OMB No. 3145-0279 (Expiration Date 10/31/2026)

NIH BIOGRAPHICAL SKETCH COMMON FORM

Name: Grippo, Paul

Persistent Identifier (PID) of the Senior/Key Person: https://orcid.org/0000-0002-6374-1282

Position Title: Associate Professor

Organization and Location: University of Illinois Chicago, Chicago, Illinois, United States

PROFESSIONAL PREPARATION

INSTITUTION AND LOCATION	DEGREE	Start Date	Completion Date	FIELD OF STUDY
Medical College of Wisconsin, Milwaukee, Illinois, United States	Not applicable	08/2000	06/2002	post-doctoral fellowship training - pancreatic tumor immunology
University of Wisconsin, Madison, Wisconsin, United States	DOCTOR OF PHILOSOPHY	08/1994	09/2000	graduate student - mouse models of pancreatic cancer
University of Wisconsin, Madison, Wisconsin, United States	MASTER OF SCIENCE	07/1993	03/1995	graduate student - evaluation of SCD1 during adipogenesis
Loyola University, Maywood, Illinois, United States	Not applicable	08/1989	05/1990	graduate student - electrophysiology of brain neurons
Oral Roberts University, Tulsa, Oklahoma, United States	BACHELOR OF SCIENCE	08/1984	05/1988	undergraduate - no defined field of study

Appointments and Positions

2014 - present	Associate Professor, University of Illinois Chicago, Chicago, Illinois, United States
2026 - present	Editorial Board Member, Nutrients Journal, Basel, Not Applicable, N/A, Switzerland
2025 - present	Board Member, Cancer Biology Training Consortium, Hanover, New Mexico, United States
2024 - present	Editorial Board Member - Handling Editor, Frontiers in Oncology, Lausanne, Not Applicable, N/A, Switzerland
2022 - 2022	External Reviewer, Career Development Awards , Pancreatic Cancer Action Network, El Segundo, California, United States
2022 - 2022	External Reviewer, PDAC Stromal Reprogramming Consortium (PSRC) , National Institutes of Health/National Cancer Institute, Bethesda, Maryland, United States
2021 - 2021	External Reviewer, Biotherapeutics Development (CBD) SBIR/STTR grants, National Institutes of Health/National Cancer Institute, Bethesda, Maryland, United States
2020 - 2020	External Reviewer, basic sciences for cancer research, French National Cancer Institute, Boulogne-Billancourt, Not Applicable, N/A, France
2019 - present	Lecturer/Course Block Leader, Graduate Education in Medical Sciences, University of Illinois Chicago, Chicago, Illinois, United States
2018 - 2018	Ad Hoc Reviewer, DoD for Pancreatic Research, Department of Defense, Washington DC, District of Columbia, United States
2017 - 2022	Associate Director, UI Cancer Center Cancer Research Training and Edcuation Core, University of Illinois Chicago, Chicago, Illinois, United States
2016 - 2018	External Reviewer, Pancreatic Cancer UK Innovation Fund, London, Not Applicable, N/A, United Kingdom
2016 - 2017	External Reviewer, Swiss National Science Foundation for Sinergia, Bern, Not Applicable, N/A, Switzerland
2015 - 2024	Associate Head, Scholarly Activities Council, Department of Medicine, University of Illinois Chicago, Chicago, Illinois, United States
2015 - 2015	External Reviewer, National Health & Medicine Research Council, Canberra, Not Applicable, N/A, Australia

2014 - present	External Reviewer – 10 different study sections (7 special emphasis panels) , National Institutes of Health/National Cancer Institute, Bethesda, Maryland, United States
2014 - present	Associate Professor, University of Illinois Chicago, Chicago, Illinois, United States
2014 - 2018	Member, American Gastroenterological Association (AGA), Bethesda, Maryland, United States
2014 - 2014	External Reviewer - Postdoctoral Fellowship, Wellcome Trust Fund, London, Not Applicable, N/A, United Kingdom
2013 - present	Ad Hoc reviewer - Pennsylvania & Florida Depts of Health, Oak Ridge Associated Universities, Oak Ridge, Tennessee, United States
2013 - 2013	External Reviewer, Research Councils of the United Kingdom, Swindol, Not Applicable, N/A, United Kingdom
2012 - 2012	External Reviewer, Agence Nationale De La Recherche, Paris, Not Applicable, N/A, France
2010 - 2015	External reviewer, Italian Ministry of Health, Rome, Not Applicable, N/A, Italy
2004 - present	Member, American Pancreatic Association (APA), Prairie Village, Kansas, United States
2004 - 2014	Assistant Research Professor, Northwestern University, Chicago, Illinois, United States
2002 - 2004	Research Associate, Northwestern University, Chicago, Illinois, United States
2000 - 2002	Post-Doctoral Fellow, Medical College of Wisconsin, Milwaukee, Wisconsin, United States
1999 - present	Member, American Association for Cancer Research (AACR), Philadelphia, Pennsylvania, United States
1995 - 2000	Graduate Student, University of Wisconsin, Madison, Wisconsin, United States

Products

Products Closely Related to the Proposed Project

1. Torres C, Mancinelli G, Cordoba-Chacon J, Viswakarma N, Castellanos K, Grimaldo S, Kumar S, Principe D, Dorman MJ, McKinney R, Hirsch E, Dawson D, Munshi HG, Rana A, Grippo PJ. p110γ deficiency protects against pancreatic carcinogenesis yet predisposes to diet-induced hepatotoxicity. Proc Natl Acad Sci U S A. 2019 Jul 16;116(29):14724-14733. PubMed Central PMCID: PMC6642408.
2. Principe DR, Overgaard NH, Park AJ, Diaz AM, Torres C, McKinney R, Dorman MJ, Castellanos K, Schwind R, Dawson DW, Rana A, Maker A, Munshi HG, Rund LA, Grippo PJ, Schook LB. KRAS(G12D) and TP53(R167H) Cooperate to Induce Pancreatic Ductal Adenocarcinoma in Sus scrofa Pigs. Sci Rep. 2018 Aug 22;8(1):12548. PubMed Central PMCID: PMC6105629.
3. Gong J, Belinsky G, Sagheer U, Zhang X, Grippo PJ, Chung C. Pigment Epithelium-derived Factor (PEDF) Blocks Wnt3a Protein-induced Autophagy in Pancreatic Intraepithelial Neoplasms. J Biol Chem. 2016 Oct 14;291(42):22074-22085. PubMed Central PMCID: PMC5063990.
4. Saloman JL, Albers KM, Cruz-Monserrate Z, Davis BM, Edderkaoui M, Eibl G, Epouhe AY, Gedeon JY, Gorelick FS, Grippo PJ, Groblewski GE, Husain SZ, Lai KKY, Pandol SJ, Uc A, Wen L, Whitcomb DC. Animal Models: Challenges and Opportunities to Determine Optimal Experimental Models of Pancreatitis and Pancreatic Cancer. Pancreas. 2019 Jul;48(6):759-779. PubMed Central PMCID: PMC6581211.
5. Bioimpedance based biomarker for the detection of precancerous and cancerous lesions of the pancreas: feasibility animal study. Translational medicine communications. . mid: NIHMS2052696; NIHMSID: NIHMS2052696

Other Significant Products Highlighting Contributions to Science

1. Kim YM, Sanborn MA, Vijeth S, Gajwani P, Wang X, Jung D, Valyi-Nagy T, Chakraborty S, Mancinelli G, Toth PT, Phillips EH, Grippo P, Salahudeen AA, Park J, Yeon SY, Ananthanarayanan V, Jiang Y, Lee SS, Valyi-Nagy K, Rehman J. Skeletal muscle endothelial dysfunction through the activin A-PGC1α axis drives progression of cancer cachexia. Nat Cancer. 2025 Aug;6(8):1350-1369. PubMed Central PMCID: PMC12254930.
2. Torres C, Mancinelli G, Chen JE, Cordoba-Chacon J, Pins D, Saeed S, McKinney R, Castellanos K, Orsi G, Singhal M, Patel A, Acebedo J, Coleman A, Heneche J, Yalagala PCR, Subbaiah PV, Leal C, Grimaldo S, Ortuno FM, Bishehsari F, Grippo PJ. Cell Membrane Fatty Acids and PIPs Modulate the Etiology of Pancreatic Cancer by Regulating AKT. Nutrients. 2024 Dec 31;17(1) PubMed Central PMCID: PMC11722924.
3. Karim M, Hasan MM, Kim SH, Azam Z, Wahab R, Islam T, Alam F, Kim YJ, Bae DJ, Roy S, Grippo P, Bishehsari F, Choi JU, Al-Hilal TA. Stromal fibrin shapes immune infiltration landscape of pancreatic ductal adenocarcinoma. Biomaterials. 2025 Sep;320:123280. PubMed Central PMCID: PMC13159430.
4. Mancinelli G, Torres C, Krett N, Bauer J, Castellanos K, McKinney R, Dawson D, Guzman G, Hwang R, Grimaldo S, Grippo P, Jung B. Role of stromal activin A in human pancreatic cancer and metastasis in mice. Sci Rep. 2021 Apr 12;11(1):7986. PubMed Central PMCID: PMC8042028.
5. Wiley MB, Bauer J, Mehrotra K, Zessner-Spitzenberg J, Kolics Z, Cheng W, Castellanos K, Nash MG, Gui X, Kone L, Maker

AV, Qiao G, Reddi D, Church DN, Kerr RS, Kerr DJ, Grippo PJ, Jung B. Non-Canonical Activin A Signaling Stimulates Context-Dependent and Cellular-Specific Outcomes in CRC to Promote Tumor Cell Migration and Immune Tolerance. Cancers (Basel). 2023 May 31;15(11) PubMed Central PMCID: PMC10252122.

Certification:

I certify that the information provided is current, accurate, and complete. This includes, but is not limited to, information related to current, pending, and other support (both foreign and domestic) as defined in 42 U.S.C. § 6605.

In accordance with Section 10632 of the CHIPS and Science Act of 2022 (42 U.S.C. § 19232), each individual identified as a senior/key person must certify that they are not a party to a malign foreign talent recruitment program.

Research Security Training Requirement for Federal Award Personnel: In accordance with Section 10634 of the CHIPS and Science Act of 2022 (42 U.S.C. § 19234), each individual identified as a senior/key person must certify that they have completed the requisite research security training that meets the requirements specified in Item 2 of Important Notice No. 149 within 12 months prior to proposal submission.

Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§287, 1001, 1031 and 31 U.S.C. §§3729-3733 and 3802.

Certified by Grippo, Paul in SciENcv on 2026-08-19 00:23:52

NIH BIOGRAPHICAL SKETCH SUPPLEMENT

Name: Grippo, Paul

Persistent Identifier (PID) of the Senior/Key Person: https://orcid.org/0000-0002-6374-1282

Position Title: Associate Professor

Organization and Location: University of Illinois Chicago, Chicago, Illinois, United States

Personal Statement

I am an Associate Professor of Medicine at the University of Illinois Chicago. I have published nearly 80 reports, been awarded several extramural grants, and mentored over 120 trainees including 40 high school and 30 undergraduate students, 6 graduate students and post-docs, 4 medical students, 12 surgical residents, 3 medical residents, 5 GI fellows, and 2 visiting professors. All of these trainees were active in a rigorous research-intensive projects resulting in many submitted abstracts to intramural symposia and national conferences. Also. I have directly encountered over 75 high school students in our researcHStart and CHESS summer programs and 100 undergraduates. I previously served 5 years as Associate Director for the University of Illinois Cancer Center's Cancer Research Training and Education Core (UICC CRTEC). I am currently the UICC CRTEC Program Lead for early pipeline initiatives, particularly those for high school, undergraduate, graduate, and medical student programs during the summer. This includes interaction with many colleagues at other colleges and universities to best advance biomedical science to the next generationat. I am an active Board Member of the nationally-recognized Cancer Biology Training Consortium (CABTRAC), having served as a co-MPI on a NIGMS T34 Bridges to the Baccalaureate (B2B) Program and site co-lead for research education iniatives in the NCI U54 ChicagoCHEC and the NCI U01 GUIDE.

My laboratory research focuses primarily on the design and utility of animal models of cancer, employing them to better understand disease progression and the underlying molecular and cellular mechanisms of these events. I was one of the first to target mutant KRAS to mouse pancreas, demonstrating that human KRAS expression in acinar cells results in acinar-to-ductal metaplasia together with pre-invasive lesions. My current emphasis is on identifying defects in signal transduction pathways in GI cancers employing mouse models of mutant KRAS-induced pancreatic neoplasia and APC loss-induced colon polyps amid high fat diets and social stress (relevant to that observed in our patient population). An awarded foundation grant supports exploring an earlier detection modality in mice and in a human clinical trial for chronic pancreatitis patients, where fine needle pancreas biposies are being assessed for the presence of PanIN disease, the primary driver of pancreatic cancer. We have demonstrated that this technology (Cole Relaxation Frequency or CRF) can consistently stratify wild type mice from mice with pancreatic cancer and have expanded this initiative to support preliminary data where CRF values for PanIN disease are between normal and cancer. In collaboration with other investigators, the goal is to develop an AI-generated algorithm with conventional (CAE, CA19-9, CA-125) and novel biomarkers in serum and saliva. This work is ongoing.

My expertise in mouse models of pancreatic neoplasia and cancer provides a robust in vivo platform for testing these approaches to establish its specificity and sensitivity in detecting primarily PanIN3, the lesion type that can readily advance to pancreatic cancer. As a UIC GI Division faculty, my work is positioning in a translational environment for collection of patient blood, saliva, and pancreas (FNB) for ex vivo evaluation in preparation for an endoscopic CRF device for live measures during upper GI pancreas assessment. I can provide this support for this application.

Honors

2022 - 2022	Invited Speaker, Animal Models for Cancer Interception and Precision Prevention, NIH/NCI
2022 - 2022	Invited Speaker, Swine Biomedical Research Conference
2017 - 2017	Moderator, American Pancreatic Association (APA) Annual Meeting
2015 - 2015	Moderator, American Pancreatic Association (APA), Annual Meeting
2014 - 2014	Moderator, Digestive Disease Week - Obesity, Dietary Fat and Pancreatic Diseases Translational Symposium
2012 - 2012	Co-Chair, Mouse Models of Human Cancer Minisymposium, American Association for Cancer Research (AACR), Annual Meeting
2009 - 2014	Member, Northwestern University, Institutional Animal Use and Care Committee
2008 - 2008	Moderator, American Pancreatic Association (APA), Annual Meeting

2007 - 2009	Nancy Riordan Career Development Award, Pancreatic Cancer Action Network/American Association for Cancer Research
2004 - 2005	Hirshberg Award for Best Abstract in Pancreatic Cancer, American Pancreatic Association (APA), Annual Meetings
2002 - 2002	Research Fellowship Award, Michael Rolfe Research Foundation

Contributions to Science

1. Targeting Human Mutant Kras in Mice. My earliest work in the field of pancreatic cancer was focused on engineering and generating mouse models of this disease, which began with my formal training at the University of Wisconsin under the mentorship of Dr. Eric Sandgren, who did his training in the laboratory of Dr. Ralph Brinster, a pioneer in the field of genetically engineered mouse models. We were one of the first laboratories to successfully target mutant Kras to the pancreas, and the only group to use a human gene construct, thus developing a unique model the develops pancreatic neoplasia (cystic lesions) from a human mutant Kras. Dr. Michael Demeure provided additional insight and mentoring. With this focus, we continue to employ inducible mouse models, including acinar targeting of mutant Kras via the TET off system. These EL-tTA/TRE-Kras mice develop acinar-ductal metaplasia (ADM) and can revert upon Doxycycline administration. The following publications demonstrate this work, both in a primary capacity as a first author and in a supporting role.

2. Impact of Polyunsaturated Fatty Acids on Pancreatic Neoplasia. I began to employ mutant Kras mouse models, beginning with the one originally developed in Dr. Eric Sandgren's laboratory, the EL-Kras mouse. It recapitulated many aspects of early human pancreatic neoplasia driving events from a human mutated Kras gene. Under the guidance of Drs. Richard Bell and Thomas Adrian at Northwestern University, our initial goal was to study epigenetic events overlaid on pancreatic neoplasia generated from a genetic event, particularly focused on diets enriched with omega-3 and omega-6 fatty acids and their role in augmenting mutant Kras-induced pancreatic metaplastic and neoplastic lesions. We have demonstrated that omega-3 fatty acids reduce the incidence, frequency, and severity of developing precancerous lesions in mouse pancreas which are promoted in the setting of omega-6 fatty acids. There was a clear correlation of increased omega-3 fatty acids with decreased pAKT and PIP3 and increased PIP2 and conversely demonstrated in the setting of omega-6 fatty acids. A possible mechanism of action may be the insertion of these PUFAs in the sn2 position of PIP2.

3. TGFβ/activin Signals alter Pancreatic Neoplasia and Cancer. Having a strong in vivo platform for mutant Kras-induced pancreatic neoplasia, it was rather straight-forward to assess the combination of genetic events in the same animal using these models. Beginning at Northwestern University (in collaboration with Drs. Boris Pasche and Barbara Jung) and continuing on at the University of Illinois Chicago, my research team has expanded our investigation into the role of TGFβ and activin in pancreatic cancer. Global haploinsufficiency of TGFBR1 in combination with mutant Kras mice led to dramatically reduced neoplastic development, which was contrary to previously published work in mice with pancreas-specific loss of TGFBR2 or SMAD4. We discovered pro-tumorigenic effects of the TGFβ family signals in the tumor microenvironment, including both in the stromal and hematopoietic cell compartments. These effects are dramatically different in the colon.

4. TGFβ and Activin in Colon Polyp Development. A more recent focus has been forged building and employing mouse models that more faithfully recapitulate human colon polyps and cancer to improve understanding of cancer biology and generate a platform for screening new and existing therapeutic compounds. In collaborations with Dr. Barbara Jung, we have begun to investigate the role of TGFβ and activin signals in APC-driven colon polyps as we engineer a model of metastatic colon cancer in mice. The use of the colon polyp model in a diet format as proposed in this application combines my modeling and diet-based expertise to address issues related to disparaging communities in the UIC catchment while exploring the role of fat and violence in colon carcinogenesis.

5. Application of Mouse Models of Pancreatic Cancer. As we pursue these projects, we have extended our research efforts to provide assistance to a number of groups at various institutions. The majority of this work has been providing these valuable mouse models of pancreatic neoplasia and cancer to our collaborators and assisting with management, experimental design, tissue collection, data assimilation, and publication. After a robust collaborative effort with Drs. HG Munshi and David Bentrem at Northwestern University, our team has demonstrated the use of mouse models of pancreatic cancer to help evaluate microRNAs in pancreatic duct formation, irons effect on EMT, tissue stiffness recording using a novel pen device, and stromal fibrin impacting the immune landscape in the pancreas.

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