; Batra V; Maris JM; Weiss B; Marachelian A; Yanik GA. Incidence and risk factors for secondary malignancy in patients with neuroblastoma after treatment with I-131-metaiodobenzylguanidine.

 European Journal of Cancer. 2016; 66:144-152.
- 18. Wagner LM; Kremer N; Gelfand MJ; Sharp SE; Turpin BK; Nagarajan R; Tiao GM; Pressey JG; Yin J; Dasgupta R. Detection of Lymph Node Metastases in Pediatric and Adolescent/Young Adult Sarcoma: Sentinel Lymph Node Biopsy Versus Fludeoxyglucose Positron Emission Tomography Imaging-A Prospective Trial. Cancer. 2017; 123:155-160.
- 19. Smith EA; Gole B; Willis NA; Soria R; Starnes LM; Krumpelbeck EF; Jegga AG; Ali AM; Guo H; Meetei AR. **DEK is required for homologous recombination repair of DNA breaks**. *Scientific Reports*. 2017; 7:44662.

- 20. Smith EA; Kumar B; Komurov K; Smith SM; Brown NV; Zhao S; Kumar P; Teknos TN; Wells SI. **DEK associates with tumor stage** and outcome in HPV16 positive oropharyngeal squamous cell carcinoma. *Oncotarget*. 2017; 8:23414-23426.
- 21. Koncar RF; Chu Z; Romick-Rosendale LE; Wells SI; Chan TA; Qi X; Bahassi EM. **PLK1 inhibition enhances temozolomide efficacy in IDH1 mutant gliomas.** *Oncotarget*. 2017; 8:15827-15837.
- 22. Dandoy CE; Hausfeld J; Flesch L; Hawkins D; Demmel K; Best D; Osterkamp E; Bracke T; Nagarajan R; Jodele S. Rapid cycle development of a multifactorial intervention achieved sustained reductions in central line-associated bloodstream infections in haematology oncology units at a children's hospital: a time series analysis. *BMJ Quality and Safety*. 2016; 25:633-643.
- 23. Mizuno T; Fukuda T; Christians U; Perentesis JP; Fouladi M; Vinks AA. Population pharmacokinetics of temsirolimus and sirolimus in children with recurrent solid tumours: a report from the Children's Oncology Group. *British Journal of Clinical Pharmacology*. 2017; 83:1097-1107.
- 24. Matrka MC; Watanabe M; Muraleedharan R; Lambert PF; Lane AN; Romick-Rosendale LE; Wells SI. **Overexpression of the human DEK oncogene reprograms cellular metabolism and promotes glycolysis.** *PloS one*. 2017; 12:e0177952.
- 25. Bahar M; Hashem H; Tekautz T; Worley S; Tang A; de Blank P; Wolff J. Choroid plexus tumors in adult and pediatric populations: the Cleveland Clinic and University Hospitals experience. *Journal of Neuro-Oncology*. 2017; 132:427-432.

Grants, Contracts, and Industry Agreements

Annual Grant Award Dollars

Investigator	Title	Sponsor	ID	Dates	Amount
Maryam Fouladi, MD	Establishment of an International Diffuse Intrinsic Pontine Glioma (DIPG) Registry	The Cure Starts Now Foundation	DIPG - Fouladi	01/01/2012 - 12/31/2018	\$233,311
Maryam Fouladi, MD	Pediatric Brain Tumor Consortium (PBTC)	National Institutes of Health (St Jude's Children's Hospital)	UM1 CA081457	04/01/2014 - 03/31/2019	\$92,745
Maryam Fouladi, MD	Pediatric Brain Tumor Consortium (PBTC)	National Institutes of Health (St Jude's Children's Hospital)	UM1 CA081457	04/01/2014 - 03/31/2019	\$39,000
Brian D Weiss, MD	COG NCTN Network Group Operations Center	National Institutes of Health (Children's Hospital of Philadelphia)	U10 CA180886	04/11/2014 - 02/28/2019	\$23,108
Maryam Fouladi, MD	COG NCTN Network Group Operations Center	National Institutes of Health (Children's Hospital of Philadelphia)	U10 CA180886	04/11/2014 - 02/28/2019	\$7,500
Adrienne Hammill, MD	Brain Vascular Malformation Consortium: Predictors of Clinical Course	National Institutes of Health (The Regents of the Univ of California)	U54 NS065705	09/30/2014 - 07/31/2019	\$4,212
John P Perentesis, MD	COG NCORP Research Base: Per case Reimbursement	National Institutes of Health (Children's Hospital of Philadelphia)	UG1 CA189955	08/01/2014 - 07/31/2018	\$50,000

Susanne Wells, PhD	Targeting Lipid Metabolism in FA for the Prevention and Treatment of Squamous Cell Carcinoma.		Wells, Sue, FARF	03/01/2016 - 02/28/2018	\$125,000
Sonya Ruiz-Torres	Role of the Fanconi Anemia DNA Repair Pathway in Epidermal Stem and Progenitor Cells and Squamous Cell Carcinoma	National Institutes of Health	F31 AR070008	09/01/2016 - 08/31/2019	\$37,176
Erin Haag Breese, MD, PhD	Total Therapy for Infants with Acute Lymphoblastic Leukemia (ALL) "TINI"	St Jude's Children's Hospital	TINI	03/01/2016 - 02/29/2020	\$31,001
Brian D Weiss, MD	A Phase I/II Study of the Mitogen Activated Protein Kinase (MEK) 1 Inhibitor Selumetinib (AZD6244; HYD SULFATE) in Children with Neurofibromatosis Type I (NF1) and Inoperable Plexiform Neurofibromas (PN)	Johns Hopkins School of Medicine	2002883540	01/01/2016 - 12/31/2018	\$123,071
Brian D Weiss, MD	A Phase I/II Study of the Mitogen Activated Protein Kinase (MEK) 1 Inhibitor Selumetinib (AZD6244; HYD SULFATE) in Children with Neurofibromatosis Type 1 (NF1) and Inoperable Plexiform Neurofibromas (PN)	Johns Hopkins School of Medicine	2001824052	01/01/2016 - 12/31/2018	\$137,500
Biplab DasGupta, PhD	Biguanide Sensitivity of Glioma Stem Cells	National Institutes of Health	R01 NS099162	02/01/2016 - 11/30/2021	\$347,942
Christine L Phillips, MD	Pembrolizumab in Combination with Decitabine in Relapsed/Refractory Pediatric Myeloid Leukemia	Cancer Free Kids	Phillips, Christine,	07/01/2016 - 06/30/2018	\$25,000
Benjamin Mizukawa, MD	The Lesser of Two Evils: Weakening Infant Leukemia Through Forced Lineage Switch	Cancer Free Kids	50000	07/01/2016 - 06/30/2018	\$50,000
Benjamin Mizukawa, MD	Precision Medicine in a Pediatric Leukemia Avatar System	St. Baldrick's Foundation	CDA	07/01/2016 - 06/30/2018	\$115,000
Elizabeth A Gilger, APRN, CNP	Prospective Symptom Assessment in Children with Advanced Cancer	Alex's Lemonade Stand Foundation (University of Wisconsin-Madison)	gilger, beth, als	01/15/2016 - 01/14/2018	\$9,998
Biplab DasGupta, PhD	Regulation of Forebrain Neurogenesis by the Energy Sensor AMP Kinase	National Institutes of Health	R01 NS072591	07/01/2016 - 06/30/2017	\$334,688

Susanne Wells, PhD	Role and Regulaton of the Human DEK Proto-Oncogene	National Institutes of Health	R01 CA116316	07/01/2016	\$265,615
				06/30/2018	
Noor A Nassef	Diffuse Intrinsic Pontine Glioma	Joshua's Wish		07/01/2016	\$5,000
				06/30/2018	
Lisa Marie Privette Vinnedge, PhD	Exploring the Role of the Oncogene Dek as a Novel	Life Sciences Research Foundation (University of	life2016	09/01/2016	\$8,032
	Player in Alzheimer's Disease	Cincinnati)		08/31/2018	
Maureen O'Brien, MD	T2012-002: A Pilot Study of Vincristine Sulfate Liposome Injection (Marqibo®) in	Children's Hospital Los Angeles	T2012002	09/01/2016 - 08/31/2020	\$10,843
	Combination with UK ALL R3 Induction Chemotherapy for Children, Adolescents, and Young Adults with Relapse of Acute Lymphoblastic Leukemia				
Rachid Drissi, PhD	Induced Telomere Damage to Treat Poor-Prognosis Pediatric	University of Cincinnati	Drissi, Rachid, UC	07/01/2016	\$25,000
	Brain Tumors			06/30/2018	
James Geller, MD	COG NCTN Network Group Operations Center	National Institutes of Health (Children's Hospital of Philadelphia)	U10 CA180886	03/01/2016	\$15,000
				02/28/2019	
Adrienne Hammill, MD	Lymphatic Anomalies Registry	Children's Hospital Boston	hammill, andrienne,	10/01/2016	\$20,000
				09/30/2018	
Maureen O'Brien, MD	Study Chair: NIH Clinical Trials Network (NCTN)	National Institutes of Health (Children's Hospital of	U10 CA180886	03/01/2016	\$23,366
		Philadelphia)		02/28/2019	
Rajaram Nagarajan, MD	Reducing Risk of Anthracycline- related Heart Failure after	National Institutes of Health (Children's Hospital of	R01 CA196854	07/01/2016	\$16,200
	Childhood Cancer ALTE1621	Philadelphia)		06/30/2020	
Maryam Fouladi, MD	Scientific Leadership NCTN grant	National Institutes of Health (Children's Hospital of	U10 CA180886	09/01/2016	\$27,876
		Philadelphia)		02/28/2021	
Maryam Fouladi, MD	Central Nervous System Tumor Committee	National Institutes of Health (Children's Hospital of Philadelphia)	U10 CA180886	07/01/2016 - 03/31/2017	\$52,500
John P Perentesis, MD	NCTN Adolescent Young Adult	National Institutes of Health	U10	07/01/2016	\$7 501
Sommer Controls, IVID	Committee	(Children's Hospital of Philadelphia)	CA180886	- 02/28/2017	ψ1,501
James Geller, MD	NCTN Committee Leadership	National Institutes of Health (Children's Hospital of	U10 CA180886	07/01/2016	\$7,501

		Philadelphia)		02/28/2017	
Maryam Fouladi, MD	Brain Tumor Center - Radio Genomics	Curing Kids Cancer	CKC2016	01/01/2017	\$60,000
	Genomics			12/31/2017	
John P Perentesis, MD	A Phase I/II Trial of Ganetespib in combination with the mTOR Inhibitor Sirolimus for Patients with Unresctable or Metastatic Malignant Peripheral Nerve Sheath Tumors	Sarcoma Alliance for Res through Collabo	Perentesis, John, SA	03/01/2017 - 02/29/2020	\$25,001
John P Perentesis, MD	EveryChild (APEC14B1)	Children's Oncology Group (Children's Hospital of Philadelphia)	APEC14B1	10/26/2015 - 10/25/2019	\$15,000
Peter Matthew Kennedy de Blank, MD	Radiographic Biomarkers for Residual Disease in Pediatric Brain Tumors	St. Baldrick's Foundation	318690	02/01/2017 - 06/30/2017	\$57,460

Total Annual Grant Award Dollars \$2,428,147

Annual Industry Award Dollars

Investigator	Industry Sponsor	Amount
Brian Keith Turpin, DO	Amgen, Inc.	\$174,524
Brian Keith Turpin, DO	Loxo Oncology	\$118,371
Christine L Phillips, MD	Kite Pharma, Inc.	\$179,754
James Geller, MD	Merck & Company, Inc. (Children's Hospital of Philadelphia)	\$6,500
James Geller, MD	Otonomy, Inc.	\$75,834
John P Perentesis, MD	American Family Life Assurance Company (Children's Hospital of Philadelphia)	\$5,878
Joseph Pressey, MD	Merrimack Pharmaceuticals, Inc (Univ of Texas Hlth Science Ctr-Lubbock)	\$17,500
Mariko DeWire-Schottmiller, MD	Tocagen	\$132,181
Maureen O'Brien, MD	Amgen, Inc.	\$33,273
Maureen O'Brien, MD	Bayer HealthCare Pharmaceuticals, Inc. (Children's Hospital of Philadelphia)	\$13,000
Maureen O'Brien, MD	Incyte, Inc. (Children's Hospital of Philadelphia)	\$45,000
Rachid Drissi, PhD	Gilead Sciences, Inc.	\$49,839
Total Annual Industry Award Dollars		\$851,654