Division Summary

	RESEARCH AND TRAINING DETAILS
2	Number of Faculty
	Number of Joint Appointment Faculty
	Number of Research Fellows
6	Number of Support Personnel
\$2,098,34	Direct Annual Grant Support
\$293,64	Direct Annual Industry Support
3	Peer Reviewed Publications

CLINICAL ACTIVITIES AND TRAINING	
Number of Staff Physicians	4
Number of Clinical Fellows	7
Number of Other Students	7
Inpatient Encounters	11,788
Outpatient Encounters	9,596



Division Photo



Row 1: J Pressey, R Nagarajan, J Perentesis, D Adams, M O'Brien, A Hammill, S Hanmod, S Wells Row 2: R Shah, B Turpin, R Drissi, B Weiss, J Wright, K Burns, J Davis, M Absalon Row 3: B DasGupta, J Geller, C Phillips, T Hummel, J Mangino, B Mizukawa, L Chow

Significant Publications

Liu X, Chhipa RR, Pooya S, Wortman M, Yachyshin S, **Chow LM**, Kumar A, Zhou X, Sun Y, Quinn B, McPherson C, Warnick RE, Kendler A, Giri S, Poels J, Norga K, Viollet B, Grabowski GA, **Dasgupta B**. Discrete mechanisms of mTOR and cell cycle regulation by AMPK agonists independent of AMPK. *Proc Natl Acad Sci U S A*. 2014 Jan 28 2014;111(4):E435-44.

The multifunctional AMPK-activated protein kinase (AMPK) is an evolutionarily conserved energy sensor that plays an important role in cell proliferation, growth, and survival. It remains unclear whether AMPK functions as a tumor suppressor or a contextual oncogene. This is because although on one hand active AMPK inhibits mammalian target of rapamycin (mTOR) and lipogenesis--two crucial arms of cancer growth--AMPK also ensures viability by metabolic reprogramming in cancer cells. AMPK activation by two indirect AMPK agonists AICAR and metformin (now in over 50 clinical trials on cancer) has been correlated with reduced cancer cell proliferation and viability. Surprisingly, we found that compared with normal tissue, AMPK is constitutively activated in both human and mouse gliomas. Therefore, we questioned whether the antiproliferative actions of AICAR and metformin are AMPK independent. Both AMPK agonists inhibited proliferation, but through unique AMPK-independent mechanisms and both reduced tumor growth in vivo independent of AMPK. Importantly, A769662, a direct AMPK activator, had no effect on proliferation, uncoupling high AMPK activity from inhibition of proliferation. Metformin directly inhibited mTOR by enhancing PRAS40's association with RAPTOR, whereas AICAR blocked the cell cycle through proteasomal degradation of the G2M phosphatase cdc25c. Together, our results suggest that although AICAR and metformin are potent AMPK-independent antiproliferative agents, physiological AMPK activation in glioma may be a response mechanism to metabolic stress and anticancer agents.

Turpin B, Miller W, Rosenfeldt L, Kombrinck K, Flick MJ, Steinbrecher KA, Harmel-Laws E, Mullins ES, Shaw M,

Witte DP, Revenko A, Monia B, Palumbo JS. Thrombin drives tumorigenesis in colitis-associated colon cancer. *Cancer research.* 2014 Jun 1;74(11):3020-30.

The established association between inflammatory bowel disease and colorectal cancer underscores the importance of inflammation in colon cancer development. On the basis of evidence that hemostatic proteases are powerful modifiers of both inflammatory pathologies and tumor biology, gene-targeted mice carrying low levels of prothrombin were used to directly test the hypothesis that prothrombin contributes to tumor development in colitis-associated colon cancer (CAC). Remarkably, imposing a modest 50% reduction in circulating prothrombin in fII+/- mice, a level that carries no significant bleeding risk, dramatically decreased adenoma formation following an azoxymethane/dextran sodium sulfate challenge. Similar results were obtained with pharmacologic inhibition of prothrombin expression or inhibition of thrombin proteolytic activity. Detailed longitudinal analyses showed that the role of thrombin in tumor development in CAC was temporally associated with the antecedent inflammatory colitis. However, direct studies of the antecedent colitis showed that mice carrying half-normal prothrombin levels were comparable to control mice in mucosal damage, inflammatory cell infiltration, and associated local cytokine levels. These results suggest that thrombin supports early events coupled to inflammation-mediated tumorigenesis in CAC that are distinct from overall inflammation-induced tissue damage and inflammatory cell trafficking. That prothrombin is linked to early events in CAC was strongly inferred by the observation that prothrombin deficiency dramatically reduced the formation of very early, precancerous aberrant crypt foci. Given the importance of inflammation in the development of colon cancer, these studies suggest that therapeutic interventions at the level of hemostatic factors may be an effective means to prevent and/or impede colitis-associated colon cancer progression.

Canner J, Alonzo TA, Franklin J, Freyer DR, Gamis A, Gerbing RB, Lange BJ, Meshinchi S, Woods WG, **Perentesis J**, Horan J. Differences in outcomes of newly diagnosed acute myeloid leukemia for adolescent/young adult and younger patients: a report from the Children's Oncology Group. *Cancer.* 2013 Dec 1;119(23):4162-9.

Studies comparing survival of adolescent and young adult (AYA) patients to that of younger patients with newly diagnosed acute myeloid leukemia (AML) have yielded conflicting results. In order to more accurately characterize relative survival and other outcomes of AYA patients, a cross-study analysis was conducted using data from recent trials conducted by the Children's Cancer Group (CCG) and Children's Oncology Group (COG). We found that **s**urvival in AYA and younger patients with newly diagnosed AML is similar; however, older patients are at higher risk for TRM. More effective strategies for preventing mortality from infection in AYA patients are needed.

Drolet BA, Trenor CC 3rd, Brandao LR, Chiu YE, Chun RH, Dasgupta R, Garzon MC, **Hammill AM**, Johnson CM, Tlougan B, Blei F, David M, Elluru R, Frieden IJ, Friedlander SF, Iacobas I, Jensen JN, King DM, Lee MT, Nelson S, Patel M, Pope E, Powell J, Seefeldt M, Siegel DH, Kelly M, **Adams DM**. Consensus-derived practice standards plan for complicated Kaposiform hemangioendothelioma. *J* Pediatr. 2013 Ju;163(1):285-91.

Kaposiform hemangioendothelioma (KHE) is a rare, potentially life-threatening vascular tumor often associated with a coagulopathy known as Kasabach–Merritt phenomenon (KMP). Optimal therapy for KHE is not known, and despite well-published classification systems, physicians still confuse this entity with other vascular anomalies. In the interest of standardizing clinical practice across specialties and institutions and to establish a basis for the design of comparative effectiveness studies in vascular tumors, we have developed a consensus-derived standard of practice for the treatment of KHE with and without associated KMP.

Johnston DL, **Nagarajan R**, Caparas M, Schulte F, Cullen P, Aplenc R, Sung L. Reasons for non-completion of health related quality of life evaluations in pediatric acute myeloid leukemia: a report from the Children's Oncology Group. *PLoS One.* 2013 Sep;8(9):e74549.

Health related quality of life (HRQL) assessments during therapy for pediatric cancer are important. The

objective of this study was to describe reasons for failure to provide HRQL assessments during a pediatric acute myeloid leukemia (AML) clinical trial. The five themes for non-completion were: patient too ill; passive or active refusal by respondent; developmental delay; logistical challenges; and poor knowledge of study processes from both the respondent and institutional perspective. This information will facilitate recommendations to improve study processes and future HRQL study designs to maximize response rates.

Division Publications

- 1. Adams D. Vascular Anomalies. In: MM Ziegler, RG Azizkhan, D Von Allmen, TR Weber, eds. *Operative pediatric surgery*. New York: McGraw-Hill Education/Medical; 2014:963-1000.
- Adams D, Neufeld E. Coagulopathy and Vascular Malformations. In: JB Mulliken, PE Burrows, SJ Fishman, JB Mulliken, eds. *Mulliken & Young's vascular anomalies : hemangiomas and malformations*. Oxford: Oxford University Press; 2013:637-644.
- 3. Adams D, Spelliscy C, Sivakumar L, Grundy P, Leis A, Sencer S, Vohra S. **CAM and Pediatric Oncology:** Where Are All the Best Cases?. *Evid Based Complement Alternat Med.* 2013; 2013:632351.
- 4. Bid HK, Kibler A, Phelps DA, Manap S, Xiao L, Lin J, Capper D, Oswald D, Geier B, DeWire M, Smith PD, Kurmasheva RT, Mo X, Fernandez S, Houghton PJ. Development, characterization, and reversal of acquired resistance to the MEK1 inhibitor selumetinib (AZD6244) in an in vivo model of childhood astrocytoma. *Clin Cancer Res.* 2013; 19:6716-29.
- 5. Bishop MW, Yin H, Shimada H, Towbin AJ, Miethke A, Weiss B. Management of stage 4S composite neuroblastoma with a MYCN-amplified nodule. *J Pediatr Hematol Oncol.* 2014; 36:e31-5.
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- Canner J, Alonzo TA, Franklin J, Freyer DR, Gamis A, Gerbing RB, Lange BJ, Meshinchi S, Woods WG, Perentesis J, Horan J. Differences in outcomes of newly diagnosed acute myeloid leukemia for adolescent/young adult and younger patients: a report from the Children's Oncology Group. *Cancer*. 2013; 119:4162-9.
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- Drolet BA, Trenor CC, 3rd, Brandao LR, Chiu YE, Chun RH, Dasgupta R, Garzon MC, Hammill AM, Johnson CM, Tlougan B, Blei F, David M, Elluru R, Frieden IJ, Friedlander SF, Iacobas I, Jensen JN, King DM, Lee MT, Nelson S, Patel M, Pope E, Powell J, Seefeldt M, Siegel DH, Kelly M, Adams DM. Consensus-derived practice standards plan for complicated Kaposiform hemangioendothelioma. *J Pediatr.* 2013; 163:285-91.
- Ehrman LA, Nardini D, Ehrman S, Rizvi TA, Gulick J, Krenz M, Dasgupta B, Robbins J, Ratner N, Nakafuku M, Waclaw RR. The protein tyrosine phosphatase Shp2 is required for the generation of oligodendrocyte progenitor cells and myelination in the mouse telencephalon. *J Neurosci*. 2014; 34:3767-78.

- Fangusaro J, Gururangan S, Poussaint TY, McLendon RE, Onar-Thomas A, Warren KE, Wu S, Packer RJ, Banerjee A, Gilbertson RJ, Jakacki R, Gajjar A, Goldman S, Pollack IF, Friedman HS, Boyett JM, Kun LE, Fouladi M. Bevacizumab (BVZ)-associated toxicities in children with recurrent central nervous system tumors treated with BVZ and irinotecan (CPT-11): a Pediatric Brain Tumor Consortium Study (PBTC-022). Cancer. 2013; 119:4180-7.
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- Fouladi M, Stewart CF, Blaney SM, Onar-Thomas A, Schaiquevich P, Packer RJ, Goldman S, Geyer JR, Gajjar A, Kun LE, Boyett JM, Gilbertson RJ. A molecular biology and phase II trial of lapatinib in children with refractory CNS malignancies: a pediatric brain tumor consortium study. *J Neurooncol.* 2013; 114:173-9.
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- 17. Gururangan S, Fangusaro J, Poussaint TY, McLendon RE, Onar-Thomas A, Wu S, Packer RJ, Banerjee A, Gilbertson RJ, Fahey F, Vajapeyam S, Jakacki R, Gajjar A, Goldman S, Pollack IF, Friedman HS, Boyett JM, Fouladi M, Kun LE. Efficacy of bevacizumab plus irinotecan in children with recurrent low-grade gliomas--a Pediatric Brain Tumor Consortium study. *Neuro Oncol.* 2014; 16:310-7.
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- Johnston DL, Nagarajan R, Caparas M, Schulte F, Cullen P, Aplenc R, Sung L. Reasons for noncompletion of health related quality of life evaluations in pediatric acute myeloid leukemia: a report from the Children's Oncology Group. *PLoS One*. 2013; 8:e74549.
- Kakarla R, Liu J, Naduthambi D, Chang W, Mosley RT, Bao D, Steuer HM, Keilman M, Bansal S, Lam AM, Seibel W, Neilson S, Furman PA, Sofia MJ. Discovery of a novel class of potent HCV NS4B inhibitors: SAR studies on piperazinone derivatives. *J Med Chem.* 2014; 57:2136-60.
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- 24. Liu X, Chhipa RR, Nakano I, Dasgupta B. The AMPK inhibitor compound C is a potent AMPK-

independent antiglioma agent. Mol Cancer Ther. 2014; 13:596-605.

- 25. Liu X, Chhipa RR, Pooya S, Wortman M, Yachyshin S, Chow LM, Kumar A, Zhou X, Sun Y, Quinn B, McPherson C, Warnick RE, Kendler A, Giri S, Poels J, Norga K, Viollet B, Grabowski GA, Dasgupta B. Discrete mechanisms of mTOR and cell cycle regulation by AMPK agonists independent of AMPK. *Proc Natl Acad Sci U S A*. 2014; 111:E435-44.
- 26. Ramaswamy V, Remke M, Bouffet E, Faria CC, Perreault S, Cho YJ, Shih DJ, Luu B, Dubuc AM, Northcott PA, Schuller U, Gururangan S, McLendon R, Bigner D, Fouladi M, Ligon KL, Pomeroy SL, Dunn S, Triscott J, Jabado N, Fontebasso A, Jones DT, Kool M, Karajannis MA, Gardner SL, Zagzag D, Nunes S, Pimentel J, Mora J, Lipp E, Walter AW, Ryzhova M, Zheludkova O, Kumirova E, Alshami J, Croul SE, Rutka JT, Hawkins C, Tabori U, Codispoti KE, Packer RJ, Pfister SM, Korshunov A, Taylor MD. Recurrence patterns across medulloblastoma subgroups: an integrated clinical and molecular analysis. Lancet Oncol. 2013; 14:1200-7.
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- Shih DJ, Northcott PA, Remke M, Korshunov A, Ramaswamy V, Kool M, Luu B, Yao Y, Wang X, Dubuc AM, Garzia L, Peacock J, Mack SC, Wu X, Rolider A, Morrissy AS, Cavalli FM, Jones DT, Zitterbart K, Faria CC, Schuller U, Kren L, Kumabe T, Tominaga T, Shin Ra Y, Garami M, Hauser P, Chan JA, Robinson S, Bognar L, Klekner A, Saad AG, Liau LM, Albrecht S, Fontebasso A, Cinalli G, De Antonellis P, Zollo M, Cooper MK, Thompson RC, Bailey S, Lindsey JC, Di Rocco C, Massimi L, Michiels EM, Scherer SW, Phillips JJ, Gupta N, Fan X, Muraszko KM, Vibhakar R, Eberhart CG, Fouladi M, Lach B, Jung S, Wechsler-Reya RJ, Fevre-Montange M, Jouvet A, Jabado N, Pollack IF, Weiss WA, Lee JY, Cho BK, Kim SK, Wang KC, Leonard JR, Rubin JB, de Torres C, Lavarino C, Mora J, Cho YJ, Tabori U, Olson JM, Gajjar A, Packer RJ, Rutkowski S, Pomeroy SL, French PJ, Kloosterhof NK, Kros JM, Van Meir EG, Clifford SC, Bourdeaut F, Delattre O, Doz FF, Hawkins CE, Malkin D, Grajkowska WA, Perek-Polnik M, Bouffet E, Rutka JT, Pfister SM, Taylor MD. Cytogenetic prognostication within medulloblastoma subgroups. J Clin Oncol. 2014; 32:886-96.
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- 32. Turpin B, Miller W, Rosenfeldt L, Kombrinck K, Flick MJ, Steinbrecher KA, Harmel-Laws E, Mullins ES, Shaw M, Witte DP, Revenko A, Monia B, Palumbo JS. Thrombin drives tumorigenesis in colitis-

associated colon cancer. Cancer Res. 2014; 74:3020-30.

- 33. Wagner L, Turpin B, Nagarajan R, Weiss B, Cripe T, Geller J. Pilot study of vincristine, oral irinotecan, and temozolomide (VOIT regimen) combined with bevacizumab in pediatric patients with recurrent solid tumors or brain tumors. *Pediatr Blood Cancer*. 2013; 60:1447-51.
- 34. Walther A, Geller J, Coots A, Towbin A, Nathan J, Alonso M, Sheridan R, Tiao G. **Multimodal therapy including liver transplantation for hepatic undifferentiated embryonal sarcoma**. *Liver Transpl.* 2014; 20:191-9.
- 35. Widemann BC, Dombi E, Gillespie A, Wolters PL, Belasco J, Goldman S, Korf BR, Solomon J, Martin S, Salzer W, Fox E, Patronas N, Kieran MW, Perentesis JP, Reddy A, Wright JJ, Kim A, Steinberg SM, Balis FM. Phase 2 randomized, flexible crossover, double-blinded, placebo-controlled trial of the farnesyltransferase inhibitor tipifarnib in children and young adults with neurofibromatosis type 1 and progressive plexiform neurofibromas. *Neuro Oncol.* 2014; 16:707-18.
- 36. Zhukova N, Ramaswamy V, Remke M, Pfaff E, Shih DJ, Martin DC, Castelo-Branco P, Baskin B, Ray PN, Bouffet E, von Bueren AO, Jones DT, Northcott PA, Kool M, Sturm D, Pugh TJ, Pomeroy SL, Cho YJ, Pietsch T, Gessi M, Rutkowski S, Bognar L, Klekner A, Cho BK, Kim SK, Wang KC, Eberhart CG, Fevre-Montange M, Fouladi M, French PJ, Kros M, Grajkowska WA, Gupta N, Weiss WA, Hauser P, Jabado N, Jouvet A, Jung S, Kumabe T, Lach B, Leonard JR, Rubin JB, Liau LM, Massimi L, Pollack IF, Shin Ra Y, Van Meir EG, Zitterbart K, Schuller U, Hill RM, Lindsey JC, Schwalbe EC, Bailey S, Ellison DW, Hawkins C, Malkin D, Clifford SC, Korshunov A, Pfister S, Taylor MD, Tabori U. Subgroup-specific prognostic implications of TP53 mutation in medulloblastoma. *J Clin Oncol.* 2013; 31:2927-35.

Faculty, Staff, and Trainees

Faculty Members

John Perentesis, MD, FAAP, Professor

Leadership Deb Kleisinger Endowed Chair of Novel Cancer Treatments; Executive Co-Director, Cancer and Blood Diseases Institute; Director, Division of Oncology; Director, Leukemia/Lymphoma Program; Cincinnati Children's Principal Investigator, Children's Oncology Group (COG); Cincinnati Children's Principal Investigator, National Cancer Institute Pediatric Phase I Consortium

Research Interests New anticancer drug development; molecular oncogenesis and pharmacogenetics in high risk leukemia, lymphoma and pediatric cancers

Michael Absalon, MD, PhD, Assistant Professor

Leadership Director, Medical Education Program; Associate Director, Leukemia/Lymphoma Program

Research Interests New therapeutics; relapsed leukemia and lymphoma, post-transplant lymphoproliferative disease, T-cell lymphoma

Denise M. Adams, MD, Professor

Leadership Marjory J. Johnson Chair Vascular Tumor Translational Research; Medical Director, Comprehensive Hemangiomas and Vascular Malformation Clinic; Director, Hematology/Oncology Fellowship Program

Research Interests Angiogenesis, endothelial cell proliferation, vascular anomalies, mTOR inhibition as a therapeutic approach to complex vascular anomalies

Karen Burns, MD, Assistant Professor

Leadership Clinical Director, Cancer Survivor Center

Research Interests Childhood cancer survival; fertility preservation and outcomes; adolescent and young adult outcomes and quality of life

Lionel Chow, MD, Assistant Professor

Leadership St. Baldrick's Foundation Scholar

Research Interests Molecular genetics of pediatric high-grade glioma, animal models of brain tumors, translational therapeutics for gliomas

Biplab Dasgupta, PhD, Assistant Professor

Research Interests Brain development, energy metabolism, brain cancer

Mariko DeWire, MD, Assistant Professor

Research Interests Developmental therapeutics in pediatric brain tumors

Rachid Drissi, MD, Assistant Professor

Research Interests Replicative senescence, telomere disruption signaling to DNA damage pathways

Maryam Fouladi, MD, FRCP, Professor

Leadership Marjory J. Johnson Chair of Brain Tumor Translational Research; Medical Director, Neuro-Oncology Program; Cincinnati Children's Principal Investigator, Collaborative Ependymoma Research Network (CERN)

Research Interests Novel drug development for the treatment of children with recurrent or poor prognosis brain tumors

James I. Geller, MD, Associate Professor

Leadership Medical Director, Kidney and Liver Tumors Program; Co-Medical Director, Retinoblastoma Program

Research Interests Developmental therapeutics for pediatric solid tumors, especially liver and kidney tumors and retinoblastoma

Adrienne Hammill, MD, Assistant Professor

Research Interests New approaches to the assessment and treatment of hemangiomas and vascular malformations

Trent Hummel, MD, Assistant Professor

Research Interests New therapeutics in neuro-oncology; diffuse intrinsic pontine glioma, neurofibromatosis type 1 and 2 related tumors, biomarker development

Beatrice Lampkin, MD, Professor Emerita

Research Interests Blood and bone marrow morphology and the significance thereof in relationship to patients' case histories

Benjamin Mizukawa, MD, Instructor

Research Interests Pediatric leukemia and lymphoma; role of small Rho GTPases in leukemogenesis and leukemic stem cell biology and their potential as therapeutic targets in acute myeloid leukemia

Rajaram Nagarajan, MD, Assistant Professor

Leadership Outpatient and Inpatient Clinical Director; Director of Cancer Control and Outcomes Research, Cancer Survivor Center

Research Interests Bone tumors; functional and quality of life outcomes following cancer therapy

Maureen O'Brien, MD, Assistant Professor

Leadership Associate Director, Leukemia/Lymphoma Program

Research Interests High-risk acute lymphoblastic leukemia; novel therapies for relapsed leukemia and lymphoma; complications of leukemia therapy

Christine Phillips, MD, Assistant Professor

Research Interests Developmental therapeutics for acute myeloid leukemia; pharmacogenomics of cytarabine and other chemotherapeutic agents

Lisa Privette, PhD, Instructor

Research Interests Molecular mechanisms of tumorigenesis and chemotherapeutic drug resistance in breast cancer, with a particular interest in breast cancer stem cells

Brian Turpin, DO, Instructor

Research Interests Developmental therapeutics in pediatric brain tumors

Brian D. Weiss, MD, Associate Professor

Leadership Associate Director for Safety and Compliance, Cancer and Blood Diseases Institute; Medical Director, Neuroblastoma Program; Cincinnati Children's Principal Investigator, New Approaches to Neuroblastoma Therapy Consortium (NANT)

Research Interests Targeted agents for neurofibromatosis type 1-related malignancies (including plexiform neurofibromas, optic pathway gliomas, and juvenile myelomonocytic leukemia); chemotherapy safety

Susanne Wells, PhD, Associate Professor

Leadership Director, Epithelial Carcinogenesis and Stem Cell Program

Research Interests Epithelial malignancies, human papillomavirus biology and new targets of the HPV E6/E7 oncogenes, the role of epithelial stem cells in carcinogenesis

Joint Appointment Faculty Members

Ahna Pai, PhD, Associate Professor (Adherence Psychology)

Saulius Sumanas, PhD, Assistant Professor (Developmental Biology)

Mary Sutton, MD, Associate Professor (Neurology)

Clinical Staff Members

- Carina Braeutigam, MD
- Vasudha Narayanaswamy, MD

Trainees

- Andrew Bukowinski, MD, PGYIV, Children's Hospital of Pittsburg
- Christopher Dandoy, MD, PGYVI, Miami Children's Hospital
- Kathleen Dorris, MD, PGYVII, Children's Memorial Hospital, Northwestern University
- Anne Hladik, MD, PGYV, Baylor College of Medicine, Houston
- Dawn Pinchasik, MD, PGYVI, Children's Hospital of Pittsburgh
- Ralph Salloum, MD, PGYVI, Detroit Medical Center/Wayne State University
- Jennifer Williams, MD, PGYVI, T.C. Thompson Children's Hospital/University of Tennessee

Division Collaboration

Scholar Training Program in Cancer Survivorship, funded by the Hyundai Hope on Wheels Foundation (John Perentesis, MD, FAAP, Karen Burns, MD, Rajaram Nagarajan, MD)
Adolescent Medicine » Leslie Ayeneu-Coker, MD
Behavioral Medicine and Clinical Psychology » Dennis Drotar, PhD
Biostatistics and Epidemiology » Mi-Ok Kim, PhD
Human Genetics » Robert Hopkin, MD and Sara Knapke, MD, CGC
Neurology » Mary Sutton, MD
Physical Medicine and Rehabilitation » David Pruitt, MD

University of Cincinnati Cancer Center Research Steering Committee (John Perentesis, MD, FAAP, Yi Zheng, PhD)

Adolescent Medicine » Frank Biro, MD University of Cincinnati Cancer Cell Biology - Environmental Sciences » Jun-Lin Guan, PhD, Shuk-Mei Ho, PhD, and Susan Pinney, PhD Comprehensive Lung Cancer Center » John Morris, MD

Pediatric Cancer Pain/Palliative Care & Research Initiative (John Perentesis, MD, FAAP, Denise Adams, MD, Rajaram Nagarajan, MD, Maryam Fouladi, MD, MSc, Brian Weiss, MD, James Geller, MD, Michael Absalon, MD, PhD, Maureen O'Brien, MD, Karen Burns, MD, Christine Phillips, MD, Mariko DeWire, MD, Jennifer Mangino, MD, Brian Turpin, DO, Lionel Chow, MD, PhD, Benjamin Mizukawa, MD, Trent Hummel, MD, Adrienne Hammill, MD, PhD, Jennifer Davis, DO, Jordan Wright, MD, Suzanne Wells, PhD, Lisa Privette-Vinnedge, PhD, William Seibel, PhD, Rachid Drissi, PhD, Biplab DasGupta, PhD)

Anesthesia » Mark Meyer, MD, Rachel Thienprayoon, MD, and Norbert Weidner, MD

Hemangioma and Vascular Malformation Center, clinical services and clinical research, including a clinical trial of rapamycin and sirolimus for complicated vascular anomalies, a vascular tumor registry, and a vascular anomaly tissue repository. (Denise Adams, MD, Adrienne Hammill, MD, PhD)

Anesthesia » Norbert Weidner, MD Cardiology » Russel Hirsch, MD Dermatology » Anne Lucky, MD, Kara Shah, MD, PhD, and Marty Visscher, PhD Gastroenterology » Ajay Kaul, MD Human Genetics » Robert Hopkin, MD, Derek Neilson, MD, and Katherine Wusik-Healy, LGC Neurology » J. Michael Taylor, MD and Mary Sutton, MD Neurosurgery » Kerry Crone, MD **Ophthalmology** » Anita Gupta, MD and Michael Yang, MD Orthopaedics » James McCarthy, MD and Joel Sorger, MD Otolaryngology » Ravindru Elluru, MD, PhD and Michael Rutter, MD Pain Management and Palliative Care » Kenneth Goldschneider, MD, FAAY Pathology » Anita Gupta, MD Plastic Surgery » Ann Schwentker, MD and Kevin Yakuboff, MD, FACS Pulmonary Medicine » Raouf Amin, MD, Michael Seid, PhD, and Robert Wood, MD, PhD Radiology » Todd Abruzzo, MD, William Ball, MD, Patel Manish, DO, Carl Merrow, MD, and Andrew Zbojniewicz, MD Surgical Services » Richard Azizkhan, MD Surgery » Belinda Hsi Dickie, MD, PhD

Thoracic Surgery » A. Roshni Dasgupta, MD, MPH Urology » Pramod Reddy, MD

Multidisciplinary clinical services for patients with neurofibromatosis type 2; clinical research related to neurofibromatosis type 2, including national trial of VEGF inhibitor for NF2 patients with vestibular schwannomas. (Trent Hummel, MD)

Audiology » Ravi Samy, MD, FACS and Gayle Riemer, MA, CCC-A, F-AAA Human Genetics » Robert Hopkin, MD and Elizabeth Schorry, MD Neurosurgery » Francesco Mangano, DO, FACS, FACOS Pathology » Lili Miles, MD Physical Medicine and Rehabilitation » David Pruitt, MD Radiology » James Leach, MD

Leukemia/Lymphoma Program clinical multidisciplinary care. (John Perentesis, MD, FAAP, Michael Absalon, MD, PhD Karen Burns, MD, Maureen O'Brien, MD, Christine Phillips, MD).

Behavioral Medicine and Clinical Psychology » Michelle Ernst, PhD
Human Genetics » Liming Bao, MD, PhD and Teresa Smolarek, PhD
Neurology; » Mary Sutton, MD
Pathology » Richard McMasters, MD
Physical Medicine and Rehabilitation » David Pruitt, MD
Radiology » Michael Gelfand, MD

Adherence research; "Promoting Treatment Adherence in Adolescent Leukemia" NIH (John Perentesis, MD, FAAP)

Behavioral Medicine » Dennis Drotar, PhD Clinical Psychology » Ahna Pai, PhD

Scholar Training Program in Pediatric Oncology Developmental Therapeutics and Clinical Pharmacology (John Perentesis, MD, FAAP, Maryam Fouladi, MD, MSc)

Biomedical Informatics » Bruce Aronow, PhD Biostatistics and Epidemiology » Mi-Ok Kim, PhD Clinical Pharmacology » Alexander Vinks, PharmD, PhD, FCP Pathology » David, Witte, MD Radiology » Michael Gelfand, MD and Alexander Towbin, MD

Down syndrome leukemia research: etiology and risk factors, pharmacogenetics of therapy and outcomes. (John Perentesis, MD, FAAP)

Biomedical Informatics » Bruce Aronow, PhD Biostatistics and Epidemiology » Mi-Ok Kim, PhD Developmental and Behavioral Pediatrics » David Schonfeld, MD Human Genetics » Teresa Smolarek, PhD

Pediatric Cancer Drug Development – Genomics, Pharmacology & Drug Discovery/Bioinformatics(John Perentesis, MD, FAAP, Denise Adams, MD, Rajaram Nagarajan, MD, Maryam Fouladi, MD, MSc, Brian Weiss, MD, James Geller, MD, Michael Absalon, MD, PhD, Maureen O'Brien, MD, Karen Burns, MD, Christine Phillips,

MD, Mariko DeWire, MD, Jennifer Mangino, MD, Brian Turpin, DO, Lionel Chow, MD, PhD, Benjamin Mizukawa, MD, Trent Hummel, MD, Adrienne Hammill, MD, PhD, Jennifer Davis, DO, Jordan Wright, MD, Suzanne Wells, PhD, Lisa Privette-Vinnedge, PhD, William Seibel, PhD, Rachid Drissi, PhD, Biplab DasGupta, PhD)

Biomedical Informatics » Bruce Aronow, PhD, Rebekah Karns, PhD, Mayur Sarangdhar, PhD, and Imre Solti, MD, PhD

Clinical Pharmacology » Alexander Vinks PharmD, PhD, FCP and Kana Mizuno, PhD

Pediatric Cancer Drug Development – Clinical Trial Biostatistics (John Perentesis, MD, FAAP, Denise Adams, MD, Rajaram Nagarajan, MD, Maryam Fouladi, MD, MSc, Brian Weiss, MD, James Geller, MD, Michael Absalon, MD, PhD, Maureen O'Brien, MD, Karen Burns, MD, Christine Phillips, MD, Mariko DeWire, MD, Jennifer Mangino, MD, Brian Turpin, DO, Lionel Chow, MD, PhD, Benjamin Mizukawa, MD, Trent Hummel, MD, Adrienne Hammill, MD, PhD, Jennifer Davis, DO, Jordan Wright, MD, Suzanne Wells, PhD, Lisa Privette-Vinnedge, PhD, William Seibel, PhD, Rachid Drissi, PhD, Biplab DasGupta, PhD)

Biostatics & Epidemiology » Lin Fei, PhD

Cancer Metabolism. (Biplab DasGupta, PhD)

Bone Marrow Transplantation & Immune Deficiency » Ashish Kumar, MD, PhD Experimental Hematology and Cancer Biology » Kakajan Komurov, PhD and Nancy Ratner, PhD Human Genetics » Gregory Grabowski, MD

Studies in DEK in Hematopoietic stem cells. (Suzanne Wells, PhD)

Bone Marrow Transplantation & Immune Deficiency » Stella Davies, MBBS PhD MRCP and Parinda Mehta, MD

Experimental Hematology and Cancer Biology » Nicolas Nassar, PhD

Pathology » Kathryn Wikenheiser-Brokamp and David Witte, MD

UC Environmental Health » Shuk-Mei Ho, PhD

UC Hematology/Oncology » El Mustapha M. Bahassi, PhD

UC Molecular Genetics » Peter Stambrook, PhD

UC Otolaryngology » Keith Casper, MD, Yash Patil, MD, and Keith Wilson, MD

Bone Marrow Derived HSCs in hPAP Patients (Michael Absalon, MD, PhD)

Bone Marrow Transplantation & Immune Deficiency » Michael Grimley, MD and Ashish Kumar, MD, PhD **Neonatology and Pulmonology** » Bruce Trapnell, MD, MS

Screening strategy and Library design for identification of inhibitors of NSD2. (William Seibel, PhD) **Cancer Pathology** » Gang Huang, PhD

Cardiac function in children with hepatoblastoma. (James Geller, MD, Rajaram Nagarajan, MD) Cardiology » John Jefferies, MD, MPH, FAAP, FACC and Thomas Ryan, MD, PhD

A Phase I/Pilot Study of CPX-351 for Children, Adolescents and Young Adults with Recurrent or Refractory
 Hematologic Malignancies (Michael Absalon, MD, PhD, John Perentesis, MD, FAAP)
 Caroldiology » John Lynn Jefferies, MD, MPH, FAAP, FACC and Ryan Thomas, MD, PhD
 Biostatistics and Epidemiology » Mi-Ok Kim, PhD

Local and Systemic Responses and Epi-Genetic Influences on Preterm Birth among Hispanic Women. (Rachid Drissi, PhD)

Center for Professional Excel Research & EBP » Rita Pickler, PhD

Post-Transplant Lymphoproliferative Disease Working Group. (Michael Absalon, MD, PhD) Cardiology » Chesney Castleberry, MD and Ryan Thomas, MD, PhD Gastroenterology » John Bucuvalas, MD Hepatology and Nutrition » Alexander Miethke, MD Nephrology » Jens Goebel, MD Pathology » David Witte, MD Radiology and Medical Imaging » Alan Brody, MD

Multidisciplinary clinical services for patients with neurofibromatosis; clinical research related to neurofibromatosis, including national clinical trial of mTOR inhibition to treat NF1-related plexiform neurofibromas. (Brian Weiss, MD, John Perentesis, MD, FAAP, Trent Hummel, MD

Clinical Pharmacology » Alexander Vinks, PharmD, PhD, FCP Human Genetics » Robert Hopkin, MD and Elizabeth Schorry, MD Neurology » Mary Sutton, MD, Neurosurgery » Kerry Crone, MD Ophthalmology » Constance West, MD Orthopaedic Surgery UC » Alvin Crawford, MD Pathology » Margaret Collins, MD Physical Medicine and Rehabilitation » David Pruitt, MD Radiology » Michael Gelfand, MD, Susan Sharp, MD, and Alexander Towbin, MD

Liver transplantation clinical services and clinical research activities for hepatoblastoma patients. (James Geller, MD)

Developmental Biology » Kenneth Campbell, PhD
Gastroenterology, Hepatology and Nutrition » John Bucuvalas, MD and Michael Leonis, MD, PhD
Pathology » Kevin Bove, MD, Anita Gupta, MD, Rachel Sheridan, MD, and Mikako Warren, MD
Radiology » Alexander Towbin, MD
Surgery » Maria Alonso, MD, Jaimie Nathan, MD, Frederick Ryckman, MD, and Gregory Tiao, MD

Myelination (Biplab DasGupta, PhD)

Developmental Biology » Yoshida Yutaka, PhD **Pain Management** » Michael Jankowski, PhD

Endocrinology services for oncology patients; Children's Oncology Group and other clinical research activities (John Perentesis, MD, FAAP, Maryam Fouladi, MD, MSc, Karen Burns, MD)

Endocrinology » Susan Rose, MD and Meilan Rutter, MD

Cdc42 inhibition for xenograft conditioning and mobilization. (Benjamin Mizukawa, MD, John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Yi Zheng, PhD

Design and Contract Synthesis of Inhibitors of cdc42. (William Seibel, PhD, John Perentesis, MD, FAAP) **Experimental Hematology and Cancer Biology** » Yi Zheng, PhD

Design and Contract Synthesis of Inhibitors of RAS-SOS1 Interactions. (William Seibel, PhD, John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Yi Zheng, PhD

Design and Contract Synthesis of Inhibitors of NF1 mutant MPNST Cell Lines. (William Seibel, PhD, John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Nancy Ratner, PhD

Oversight of development of High Throughput Screen for inhibitors of Fibrin and MAC-1 binding. (William Seibel, PhD, John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Jay Degen, PhD

Medicinal Chemistry Consultation and supply of compounds targeting inhibition of STS1 Phosphatase. (William Seibel, PhD, John Perentesis, MD, PhD, FAAP)

Experimental Hematology and Cancer Biology » Nicolas Nassar, PhD

Medicinal Chemistry Consultation and supply of compounds targeting inhibition of RAS. (William Seibel, PhD, John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Nicolas Nassar, PhD

Medicinal Chemistry Consultation and supply of compounds modulating of RAS-VAV3 binding. (William Seibel, PhD, John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Jose Cancelas, MD, PhD

Cancer (Biplab DasGupta, PhD, John Perentesis, MD, FAAP) **Experimental Hematology and Cancer Biology** » Daniel Starczynowski, PhD

Provide technical services with flow cytometry and intellectual input on identifying cancer stem cells. (Lisa Privette-Vinnedge, PhD, John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Jose Cancelas, MD, PhD

Facilitating cell culture and murine model experiments for his studies while assisting with bioinformatics and data mining for projects. (Lisa Privette-Vinnedge, PhD, John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Kakajan Komurov, PhD

Breed mice for stem cell studies. (Lisa Privette-Vinnedge, PhD, John Perentesis, MD, FAAP) Experimental Hematology and Cancer Biology » Hartmut Geiger, PhD

Cdc42 inhibition for stem cell mobilization and hematopoietic cell transplant conditioning (Benjamin Mizukawa, MD, Ahmad Rayes, MD, John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Yi Zheng, PhD

Targeting the endoplasmic reticulum stress pathways in drug-resistant breast cancers. This project aims to identify molecular and chemical methods of inhibiting triple negative breast cancers (Lisa Privette-Vinnedge, PhD, John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Kakajan Komurov, PhD

The role of DEK in murine hematopoiesis. This project identifies and examines the hematopoietic defects, and cause of anemia, in Dek deficient mice (Lisa Privette-Vinnedge, PhD, John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Jose Cancelas, MD, PhD, Hartmut Geiger, PhD, and Yi Zheng, PhD

Hematology » Theodosia Kalfa, MD, PhD Immunology » Julio Aliberti, MS, PhD

Brain Development. (Biplab DasGupta, PhD, John Perentesis, MD, FAAP)
 Experimental Hematology and Cancer Biology; » Ronald Waclaw, PhD and Qishen Pang, PhD
 Human Genetics » Rolf Stottmann, PhD

Cincinnati Center of Neurofibromatosis Research (P50). (John Perentesis, MD, FAAP)

Experimental Hematology and Cancer Biology » Nancy Ratner, PhD

Pathology » Margaret Collins, MD

University of Cincinnati Department of Cancer and Cell Biology » Sara Kozma, PhD and George Thomas, PhD

High Risk Pediatric Cancer Genetics/Genomics Research (John Perentesis, MD, FAAP, Denise Adams, MD, Rajaram Nagarajan, MD, Maryam Fouladi, MD, MSc, , Brian Weiss, MD, James, Geller, MD, Michael Absalon, MD, PhD, Maureen O'Brien, MD, Karen Burns, MD, Christine Phillips, MD, Mariko DeWire, MD, Jennifer Mangino, MD, Brian Turpin, DO, Lionel Chow, MD, PhD, Benjamin Mizukawa, MD, Trent Hummel, MD, Adrienne Hammill, MD, PhD, Jennifer Davis, DO, Jordan Wright, MD, Suzanne Wells, PhD, Lisa Privette-Vinnedge, PhD, William Seibel, PhD, Rachid Drissi, PhD, Biplab DasGupta, PhD)

Human Genetics » Jennifer Holle, PhD, Sara Knapke, PhD, and Erin Mundt, PhD

Genetic services for oncology patients; Children's Oncology Group clinical research activities (John Perentesis, MD, FAAP)

Human Genetics » Liming Bao, MD, PhD and Teresa Smolarek, PhD

Molecular (FISH, SNP) characterization of TFE (translocation-type) Renal Cell Carcinoma. (James Geller, MD) **Human Genetics** » Lisa Dyer, PhD and Teresa Smolarek, PhD

Characterization and Genetic Counseling Practices for Patients with Retinoblastoma at Cincinnati Children's Hospital Medical Center (James Geller, MD)

Human Genetics » Nancy Leslie, MD

Pediatric Hereditary Cancer Predisposition Clinic (James Geller, MD) Human Genetics » Sara Knape, LGC and Nancy Leslie, MD

Clinic for patients with intracranial vascular malformations, congenital and acquired, to provide comprehensive

multidisciplinary care in one visit (Adrienne Hammill, MD, PhD)
 Human Genetics » Katherine Wusik-Healy, LGC
 Neurology » Michael Taylor, MD
 Neurosurgery » Sudhaker Vadivelu, DO
 Radiology » Todd Abruzzo, MD

Multidisciplinary clinical services for patients with neurofibromatosis type 2; clinical research related to neurofibromatosis type 2, including local trial of MEK inhibition to treat NF2-related central nervous system tumors. (Trent Hummel, MD, Maryam, Fouladi, MD, MSc, Mariko DeWire, MD Lionel Chow, MD, PhD)

Human Genetics » Robert Hopkin, MD and Elizabeth Schorry, MD
Neurosurgery » Francesco Mangano, DO, FACS, FACOS
Otolaryngology » Ravi Samy, MD
Pathology » Lili Miles, MD
Physical Medicine and Rehabilitation » David Pruitt, MD
Radiology » James Leach, MD

HHT Clinic - providing comprehensive evaluation and treatment for individuals and families with Hereditary Hemorrhagic Telangiectasia (HHT). Working on Center of Excellence certification - in process of submitting application (Adrienne Hammill, MD, PhD)

Human Genetics » Katherine Wusik-Healy, LGC
Otolaryngology » Ravindhra Elluru, MD, PhD and Charles Myer, IV, MD
Radiology » Manish Patel, DO
University of Cincinnati Interventional Radiology » Ross Ristagno, MD

Gardner fibroma: clinical and histopathologic implications of germline APC mutation association. (James Geller, MD)

Human Genetics » Nancy Leslie, MD Pathology » Amy Sheil, MD Radiology » Andrew Zbojniewicz, MD

Clinical services and research activities for kidney tumor patients. (James Geller, MD)
 Human Genetics » Lisa Dyer, PhD and Teresa Smolarek, PhD
 Pathology » Kevin Bove, MD and Mikako Warren, MD
 Radiology » Eric Crotty, MD and Andrew Trout, MD
 Surgery » Jaimie Nathan, MD and Gregory Tiao, MD

Phase I trial of HSV1716. (James Geller, MD) Infectious Diseases » Beverly Connelly, MD Investigational Pharmacy » Denise Lagory, RPh Radiology » John Racadio, MD and Alexander Towbin, MD

Design and Contract Synthesis of Inhibitors of Midkine Expression. (William Seibel, PhD) **Neonatology and Pulmonary Biology** » Yutaka Maeda, DVM, PhD and Jeffrey Whitsett, MD

Study ADVL1315 - Biomarkers of renal injury during anti-angiogenic therapy. (James Geller, MD)

Nephrology » Stuart Goldstein, MD

Urinary Biomarkers of Acute Kidney Injury in Children with Cancer receiving Nephrotoxic Chemotherapy. (Maureen O'Brien, MD)

Nephrology » Stuart Goldstein, MD

Visual pathway research for children with retinal or optic pathway tumors. (James Geller, MD)

Neurology » Douglas Rose, MD Ophthalmology » Constance West, MD Radiology » James Leach, MD

Vincristine morbidity in children with hepatoblastoma. (James Geller, MD) **Neurology** » Mary Sutton, MD **Surgery** » Gregory Tiao, MD

Culture and xenografts of pediatric brain tumors. (Lionel Chow, MD, PhD) **Neurosurgery** » Charles Stevenson, MD

Prognostic Role of Telomerase Expression in Pediatric High-Grade Gliomas. Telomerase Activity and *hTERT* mRNA Expression Predict Shorter Progression-free and Overall Survival in Pediatric Medulloblastoma. (Rachid Drissi, PhD, Maryam Fouladi, MD, MSc, Kathleen Dorris, MD) **Neurosurgery** » Charles Stevenson, MD

Pathology » Lili Miles, MD

A Pilot Study of SAHA in combination with 13-cis-retinoic acid for high risk medulloblastoma/PNET following craniospinal irradiation therapy and high dose chemotherapy with stem cell rescue, A phase II study of SAHA in combination with 13-cis-retinoic acid in recurrent/ refractory medulloblastoma/PNET, ATRT, ependymoma, high grade glioma. (Mariko DeWire, MD, Rachid Drissi, PhD, Maryam Fouladi, MD, MSc)

Neurosurgery » Charles Stevenson, MD Pathology » Lili Miles, MD

Fertility Consultation Service for oncology patients. (Karen Burns, MD) Obstetrics and Gynecology » Leslie Ayensu-Coker, MD

Cincinnati Chapter of the Oncofertility Consortium (Karen Burns, MD) Obstetrics and Gynecology » Leslie Ayensu-Coker, MD

Locoregional therapy (intra-atrerial and intravitreal chemotherapy) for Retinoblastoma. (James Geller, MD) **Ophthalmology** » James Augsburger, MD **Radiology** » Todd Abruzzo, MD

Hemangioma & Vascular Malformation Clinic Effective of Knee surgery for children with vascular malformation of the knee. (Denise Adams, MD, Adrienne Hammill, MD, PhD, Biplab DasGupta, PhD) Orthopedics Surgery » Joel Sorger, MD Evaluation of sentinel node biopsies (Rajaram Nagarajan, MD, Brian Turpin, DO, Biplab DasGupta, PhD) **Orthopedics Surgery** » Joel Sorger, MD

Multidisciplinary clinical services for patients with musculoskeletal sarcoma (Rajaram Nagarajan, MD Brian Turpin, DO, James Geller, MD)

Orthopaedic Surgery » Joel Sorger, MD Pathology » Amy Shiel, MD Radiology » Neil Johnson, MD and Tal Laor, MD Rehabilitation Medicine » David Pruitt, MD University of Cincinnati Radiation Oncology » John Brenneman, MD and Luke Pater, MD

Molecular characteristics of Angiosarcoma (Lionel Chow, MD, PhD). **Pathology** » Anita Gupta, MD

ACNS0822: a randomized phase II/III study of suberoylanilide hydroxamic acid (SAHA) (IND# 71976) and local irradiation or temozolomide and local irradiation or arsenic trioxide and local irradiation followed by maintenance bevacizumab (IND# 7921) and irinotecan in children with newly diagnosed high-grade glioma. (Maryam Fouladi, MD, MSc, James Geller, MD, Rachid Drissi, PhD)

Pathology » Lili Miles, MD

Characterization of mouse glioma models. (Lionel Chow, MD, PhD) **Pathology** » Lili Miles, MD

*hTERT*Expression Predicts Shorter Progression-Free and Overall Survival in Pediatric Medulloblastoma(Rachid Drissi, PhD, Maryam Fouladi, MD, MSc, Kathleen Dorris, MD) **Pathology** » Lili Miles, MD

Pathology services for oncology patients; Children's Oncology Group clinical research activities (John Perentesis, MD, FAAP)

Pathology » Margaret Collins, MD, Richard McMasters, MD, Lili Miles, MD, and David Witte, MD

Cincinnati Children's to develop an assay for High-grade patents eligibility. (Rachid Drissi, PhD) **Pathology** » David Witte, MD

Molecular characterization of tumor tissue and cells derived from patients with Brain tumors (Rachid Drissi, PhD) **Pathology** » Lili Miles, MD **Neurosurgery** » Charles Stevenson, MD

Clinical services for neuroblastoma patients; clinical research related to neuroblastoma. (John Perentesis, MD, FAAP, Brian Weiss, MD)

Pathology » David Witte, MD Radiology » Michael Gelfand, MD, Susan Sharp, MD, and Alexander Towbin, MD

Rehabilitation services for oncology patients; Children's Oncology Group and other clinical research activities (John Perentesis, MD, FAAP)

Physical Medicine and Rehabilitation » David Pruitt, MD

Pediatric Cancer Psychology & Family Wellness Research & Clinical Program (John Perentesis, MD, FAAP)
 Psychiatry » Mark Johnson, MD
 Behavioral Medicine and Clinical Psychology » Ahna Pai, PhD

Nuclear medicine services for oncology patients; Children's Oncology Group clinical research activities (John Perentesis, MD, FAAP)

Radiology » Michael Gelfand, MD and Alexander Towbin, MD

FDG-PET imaging of translocation renal cell carcinoma. (James Geller, MD) Radiology » Andrew Trout, MD

Director: Multidisciplinary Solid Tumor Board - a weekly educational session pertaining to solid tumors, for all levels of care providers. (James Geller, MD)

Radiology » Alexander Towbin, MD Pathology » Kevin Bove, MD Thoracic Surgery » Daniel von Allmen, MD

Protocol Chair: CCHMC IARB1 – (IND# 111358) - A Pilot Study of Intra-Ophthalmic Artery Topotecan Infusion for the Treatment of Retinoblastoma. (James Geller, MD) **Radiology** » Todd Abruzzo, MD **Ophthalmology** » James Augsburger, MD

Advancement of High Frequency Ultrasound (HIFU) for pediatric oncology patients. (James Geller, MD) **Radiology** » Brian Cooley, MD, Charles Dumoulin, PhD, Daniel Podberesky, and John Racadio, MD **Thoracic Surgery** » Daniel von Allmen, MD

Pediatric Liver Cancer Genomics & Biology (John Perentesis, MD, FAAP, James Geller, MD) **Surgery** » Nikolai Timchenko, PhD

Surgical services for oncology patients; Children's Oncology Group clinical research activities (John Perentesis, MD, FAAP)

Surgical Services » Richard Azizkhan, MD Surgery » Gregory Tiao, MD

Cincinnati Children's Hospital Medical Center Particle Beam/Proton Research Initiative (John Perentesis, MD, FAAP, Yi Zheng, PhD)

University of Cincinnati – Barrett Cancer Center Radiation Oncology » Luke Pater, MD Cancer & Cell Biology » Jun-Lin Guan, PhD, Peter Stambrook, MD, Susan Waltz, PhD, and Michael Lamba, MD

College of Arts & Sciences/Physics » Kay Kinoshita, MD

College of Design, Architecture, Art & Planning » Craig Vogel, MID

Engineering, Radiation Physics » David Mast, PhD and Mark Schulz, PhD

Medicinal Chemistry Consultation and supply of compounds Stabilizing PCNA trimerization. (William Seibel, PhD) University of Cincinnati Cancer and Cell Biology » Zhongyun Dong, MD, PhD

Medicinal Chemistry Consultation and supply of compounds inhibiting PKCiota. (William Seibel, PhD) University of Cincinnati Cancer and Cell Biology » Ken Greis, PhD

Medicinal Chemistry Consultation and supply of compounds related to Prolactin antagonist activity. (William Seibel, PhD)

University of Cincinnati Cancer and Cell Biology » Nira Ben-Jonathan, PhD and Eric Hugo, PhD

Provide technical services with murine models of breast cancer, intellectual input, career mentoring. (Lisa Privette-Vinnedge, PhD)

University of Cincinnati Cancer and Cell Biology » Susan Waltz, PhD

Molecular functions of the DEK oncogene in breast cancer pathogenesis (Lisa Privette-Vinnedge, PhD, Suzanne Well, PhD)

University of Cincinnati Cancer and Cell Biology » Susan Waltz, PhD

Pediatric Cancer Metabolomics & Biology (John Perentesis, MD, FAAP, Suzanne Wells, PhD) University of Cincinnati Cancer and Cell Biology » Kenneth Greis, PhD

Developing a novel RNA nanoparticle for the simultaneous imaging and treatment of breast cancer (Lisa Privette-Vinnedge, PhD)

University of Cincinnati Cancer and Cell Biology » Xiaotling Zhang, PhD University of Cincinnati Environmental Health » Pheruza Tarapore, PhD University of Cincinnati Hematology/Oncology » Trisha Wise-Draper, MD, PhD University of Cincinnati Radiation Oncology » Kris Huang, MD and William Porter, MD University of Cincinnati Radiation & Nuclear Medicine » Mariano Fernandez-Ulloa, MD University of Cincinnati Surgical Oncology » Syed Ahmad, MD

Pediatric leukemia, solid tumor, and brain tumor drug discovery screening. (John Perentesis, MD, FAAP, Brian Weiss, MD, Michael Absalon, MD, PhD, Maureen O'Brien, MD)

University of Cincinnati Drug Discovery Center » Ruben Papoian, PhD

Provide shared reagents and intellectual input regarding hormone studies, co-mentor and co-author. (Lisa Privette-Vinnedge, PhD)

University of Cincinnati Environmental Health » Shuk-Mei Ho, PhD

Gene targets of steroid hormone signaling in breast cancer (Lisa Privette-Vinnedge, PhD) University of Cincinnati Environmental Health » Shuk-Mei Ho, PhD

Cancer – Role of AMPK in autophagy. Autophagy in TFE (Translocation-type) RCC. (James Geller, MD) University of Cincinnati Hematology/Oncology » Maria F. Czyzyk-Krzeska, M.D., PhD

Examining the clinical relevance of DEK as a clinical biomarker of progression and potential therapeutic target in

solid tumors (Lisa Privette-Vinnedge, PhD)

University of Cincinnati Hematology/Oncology » Elyse Lower, MD and Trisha Wise-Draper, MD, PhD

Cheminformatics library analysis and supply of compounds. (William Seibel, PhD) University of Cincinnati Hematology/ Oncology » James Driscoll, MD, PhD University of Cincinnati Pharmacology & Cell Biophysics » Terry Kirley, PhD

Cheminformatics library analysis and supply of compounds. (William Seibel, PhD) University of Cincinnati Pharmacology & Cell Biophysics » Terry Kirley, PhD

Next Generation Cancer Survivorship – Internal Medicine Education Program (John Perentesis, MD, FAAP, Karen Burns, MD, Rajaram Nagarajan, MD)

University of Cincinnati Internal Medicine » Jonathan Tolentino, MD

Providing reagents and samples for analysis. (Lisa Privette-Vinnedge, PhD) University of Cincinnati College of Pharmacy » Pankaj Desai, PhD and Georg Weber, MD, PhD

GBM Model in rat. Preclinical testing of aromatase inhibitor in glioma. (Lionel Chow, MD, PhD) University of Cincinnati College of Pharmacy » Pankaj Desai, PhD

Radiation oncology clinical services for oncology patients; Children's Oncology Group clinical research activities (John Perentesis, MD, FAAP)

University of Cincinnati Division of Radiation Oncology » John Breneman, MD and Ruth Lavigne, MD

Grants, Contracts, and Industry Agreements

Grant and Contract Awards		Annual Direct
CHLON, T		
Pelotonia Fellowship Program		
Ohio State University Comprehensive	Cancer Center	
	03/01/13-02/28/15	\$39,264
CHOW, L		
Molecular Targeting of High-Grade A	strocytoma	
The Sontag Foundation		
	10/01/11-09/30/15	\$130,435
Molecular Targeting of Pediatric Higl	n-Grade Glioma	
St. Baldrick's Foundation		
	07/01/11-06/30/14	\$110,000
DASGUPTA, B		
Regulation of Forebrain Neurogenes	is by the Energy Sensor AMP Kinase	
National Institutes of Health		
R01 NS 072591	07/01/12-06/30/17	\$222.372

FOULADI, M		
NIH COG Study Chair		
National Institutes of Health(Childrer	's Hospital of Philadelphia)	
U10 CA 098543	04/13/13-02/28/15	\$11,550
Establishment of an International D	iffuse Intrinsic Pontine Glioma (DIPG) Registry	
The Cure Starts Now Foundation		
	01/01/12-12/31/14	\$205,000
The Pediatric Brain Tumor Consort	ium - Per Patient	
National Institutes of Health(St. Jude	Children's Hospital)	
U01 CA 08155	04/01/11-03/31/15	\$23,195
The Pediatric Brain Tumor Consort	ium	
National Institutes of Health(St. Jude	Children's Hospital)	
UM1 CA 081457	04/01/11-03/31/19	\$121,496
GELLER, J		
NIH COG Phase 1 Study Chair		
National Institutes of Health(Children	's Hospital of Philadelphia)	
UM1 CA 097452	08/01/12-07/31/17	\$11,550
Epigenetic and Clinical Impact of S	MARCB1 Loss in Cancer	
National Institutes of Health(Children	n's Memorial Hospital)	
	07/01/12-06/30/14	\$6,954
LEE, J		
Prolife action Control of DIDC Colle		
Proliferation Control of DIPG Cells	by AMP Linase inhibition	
303104 3 7031	06/01/14 05/31/15	\$5,000
	00/01/14-03/31/13	\$5,000
MIZUKAWA, B		
Targeted Inhibition of Cdc42 GTPas	se in the Acute Myeloid Leukemia Stem Cell	
ot. Buildhoko i builduloh	07/01/13-06/30/16	\$110.000
Children's Oncology Group Chair -	Workload Intensity	
National Institutes of Health(Childrer	's Hospital of Philadelphia)	
U10 CA 098543	03/01/12-02/28/17	\$27,797
Children's Oncology Group Chair -	per patient	
National Institutes of Health(Children	rs Hospital of Philadelphia)	
U10 CA 098543	03/01/12-02/28/17	\$144,883
CHOP/COG ADVL0921		
willennium Pharmaceuticals(Childre	n's Hospital of Philadephia)	

COG Supplemental Reimbursement		
St. Baldrick's Foundation(Children's Hospi	tal of Philadelphia)	
	03/01/12-02/18/17	\$46,970
CHOP/COG AALL0932		
National Institutes of Health(Children's Ho	spital of Philadelphia)	
HHSN261200800001E	03/30/12-06/30/15	\$4,620
Pediatric Phase I - Pilot Consortium (per	case)	
National Institutes of Health(Children's Ho	spital of Philadelphia)	
UM1 CA 097452	07/24/12-05/31/15	\$12,320
Pediatric Phase I Scientific Leadership		
National Institutes of Health(Children's Ho	spital of Philadelphia)	
UM1 CA 097452	09/26/12-07/31/15	\$11,501
COG ADVL1213		
Morphotek(Children's Hospital of Philadel	ohia)	
	01/01/14-12/31/16	\$8,778
COG Community Clinical Oncology Prog	ram	
National Institutes of Health(Children's Ho	spital of Philadelphia)	
U10 CA 095861	08/01/13-07/31/16	\$808
COG Cancer Trial Support Unit		
National Institutes of Health(Children's Ho	spital of Philadelphia)	
	03/01/14-02/28/17	\$9,240
COG AALL1131		
National Institutes of Health(Children's Ho	spital of Philadelphia)	
	01/01/14-12/31/16	\$3,080
COG AALL1121		
Amgen(Children's Hospital of Philadelphia	a)	
	05/01/12-04/30/15	\$9,269
PHILLIPS, C		
- /		
Genetic Model of Cytarabine Sensitivity	in Children with AML	
American Association for Cancer Researc	n	
	07/01/12-06/30/14	\$50,000
PRIVETTE, L		
Cincinnati Interdisciplinary Women's He	alth Research Career Training Grant	
National Institutes of Health(University of C	Cincinnati)	
K12 HD 051953	07/01/12-06/30/14	\$82,385
Defining the Role of the DEK Oncogene i Therapeutic DEK Targeting Strategies	n Breast Cancer Stem Cell Tumorigenici	ty And Pre-Clinical Testing of
Ride Cincinnati Foundation		
	06/01/14-05/31/15	\$40,000

06/01/14-05/31/15

\$30,000

ROMICK-ROSENDALE, L

Environmental Carcinogenesis and	d Mutagenesis		
National Institutes of Health(Universi	ity of Cincinnati)		
T32 ES 007250	09/01/12-06/30/14		\$41,364
WEISS, B			
Children's Oncology Group Chair			
National Institutes of Health(Childrer	n's Hospital of Philadelphia)		
U10 CA 098543	04/13/13-02/28/15		\$11,550
Phase I Study of MEK Inhibitor AZD	6244 in NF1 with Plexiforms		
Children's Tumor Foundation(Childre	en's Hospital of Philadelphia)		
	02/01/12-04/30/15		\$22,952
WELLS, S			
Fanconi Anemia and HPV Transfor	mation		
	00/28/00 08/31/14		¢120 324
Role and Regulation of the Human	DEK Proto-Oncogene		\$100,52 4
National Institutes of Health			
R01 CA 116316	09/05/12-06/30/17		\$163,859
Targeting the Ron-DEK Signaling A	xis in Breast Cancer		
Department of Defense			
W81XWH-12-1-0194	09/01/12-08/31/14		\$125,000
WILLIAMS, J			
ETV2 Role in Tumor-Induced Lymp	hangiogenesis, A Putative Therapeu	tic Target	
St. Baldrick's Foundation			
	07/01/12-06/30/14		\$71,748
		Current Year Direct	\$2,098,344
Industry Contracts			
ADAMS, D			
Pfizer, Inc.			\$120,000
Pierre Fabre Pharmaceuticals			\$5,100
FOULADI, M			
Genentech, Inc			\$11,550
Novartis Pharmaceuticals			\$18,750

GELLER, J

Total	\$2,391,991
Current Year Direct Receipts	\$293,647
NANT	\$5,822
Novartis Pharmaceuticals	\$17,000
Bacterial Robotics, LLC	\$4,004
WEISS, B	
Sarcoma Alliance for Research through Collaboration	\$5,236
WAGNER, L	
Sarcoma Alliance for Research through Collaboration	\$8,500
TURPIN, B	
Seattle Genetics, Inc.	\$39,397
O'BRIEN, M	
Glaxo Smith Kline	\$13,500
Lilly USA, LLC	\$13,650
HUMMEL, T	
Bayer HealthCare Pharmaceuticals, Inc.	\$31,138