

Pediatrics 2017 Annual Report – Division Highlights

Hematology, Oncology and Bone Marrow Transplant

DIVISION DESCRIPTION

The Division of Hematology, Oncology and Bone Marrow Transplant provides state-of-the-art integrated care, utilizing conventional treatments (such as chemotherapy, radiation and surgery), cellular therapies, molecular- and radioisotope-targeted therapies and stem cell transplant, aimed at curing malignancies and treating hematological disorders in children.

Research interests include ways to recognize and destroy cancer cells using immunologic, cellular and molecular biologic pathways, bone marrow transplantation as immunotherapy, CAR T-cell therapy, systemic targeted radiotherapy, cancer survivorship, neuro-oncology and palliative care.

2017 HIGHLIGHTS

- The Midwest Athletes Against Childhood Cancer (MACC) Fund has funded nine separate two-year, \$100,000 grants in the Departments of Pediatrics and Human Oncology:
 - **Christian Capitini, MD:** “Improving Graft-Versus-Leukemia Effects of Ex Vivo Activated NK Cells through JAK/STAT Blockade”
 - **Ken DeSantes, MD:** “Support for Clinical Research Infrastructure”
 - **Ken DeSantes, MD:** “Treatment of Relapsed or Refractory Neuroblastoma with Ex-Vivo Activated and Expanded Haploidentical NK Cells and Hu14.18-IL2”
 - **Jacquelyn Hank, PhD:** “Monitoring of Immune Network Responses in Pediatric Neuroblastoma Patients Treated with Anti-GD2 Immunotherapy”
 - **Inga Hofmann, MD (with Emery Bresnick, PhD):** “Prognostic Markers and Therapeutic Targets in GATA2-Related Myelodysplastic Syndromes and Leukemia”
 - **Mario Otto, MD, PhD:** “Targeted Molecular Radiotherapy to Improve the Outcomes in Children with Malignant Brain Tumors”
 - **Mario Otto, MD, PhD (with Dana Baiu PhD):** “Strategies for Improving Recovery of Immune Function following TCRab-depleted Hematopoietic Stem Cell Transplantation”
 - **Alexander Rakhmilevich, MD, PhD:** “Combining Innate and Adaptive Immune Activation for Treatment of Experimental Neuroblastoma”
 - **Paul Sondel, MD, PhD (with Amy Erbe Gurel, PhD):** “Determining the Influence of KIR/KIR-ligand Genotypes in the Outcome of High-Risk Neuroblastoma Patients Following Anti-GD2 Based Immunotherapy”
- **Inga Hofmann, MD**, was chosen as [the first medical director of the Program for Advanced Cell Therapy \(PACT\) \(link to YIR story on faculty leadership\)](#), a collaboration of the University of Wisconsin School of Medicine and Public Health and UW Carbone Cancer Center.

Dr. Hofmann also received a \$50,000 infrastructure grant from the St. Baldrick’s Foundation to support her work in advanced cellular therapies for pediatric cancer and cancer predisposition syndromes.
- Fellow **Miriam Kim, DO**, received a two-year St. Baldrick's Fellowship Award that, with her mentor **Christian Capitini, MD**, will support her project, "Developing MSC-derived exosomes to enhance HSCT for pediatric leukemia."

- **Neha Patel, MD**, organized and hosted UW Health's first Neurofibromatosis Type 1 (NF1) symposium to help children and families learn more about the disease, meet other NF1 patients and families and learn about resources and support available for NF1 patients.
- **Paul Sondel, MD, PhD**, received the Richard V. Smalley, MD, Memorial Lectureship Award from the Society for Immunotherapy of Cancer (SITC); he was the first pediatric oncologist to receive this recognition.

In addition, Kayla Rasmussen, an undergraduate student mentored by Dr. Sondel, received a 2017-2018 University of Wisconsin Hilldale Undergraduate/Faculty Research Fellowship.

- In 2017, *U.S. News and World Report* ranked American Family Children's Hospital (AFCH) among the [top 50 children's hospitals for pediatric oncology \(https://www.uwhealthkids.org/news-and-events/american-family-childrens-hospital-ranks-among-us-news-world-report-best-hospitals/51058\)](https://www.uwhealthkids.org/news-and-events/american-family-childrens-hospital-ranks-among-us-news-world-report-best-hospitals/51058).
- The AFCH pediatric oncology program was chosen as a member of the newly formed Pediatric Cancer Immunotherapy Trials Network (Pediatric CITN).

In addition, the AFCH pediatric neuro-oncology program joined the Nationwide Children's NEXT Consortium to conduct Head Start 4, a randomized clinical trial to treat very young children with brain tumors.

RECENT PUBLICATIONS

Ascierto PA, Agarwala SS, Ciliberto G, Demaria S, Dummer R, Duong CPM, Ferrone S, Formenti SC, Garbe C, Halaban R, Khleif S, Luke JJ, Mir LM, Overwijk WW, Postow M, Puzanov I, **Sondel P**, Taube JM, Thor Straten P, Stronck DF, Wargo JA, Zarour H, Thurin M. Future perspectives in melanoma research "Melanoma Bridge", Napoli, November 30th-3rd December 2016. *J Transl Med.* 2017 Nov 16;15(1):236. doi: 10.1186/s12967-017-1341-2. PubMed PMID: 29145885; PubMed Central PMCID: PMC5691855.

Baiu DC, Marsh IR, Boruch AE, Shahi A, **Bhattacharya S**, Jeffery JJ, Zhao Q, Hall L, Weichert JP, Bednarz B, **Otto M**. Targeted molecular radiotherapy of pediatric solid tumors using a radioiodinated alkyl-phospholipid ether analog. *J Nucl Med.* 2017 Jul 26. pii: jnumed.117.193748. doi: 10.2967/jnumed.117.193748. [Epub ahead of print] PubMed PMID: 28747518. *

Bouchlaka MN, Hematti P, **Capitini CM**. Therapeutic purposes and risks of ex vivo expanded mesenchymal stem/stromal cells. In: Bolontrade MF, Garcia MG, eds. *Mesenchymal Stromal Cells as Tumor Stromal Modulators*. Cambridge, MA: Elsevier; 2017: 551-88.

Bouchlaka MN, Moffitt AB, Kim J, Kink JA, Bloom DD, Love C, Dave S, Hematti P, **Capitini CM**. Human mesenchymal stem cell-educated macrophages are a distinct high IL-6-producing subset that confer protection in graft-versus-host-disease and radiation injury models. *Biol Blood Marrow Transplant.* 2017 Jun;23(6):897-905. doi: 10.1016/j.bbmt.2017.02.018. Epub 2017 Feb 28. PubMed PMID: 28257800; PubMed Central PMCID: PMC5499382.

Carberry AR, Hanson K, Flannery A, Fischer M, Gehlbach J, **Diamond C**, Wald ER. Diagnostic error in pediatric cancer. *Clin Pediatr (Phila).* 2017 May 1:9922816687325. doi: 10.1177/0009922816687325. [Epub ahead of print] PubMed PMID: 28478722. *

Elsaid MY, Gill KG, Gosain A, Nichol PF, Leys CM, Buehler D, Leith CP, **Patel NJ**. Synchronous presentation of renal cell carcinoma and Hodgkin lymphoma in an adolescent. *J Pediatr Hematol Oncol*. 2017 Oct;39(7):e399-e402. doi: 10.1097/MPH.0000000000000769. PubMed PMID: 28092312.

Erbe AK, Wang W, Carmichael L, Kim K, Mendonça EA, Song Y, Hess D, Reville PK, London WB, Naranjo A, Hank JA, Diccianni MB, Reisfeld RA, Gillies SD, Matthay KK, Cohn SL, Hogarty MD, Maris JM, Park JR, Ozkaynak MF, Gilman AL, Yu AL, **Sondel PM**. Neuroblastoma patients' KIR and KIR-ligand genotypes influence clinical outcome for Dinutuximab-based immunotherapy: A report from the Children's Oncology Group. *Clin Cancer Res*. 2018 Jan 1;24(1):189-196. doi: 10.1158/1078-0432.CCR-17-1767. Epub 2017 Oct 2. PubMed PMID: 28972044; PubMed Central PMCID: PMC5754221.

Erbe AK, Wang W, Goldberg J, Gallenberger M, Kim K, Carmichael L, Hess D, Mendonca EA, Song Y, Hank JA, Cheng SC, Signoretti S, Atkins M, Carlson A, Mier JW, Panka DJ, McDermott DF, **Sondel PM**. FCGR polymorphisms influence response to IL2 in metastatic renal cell carcinoma. *Clin Cancer Res*. 2017 May 1;23(9):2159-2168. doi: 10.1158/1078-0432.CCR-16-1874. Epub 2016 Oct 14. PubMed PMID: 27742794; PubMed Central PMCID: PMC5392177. **

Erbe AK, Wang W, Reville PK, Carmichael L, Kim K, Mendonca EA, Song Y, Hank JA, London WB, Naranjo A, Hong F, Hogarty MD, Maris JM, Park JR, Ozkaynak MF, Miller JS, Gilman AL, Kahl B, Yu AL, **Sondel PM**. HLA-Bw4-I-80 isoform differentially influences clinical outcome as compared to HLA-Bw4-T-80 and HLA-A-Bw4 isoforms in Rituximab or Dinutuximab-based cancer immunotherapy. *Front Immunol*. 2017 Jun 12;8:675. doi: 10.3389/fimmu.2017.00675. eCollection 2017. PubMed PMID: 28659916; PubMed Central PMCID: PMC5466980.

Federico SM, McCarville MB, Shulkin BL, **Sondel PM**, Hank JA, Hutson P, Meagher M, Shafer A, Ng CY, Leung W, Janssen WE, Wu J, Mao S, Brennan RC, Santana VM, Pappo AS, Furman WL. A pilot trial of humanized anti-GD2 monoclonal antibody (hu14.18K322A) with chemotherapy and natural killer cells in children with recurrent/refractory neuroblastoma. *Clin Cancer Res*. 2017 Nov 1;23(21):6441-6449. doi: 10.1158/1078-0432.CCR-17-0379. Epub 2017 Sep 22. PubMed PMID: 28939747.

Ha B, O'Sullivan DL, **Diamond CA**, Plumb AJ, Sleeth JS, Greer FR, Kling PJ. Improving rates of screening for anemia in infancy. *Clin Pediatr (Phila)*. 2017 Nov 1;9922817744608. doi: 10.1177/0009922817744608. [Epub ahead of print] PubMed PMID: 29183146. *

Heimall J, Logan BR, Cowan MJ, Notarangelo LD, Griffith LM, Puck JM, Kohn DB, Pulsipher MA, Parikh S, Martinez C, Kapoor N, O'Reilly R, Boyer M, Pai SY, Goldman F, Burroughs L, Chandra S, Kletzel M, Thakar M, Connelly J, Cuvelier G, Davila Saldana BJ, Shereck E, Knutsen A, Sullivan KE, **DeSantes K**, Gillio A, Haddad E, Petrovic A, Quigg T, Smith AR, Stenger E, Yin Z, Shearer WT, Fleisher T, Buckley RH, Dvorak CC. Immune reconstitution and survival of 100 SCID patients post-hematopoietic cell transplant: a PIDTC natural history study. *Blood*. 2017 Dec 21;130(25):2718-2727. doi: 10.1182/blood-2017-05-781849. Epub 2017 Oct 11. PubMed PMID: 29021228; PubMed Central PMCID: PMC5746165.

Masucci GV, Cesano A, Eggermont A, Fox BA, Wang E, Marincola FM, Ciliberto G, Dobbin K, Puzanov I, Taube J, Wargo J, Butterfield LH, Villabona L, Thurin M, Postow MA, **Sondel PM**, Demaria S, Agarwala S, Ascierto PA. The need for a network to establish and validate predictive biomarkers in cancer immunotherapy. *J Transl Med*. 2017 Nov 3;15(1):223. doi: 10.1186/s12967-017-1325-2. PubMed PMID: 29100546; PubMed Central PMCID: PMC5670700.

McCabe KE, Pollock AJ, Rehm JL, **DeSantes KB**. Curative potential of allogeneic hematopoietic stem cell transplant in type 1 diabetes. *Pediatr Diabetes*. 2017 Dec;18(8):832-834. doi: 10.1111/pedi.12430. Epub 2016 Aug 30. PubMed PMID: 27572817. **

Miller JS, Morishima C, McNeel DG, Patel MR, Kohrt HE, Thompson JA, **Sondel PM**, Wakelee HA, Disis ML, Kaiser JC, Cheever MA, Streicher H, Creekmore SP, Waldmann TA, Conlon KC. A first-in-human phase 1 study of subcutaneous outpatient recombinant human IL-15 (rhIL-15) in adults with advanced solid tumors. *Clin Cancer Res*. 2017 Dec 4. pii: clincanres.2451.2017. doi: 10.1158/1078-0432.CCR-17-2451. [Epub ahead of print] PubMed PMID: 29203590. *

Mody R, Naranjo A, Van Ryn C, Yu AL, London WB, Shulkin BL, Parisi MT, Servaes SE, Diccianni MB, **Sondel PM**, Bender JG, Maris JM, Park JR, Bagatell R. Irinotecan-temozolomide with temsirolimus or dinutuximab in children with refractory or relapsed neuroblastoma (COG ANBL1221): an open-label, randomised, phase 2 trial. *Lancet Oncol*. 2017 Jul;18(7):946-957. doi: 10.1016/S1470-2045(17)30355-8. Epub 2017 May 23. PubMed PMID: 28549783; PubMed Central PMCID: PMC5527694.

Rakhmievich AL, Felder M, Lever L, Slowinski J, Rasmussen K, Hoefges A, Van De Voort TJ, Loibner H, Korman AJ, Gillies SD, **Sondel PM**. Effective combination of innate and adaptive immunotherapeutic approaches in a mouse melanoma model. *J Immunol*. 2017 Feb 15;198(4):1575-1584. doi: 10.4049/jimmunol.1601255. Epub 2017 Jan 6. PubMed PMID: 28062694; PubMed Central PMCID: PMC5296279.

Wang W, Erbe AK, **DeSantes KB**, **Sondel PM**. Donor selection for ex vivo-expanded natural killer cells as adoptive cancer immunotherapy. *Future Oncol*. 2017 May;13(12):1043-1047. doi: 10.2217/fon-2017-0039. Epub 2017 May 11. PubMed PMID: 28492088.

Wolfe AD, **Capitini CM**, Salamat SM, **DeSantes K**, Bradley KA, Kennedy T, Dehner LP, Patel NJ. Neck rhabdoid tumors: Clinical features and consideration of autologous stem cell transplant. *J Pediatr Hematol Oncol*. 2017 Apr 3. doi: 10.1097/MPH.0000000000000829. [Epub ahead of print] PubMed PMID: 28375943. *

**ePub only; no print citation available when report was compiled*

*** Publication had previously appeared in 2016 report as an ePub*

GRANT SUPPORT

| Faculty/Role | Funding Agency | Title |
|-------------------------------------|---|---|
| Capitini, Christian Matthew (PI) | American Association of Immunologists | Travel award |
| Capitini, Christian Matthew (PI) | DHHS, PHS, National Institutes of Health | Inhibiting STAT1 as a novel graft-versus-host/graft-versus-leukemia therapy (K08) |
| Capitini, Christian Matthew (PI) | Hyundai Hope On Wheels | Anti-GD2 immunocytokine and NK cell infusions for neuroblastoma |
| Capitini, Christian Matthew (PI) | Midwest Athletes Against Childhood Cancer | Exploitation of the STAT1-BCL2 axis to dissect GVL from GVHD |
| Capitini, Christian Matthew (PI) | Novartis Pharmaceuticals KK | CTL019B2202 - A Phase II, single arm, multicenter trial to determine the efficacy and safety of CTL019 in pediatric patients with relapsed and refractory B-cell acute lymphoblastic leukemia |

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| Capitini, Christian Matthew (PI) | Novartis Pharmaceuticals KK | Long term follow-up of patients exposed to lentiviral-based CD19 directed CART cell therapy |
| Capitini, Christian Matthew (PI) | Novartis Pharmaceuticals KK | Phase II study of redirected autologous T cells engineered to contain anti-CD19 attached to TCR and 4-1BB signaling domains in patients with chemotherapy resistant or refractory acute lymphoblastic leukemia |
| Capitini, Christian Matthew (PI) | St Baldricks Foundation | Developing MSC-derived exosomes to enhance HSCT for pediatric leukemia |
| Capitini, Christian Matthew (PI) | Wisconsin Alumni Research Foundation | Travel award |
| Capitini, Christian Matthew (PI) | Wisconsin Alumni Research Foundation | Enhancing the graft-versus-tumor effect against neuroblastoma |
| Capitini, Christian Matthew (co-MPI) with Saha, Krishanu and Beebe, David (co-MPIs) | National Science Foundation | EAGER BIOMANUFACTURING:A Microscale Testbed to Assay and Manufacture CAR T-Cell Immunotherapies |
| Capitini, Christian Matthew (co-I) with Slukvin, Igor (PI) | NIH/Office of the Director | CCR5-mutant monkey model to facilitate the development of novel stem cell-based therapies for AIDS |
| Desantes, Kenneth B (PI) | Children's Hospital of Los Angeles | PIDTC protocol #6901: A prospective natural history study of diagnosis, treatment and outcomes for children with SCID disorders |
| Desantes, Kenneth B (PI) | Children's Hospital of Los Angeles | PIDTC protocol #6902: A retrospective and cross-sectional analysis of patients treated for SCID |
| Desantes, Kenneth B (PI) | Children's Hospital of Los Angeles | PIDTC protocol #6903: Analysis of patients treated for chronic granulomatous disease |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | A phase 2 multi-center, historically-controlled study of dasatinib added to standard chemotherapy in pediatric patients with newly diagnosed Philadelphia chromosome positive acute lymphoblastic leukemia |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | A phase III randomized trial for patients with de novo AML using bortezomib and sorafenib for patients with high allelic ratio FLT2/ITD - AAML1031 |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | A randomized phase III study of brentuximab vedotin for newly diagnosed classical hodgkin lymphoma (cHL) in children and adolescents (AHOD1331) |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | AALL1131 - A phase III randomized trial for newly diagnosed high risk B-precursor acute lymphoblastic leukemia testing clofarabine in the very high risk stratum |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | AAML1031: A phase III randomized trial for patients with de novo AML using bortezomib and sorafenib for patients with high allelic ratio FLT3/ITD |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | ANHL1131 - Intergroup trial for children or adolescents with B-Cell NHL or B-AL: Evaluation of rituximab efficacy and safety in high risk patients |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | APEC14B1 - Everychild protocol: a registry, eligibility screening, biology and outcome study |

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| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | COG CTSU phase II supplement |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | COG NCORP research base, per case reimbursement |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | COG workload intensity |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | COG/NCTN per case reimbursement |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | Risk-stratified randomized phase III testing of blinatumomab in first relapse of childhood B-lymphoblastic leukemia (B-ALL). AALL1331 |
| Desantes, Kenneth B (PI) | Children's Hospital of Philadelphia | St. Baldrick's supplemental per case reimbursement (COG) |
| Desantes, Kenneth B (PI) | Macrogenics | A phase I, open-label, dose escalation study of MGA271 in pediatric patients with B7-H3-expressing relapsed or refractory solid tumors |
| Desantes, Kenneth B (PI) | Mesoblast | A single-arm, prospective study of remestemcel-L, ex-vivo cultured adult human mesenchymal stromal cells, for the treatment of pediatric patients who have failed to respond to steroid treatment for acute GVHD |
| Desantes, Kenneth B (PI) | Midwest Athletes Against Childhood Cancer | Reduced intensity haploidentical transplantation with NK cell infusions for pediatric acute leukemia and high risk solid tumors |
| Desantes, Kenneth B (PI) with Sondel, Paul M (co-I) | Midwest Athletes Against Childhood Cancer | Support for research data management |
| Desantes, Kenneth B (PI) with Sondel, Paul M (collaborator) | Midwest Athletes Against Childhood Cancer | Treatment of relapsed or refractory neuroblastoma with ex-vivo activated and expanded haploidentical NK cells and continuous infusion Hu14.18-IL2 |
| Desantes, Kenneth B (PI) | Solving Kids Cancer | Phase I trial of ex-vivo expanded haploidentical NK cells and Hu14.18-IL2 for children with relapsed/refractory neuroblastoma |
| Hematti, Peiman (PI) | Novartis Pharmaceuticals KK | A multicenter study of apheresis collection of peripheral blood mononuclear cells (PBMC) in patients with CD19 expressing malignancies who could be eligible for a CTL019 |
| Hofmann, Inga (PI) | EvansMDS | Prognostic markers and therapeutic targets in GATA2-related myelodysplastic syndromes and leukemia |
| Hofmann, Inga (PI) | Midwest Athletes Against Childhood Cancer | Prognostic markers and therapeutic targets in GATA2-related myelodysplastic syndromes and leukemia |
| Otto, Mario (PI) | American Association of Immunologists | A novel phospholipid ether analog to combine targeted molecular radiotherapy and immunotherapy in pediatric solid tumors |
| Otto, Mario (PI) | Cannonball Kids Cancer Foundation | TCR- α/β + and CD19+ depleted KIR/KIR ligand-mismatched haploidentical hematopoietic stem cell transplant and Zoledronate for pediatric relapsed/refractory hematologic malignancies and high risk solid tumors |

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| Otto, Mario (PI) | DHHS, PHS, National Institutes Of Health | A cancer-targeted phospholipid ether analog for molecular radiotherapy of pediatric solid tumors |
| Otto, Mario (PI) | DHHS, PHS, National Institutes of Health | TCR- α/β + and CD19+ depleted KIR/KIR ligand-mismatched haploidentical hematopoietic stem cell transplant and Zoledronate for pediatric relapsed/refractory hematologic malignancies and high risk solid tumors |
| Otto, Mario (PI) | Hyundai Hope On Wheels | A novel phospholipid ether analog to combine targeted molecular radiotherapy and immunotherapy in pediatric solid tumors |
| Otto, Mario (PI) | Midwest Athletes Against Childhood Cancer | CLR1404 – A tumor-selective alkyl phospholipid analog for the treatment of pediatric solid malignancies |
| Otto, Mario (PI) | Midwest Athletes Against Childhood Cancer | Effect of zoledronate on engraftment and T-cell development after TCR $\alpha\beta$ /CD19-depleted hematopoietic stem cell transplantation |
| Otto, Mario (PI) | Wisconsin Alumni Research Foundation | Travel award |
| Patel, Neha (PI) | Ann & Robert H Lurie Childrens Hospital | LGG-14C03: A phase III study comparing two carboplatin containing regimens for children and young adults with previously untreated low grade glioma |
| Patel, Neha (PI) | Boehringer Ingelheim Ltd | Phase I open label, dose escalation trial to determine the MTD, safety, PK and efficacy of afatinib monotherapy in children aged 2 years to <18 years with recurrent/refractory neuroectodermal tumours, rhabdomyosarcoma and/or other solid tumours |
| Patel, Neha (PI) | Multiple Donors | Neurocutaneous disorders - NCD |
| Patel, Neha (PI) | Nationwide Children's Hospital | The "head start 4" protocol: Newly diagnosed children (less than 10 years old) with medulloblastoma and other central nervous system embryonal tumors, phase IV |
| Puccetti, Diane M (co-PI with Ikonomidou, Hrissanthi) | DHHS, PHS, National Institutes of Health | Methods to Study Chemotherapy-Related Neurotoxicity in Children |
| Sondel, Paul M (PI) | Alex's Lemonade Stand Foundation | Flow hood |
| Sondel, Paul M (PI) | Alex's Lemonade Stand Foundation | Identifying how pre-existing anti-therapeutic antibodies are associated with better outcome in a clinical trial of ADCC-inducing anti-GD2 mAb |
| Sondel, Paul M (PI) with DeSantes, Kenneth B (investigator) and Capitini, Christian M and Otto, Mario (young investigators) | AACR/St. Baldrick's/Stand Up 2 Cancer Foundations | Immunogenomics to create new therapies for high-risk childhood cancers ("dream team") |

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| Sondel, Paul M (PI) | DHHS, PHS, National Institutes of Health | Enhancing antibody-directed innate immunity to improve cancer outcome |
| Sondel, Paul M (PI) | Hughes (Howard) Medical Institute | Description and characterization of endogenous antibodies found in some cancer patients that are capable of recognizing various monoclonal antibodies used in cancer immunotherapy |
| Sondel, Paul M (PI) | Midwest Athletes Against Childhood Cancer | Enhancing immunocytokine efficacy in neuroblastoma: Synergy with radiation therapy and development of a 2nd generation immunocytokines |
| Sondel, Paul M (PI) | St Baldricks Foundation | Finding the target of beneficial pre-existing anti- therapeutic antibodies |
| Sondel, Paul M (PI) | St Jude Medical | A phase I trial of the humanized anti-GD2 antibody (HU14.18K322A) in children and adolescents with neuroblastoma or melanoma |
| Sondel, Paul M (PI) | St Jude Medical | Neuroblastoma protocol 2012: Therapy for children with advanced stage high-risk neuroblastoma |
| Sondel, Paul M (PI) | WISCONA | Murine cancer models for testing in situ vaccination strategies |
| Sondel, Paul M (PI) with Otto, Mario (co-I) | Wisconsin Alumni Research Foundation | Combining radiotherapeutic with antitumor antibody and IL2 to create a potent in situ cancer vaccine |
| Sondel, Paul M (Chair, Scientific Review Committee) and Hoover-Regan, Margo (Research Subject Advocate [RSA] for the Clinical Research Unit) with Drezner, Marc (PI) | NIH/NCATS | UW-ICTR |
| Sondel, Paul M (co-I) with Ponik, Suzanne (PI) | NIH/NCI & Morgridge Institute for Research, Inc. | Quantitative in Vivo Optical Imaging of Tumor Heterogeneity |
| Sondel, Paul M (co-I) with Asimakopoulos, Fotios (PI) | American Cancer Society, Inc | The Role of TPL2 in Regulating Macrophage-Myeloma Tumor Cell Interactions |