CURRICULUM VITAE

Peter Kuhn, Ph.D.
Dean's Professor of Biological Sciences
Professor of Medicine
Professor of Urology
Professor of Biomedical Engineering
Professor of Aerospace and Mechanical Engineering
Director, USC Michelson Convergent Science Institute in Cancer
University of Southern California (USC)

Personal Statement

I am a scientist and educator with a career long commitment in personalized medicine and individualized cancer patient care with a focus on the redesign of cancer care that eliminates uncertainty in treatment choices and outcomes. Diagnostic products from science and technology developed by my research team became available for prostate cancer care in June 2017 and breast cancer care in 2022. My strategy is to advance our understanding of how cancer spreads through the body and evolves over time both naturally and under treatment pressure. With this insight, my focus is to improve the overall human condition for those affected by cancer by establishing a personalized care strategy that is both biologically informed and clinically actionable. I am a physicist by training initially at the Julius Maximilians Universität Würzburg, Germany, before receiving my Masters in Physics at the University of Albany, Albany, NY in 1993 and my Ph.D. in Physics in 1995. I then moved to Stanford University to join the faculties of Medicine and Accelerator Physics as tenure track Assistant Professor. From 2002 to 2014, I established the Physics Oncology program at The Scripps Research in La Jolla, CA as tenured Associate Professor before joining USC in 2014 as a founding faculty of the USC Michelson Center for Convergent Bioscience and director of the Convergent Science Institute in Cancer. I have published over 300 peer scientific articles and patents resulting from my research.

Education

1992	Vordiplom in Physics (B.Sc.), Julius Maximilians Universität Würzburg, Germany
1993	M.Sc., Physics Dept., State University of New York at Albany, NY
1995	Ph.D., Wadsworth Center, New York State Dept. of Health, and Physics Dept., State University of New York at Albany, NY

Academic Experience

1989 – 1992	Physics Student, Julius Maximilians **Universität Würzburg**, Germany
1993 – 1995	Research Assistant and Physics Graduate Student, **Wadsworth Center, Albany, NY**
1994	Visiting Scientist, **New England Biolabs**, Beverly, MA
1995 – 1999	Staff Scientist, SSRL, Chemistry Department, **Stanford University**, Stanford, CA
1999 – 2002	Assistant Professor of Structural Biology (tenure track), Stanford Medical School, Stanford University.
1999 – 2002	Assistant Professor (tenure track) Stanford Synchrotron Radiation Laboratory, Stanford University.
2002 – 2009	Research Fellow, **Palo Alto Research Center**

2002 – 2014 Associate Professor (tenured), Department of Cell & Molecular Biology, **Scripps Research**, La Jolla, CA
2013 – 2018 Professor of Medicine, **Charles University of Prague**, Czech Republic
2014 – present **Dean's Professor** of Biological Sciences, Dornsife College of Letters, Arts and Sciences, **University of Southern California (USC)**, Los Angeles, CA, USA
2014 – present **Professor of Medicine,** Keck School of Medicine, USC, Los Angeles, CA, USA
2015 - present Honorary Professor, Charles University in Prague, Czech Republic
2015 – present **Professor Biomedical Engineering and Aerospace & Mechanical Engineering,** Viterbi School of Engineering, USC, Los Angeles, CA, USA
2018 – present **Professor of Urology**, Keck School of Medicine, USC, Los Angeles, CA, USA
2021 – present Honorary Professor, Department of Cancer Sciences, **University of Manchester,** United Kingdom

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Research Interests

- Early cancer detection using a blood test.
- Early cancer evolution in patients.
- Early cancer interception for curative intent.
- Understanding the time dependent evolution of disease under treatment pressure with spatiotemporal biology.
- Understanding the relationship of the patient's health in the context of cancer with its implications on cancer care.

Teaching Interests

- Educating the next generation of global scientific, human health and business leaders in the context of convergent science to solve wicked problems with a focus on cancer care.
- Training of students and researchers in convergent science in cancer.

CV Highlights

- Over 300 peer reviewed publications
- Over 26,000 citations
- H-index of 71 (71 papers with at least 71 citations)
- Over 200 invited lectures
- 16 patent applications licensed for commercialization
- Outreach beyond the worldwide scientific community: Initiated the "Night at the Lab" for cancer patient events and co-presentations with Steve Ballmer to worldwide audiences.
- Average total funding to the laboratory of $5M annually for the past 20 years. Over $150M total research funding raised over that time period with a focus on large scale research programs.

Funded Research: Scientific and Programmatic Leadership

1998 – 2003	Co-Investigator on NIH/NCRR, "Collaboratory testbed for macromolecular crystallography", P41RR1209, Hodgson.
2000 – 2005	Co-Principal Investigator, "A Synchrotron Radiation Structural Biology Resource", P41RR1209, Hodgson.
2004 – 2006	**Principal Investigator**, "Understanding and Modulating Protein-Protein Interactions for Drug Discovery", SFP-1543, Kuhn.
2004 – 2009	**Principal Investigator**, "Center for Functional and Structural Proteomics of SARS CoV related proteins", HHSN266200400058C/N01-AI-40058, Kuhn.
2004 – 2014	Co-Investigator, "Joint Center for Integral Membrane Protein (JCIMPT-Complexes)", P50GM073197, Stevens.
2005 – 2010	Co-Principal Investigator," Center for Advanced Technologies from Gene to 3D Structure", U54GM074961, Stewart.
2005 – 2009	Co-Investigator, Pacific-Southwest Center for Biodefense and Emerging Infectious Diseases Research, "Structure and function of the dengue protease", U54AI065359, Barbour.
2006 – 2011	Co-Principal Investigator, "Cancer Bioengineering Research Partnership for the detection and characterization of Circulating Tumor Cells", R01CA11359, Bruce.
2007 – 2012	Co-Principal Investigator, Circulating Tumor Cells in Non-Small Cell Lung Cancer, R01CA125653, Nieva.
2009 – 2015	**Principal Investigator and Program Director**, "Four-Dimensional Heterogeneity of Fluid Phase Biopsies in Cancer, the Scripps Physics Oncology Center", U54CA143906, Kuhn.
2013 – 2015	**Principal Investigator**, "Pre-analytical Variables and Circulating Tumor Cells, Phase I", HSSN2612008/12XS527-Scripps-15X003-USC, Kuhn.
2013 – 2016	**Principal Investigator**, "Clinical Validation of the HD-CTC fluid biopsy in early detection of lung cancer", R33CA173373, Kuhn.
2014 – 2024	**Principal Investigator,** "Fluid Biopsy in Breast Cancer Patients to Characterize Cell Free and Cellular Molecular and Protein", BCRF-21-089, Kuhn.
2015 – 2016	Co-Investigator, "DOD Collaborative Initiative on Human Performance Optimization", FFP#012016 ATOM-HP, Nieva.
2015 – 2018	**Principal Investigator**, "HCS of physical based properties in Biospecimens, Phase II", HSSN2612008/15X003, Kuhn.
2016 – 2019	**Principal Investigator**, "High-Definition Single Cell Analysis of Blood and Tissue Biopsies in Patients with Colorectal Cancer Undergoing Hepatic Metastasectomy project ("HD-SCA in CRC")", USC16HSC, Kuhn.
2016 – 2018	**Principal Investigator, "**Integrated Identification and Molecular Evaluation of Disseminated Tumor cells and their Microenvironment", Movember Foundation PCF 16CHAL04, Pienta.
2017 – 2020	Co-Principal Investigator, "Development of a Blood Profiling Atlas to Understand Spatiotemporal Evolution of Breast Cancer in Patients", BCRF-16-189, Shriver.
2017 – 2019	**Principal Investigator**, "Subsets of de novo Metastatic Cancer to Patient Outcome in the Context of Local Therapy to the Primary Tumor", PCF 17CHAL01, Aparicio.
2017 – 2021	**Principal Investigator, "**Multiplatform Profiling of Lethal Prostate Cancer in the Veterans Affairs Population", PCF 17CHAL04, Garraway.

2018 – 2019	**Principal Investigator,** "Mapping disease and treatment patterns in breast cancer", Novartis, PRSUPON/S3410160, Kuhn.
2018 – 2024	**Principal Investigator**, "Measuring and predicting the evolution of multiple myeloma", Adelson Medical Research Foundation, Kuhn.
2019 – 2020	**Principal Investigator**, "Individual Predictability of Medication-related Osteonecrosis of the Jaw", Amgen, Kuhn.
2019 – 2021	Co-Principal Investigator, "Dissecting the Prostate Cancer Diaspora", PCF 18CHAL15, Pienta.
2019 – 2021	Co-Principal Investigator, "Establishing a Diagnosis of Lung Cancer Through a Fluid Biopsy", USC, Kuhn.
2019 – 2021	Co-Principal Investigator, "The Geochemistry of Cancer: A New Collaborative Approach for Research and Diagnosis", USC, John.
2019 – 2022	Co-Investigator, "Phase I Study of Chimeric Antigen Receptor Engineered Stem/Memory T Cells for the Treatment of HER2+ Brain Metastases", CIRM 61855.2007364.669301, Priceman.
2020 – 2021	**Principal Investigator**, "SOW2 – Establish the Limit of Detection as the Primary Gate for Clinical Trial Implementation and Deep Characterization", Kite Pharma, 012564-00001, Kuhn.
2020 – 2021	Co-Investigator, "Scaling up data FAIR-ification", 009415-00003, Novartis, Knoblock.
2020 – 2021	**Principal Investigator**, "Development and implementation of a novel mobile application to assess COVID-19 symptoms and facilitate geospatial activity mapping for managing disease surveillance and containment", USC, Kuhn.
2020 – 2024	**Principal Investigator**, "Comprehensive Liquid Biopsy", Epic Sciences, Kuhn.
2020 – 2023	**Principal Investigator**, "Pancreatic Biomarker Bank", Cedars-Sinai, Pandol.
2021 – 2026	Co-Principal Investigator, "Developing a Convergent Science Virtual Cancer Center", DOD CA201079P1.
2022 – 2025	Co-Principal Investigator, "SCH: Wearables for Health and Disease Knowledge (W4H)", NIH R01LM014026, Shahabi.
2022 – 2023	**Principal Investigator**, "Liquid biopsy predicts metastatic relapse in primary bladder cancer patients", USC Ming Hsieh, Kuhn.
2022 – 2027	Co-Investigator, "A Phase I study to evaluate chimeric antigen receptor (CAR) T cells targeting TAG72 in patients with recurrent epithelial ovarian cancer", NIH R01CA266874, Priceman.
2022 – 2023	Co-Investigator, "Diversity and determinants of the immune-inflammatory response to SARS-CoV-2", NIH U54CA260591, Figueiredo.
2023 – 2025	Co-Investigator, "Developing engineered cell therapies for metastatic castrate resistant prostate cancer to increase efficacy and decrease toxicity", PCF TACTICAL, June.
2023 – 2025	**Principal Investigator**, "Convergent Science Cancer Consortium" (in negotiations), DOD CA220785.
2023 – 2024	Co-Principal Investigator, "INTERCEPT: Data science-driven liquid biopsy in early breast cancer detection", USC Ming Hsieh, Nieva.
2023 – 2024	Principal Investigator, "Digital tools enabling remote clinical trials", USC Research and Innovation, Kuhn.

2023 – 2027	Co-Investigator, "Development of a Multi-modal Liquid Biopsy for the Early Detection of Lung Cancer", Cancer Research UK, Dive and Crosbie.
2023 - 2028	**Principal Investigator**, "Multi-modal Liquid Biopsy Early Assessment of Breast Cancer, Pancreatic Cancer, and Multiple Myeloma, NIH U01CA285013, Kuhn.

Professional Activities - Chairmanships, Consultancies, Advisory Boards, Review Panels, & Memberships

Chairmanships

1997, June	Conference Chair, Xenon Derivatization and Ultra-high Resolution Data Collection
1998, July	Conference Chair, SHARP - Methods and Applications in Crystallography
1998, October	Conference Chair, 25th SSRL Users Meeting
1999, June	Co-chair, Crystal Decay in Hot Synchrotron Beams, ESRF
1999 – 2002	Co-chair, UNESCO scientific advisory panel for structural molecular biology at SESAME (Synchrotron light for Experimental Science and Applications in the Middle East)
2000 – 2002	Co-Director, Stanford Berkeley Synchrotron Schools in the Life and Physical Sciences, Stanford Linear Accelerator Center, Stanford University, Stanford, CA
2000, September	Chair, 1st Stanford Structural Molecular Biology School, SSRL, Stanford, CA,
2000	Member, Conceptual Design Review for Control Software at the Advanced Light Source
2001	Chair, Structural Biology beam line review for SRRC, Taiwan
2001 – present	Chair, Technical Advisory Board, NIH GM/CA-CAT, Argonne
2002 – 2009	Life Sciences Director, Scripps PARC Institute for Advanced Biomedical Sciences
2011 – 2015	Member, Healthcare CEO Roundtable, Washington, DC
2013 – 2017	Chair, High Content Single Cell Analysis project team of the fNIH Biomarker Consortium.
2014	Chair, AACR Workshop on Tumor Heterogeneity
2014 – present	**Founding Faculty** of the USC Michelson Center for Convergent Biosciences, Los Angeles, CA, USA.
2014 – 2019	Founding Deputy Director, Bridge Institute @ USC, USC, Los Angeles, CA, USC
2015 – present	Member, International Advisory Board, Charles University of Prague, Prague, Czech Republic
2015	Chair, Quantitative Biology: From Molecules to Man, New York Academy of Sciences, New York City, NY.
2017 – 2020	Co-Chair, scientific program, European Society of Medical Oncology (ESMO)
2017 – present	**Director, USC Michelson Convergent Science Institute in Cancer, CSI-Cancer**
2018 – 2019	Co-Chair, 2019 AACR Annual Meeting Program Committee, March 30 – April 3, 2019, Atlanta, Georgia
2018 – 2019	Co-Chair, AACR ThinkTank in Convergent Science in Cancer
2021 – present	Co-Director, Convergent Science Virtual Cancer Center, csvcc.org.
2022 – 2023	Vice Chair, 2023 AACR Annual Meeting Program Committee, April 14-19, 2023, Orlando, FL

2023 – present **Director, Convergent Science Cancer Consortium**

Consultancies

1991	Research Student, Daimler Benz AG, Stuttgart, Germany
1998 – 2003	Consultant, Syrrx Inc. (now Takeda San Diego)
2003 – 2009	Founder, SHOUT Life Sciences ThinkTank
2003 – 2010	Founder, KCI Life Sciences (acquired by Epic Sciences in 2010)
2004 – 2008	Scientific Advisory Board, Lyncean Technologies Inc.
2008	Medical Advisor, Clovis Oncology, Inc.
2008 – 2015	Founder and Director, Epic Sciences, Inc., San Diego, CA
2012 – present	Founder, Cansera, Inc.
2015 – 2023	Founder and Chief Scientific Advisor, Epic Sciences, Inc.
2016 – 2020	Founder and Director, CancerBase.org.
2016 – 2017	Advisor, Fluidigm Inc.
2016 – 2019	Advisor, Novartis AG
2017 – present	Founder/Exec Member, Blood Profiling Atlas in Cancer – BloodPAC
2019 – present	Advisor, Earli Inc.
2020 – 2023	Founder and Advisor, Forbie Inc.
2022 – present	Academic Advisor, Quest Diagnostics
2022 – present	Advisor, Sampling Human Inc.
2023 – present	Associate Partner, Trusted Health Advisor

Advisory Boards

1999, June	Member, BESSY I - Scientific Case for a Synchrotron in the Middle East, UNESCO, Paris
2008 - 2010	Member, NIH NCI Think Tank for translational science in physics and oncology
1999 – 2003	Member, international advisory panel for NOBUGS (New Opportunities for Better User Group Software)
2000 – present	Member, Scientific Advisory Panel, NIH-NCRR BioCARS, Argonne
2009 – present	Member, Board of US HUPO Human Proteome Organization
2011, April	Chair, Second Annual NCI Physical Sciences-Oncology Centers (PS-OCs) Network Investigators' Meeting, La Jolla, CA
2010, September	Session Chair, Fourth AACR International Conference on Molecular Diagnostics in Cancer Therapeutic Development, Denver, CO,
2000, December	Member, UNESCO on SESAME – 2nd international workshop on structural molecular biology, Cyprus
2001 – present	Member, Scientific Advisory Board, NIH NIGMS Council
2001 – 2005	Member, Scientific Advisory Board, Alberta Synchrotron Institute, Canada
2002 – 2005	Member, Scientific Advisory Board, Structural genomics BL at SRRC, Taiwan
2002 – 2007	Member, Resource Advisory Committee, National Resource for Automated Molecular Microscopy, TSRI.
2003 – 2005	Member, eHTPX Scientific Advisory Board, Cambridge, UK.
2003 – 2008	Member, United States National Committee for Crystallography
2008, February	Member, Think Tank, Integrating and Leveraging the Physical Sciences to Open a New Frontier in Oncology, Arlington, VA

2008, October	Member, Think Tank on Physical Sciences-Based Frontiers in Oncolo gy: The Coding, Decoding, Transfer, and Translation of Information in Cancer, Arlington, VA
2010, September	Discussant, ASCO-NCI_EORTC Annual Meeting on Molecular Markers in Cancer, Hollywood, Florida
2011 – 2015	Member, Healthcare CEO /Innovators Roundtable, Washington, DC
2012, February	Member, NCI Think Tank in Physical Sciences Perspectives in Oncology, Bethesda, MD
2013 – present	Member, The Biomarkers Consortium, Foundation of the NIH
2013 – present	Member, National Biomarker Development Alliance
2013 – 2016	Expert Advisor to the International Breast Cancer Study Group
2013 – present	SWOG Breast Cancer Translational Science Working Group
2017 – present	Cancer Research UK, Early Detection Committee
2018 – present	Member, Translational Research Sub-Committee (Track), European Society of Medical Oncology (ESMO)
2018 – present	Program Committee, American Association for Cancer Research (AACR)
2018 – present	Cancer Science Committee, XPrize Foundation
2018 – present	Member, Internal Advisory Committee, Children's Hospital-Los Angeles
2019 – present	USC Urology: Research Initiative
	2019 – present CHLA: Clinician Scientist Training Program
2020 – present	Member, Prostate Cancer Foundation Scientific Advisory Board
2020 – present	Member, Scientific Advisor, USC Institute of Urology
2020 – 2022	USC COVID-19 Restart Committee
2020 – 2022	USC Keck COVID-19 Research Committee
2020 – present	USC Research: Strategy Innovation Committee
2020 – present	USC Innovation Council
2023 – 2023	NCI SBIR Program Committee

Review Panels

1998	Review Panel for Technology Applications and Development, Dept. of Energy, Office of Biological and Environmental Research
2000, October	Member, Review Panel for the Motion Control and Data Collection System at the Advanced Light Source, Berkeley, CA,
2000, October	Member, Review Panel for the Conceptual Design of the HHMI Beamline for macromolecular crystallography at the Advanced Light Source, Berkeley, CA
2000, November	Member, Review Panel for BioCARS NIH-NCRR Resource at the Advanced Photon Source, Argonne, IL
2002 – present	Member, NIH CSR Study Section and Special Emphasis Panels (NCI, NCRR, NIGMS, NIAID)
2004, February	Review Panel, NIH/NCRR Center for Biomedical Research Excellence (COBRE), Rockville, MD
2004, August	Review Panel, NIH/NCRR NIGMS Special Review Panel for Synchrotron Radiation at NSLS, Brookhaven, NY
2005 – 2006	Review Panel, Special Emphasis Review of NCI Program P01 Projects Grants, Bethesda, MD

2005-2007	Member, Study Section for Biological Chemistry and Macromolecular Biophysics (BCMB), Bethesda, MD
2006, February	Review Panel, Biochemistry and Biophysics of Membranes Study Section (BBM), Washington, DC
2008, October	Member, Review Panel, Diamond Lightsource, MX Beamline Review, Oxfordshire, UK,
2008, November	Review Panel, Cancer Research UK Receptor Structure Research Group, UK
2010 – present	Review Panel, National Medical Research Council, United Kingdom
2010, June	Review Panel, Singapore Study Section, Individual Research Grant, national Medical Research Council, Ministry of Health, Singapore
2010 – present	Review Panel, AIRC - Italian Association for Cancer Research, Milan, Italy
2010, December	Review, Netherlands Genomics Initiative Booster Grant Assessment Committee, The Hague, Netherlands
2011, February	Review Panel, Special Emphasis Review Panel for SBIR, "Review of Topic 293 on Circulating Tumor Cells", Bethesda, MD
2011, June	Review Panel, Special Emphasis Review Panel for NCI Study Section, "Advanced In Vivo Imaging to Understand Cancer Systems" at Bethesda, MD
2011- 2018	Review Panel, NIH Director's New Innovator Awards, Bethesda, MD
2013 – 2016	Editorial Board, IOP Physical Biology
2013 – present	Editorial Board, Technology
2014 – 2018	Editorial Board, IOP Convergent Science: Physics Oncology (Founding Editor).
2015 – 2017	Founding Editor, Convergent Science: Physics Oncology (IOP)
2020 – present	Editorial Board, Cancers, Journal by MDPI

Memberships

1994 - 2010	American Crystallographic Association
1997 - 2010	Asia-Pacific Bioinformatics Network
1999 - present	American Physical Society
1999 - present	Biophysical Society
2002 - 2010	Association for Laboratory Automation
2004 – 2014	Member, Kellogg School of Science & Technology Graduate Program
2005 - present	American Association for Cancer Research
2005 - 2012	American Society for Microbiology
2007 - present	American Association for the Advancement of Science
2010 - present	American Society of Clinical Oncology
2016 – present	Member, BISC Program in Molecular and Computational Biology
2018 – present	Member, PIBBS, Keck School of Medicine Graduate Program of Medical Biophysics
2019 – present	Member, PIBBS, Keck School of Medicine Graduate Program of Cancer Biology and Genomics

Honors & Awards

1994	Linus Pauling Award, American Crystallographic Association
1995	Linus Pauling Award, American Crystallographic Association
1996	NATO grant to attend Advanced Study Institute, Erice
1996	Distinguished Doctoral Dissertation Award

2007, 2008	Nominator, The Heinz Awards
2007	Top Ten Scientific Breakthroughs of 2007, Science Magazine
2012	Carol Vassiliadis Fellowship in Melanoma Research
2013	Sandy Borden Thielicke Fellowship in Breast Cancer Research
2014	Technology Corner Story, *the* Clinical Chemist*, Finding Waldo: The Emerging Field of Circulating Tumor Cells*, Vikram Sheel Kumar and Molly Webster, Clinical Chemistry 2014. DOI: 10.11373/clinchem.2014.233080.
2020	USC Stevens Center for Innovation 2020 Commercialization Award "OCULAR Technologies and Software for Rare Cell Identification and Classification"

Peer Reviewed Publications (270 to date)

1. Kuhn P, Tarentino A, Plummer T, and Van Roey P. Crystallization and Preliminary Crystallographic Analysis of Peptide-N'-(N-acetyl-beta-D-glucosaminyl)asparagine Amidase F, PNGase F. J Mol Biol 1994;241:622-623.
2. Kuhn P, Tarentino A, Plummer T, and Van Roey P. Crystal Structure of Peptide-N'-(N-acetyl-beta-D- glucosaminyl)asparagine Amidase F at 2.2 Å Resolution. Biochemistry 1994;33:11699-11706.
3. Kuhn P. Structure and Function of PNGase F. Dissertation submitted to the Physics Department at the State University of New York at Albany, NY, (1995).
4. Kuhn P, Guan C, Cui T, Tarentino AL, Plummer Jr TH, and Van Roey P. Active Site and Oligosaccharide Recognition Residues of PNGase F. J. Bio. Chem 1995;270:29493-29497.
5. VanRoey P, Rao V, Kuhn P, Tarentino AL, Plummer Jr TH. Structural analysis of the mechanisms and substrate specificities of oligosaccharide releasing enzymes. Glycobiology 1996;6:1004-1004.
6. Whitby FG, Luecke H, Kuhn P, Somoza JR, Huetze-Perez JA, Phillips JD, Hill CP, Fletterick RJ, and Wang CC., Crystal Structure of Tritrichomonas foetus lnosine-5'-monophosphate Dehydrogenase and the Enzyme Product Complex. Biochemistry 1997;36:10666-10674.
7. Redinbo MR, Stewart L, Kuhn P, Champoux JJ, and Hol WGJ. Crystal Structures of Human Topoisomerase I in Covalent and Noncovalent Complexes with DNA. Science 1998;279:1504-1513.
   a. Multi-crystal data collection and data merging was a key to the successful completion of the structural determination. This provided the foundation of many of the diffraction data collection approaches.
8. Genick U, Softis SM, Kuhn P, Canestrelli IL, and Getzoff ED. Structure at 0.85 Å Resolution of an Early Protein Photocycle Intermediate. Nature 1998;392:206-209.
   a. Ultra-high resolution data collection and data interpretation was applied to time resolved crystallography. This provided the initial data to investigate radiation decay and its interpretation in the biological/structural context.
9. Bernstein BE, Williams DM, Bressi JC, Kuhn P, Gelb MH, Blackburn GM, and Hol WGJ. A Bisubstrate Analog Induces Unexpected Conformational Changes in Phosphoglycerate Kinase from Trypanosoma brucel. J Mol Biol 1998;279:1137-1148.
10. Merritt EA, Kuhn P, Sarfaty S, Erbe JL, Holmes RK, and Hol WGJ. The 1.25 Å Resolution Refinement of the Cholera Toxin B-pentamer: Evidence of Peptide Backbone Strain at the Receptor Binding Site. J Mol Biol 1998;282:1043-1059.

11. Kuhn P, Knapp M, Soltis SM, Ganshaw G, Thoene M, and Bott R. The 0.78 Å Structure of a Serine Protease, Bacillus lentus Subtilisin. Biochemistry 1998;37:13446-13452.
12. Kuhn P. Analysis of disordered in protein structures as observed by protein crystallographic methods. Biophysical J 1999;76:30-31.
13. Mitchell E, Kuhn P and Garman E. Demystifying the Synchrotron Trip: a First Time User's Guide. Structure 1999;7:111-121.
14. Yew WS, Kolatkar PR, Kuhn P, and Khoo HE. Crystallization and Preliminary Crystallographic Study of Stonustoxin, a Protein Lethal Factor isolated from the Stonefish (Synanceja horrida) Venom. J Struct Biol 1999;128:216-218.
15. Ellis P,Carlow C, Ma D, and Kuhn P. Crystal Structure of the Complex of Brugia Malayi Cyclophilin and Cyclosporin A. Biochemistry 2000;39:592-598.
16. Kielkopf CL, Ding S, Kuhn P, and Rees DC. Conformational Flexibility of B-DNA at 0.74 Å Resolution: d(CCAGTACTGG)$_2$. J Mol Biol 2000;296:787-801.
17. Luan P, Heine A, Zeng K, Moyer B, Greasely SE, Kuhn P, Balch WE and Wilson IA. A New Functional Domain of Guanine Nucleotide Dissociation Inhibitor (a-GDI) Involved in Rab Recycling. Traffic 2000;1:270-281.
18. Kuhn P, Garman E, Soltis SM. Limitations in macromolecular crystallography due to radiation damage. Synchrotron Radiat and Instr (P. Pianetta, J. Arthur, and S. Brennan, Eds.), 215-218, (2000).
19. Yeh AP, Chatelet C, Soltis SM, Kuhn P, Meyer J, and Rees DC. Structure of a Thioredoxin-like [2Fe-2S] Ferredoxin from Aquifex aeolicus. J Mol Biol 2000;300:587-595.
20. Bott R, Ganshaw M, Soltis M, Kuhn P, Knapp M. Snapshots of enyme activation. Acta Crystallogr Section A 2000;56:S247.
21. Kuhn P, Deacon AM, Comoso S, Rajaseger G, Kinik RM, Uson I, Kolatkar PR, The atomic resolution structure of bucandin, a novel toxin isolated from the Malyan krait, determined by direct methods. Acta Crystallogr Section D 2000;56: 1401-1407. erratum 2000;56:1702.
22. Abola E, Kuhn P, Earnest T, and Stevens RC. Automation of x-ray crystallography. Nature Struct Biol 2000;7:973–977.
23. Ellis P, Conrads T, Hille R, and Kuhn P. Crystal structure of the 100 kDa arsenite oxidase from Alcaligenes faecalis in two crystal forms at 1.64 Å and 2.03 Å. Structure 2001;9:125–132.
24. Kuhn P, and Soltis SM. Macromolecular structure determination in the post-genome era. Nuclear Instr and Methods in Physics Res 2001;467-468:1363-1366.
25. McPhillips TM, McPhillips SE, Chiu H-J, Cohen AE, Deacon AM, Ellis PJ, Garman E, Gonzalez A, Sauter NK, Phizackerley RP, Solits SM, Kuhn P. Blu-Ice and the distributed control system: software for data acquisition and instrument control at macromolecular crystallography beamlines. J Synchr Radiation 2002;9:401-406.
26. Eriksson T, Chiu H-J, Sharp K, McPhillips T, McPhillips S, Sauter N, Solits M, and Kuhn P. Collaboratory for macromolecular cyrstallography at SSRL. Acta Crystallogr Section A 2002;58:C73.
27. Mathews II, Deacon AM, McMullan D, CanavesJM, Kuhn P and Lesley S. Structural insights into the mechanism of thymidylate synthase complementing proteins. Acta Cyrst Section A 2002;58:C106.
28. Miller MD, Cohen A, Deacon A, Ellis P, Kuhn P Phizackerley P. Automated mounting cryo-cooled crystals on Stanford synchrotron radiation laboratory beamline 11-1. Acta Crystallogr Section A 2002;58:C202.

29. Deacon A, Brinen L. Kuhn P, McPhillips S, McPhillips T, Miller M, van den Bedem H. Wolf G, Zhong J, Zhang Z. A system for rapid and systematic characterization of protein cyrstals. Acta Crystallogr Section A 2002;58:C299.
30. Manikandan P, Ellis P, Kuhn P, Choi EY, Hoffman B, and Hille R. Structure/function studies of arsenite oxidoreductase and xanthine oxidase. Indian J of Chem 2002;41:22-31.
31. Chiu H, McPhillips T, McPhillips S, Sharp K, Eriksson T, Sauter N, Soltis M, and Kuhn P. Collaboratory for Macromolecular Crystallography at SSRL. Networked Learning. NAISO Academic Press, 128-134 (2002).

Structure Notes: 32-82:

32. Lesley, Scott A.; Kuhn, Peter; Godzik, Adam; Deacon, Ashley M.; Mathews, Irimpan; Kreusch, Andreas; Spraggon, Glen; Klock, Heath E.; McMullan, Daniel; Shin, Tanya; Vincent, Juli; Robb, Alyssa; Brinen, Linda S.; Miller, Mitchell D.; McPhillips, Timothy M.; Miller, Mark A.; Scheibe, Daniel; Canaves, Jaume M.; Guda, Chittibabu; Jaroszewski, Lukasz; Selby, Thomas L.; Elsliger, Marc-Andre; Wooley, John; Taylor, Susan S.; Hodgson, Keith O.; Wilson, Ian A.; Schultz, Peter G.; Stevens, Raymond C. Structural genomics of the Thermotoga maritima proteome implemented in a high-throughput structure determination pipeline, Proceedings of the National Academy of Sciences of the United States of America (2002), 99(18), 11664-11669
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Patent & Patent Applications

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2. METHODS AND COMPOSTIONS FOR OBTAINING HIGH-RESOLUTION CRYSTALS OF MEMBRANE PROTEINS
   R STEVENS, M HANSON, V CHEREZOV, P KUHN
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3. METHODS FOR THE DETECTION OF CIRCULATING TUMOR CELLS
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4. METHODS FOR DETECTION OF CIRCULATING TUMOR CELLS AND METHODS OF DIAGNOSIS OF CANCER IN A MAMMALIAN SUBJECT
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6. METHODS FOR OBTAINING SINGLE CELLS AND APPLICATIONS OF SINGLE CELL OMICS
X YANG, D NELSON, P KUHN, D LAZAR
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7. METHOD FOR CATEGORIZING CIRCULATING TUMOR CELLS
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8. METHODS FOR THE DETECTION AND QUANTIFICATION OF CIRCULATING ENDOTHELIA CELLS
P KUHN, A Kolatkar
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9. AMPLIFICATION OF ENZYMATIC REACTIONS FOR USE WITH AN ENTHALPY ARRAY
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10. CRYSTAL STRUCTURE OF A RECEPTOR-LIGAND COMPLEX AND METHODS OF USE
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12. GENOTYPIC AND PHENOTYPIC ANALYSIS OF CIRCULATING TUMOR CELLS TO MONITOR TUMOR EVOLUTION IN PROSATE CANCER PATIENTS
J Hicks, P Kuhn, AE Dago Rodriguez, A Carlsson, L Wei
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13. CIRCULATING TUMOR CELL DIAGNOSTICS FOR LUNG CANCER
P KUHN, A CARLSSON, A KOLATKAR S GAMBHIR, V NAIR
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14. LUNG CANCER PROGNOSIS USING A FLUID BIOPSY
P Kuhn, A Carlsson, F Carlsson, A Kolatkar
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15. SYSTEM AND METHOD FOR DETERMINING HUMAN PERFORMANCE
P Kuhn, J Nieva
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16. SYSTEM AND METHOD FOR PREDICTING SURVIVIAL TIME
A Kolatkar, P Kuhn, Y Liu, P Malihi, S Puruthotham
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P Kuhn, C Ruiz, S Chai, J Hicks, A Kolatkar, N Matsumoto, R Nevarez, B Ormseth
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P Kuhn, J Nieva
US Patent, Docket 043871-0501304, Serial No. 62/825,965
19. IDENTIFYING NON-DISEASE PATIENTS USING A DISEASE RELATED ASSAY AND ANALYSIS IN THE LIQUID BIOPSY

A Kolatkar, P Kuhn, N Matsumoto, R Nevarez
US Patent Application Number 63304354, Serial No. 63/304,354

20. LIQUID BIOPSY ANALYTES TO DEFINE CANCER STAGES
O Hart, A Kolatkar, P Kuhn, N Matsumoto, M Setayesh, S Shishido, J Mason
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15. Richard Campbell, .Net Rocks; http://www.dotnetrocks.com/default.aspx?showNum=243., June 2007.
16. Reuben H. Fleet Science Center, Senior Mondays Lecture, "Making Cancer a Managed Disease". August 2007.
17. Frontiers in Science – A Lecture and Reception, "Novel Approaches to Monitoring the Spread of Cancer Cell", Hyatt Regency, La Jolla, CA. October 2009.
18. National Public Radio: interview on the creation of the Scripps Physics Oncology Center, October 2009.
19. Night at the lab: When cancer cells become the prey, Peter Kuhn Laboratory, The Scripps Research Institute, La Jolla, CA. January 2010.
20. MySDSCience and Scholar Nexus Science Symposium, San Diego, CA, October 2011.
21. YouTube videos on the Fluid Biopsy with a total of over 2,000 views. February 2012.
22. Night at the lab: Current and Future steps in controlling cancer, Peter Kuhn Laboratory, The Scripps Research Institute, La Jolla, CA. September 2012.
23. Navigating Cancer Research, Carol Vassiliadis and The Scripps Research Institute, Harbor Cruise Presentation, San Diego, January 2013.
24. Interview with KPBS on Sponges & Spreaders of lung cancer, March 2013.

25. KBPS featured story on television and radio on our ovarian cancer study. September 2013.
26. Carlson RH. "Liquid Biopsy' – Circulating Tumor Cells Detect Real-Time Biomarkers from Blood. Oncology Times 2010:32:42-43.
27. "Local biotechs focus on blood tests for cancer", San Diego Business Newspaper, November, 2011.
28. "Circulating tumor cells: The Ultimate Assay?" Journal Clinical Oncology 2012;7:1.
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31. "Peter Kuhn on detecting circulating tumor cells", Xconomy, February 16, 2012. ADD
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37. "New blood test, HD-CEC Assay, predicts imminent heart attack in high risk patients", *Medical Daily*, January 9, 2014
38. "Heart Attack 'leaves cellular trace', *BBS News*, January 10, 2014
39. "New blood test 'cold accurately predict heart attack risk'", *Medical News Today*, January 10, 2014
40. "Simple blood test could detect heart attacks before they happen", *HealthLine News*, January 10, 2014
41. "Simple test that may predict patients at risk of heart attack", *Fox News*, January 10, 2014
42. "A new test could accurately predict heart attack risk", *Health2Fit*, January 10, 2014
43. "Blood test may predict heart attack: Study", *Consumer HealthDay*, January 10, 2014
44. "New blood test could be used to predict if a patient will have a heart attack", *The Independent UK*, January 10, 2014
45. "New test to predict heart attacks", *WebMD*, January 10, 2014
46. "Could a simple blood test show the early onset of a heart attack*?", ScienceWorldReport.com*, January 10, 2014
47. "Blood test gives early heart attack warning and can save thousands of lives", *Express, London*, UK, January 10, 2014
48. "Simple blood test could predict heart attack–American Live Wire"*, Top Headlines Daily*, January 10, 2014
49. "Blood test predicting heart attack risk devised by Scripps Research Institute", *Bustle,* January 10, 2014
50. "New test could 'predict heart attacks', *LabMate Online, Microscopy & Microtechniques*, January 10, 2014
51. "Doctors develop test 'to predict heart attacks', *NetDoctor*, January 10, 2014
52. "Can heart attacks be predicted and prevented by blood test? Researchers say yes", *Tech Times*, January 10, 2014
53. "New blood test could be used to predict if a patient will have a heart attack by searching for CECs cells", *FirstWord MedTech, UK*, January 10, 2014

54. "Test developed that predicts heart attacks before they happen", *Examiner.com*, January 10, 2014
55. "New 'Fluid Biopsy' technique may predict when heart attack will occur", *redOrbit, Your Universe Online*, January 10, 2014
56. "New blood test could be used to predict if a patient will have a heart attack", *Life Science Log*, January 10, 2014
57. "Blood test may predict heart attack: study", *HealthBanks.com*, *Urology Associates of Fredericksburg, VA*, January 10, 2014
58. "Heath attach risk can be detected using a simple blood test: New Study", International Business Times, January 11, 2014
59. "New blood test detects heart attack before warning symptoms start appearing", *International Business Times, India*, January 10, 2014
60. "HD Circulating Endothelial Cell Blood Test to Detect Heart Attacks?", *Liberty Voice*, January 11, 2014
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62. "New test can predict early onset of heart attacks", *ZNews*, January 11, 2014
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65. "New 'fluid-biopsy' test to predict early onset of heart attacks', *Business Standard*, January 11, 2014
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68. "New blood test that could predict heart attack", *Galenus Revista Sustinuta de Catena*, *Bucharest*, January 11, 2014
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82. "Therapy: This time it's personal", Scientific American, June, 2014;
83. MIT Tech Review

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115. "USC and Cedars-Sinai to jump-start young scientists' efforts to cure cancer". USC News and Cedars Sinai Newsroom, April 28, 2021. https://news.usc.edu/185625/usc-cedars-sinai-

convergent-science-virtual-cancer-center/. https://www.cedars-sinai.org/newsroom/cedars-sinai-and-usc-to-jump-start-young-scientists-seeking-to-cure-cancer/

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122. "Finding a Cure". USC Trojan Family, Summer 2022. Finding a Cure • Trojan Family Magazine (usc.edu)
123. "Hiding in plain sight: early, nano-sized signs of breast cancer detected by liquid biopsy". Nature Portfolio: Cancer, September 27, 2022. Hiding in Plain Sight: Early, nano-sized signs of breast cancer detected by liquid biopsy | Nature Portfolio Cancer Community
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126. "The Cancer Solution We Need: Uniting Experts From Science, Engineering, and the Humanities". USC Dornsife News, February 23, 2023. https://dornsife.usc.edu/news/stories/3819/cancer-solution-we-need/
127. "Liquid Biopsies and Early Detection of Breast Cancer". Alamo Breast Cancer Foundation Advocate Program: Advocate Chats, July 28, 2023. Liquid Biopsies and Early Detection of Breast Cancer - YouTube
128. "Revolutionizing Breast Cancer Screening", Women's Cancer Research Fund, chaired by Kate Capshaw, Rita Wilson, Tom Hanks and Steven Spielberg, March 15, 2023. Research Keynote Speaker.
129. USC Dornsife Dialogues, Los Angeles, CA, August 29, 2023. Discussion with Amy Ross, *Fighting Cancer with Breakthrough Technology.* https://t.co/8eGQtsfjy8

Invited Lectures, Seminars & Presentations

1996

1. "Advanced Beam Line Instrumentation for Macromolecular Crystallography", ESRF, Grenoble, France.
2. "Introduction to Diffraction Data Collection at Synchrotrons", Cambridge Data Collection Course, United Kingdom.
3. "Structure and Function of PNGase F", Oxford University, United Kingdom.
4. "High-Resolution Structure of PNGase F in complex with its product analogue" (poster), International Union of Crystallography General Assembly, Seattle.
5. "A New Beam Line for Macromolecular Crystallography at SSRL" (poster), International Union of Crystallography General Assembly, Seattle.
6. "High Resolution studies of the enzyme-product complexes in PNGase F", Department of Molecular Structural Biology, UCSF, San Francisco.

1997

7. "Frontiers in High Resolution Crystallography", SLAC Science Policy Committee.
8. Merritt, E.A., and Hol, W.G.J. , "The 50kDa, B5 Pentamer of Cholera Toxin at 1.25 Å", American Crystallographic Association WeC02, St. Louis.
9. "Xenon Derivatization of Protein Crystals", MAD Workshop, ESRF, France.
10. "Towards the Atomic Resolution Structure of the Ffh-NG domain" (poster), Protein Society Eleventh Symposium, Boston.

1998

11. Structural Molecular Biology at SSRL", BESSY, Germany.
12. "Visualization of a Putative Hydrogen Bond in a Serine Protease at 0.78 Å", European Crystallographic Meeting, Prague.
13. "Visualization of a Putative Hydrogen Bond in a Serine Protease at 0.78 Å", Gordon Research Conference on Diffraction.
14. "Ultra-High Resolution Protein Crystallography Using Short Wavelength X-rays". SSRL Faculty Retreat.
15. "Frontiers in Ultra-high Resolution Crystallography for Next Generation Protein Structures", Keynote at the Structural Analysis Workshop, National University of Singapore, Singapore.
16. "Rough Guide to Protein Crystallography at Synchrotrons", Lecture at the Structural Analysis Workshop, National University of Singapore, Singapore.

1999

17. "Structural Molecular Biology Resource at SSRL", An Integrated Program Addressing Scientific Challenges and Opportunities, Structure and Chemistry Affinity Group Seminar, The Scripps Research Institute, La Jolla, USA.
18. "Structural Molecular Biology Resource at SSRL", SLAC Scientific Policy Committee, Stanford, USA.
19. "Intense Synchrotron Radiation Can Cause Rapid Decay in Biological Samples", Synchrotron Radiation Instrumentation, Stanford, USA.
20. "Cryo Measurements Conducted at Helium Temperature", International Union of Crystallography General Assembly, Glasgow, UK.
21. "Subtilisin at Atomic Resolution". International Union of Crystallography General Assembly, Glasgow, UK.

22. "Molecular Biology and Synchrotrons in the Genomics Era - Impact of Visualization and Collboratories", XEROX PARC Forum.
23. "Structural Molecular Biology at the Stanford Synchrotron Radiation Laboratory", West Coast Protein Crystallography Workshop.
24. "A New Collaboratory for Protein Crystallography at SSRL", West Coast Protein Crystallography Workshop.
25. "Structure of the Brugia malayi Cyclophilin in Complex with Cyclosporin A "(poster). West Coast Protein Crystallography Workshop.
26. "A Distributed Control Environment Implemented at the Crystallographic Beam Lines at SSRL" (poster), West Coast Protein Crystallography Workshop.
27. "Advanced User Support and Training at SSRL" (poster), West Coast Protein Crystallography Workshop.
28. "Challenges in Structural Molecular Biology Attacked by Synchrotron Radiation", American Physical Society - Centennial Meeting, Atlanta.
29. "Analysis of Disorder in Protein Structures as Observed by Protein Crystallographic Methods", Biophysical Society Meeting 1999, Baltimore.
30. "Analysis and Classification of Disorder in Proteins". Pacific Symposium of Biocomputing, Oahu, Hawaii.

2000

31. "Beam line automation for high-throughput diffraction data collection", International Workshop on structural genomics applications, Riken, SPring-8, Japan.
32. "Macromolecular Structure Determination in the Post-Genome Sequencing Era", International Synchrotron Radiation Instrumentation, Berlin, Germany.
33. "Strategies for the Collection and Analysis of Ultra-high Resolution Diffraction data", American Crystallographic Association, Annual Meeting, Minneapolis.
34. Software Design Principles for High-Throughput Structure Determination, NOBUGS III", Daresbury, United Kingdom
35. BLU-ICE and the Distributed Control System", NOBUGS III, Daresbury, United Kingdom.
36. "Evolution of the Collaboratory for Protein Crystallography at SSRL", NOBUGS III, Daresbury, United Kingdom.
37. "High resolution structures and functional analysis of viral neuraminidases in complex with commercial anti-flu drugs", Erice 2000, Erice, Italy
38. "Structure Determination Core of the Joint Center for Structural Genomics", Erice 2000, Erice, Italy
39. "Implications of Structural Genomics for Experimental Instrumentation and Automation", 11th Annual Conference of the World Molecular Engineering Network, San Jose del Cabo, Mexico.
40. "Scientific Opportunities for Structural Biology in the Middle East and Mediterranean Region", 1st Meeting of the Scientific Advisory Panel for SESAME, Athens, Greece.
41. "Remote Data Collection and Structure Determination using Collaboratory Tools", Hong Kong University of Science and Technology, Hong Kong.
42. "Scientific Opportunities in Structural Biology", University of Texas at El Paso, Texas, USA.

2001

43. "High-throughput technologies in structural genomics", NSF workshop on Analytical Instrumentation For The New Millennium Biological Sciences, Tucson, Arizona

44. "Structural Genomics using Synchrotron Radiation", Synchrotron Radiation and Structural Genomics Minisymposium, Copenhagen, Denmark
45. "Structural Genomics using Synchrotron Radiation", University Lecture, Stockholm Center for Physics, Astronomy and Biotechnology, Stockholm, Sweden.
46. "Opportunities for high-throughput technologies in structural and functional genomics using synchrotron radiation", SSRL workshop on structural genomics using non-crystallographic methods, Stanford, CA.
47. "Ultra-high resolution in crystallographic studies to investigate protein intermediates", New England Biolabs, Beverley, MA
48. "High-throughput Structural Biology Using Synchrotron Radiation", Invited lecture at the annual meeting of the American Crystallographic Association 2001, Los Angeles, CA
49. "Structural Genomics within the framework of the Joint Center for Structural Genomics", 12th Annual Conference of the World Molecular Engineering Network, San Jose del Cabo, Mexico.

2002:

50. International Structural Genomics Meeting, Berlin, Germany, October 2002
51. Biocat, International Conference on Biocatalysis in Hamburg, Germany, July 2002
52. From Genes to Drugs, Study Institute Erice, Sicily, May 2002
53. Protein Interaction Workshop, Singapore, June 2002
54. Network Learning 2002, Berlin, May 2002
55. NPACI All Hands Meeting, San Diego, March 2002
56. LabAutomation 2002, Palm Springs, USA, January 2002
57. University of Virginia, Medical School; January 2002
58. "Structural Molecular Biology Resource at SSRL", San Diego Structural Biology Forum, San Diego, California
59. "High throughput diffraction data collection environment at SSRL", Workshop on Hihg-throughput Structural Biology, ESRF, Grenoble, France.

60. **2003:**
61. "Proteomics Discovery through miniaturization and parallelization" Labautomation 2003, Palm Springs, USA.
62. "Generic Detection of Biomolecular Interactions" World Molecular Engineering Network Fourteenth Annual Meeting on Structural Biology, San Jose del Cabo, May 2003.
63. "Data centric experimentation and data standards", EBI Workshop, London, UK.
64. "Biophysical Characterization in Structural Proteomics", Oxford University, May 2003.
65. Data Centric Experimentation in Structural Biology" American Crystallographic Association, July 2003.
66. "From Printing to Revolutionizing Cancer Therapy and Cancer Discovery" PARC Forum, Palo Alto, CA, June 2003.

67. **2004:**
68. Structural Genomics, Keystone Symposia 2004, Snowbird, UT. April 13-19, 2004.
69. "High Throughput X-ray &B Genomics", Novozymes R&D Technology Conference, Copenhagen. April 23, 2004,

70. "High-throughput Biophysical Methods in Structural Proteomics and Drug Discovery", Drug Research Academy, Danish University of Pharmaceutical Sciences, Copenhagen. April 26-30, 2004.
71. "Understanding and Modulating Protein-Protein Interactions using biophysics and tool compounds", European Structural Biology Forum, Amsterdam. June 3-4, 2004.
72. "Biophysical analysis in structural proteomics", Novartis Institutes of BioMedical Research, Basel. July 21-22, 2004
73. Speaker in Structure Proteomics Session, HUPO 3rd Annual World Congress, Beijing, China. October 25-27, 2004.

2005:

74. "Small-scale biophysical analysis in biomedical structural proteomics", University of Utah, Salt Lake City, February 2005.
75. "Enthalpy Arrays, a small-scale biophysical analysis tool", ScreenTech Conference, San Diego, CA, March 2005.
76. "Microcapillaries and in-situ diffraction data collection" American Crystallographic Association, May 2005.
77. "Testing new drugs ex vivo – the potential of Circulating Tumor Cells", Peregrine Pharmaceuticals, Los Angeles, CA, July 2005.
78. "Circulating Tumor Cell Detection", Cell Signaling Technologies, Beverly, MA, August 2005.
79. "Enabling technologies for the characterization of protein interactions and protein function". The 10th Annual European Conference on Micro and Nanoscale Technologies for the Biosciences Montreux, Switzerland, November 15-17, 2005.
80. "Modulating Protein Protein Interactions", Novartis Institutes for Biomedical Research, Basel, CH, November 2005.

2006:

81. Plenary Keynote address- "Large scale, rapid proteomics of biodefense-related pathogens". Fourth ASM Biodefense Meeting, Washington, D.C., February 15-18, 2006.
82. "Structural and functional proteomics of SARS coronavirus". International Workshop on Discovery of Antiviral Compounds, Lubeck, Germany, April 26-29, 2006.
83. "Structure determination of membrane proteins". 2006 Gordon Research Conference, Diffraction Methods in Structural Biology, Lewiston, Maine July 16-21, 2006.
84. "The FSPS – Functional and structural proteomics of SARS CoV related proteins". International Conference on Structural Genomics, Beijing, China, October 22-26, 2006.
85. "Business Value Launch with Steve Ballmer at the NASDAQ", New York City, November 30, 2007.

2007:

86. "Microsoft Vista for visualization of life sciences data", Launch tour 2007, Los Angeles, CA, January 27, 2007.
87. "C-ME: a small client to enable collaboration using a two- or three- dimensional contextual basis for annotations". Presented at the Data Integration and Management session. Association for Laboratory Automation 2007.
88. "Informatics for Health Care with Steve Ballmer", Keynote at HIMMS 2007, New Orleans, February 26, 2007

89. "Structural proteomics technologies for SARS CoV", DARPA Workshop on viral evolution, Arlington, March 27, 2007.
90. "Infectious Disease Structural Proteomics", Biochemistry Lecture Series, National University of Singapore, Singapore, April 27, 2007.
91. "Circulating Tumor Cells in Cancer Diagnosis and Prognosis"; Human Anatomy and Physiology Society Annual Meeting 2007, San Diego, CA, May 23, 2007.
92. "Structure based drug design using laboratory-based synchrotron radiation" Workshop on synchrotron radiation applications, Technical University Graz, Austria, June 3, 2007
93. "The Next Generation in Structure Based Drug Design", Pfizer Pharmaceuticals, San Diego, CA, August 2007.
94. "Characterizing Circulating Tumor Cells", 3rd International Conference on Minimal Residual Disease, Hamburg, Germany, September 2007.
95. "The Future of Molecular System Biology", Defining the Next Decade of the European Research Agenda, Florence, Italy, October 2007.

2008:

96. "Proteomic analysis of nsp3, a multifunctional 1922 amino acid polypeptide in SARS CoV" Structural Genomics and its Applications to Chemistry, Biology, and Medicine; Keystone Symposia, January 2008
97. "Viral Structural Proteomics", University of California Irvine, April 2008
98. "Eph-ephrin interaction – what effects drugability of a protein-protein interface", Eph-ephrins and Cancer Conference, Winston Salem, NC, June 2008.
99. "Circulating Tumor Cells in Human Blood - a point of entry for cancer diagnosis, prognosis and therapy management", Netherlands Cancer Institute, Amsterdam, June 2008
100. Gordon Conference on X-ray Diffraction, Bates College, July 2008

2009:

101. "Fluid biopsies and the credentialing of circulating tumor cells", NCI, NIH Washington DC, January 22, 2009.
102. **"**Structural Insights into Virus Biology", University of Leeds, UK, April 1-2, 200.
103. "Circulating Tumor Cells", Research Opportunities at the Intersection of the Physical and Engineering Sciences and Cancer Biology, NSF CMMI Research and Innovation Conference, Honolulu, HI, June 23, 2009.
104. "Credentialing of Circulating Tumor Cells – making the connection between the primary and metastatic tumor", Athens, Greece, September 16-19, 2009
105. "The Incidence and Prognostic Significance of Circulating Tumor Cells in Non-Small Cell Lung Cancer" 2009 NCI Translational Science Meeting (TSM 2), Vienna, VA, November 5-7, 2009

2010:

106. Panelist, The Grand Challenges Session – Cancer Therapy Personalized, 22nd Annual CSU Biotechnology Symposium, California State University, January 9, 2010.
107. "Detection and Analysis of Circulating Tumor Cells" ASME 2010 First Global Congress on Nano- Engineering for Medicine and Biology, Houston, TX, February 7-10, 2010.
108. "Circulating Tumor Cells in the Peripheral Blood: The Third Cancer Microenvironment", Miami 2010 Winter Symposium Targeting Cancer Invasion and Metastasis, Miami, Florida, February 21-24, 2010.

109. **"**Circulating Tumor Cells in the Peripheral Blood", University of California, San Francisco, CA, May 17, 2010.
110. "Fluid phase biopsy in solid tumors", Grand Rounds, The Robert M. Nakamura Lectureship, Scripps Green Hospital, La Jolla, CA, June 16, 2010.
111. "Fluid Phase Biopsy in Solid Tumor", USC – Physical Sciences in Oncology Center, University of Southern California, June 18, 2010.
112. "Enrichment Free CTC Identification", NIH/FDA/Pharma Biomarker Consortium workshop on qualification and validation of CTC assays, Bethesda, MD, June 2010.
113. **"**Fluid phase biopsy in solid tumors**",** 2010 EMI2010 Engineering Mechanics Institute 2010, USC Viterbi School of Engineering, Los Angeles, CA, August 8-11, 2010.
114. "Fluid phase of solid tumors, circulating cells in high definition", AACR Special Conference in Molecular Diagnostics in Cancer Therapeutic Development: Challenges and New Horizons, Plenary Session 2: Minimally invasive Access to Tumors, Denver, CO, September 27-30, 2010.
115. "Fluid Biopsy of Solid Tumors", Crump Institute of Molecular Imaging and the Jonsson Comprehensive Cancer Center, Los Angeles, CA, November 15, 2010.
116. "High-Definition Circulating Tumor Cells in Carcinoma Patients", NCI Special Working Group in Prostate Cancer Drug Discovery, December 6-7, 2010.

2011:

117. "The biophysics of the metastatic cascade in cancer patients – a new approach to personalized medicine**"**, Center for Theoretical Biological Physics (CTBP), UC San Diego and Salk Institute, La Jolla, CA January 7, 2011.
118. "HD-CTCs, the fluid biopsy of solid tumors", Workshop: Circulating Tumor Cells, The Lorentz Center, Leiden, The Netherlands, February 7-11, 2011.
119. "Morphologic and Morphometric Characterization of Circulating Tumor Cells in Carcinoma Patients", Circulating Tumor Cells: For Cancer Detection, Diagnosis, Prognosis, and Treatment, Molecular Med TRI-CON, San Francisco, CA, February 23-25, 2011.
120. **"**High definition circulating tumor cells in carcinoma patients", Keystone Symposia: Stem Cells, Cancer and Metastasis, Keystone, CO, March 6-11, 2011.
121. "HD CTCs", Invasion: how cancer cells spread around the body?, Cancer Forum: Workshop on Cancer Cell Motility and Metastasis, ASU, Tempe, AZ, May 19-20, 2011.
122. "The Fluid Phase of Solid Tumors" 3rd World Circulating Tumor Cells Summit 2011, San Diego, CA, November 8-10, 2011.
123. "The Fluid Phase of Solid Tumors: Understanding the Travel Mechanism of Cancer", Integrated Biological Systems, STSI, San Diego, CA, November 17, 2011.

2012:

124. "Fluid Phase Biopsy of Solid Tumors", Keynote Speaker, Select Biosciences: Circulating Tumor Cells 2012, San Diego, CA, February 2-3, 2012.
125. "Fluid Biopsy in Solid Tumors: HD-CTCs in therapy management of cancer patients," Invited Speaker, Chinese Academy of Medical Sciences, Shanghai, China, February 20, 2012
126. "Fluid Biopsy in Solid Tumors: HD-CTCs in therapy management of cancer patients," China Anti-cancer Association, Beijing, China, February 21, 2012
127. "Fluid Biopsy in Solid Tumors: HD-CTCs in therapy management of cancer patients," Beijing Cancer Hospital, Beijing, China, February 22, 2012

128. "Fluid Biopsy in Solid Tumors: HD-CTCs in therapy management of cancer patients," China PLA Navy General Hospital, Beijing, China, February 22, 2012
129. "Fluid Biopsy in Solid Tumors: HD-CTCs in therapy management of cancer patients," Shanghai Jiaotong University, Shanghai, China, February 23, 2012
130. "Fluid Biopsy in Solid Tumors: HD-CTCs in therapy management of cancer patients," Shanghai Institute of Material Medica, Shanghai, China, February 24, 2012
131. "The Fluid Phase of Solid Tumors: real-time access to cancer in individual patients", American Physical Society, Boston, MA, February 27 – March 2, 2012
132. "Personalized Medicine and Individual Cancer Care, it is a data problem", Strata Conference, Making Data Work, O'Reilly, Santa Clara, CA, February 28-March 1, 2012
133. "Fluid Phase Biopsy of Solid Tumors", CIHR Strategic Training Program in Cancer Research and Technology Transfer (CaRTT), Ontario, Canada, March 14-15, 2012
134. "The Fluid Biopsy of Solid Tumors, how circulating tumor cells can shed light on cancer development in individual patients", Deutsches Krebsforschungszentrum in der Helmholtz-Gemeinschaft, Germany, March 21, 2012
135. "Fluid Phase of Solid Tumors", 22nd annual meeting on Structural Biology, CABO XXII, Kuhn, San Jose del Cabo, Mexico, May 6-10, 2012
136. "Fluid Biopsy in Solid Tumors, how HD-CTCs can provide real-time drug response and stratification", Work in Progress Seminar, Weill Cornell Medical Center, Hematology and Medical Oncology, New Yor, NY, June 13, 2012
137. "Fluid Biopsy in Solid Tumors, how HD-CTCs can provide real-time insights into cancer", TechConnect World Conference and Expo, Kuhn, Santa Clara, CA, June 18-21, 2012
138. "Fluid Phase Biopsy in Heart Attack Fluid Biopsy in Solid Tumors, how HD-CTCs can provide real-time drug response and stratification Patients", Next Generation Dx Summit, Washington, DC, August 21 - 23, 2012.
139. "Fluid Biopsy of Solid Tumors, a real-time window into cancer evolution in individual patient", Advances in Circulating Tumor Cells (ACTC): From Basic Research to Clinical Practice, Athens, Greece, September 26 –29, 2012.
140. "The Fluid Phase of Solid Tumors – What are the travel scenarios of cancer cells in patients?", Center for Cancer Nanotechnology Excellence (CCNE) 2012 Seminar Series, Stanford, CA, October 11, 2012.
141. "Total Fluid Biopsy in Prostate Cancer", Prostate Cancer Foundation, La Costa Resort, Carlsbad, CA, October 25-27, 2012.
142. "Fluid phase of solid tumors", ASU PSOC Seminar Series, Arizona State University, Tempe, AZ, November 1, 2012.
143. Speaker and Workshop Leader: "Fluid Biopsy of Solid Tumors: Its Many Uses in Clinical Research and Therapy Management", 6th World CTC USA, Boston, MA, November 12-15, 2012.
144. "Fluid Biopsy in Prostate Cancer Management", MD Anderson Cancer Center, Houston, TX, November 29, 2012.
145. "Heterogeneity of Circulating Tumor Cells", New Frontiers in Physical Sciences Oncology Symposium, National Institutes of Health, Bethesda, MD, December 10, 2012.

2013:

146. "Fluid Phase of Solid Tumors", Third Annual Circulating Tumor Cells: Future of Cancer Management, San Francisco, CA, February 13-15, 2013.

147. "How does cancer spread: cracking the time domain", Enabling Technologies for Cancer Research: Imaging and Diagnostics, Beverly, MA, March 4-5, 2013.
148. "The Fluid Phase of Solid Tumors", La Jolla Institute for Allergy and Immunology, La Jolla, CA, March 6, 2013.
149. "Personalizing Cancer Care", Frontiers in Science, La Jolla, CA, March 22, 2013.
150. "Techniques for Assessing Circulating Tumor Cells, Circulating DNA & microRNAs", Methods Workshop, American Association for Cancer Research (AACR), Chicago, IL, April 6-10, 2013.
151. "Personalized Cancer Care: Single Cell Biology and Clinical Decision Making", Mike Shuler, Chair, Department of Biomedical Engineering, Cornell University, Ithaca, NY, April 10- 11, 2013.
152. Panel Discussion: Innovation Imperative, Slovakia's Future, International Forum, Bratislava, Slovak Republic, April 24-26, 2013.
153. "Dual MEK/EGFR inhibition for advanced, chemotherapy-refractory pancreatic cancer: A multicenter phase II trial of selumetinib (AZD6244; ARRY-142886) plus erlotinib" (poster), American Society of Clinical Oncology, Chicago, IL, May 31- June 4, 2013.
154. "High content single cell analysis and in-vivo imaging: dual modality diagnostic concepts ", UCSF Breast Oncology Program Seminar, San Francisco, CA, June 19, 2013.
155. "Quantifying Tumor Heterogeneity by Single Cell Phenotype and Genotype Analysis in Patients with Prostate Cancer", Cancer Therapeutics 2013: From Bench to Bedside, 7th Annual Frontiers of Clinical Investigation Symposium, La Jolla, CA, November 4-6, 2013.

2014:

156. Invited Speaker, National Biomarker Development Alliance (NBDA) Workshop IV: Challenging Dogma: creating a New Generation of Efficacious Biomarker-Driven Clinical Trials, Scottsdale, AZ, February 3-4, 2014.
157. Invited Speaker: High Content Single Cell Analysis, Tri Conference, San Francisco, CA, February 2014.
158. Invited Speaker: High-Content Analysis of Patient Circulating Tumor Cells to Improve Cancer Care, AAAS 2014 Annual Meeting.
159. Invited Speaker, Science at Clinical Inflection Points, Society of Toxicology, Phoenix, AZ, March 2014.
160. Invited Speaker: Single Cell Analysis of the tumor, AACR, San Diego, CA, April 5-9, 2014.
161. Chair, Methods Workshops, Topic: "Studying Intratimoral Heterogeneity." AACR, San Diego, April 5-9, 2014.
162. Plenary Lecture: High Content Single Cell Analysis in Patients with Cancer, Experimental Biology Annual Meeting, San Diego, CA, May 2014.
163. Plenary Lecture: Cytometry in Cancer; Cyto 2014, Fort Lauderdale, FL, May 2014
164. Invited Lecture: High Content Single Cell Analysis in Patients with Cancer, Cancer Research UK, Manchester, UK, May 2014.
165. Invited Keynote: Fluid Biopsy in Solid Tumors, 3rd International Personalized Medicine Conference, Prague, Czech Republic, June 2014.
166. Plenary Lecture: Cancer Stem Cells, NCRM Annual Meeting, Cleveland, OH, August 2014.
167. Invited Speaker, 2nd International Symposium on Advances in Circulating Tumor Cells (ACTC): From Basic Research to Clinical Practice, Crete, Greece, October 8-11, 2014.
168. Plenary Lecture, National Cancer Research Institute, Liverpool, UK, November 2-5, 2014

2015:

169. Dean's Lecture: "Convergent Science: Life Sciences and engineering in Oncology", Peter Kuhn USC, Los Angeles, CA, January 26, 2015,
170. Speaker and host for "Spatiotemporal Dynamics of Single Cell Trafficking" USC, Los Angeles, CA, February 20-21, 2015.
171. Invited Speaker for SSP Advocates, Special Interest Session, "CTCs- The Current State of the Art and Current State of the Clinic in Circulating Tumor Cell Liquid Biopsies", AACR Annual Meeting, Philadelphia, PA, April 18-22, 2015.
172. Speaker and host for "Night at the Lab, for Metastatic breast cancer survivors, family and friends other participants: James Hicks and Jorge Nieva. USC, Dornsife, May 25, 2015,
173. Invited Speaker for Quantitative Biology: from Molecules to Man. Conference with the New York Academies of Science, NYAS, New York City, NY, June 18, 2015.
174. Invited Speaker to the 2015 Coffey-Holden Prostate Cancer Academy Meeting, Multidisciplinary Intervention of early, lethal, metastatic prostate cancer. Talk presented "High-Content Single Cell Analysis to Understand Happenings in the Microenvironment", La Jolla, CA, June 25-28, 2015.
175. Invited Speaker to present "Rare Cell Biology in Cancer Care, Moffitt Cancer Center, Tampa FL, October 1-3, 2015.

2016:

176. Invited Speaker for Gordon Research Conference, Spatiotemporal Biology using the Liquid Biopsy, Stonehill College, Easton, MA, June 26-July 1, 2016.
177. Invited to join and participate at the Vice President Joe Biden and Dr. Jill Biden at the Cancer Moonshot Summit in Washington, D.C. on Wednesday, June 29, 2016 to bring together all sectors that have a role to play in making progress on the Cancer Moonshot goals to share new ideas and launch new collaborations and actions. As participants we were able to address provocative questions about how the entire cancer system currently operates and how individuals and organizations can take action to change the status quo to advance progress for patients with the goal of developing additional actions to be announced through the remainder of 2016 and beyond.
178. Invited Speaker2016 Gordon Research Conference on Rare Cells and other Tumor-derived Products in Circulation, talk presented, "Definition Single Cell Analysis (HD-SCA): a window into the spatiotemporal evolution of cancer in the patient". South Hadley MA, August 7-12, 2016.
179. Invited Speaker at the Liquid Biopsy Meeting, Walter Reed Medical Center, "Liquid biopsies and Genomics", Washington, DC, September 1, 2016.
180. Invited Speaker, Thomas Ashworth Lecture at the 3rd T Ashworth Symposium, "Liquid Biopsy", Sydney, Australia, September 21, 2016.
181. Invited Speaker to the ctDNA Workshop, talk presented, "Liquid biopsies and Genomics" NCI Shady Grove, Rockville, MD, September 29-30, 2016.
182. Exhibit/Participate in South by South Lawn: A White House Festival of Ideas, Art and Action to "Showcase AtomHP", Washington DC, October 1, 2016. Exhibited project called Analytical Technologies to Objectively Measure Human Performance (ATOM-HP). Our aim to provide doctors with real-time patient data from wearable technology and patient-reported experiences so that physicians can base their treatment decisions on objective measures rather than just subjective and episodic observations.

183. Invited Speaker for Xconomy's State of Biotech on the impact of the 21st Century Cures Act, December 6, 2016
184. Invited Speaker at the Renaissance Technologies and Simons Foundation, presented talk,"Math against Cancer", New York, NY, December 19, 2016.

2017:

185. Invited Speaker for the MD Anderson Prostate Cancer Moonshot Program , Symposium entitled, *Mechanisms of Castration Resistance and Metastasis in Prostate Cancer, title of talk* "Quantifying Heterogeneity: Single Cell Proteogenomics on Cells from the Solid and Liquid Phases of Prostate Cancer", The University of Texas MD Anderson Cancer Center, January 13-14, 2017.
186. Invited Keynote Speaker at the 10th Anniversary International Symposium: Multi-scale approaches to cancer biology, talk presented "Spatiotemporal evolution in cancer patients", Cancer Research UK Cambridge Institute, Cambridge UK March 2-3, 2017.
187. Invited Speaker at the Effective Therapy Strategies for Prostate Cancer by Developing a Predictive Model Conference, hosted by Dr. Christopher Logothetis, talk presented "Liquid Biopsies", Athens, Greece, March 6-7, 2017.
188. Peter Kuhn, hosted USC student 48-hour hackathon, "HackForHealth Let's Beat Cancer, TOGETHER", April 7-9, 2017. The Bridge@USC, USC Michelson Center for Convergent Bioscience California, Los Angeles, CA. Theme: Connecting with patients and oncologists to build innovative solutions through design and technology to improve the quality of life for cancer patients. Awards presented at closing ceremonies to 1st, 2nd and 3rd place teams.
189. Chaired, "Mathematical Oncology", Bridge@USC, USC Michelson Center for Convergent Bioscience, Los Angeles, CA. Workshop highlighted mathematical models for personalized patient care; machine and deep learning in cancer; computational opportunities in biological datasets. Convergent Participants: The Bridge@USC, USC Michelson Center for Convergent Bioscience, USC Dornsife; USC Institute of Urology, USC Norris Comprehensive Cancer Center; Aerospace and Mechanical Engineering, USC Viterbi; Computer Science and Integrated Media Systems Center, USC Dornsife; Molecular and Computational Biology, USC Dornsife; Translational Genomics, Keck School of Medicine; Preventive Medicine, Keck School of Medicine, USC Information Sciences Institute. May 24, 2017,
190. Co-Chair and Speaker to "Precision Diagnostics in Cancer Care", 1st Vietnam Multidisciplinary Oncology Conference, September 5-6, 2017. The 1st Vietnam Multidisciplinary Oncology Conference took place both in Hanoi and Ho Chi Minh City in September 2017 in order to create an opportunity for Doctors and Scientists in Vietnam to share knowledge, exchange experience, and collaborate with international Experts in order to improve the quality of treatment and prevention of cancer.
191. Co-Chair and Speaker, "CancerBase Ecosphere, Vietnam Oncology Patient Forum, Ho Chi Minh City, Vietnam. Connect health authorities, volunteer organizations, philanthropists, businesses and communities together for supporting cancer patients. September 8, 2017.
192. Panel Speaker, "Convergent Discovery, Personalized Medicine and the Birth of a Los Angeles Biotech Industry", USC Global Conference September 21-23, 2017, Grand Hyatt Tokyo, Japan. Exploring how to improve and enhance lives worldwide through various sectors including the sciences, humanities, engineering, medicine, entrepreneurship, the arts and entertainment. Other panel participants: Juan M. E. Harrison, Vice President, Head of Strategic Academic Alliances in the Center for External Innovation at Takeda Pharmaceuticals; Steve Kay, Director of

Convergent Biosciences, and Provost Professor of Neurology, Biomedical Engineering and Biological Sciences at the Keck School of Medicine, University of Southern California; Michael Meyers, Managing Director and Head of Investment Banking at T.R. Winston & Company.

193. Invited Speaker for the 2017 ACTC Rhodes, Greece, title of talk: No Cell Left Behind: Tracing the temporal evolution in cancer", Rodos Palace International Convention Center, October 4-7, 2017.
194. Cohosted with James Hicks the First Convergence Science Initiative-Cancer, Path to Implementation for Improved Outcomes (CSI-Cancer PATIO), USC Michelson Center, Los Angeles, CA, November 12, 1017. Presentations by guest speakers: Kelly Bethel of Scrips Clinic, La Jolla, CA; Indy Gill, USC-Keck; Niero Rajarubendra, USC-Keck.

2018:

195. Invited Speaker, Annual American Association for Cancer Research (AACR) 2018 Conference, SSP Special Interest Session: Liquid Biopsies, "Space and Time in Cancer", April 14-18, 2018, Chicago, IL
196. Invited Speaker for the NCI Esophagogastric Task Force, Gastroesophageal Carcinoma Immuno-Oncology, clinical Trials Planning Meting, National Cancer Institute, Biomarkers session, "Circulating Tumor Cells/blood assessment", May 21-22, 2018, Rockville, MD.
197. Invited Speaker, Annual American Society of Clinical Cancer (ASCO), June 1-6, 2018, Session: Next-Generation Diagnostics Beyond Tissue: "Noninvasive Biomarkers for Immunotherapy", June 6, 2018, Chicago IL.
198. **Opening Keynote**, Coffey-Holden Prostate Cancer Academy Meeting, Tumor Cell Heterogeneity and Resistance, "Diagnostic Approaches to Prostate Cancer Evolution", June 21-24, 2018, Prostate Cancer Foundation, Los Angeles.
199. Invited Speaker, European Society for Medical Oncology (ESMO) 2018 Congress, "Early Lung Cancer Detection: Single Cell Proteogenomics in the Diagnostic Workup", October 19-23, 2018, Munich, Germany.

2019:

200. USC Norris Comprehensive Cancer Center, Genetic Epidemiology seminar, "Liquid Biopsy and single cell proteogenomics: From Technology innovation to clinical utility", January 8, 2019, Los Angeles, CA.
201. Women's Cancer Research Fund in LA & Breast Cancer Research Foundation, Beverly Wilshire Hotel, An Unforgettable Evening, "Liquid Biopsies in Breast Cancer", February 28, 2019, Los Angeles, CA. WCRF's signature fundraiser mobilized the Hollywood and entertainment community in support of breast cancer research.
202. **AACR Opening Plenary** "Physicist vs. Physician, Digitizing clinical assessment and using it for evidence-based prediction of outcomes". AACR Annual Meeting, March 29 – April 3, 2019, Atlanta, GA, USA.
203. Invited speaker, AACR Scientist Survivor Program "Liquid Biopsy: the future of precision medicine", AACR Annual Meeting, April 4th, Atlanta, GA, USA.
204. Early Detection Research Committee Meeting, Cancer Research UK, May 12-15, 2019. Dr. Kuhn is a member of this committee whose goal is to improve the clinical translation of Early Detection of cancer approaches.
205. International Advisory Board for Charles University Annual Meeting, May 27-28, 2019, Prague, Czech Republic. Dr. Kuhn is a member of the IAB for Charles University.

206. Amgen XGEVA Investigator Meeting June 10-14, 2019, Grenaa, Denmark. Dr. Kuhn participated in this investigator meeting whose project goal is to establish the level of predictability of medication related osteonecrosis of the jaw (ONJ) for individual patients through academic-industry collaborations.
207. "Physicist vs. Physician: A Convergent Approach to Evidence Based Medicine", The Saban Research Building Auditorium, Children's Hospital Los Angeles August 9, 2019, Drs. Peter Kuhn, Jorge Nieva and Yves DeClerck moderated. Through an interactive presentation, this workshop illustrated the power of a transdisciplinary approach that unites the laboratory and the clinic, in bringing the next decade of discoveries to patients in the fastest way possible. This workshop targeted a broad audience of faculty members, researchers, and clinicians, pre-and post-doctoral trainees and other health care professionals.
208. "Broadening Convergent Bioscience Research at USC", USC Viterbi School of Engineering August 12, 2019. Dr. Kuhn presented amongst others: Dean Yannis Yortsos, Scott Fraser, David Agus, Eva Kanso, Urbashi Mitra, Christoph Haselwandter presented discussions on convergent bioscience and next steps.
209. Invited speaker, 78th Annual Meeting of the JCA-AACR Joint Session, "Liquid Biopsies", Kyoto, Japan, October 24-26, 2019.
210. Invited speaker, 4th ACTC: Advances in Circulating Tumor cells, Liquid Biopsy: Latest Advances and Future Challenges, "Liquid Biopsies", Corfu, Greece, October 2-5, 2019. Dr. Kuhn Chaired Plenary Lecture Session 5, "Liquid Biopsy: Recent Progress in Lung Cancer" on Day 2, October 3, 2019; and presented, "Mathematical oncology to integrate clinical and liquid biopsy data for the prediction of survival" on Day 3, October 4, 2019.
211. Breast Cancer Research Foundation in New York City, October 16-17, 2019. Annual Scientific Retreat, Doctors Reception & Dinner, and Symposium & Luncheon. The annual event recognized more than 300 BCRF-funded scientists from around the world who are devoted to ending breast cancer through groundbreaking research.
212. 26th Annual Prostate Cancer Foundation Scientific Retreat, October 24-26, 2019, Omni La Costa Resort, Carlsbad, CA. Poster presentation, "Genomic Characterization of Circulating Tumor Cells in De Novo Metastatic Prostate Cancer". Conclusions: This study aims at characterizing changes induced by systemic therapies in CTC potential biomarkers that identify distinct subsets of disease biology. The changes observed in patient subsets may serve as clinically relevant biomarkers to optimize treatment and improve prognosis.
213. Annual Adelson Medical Research Foundation, Las Vegas, NV, November 12-15, 2019, The Dr. Miriam and Sheldon G. Adelson Medical Research Foundation (AMRF), is a private foundation funding collaborative translational science, for three-year awards that support seven biomedical researchers conducting translational research in multiple myeloma at four leading academic institutions across the U.S. Meeting focused milestones to date. Dr. Kuhn is receiving ongoing funding for a collaborative project, "Measuring and Predicting the Evolution of Multiple Myeloma".
214. Ambassadors of the Future, 3rd Annual Gala, Beverly Wilshire Hotel, November 20, 2019 Los Angeles, CA. Dr. Kuhn presented keynote address for this charity foundation raises funds for scholarships for the international education of intellectually gifted but financially challenged students. Over the course of the last two years they have helped about 30 students fulfill their potentials and reach their dreams of studying abroad. Since last year the foundation established a scholarship for USC Dornsife as well as for 5 students/year (Ambassadors of the Future Scholarship at USC).

215. California Institute for Regenerative Medicine, (CIRM) Kick-off Meeting at CIRM Headquarters Oakland, CA, December 4-5, 2019. Project Title: LIN2-11574: Phase I study of chimeric antigen receptor engineered stem/memory T cells for the treatment of HER2+ brain metastases. CIRM CLIN2 $9.28 million dollar grant to Saul Priceman, City of Hope to conduct a clinical trial for the treatment of breast cancer related brain metastases, which are tumors in the brain that have spread from the original site of the breast cancer. Dr. Kuhn is a collaborator on this project.

2020:

216. Cancer Center Grand Rounds Cedars-Sinai Cancer, Los Angeles, CA, January 22, 2020. "*MultiOmics, single cell science, liquid biopsy and mathematics for survival predictions in cancer"*, Peter Kuhn.
217. Distinguished Ophthalmology Lecture Series, USC Roski Eye Institute, Keck School of Medicine, February 25, 2020, *Physicians & physicists: A new paradigm to advance patient centric cancer research*", Peter Kuhn.
218. USC Viterbi, Center for Cyber-Physical Systems and the Internet of Things, April 3, 2020, CCI virtual mini-workshop with USC researchers and faculty on how digital technologies can play a role in understanding, monitoring and combatting COVID-19. Dr. Kuhn participated in Session 1: Data collection, Mobile apps, IoT and Social Media Analytics
219. USC Viterbi, AI For COVID-19 in LA Symposium, May 8, 2020. Dr. Kuhn presented "Emerging question in COVID-19 that need data science and computer science driven answers.
220. USC Viterbi Webinar Series, May 22, 2020, "Digital Technologies for COVID-19". Dr. Kuhn discussed healthcare restart requirements. He joined Dr. Cyrus Shahabi, USC Computer Science, who discussed contact mapping and risk analysis.
221. Cancer Center Grand Rounds, Mayo Clinic Cancer Center, August 6, 2020. *Precisions Oncology: precision diagnostics and precision health with mathematics to achieve single patient resolution.*
222. Breast Cancer Research Foundation Symposium, October 15, 2020. *Post-outbreak breast cancer research: Bridging the gap(s) to enable the continuity of care.*
223. Komen Foundation, October 27, 2020, *Liquid Biopsy: Bridging the Gap to enable the continuity of care.*

2021:

224. Cancer Center Grand Rounds, City of Hope Comprehensive Cancer Center, Virtual Seminar, January 18, 2021, *MultiOmics, Single Cell Science, Liquid Biopsy and Mathematics for Survival Predictions.*
225. Molecular Med Tri-Conference & Expo, February 17, 2021. *Comprehensive Liquid Biopsy: Integrating CTCs and cell-free DNA.*
226. USC Brain Tumor Center, February 19, 2021. *Liquid Biopsy Using Peripheral Blood and Cerebral Spinal Fluid in Brain Metastatic Disease.*
227. USC Information Sciences Institute, AI Futures Symposium on Artificial Intelligence and Data Science, May 3-5, 2021. *Panel II: Health.*

2022:

228. USC Dornsife Dialogues: COVID-Future Evolution, January 19, 2022. Panel discussion with Dr. Kuhn, Dr. Paula Cannon and Sarah Van Orman on future variations of COVID-19.
229. Announcement on the Cancer Moonshot, The White House, Washington D.C., February 2, 2022.

230. Department of Defense CDMRP PRCRP. Drs. Theodorescu and Kuhn presented to DoD leadership on developing a convergent science research portfolio.
231. 29th International Molecular & Precision Med Tri-Conference, February 21-23, 2022. *Comprehensive cancer profiling with a next-generation liquid biopsy.*
232. USC Ostrow Research Day, March 23, 2022. Keynote speaker, *Improving the lives of patients through science*
233. California Life Sciences: Cancer Moonshot – California Life Sciences' Mission Critical Role in Defeating Cancer, August 16, 2022. Participated in *An Evening with Thought Leaders.*
234. Future Vision Foundation: Forum, Human Centric Computing in Ophthalmology, October 31, 2022. Nominated to be a faculty participant and speaker at the inaugural forum.
235. Cancer Research UK Lung Cancer Conference, November 15-17, 2022. Presented *Augmented intelligence and augmented learning to improve patient outcomes,* during session, Informatics and technology approaches to lung cancer diagnosis and treatment.

2023:

236. 22nd Precision Medicine World Conference 2023 Silicon Valley, January 25-27, 2023. Panel discussion: Challenges in Providing Global Access to Precision Health
237. Women's Cancer Research Fund – BCRF, An Unforgettable Night, March 15, 2023. Research keynote speaker.
238. **AACR Plenary:** American Association for Cancer Research, Orlando, FL, April 14-19, 2023. Chair of plenary session, *Early Detection and Interception of Cancer*.
239. AACR Presentation, *Oncosomes in the early stages of breast cancer*
240. 6th Advances in Circulating Tumor Cells, Skiathos, Greece, September 20-23, 2023. Presented *Early Breast Cancer Detection and Interception with the Multimodal Liquid Biopsy* and Chair of Plenary Lecture Session, Recent Advances in CTC Technologies

Supervision of Postdoctoral Fellows & Scientific Lab Members

Past Trainees

1. Dr. Irimpan Mathews, Staff Scientist, 2000 - 2002; *Now: Staff Scientist, Stanford University*
2. Dr. Guenter Wolf, Senior Scientific Software Developer, 2001 – 2002; *Now: SAP Basis Consultatnt, Germany*
3. Dr. Henry van den Bedem, Senior Scientific Software Developer, 2001 – 2002; *Now: Senior Staff Scientist, SLAC National Accelerator Laboratory, Stanford University*
4. Dr. Jeanette Hobbs, Postdoctoral Fellow, 2000 – 2002; *Now: NPD Manager, Business Development Manager, Quality Assurance, Molecular Dimensions, Cambridge, UK*
5. Mrs. Hillary Yu, Database Developer, 2001 – 2002
6. Mr. Kenneth Sharp, Scientific Software Developer, 2001 - 2002
7. Dr. Mitch Miller, Engineering Physicist, 2001 - 2002
8. Dr. Linda Brinen, Scientific Project Manager, 2001 – 2002; *Now Associate Professor in Pharmacology at UCSF, CA*
9. Dr. Fred Bertsch, Scientific Software Developer, 2000 – 2001; *Now: Software Developer at mutual fund analysis firm*
10. Dr. Ana Gonzalez, Staff Scientist, 2000 – 2002; *Now: Staff Scientist at BIOMAX at MAX IV Laboratory, Lund, Sweden*
11. Mr. Thomas Eriksson, Systems Developer, 2000 – 2002; *Now: Scientific Systems Administration, MAX IV Laboratory, San Francisco, CA*

12. Dr. Ashley Deacon, Staff Scientist, 1999 – 2002; *Now: Chief Scientific Officer, Accelero Biostructures, San Francisco, CA*
13. Mr. Scott McPhillips, Scientific Software Developer, 1999 – 2002; *Now: Application Software Developer, Stanford Synchrotron Radiation Laboratory, San Francisco, CA*
14. Ms. Limin Yang, scientific Software Developer, 1999 – 2002; Now: *Software Engineer* at startup company
15. Dr. Nicholas Sauter, staff scientist, *Now: Scientific Software Developer, CCI, Berkley*
16. Dr. Paul J. Ellis, Postdoctoral Fellow 1997 - 1999, *Now: Engineering Physicist at SSRL*
17. Dr. Timothy McPhillips, Senior Scientific Software Developer 1997 – 2002, *Now: Entrepreneur*
18. Dr. Kumar Saikatendu, Research Associate, 2004 – 2008, *Now: Director, Drug Discovery Sciences, Takeda Pharma*
19. Dr. Alexei Brooun, Scientific Associate, 2004 – 2007, *Now: Senior Director Protein Sciences, Erasca, San Diego, CA*
20. Dr. Jill E. Chrencik, Research Associate, 2004 - 2007, *Now: Principal Scientist, Merck, San Francisco*
21. Dr. Lindsay Kroener, Research Assistant, 2004 – 2005, *Now: Assistant Clinical Professor in Reproductive Endorinology and Infertility, UCLA*
22. Ms. Michelle Kraus, Research Assistant, 2005 – 2007, *Now: Scientist, Pfizer Pharmaceutical, San Diego, CA*
23. Ms. Sophie Coon, Research Programmer III, 2004 – 2007, *Now: Senior Manager Product Management, Illumina*
24. Dr. Nicole Lazarus, Research Associate, 2006 – 2008, *Now: Scientific Associate at PARC*
25. Dr. Jerome Dupuy, Research Associate, 2006 – 2008, *Now: Assistant Professor, Marseille-Luminy University.*
26. Dr. Maneesh Yadav, Graduate Student, 2004- 2007, *Now: Quantitative Research Analyst at Graham Capital Management, San Francisco, CA*
27. Dr. Dena Marrinucci, Graduate Student, 2004 – 2009; Scientific Associate, 2009 – 2010; *Now: Founder and VP of Truvivan Sciences*
28. Mr. Scott Foster, Research Assistant, 2004 – 2006; *Executive Director and Director of Coaching, Liverpool FC International Academy*
29. Ms. Christine Chen, Research Assistant, 2005 – 2006; *Now: graduate student, UCSB*
30. Mr. Enrique Rayon, 2005 Summer Intern; *Now; Managing Director, Global Product Management Fixation Procedures, NuVasive, San Diego, CA*
31. Ms. Sophie Daudenarde, Research Assistant, 2005 – 2009, *Now: Senior Product Manager, Convergence Group*
32. Mr. Peter Clark, Research Assistant I, 2006 – 2010; *Now: Professional Helicopter Pilot & Instructor, Helistream, San Diego, CA*
33. Mr. Matthew Leach, Research Assistant I, 2005 – 2007, *Now: Physician n Otolaryngology, United Medical Doctors, UC San Diego Health, Temecula, CA*
34. Ms. Vanitha Subramanian, Research Assistant I, 2004 – 2007; *Now: Scientist I, Novartis, Boston, MA*
35. Dr. Beili Wu, Research Associate, 2007 – 2011; *Now: Professor, Shanghai Institute of Materia Medica, CAS, Shanghai, P.R. China*
36. Dr. Jennifer Fisher, Oncology Research Fellow, 2007 – 2008; *Now: Oncologist, Scripps Health*
37. Ms. Theresa Tran, Research Intern 2007-2008; 2009 Summer Intern; *Now: UCSD, Junior year.*

38. Dr. Sumana Chandramouli, Research Associate, 2008 – 2009; *Now: Director & Research Program Leader, Moderna*
39. Dr. Edward Huynh, Oncology Research Fellow, 2008 – 2009; *Now: Oncologist, Sharp Rees-Stealy Medical Group*
40. Mr. Michael Malchiodi, Research Assistant, 2008 – 2011; *Now: Technical Support Scientist, Truvian*
41. Dr. Ethan Schram, Oncology Research Fellow, 2009-2010; *Now: Oncologist, Adventist Health St. Helena*
42. Dr. David Nelson, Visiting Investigator, 2009 – 2010; *Now: President and CEO, Splash Pharmaceuticals, Inc, San Diego, CA*
43. Dr. Xing Yang, Scientific Associate, 2009 – 2010; *Now:* VP of Technology, BioNanomatrix, Inc.
44. Dr. Marco Wendel, Research Associate, 2009 – 2011; *Now: Medical Strategy & Operations Lead, Bristol Myers Squibb*
45. Dr. Yelena Petrova, Research Associate, 2009 – 2011; *Now: Staff Biostatistician and SAS Programmer, Stattrials*
46. Mr. Devin Sok, Graduate Student, 2009 – 2010; *Now: Director of Antibody Discovery and Development, International AIDS Vaccine Initiative (IAVI), Scripps Research Institute*
47. Dr. Craig Yoshioka, Research Programmer, 2009 – 2011; *Now: Research Assistant Professor of Biomedical Engineering, Oregon Health & Science University*
48. Daniel Malinowski, 2010 Summer Intern, *Now: Freshman at Dartmouth College, Hannover, NH*
49. Dr. Melissa Torrey, Oncology Research Fellow, 2010 – 2011; *Now: Medical Oncologist, Scripps Clinic*
50. Meghana Bhimarao, 2011 Summer Intern; *Now: Consulting Data Analyst, Kaiser Permanente*
51. Ms. Meghana Honnatti, Research Assistant, 2010 – 2011; *Now: Senior Business Analyst, Epic Science, Inc.*
52. Dr. Edward Cho, Research Associate, 2010 – 2011; *Now, Head of Biologics Development, Detect, San Diego, CA*
53. Dr. Cromwell Cornillez-Ty, Staff Scientist, 2008 – 2011; *Now: Investment Advisor Representative, STEM Financial*
54. Ms. Loressa Uson, Research Assistant, 2010-2012; *Now: Government Relations Analyst, UC San Diego*
55. Ms. Rachelle Kareen Jessica Lamy, Research Assistant, 2010 – 2012; *Now: Clinical Laboratory Scientist, NeoGenomics Laboratories*
56. Ms. Magdalena Panetta, Summer Intern, 2012; *Now: Figure Skating Coach, Saint Paul, Minnesota*
57. Mr. Lawrence Allin, Research Assistant III, 2008 – 2012; *Now: Scientist, SAFC*
58. Mr. Daniel Lazar, Research Assistant, 2007 – 2012; *Now: Research Assistant, TSRI, Morris Lab.*
59. Mr. Thomas Metzner, Research Assistant, 2010 – 2012; *Now:, Medical Student, Pacific Northwest University of Health Sciences*
60. Dr. Jeremiah Joseph, Staff Scientist, 2003 – 2012; *Now:, Associate Director, Ferring Pharmaceuticals*
61. Dr. Garry Jason Forse, Research Associate, 2011 – 2013; *Now: Principal Scientist, Grifols Biologicals*
62. Ms. (Julia) Su Zhou Li, Research Assistant, 2011 – 2013; *Now: Postdoctoral Fellow, University of California, San Diego*

63. Dr. Mohsen Sabouri, Bioinformatics Analyst, 2011 – 2013; *Now: Director, Computational Biology, RAPT Therapeutics*
64. Janett Stoehr, Research Assistant Trainee, 2012 – 2013; *Now: Research Assistant, Garvan Institute of Medical Research, Sydney, Australia*
65. Newsha Sahaf, Research Assistant III, 2013 – 2014; *Now: In Vivo Study Resource Manager Scientist, Arrowhead Pharmaceuticals*
66. Nadia Ebrahim, Research Assistant, 2012 – 2014, *Now: Alliances Manager, Epic Sciences, San Diego, CA.*
67. Mr. Joshua Kunken, Bioinformatics Analyst, 2005 – 2014; *Now: Strategy & Innovation, Memorial Sloan Kettering Cancer Center*
68. Ms. Madelyn (Luttgen) McCormick, Research Assistant II, 2008 – 2014; *Now: Associate, Patent Litigation, Fish & Richardson P.C., San Diego, CA*
69. Dr. Michael McCormick, Research Associate, 2008 – 2013; *Now: Staff Scientist, Choate, Hall & Stewart LLP*
70. Dr. Vadim Cherezov, Assistant Professor, 2006 – 2013; *Now: Professor, The Bridge at USC, Dornsife College of Letters, Arts and Sciences*
71. Dr. Angel Ernesto Dago Rodriguez, Research Associate, 2010 – 2014; *Now: Scientist, Exact Sciences*
72. Dr. Jennifer Au, Scripps Clinical Fellow, 2013 – 2014; *Now: Transplant Hepatologist, Scripps Health, La Jolla, CA*
73. Dr. Edna Flores, Scripps Clinical Fellow, 2013 – 2014; *Now: Medical Oncologist and Hematologist, Scripps Health, La Jolla, CA*
74. Dr. Zheng Topp, Scripps Clinical Fellow, 2013– 2014; *Now: Hematologist Oncologist, Baptist Health South Florida*
75. Dr. Aadel Chaudhuri, Professional Scientific Collaborator, 2013 – 2014; *Now: Assistant Professor of Radiation Oncology, Washington University School of Medicine in St. Louis*
76. Ms. Lan Zhou, Research Assistant, 2013 – 2015; *Now: Arizona State University, PhD Graduate Student, 2015 – present*
77. Dr. Luisa Fernandez Altuna, Research Associate, 2012 – 2014; *Now: Scientist, Epic Sciences, Inc.*
78. Ms. Yekaterina Kadyshevskaya, Research Assistant, Scripps Research Institute, 2009-2014; *Now: Technical Artist II, USC, 2014 – present*
79. Dr. Anand Kolatkar, Sr. Research Scientist, Scripps Research, 2004 – 2014; Sr. Research Scientist, *Now: Staff Scientist, USC Kuhn-Hicks Labs, 2014- present*
80. Dr. Carmen Ruiz Velasco, Postdoctoral Scholar - Research Associate, Scripps Research 2011 – 2014 and USC, 2014 – 2015; Staff Scientist, USC, 2015-2021. *Now: Scientist, Exact Sciences*
81. Dr. Michaela Miklikova, Exchange Postdoctoral Fellow, October 2015 – February 2016; *Now, Postdoctoral Fellow, Charles University in Prague*
82. Dr. Enrique Abola, Research Scientist (Staff), 2003 – 2014; *Now: Retired*
83. Dr. Fariborz Nasertorabi, Research Scientist, The Bridge, USC, 2014 – 2017; *Now: Director of Structural Biology Center, USC*
84. Dr. Anders Carlsson, Postdoctoral Scholar - Research Associate, 2012 – 2015; Research Scientist (Staff), 2015 – 2016; *Now: CEO, Bionamic, Lund, Sweden.*
85. Ms. Lisa Welter, Research Assistant, 2014 – 2015, PhD Molecular Biology Student, USC; *Now: Scientist, Takara*

86. Dr. Fredrika Carlsson, Postdoctoral Scholar - Research Associate, 2014 – 2016; *Now: Project Director, Synklino, Lund, Sweden.*
87. Christopher Koehler, Bridge Undergraduate Science (BUGS) Program-Student, 2016-2017; *Now: Medical Student, Warren Alpert Medical School, Brown University, Providence, Rhode Island.*
88. Dr. Sara Restrepo, Postdoctoral Scholar - Research Associate, USC, 2015 – 2017; *Now: Medical Affairs Manager, OM Pharma*
89. Dr. Mariam Rodriguez Lee, Research Associate, 2013 – 2013; Research Scientist (Staff), 2013 – 2018. *Now: Medical Affairs Consultant, 1798 Consultants*
90. Dr. Jeremy Mason, Postdoctoral Scholar - Research Associate, USC, 2013 – 2018; *Now: Assistant Professor of Research Urology, Keck School of Medicine, 2018 – present*
91. Dr. Anna Sundstrom-Gerdtsson, Postdoctoral Scholar - Research Associate, 2014 – 2018, *Now: Associate Senior Lecturer, Lund University, Sweden.*
92. Mr. Erik Gerdtsson, Research Lab Specialist, 2014 – 2018; *Now: Imaging Scientist, ImaGene-IT*
93. Dr. Jana-Aletta Thiele, Research Assistant, External 2018 PhD Graduate Student, Charles University, Prague, Czech Republic, 2014 – 2018; PhD 9/2018, *Now: Assistant Head of Production at Lyocontract GmbH*.
94. Ms. Serena Zheng, Student Researcher, Cancer Undergraduate Research Experience Program (CURE), 2015-2018; *Now: Medical Resident, David Geffen School of Medicine at UCLA*
95. Ms. Sophia Wix, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, 2015-2018; Fulbright Scholar to Cambridge UK 2018 - 2019; *Now: Medical Student, Texas Christian University and University of North Texas Health Science Centre School of Medicine*
96. Mr. Joseph Bae, Student Researcher, Cancer Undergraduate Research Experience Program (CURE) in the Kuhn-Hicks Labs, 2015-2018; *Now: Medical Student (MD-PhD), Stony Brook University on Long Island, New York.*
97. Mr. Michael Morikado, Student Researcher, Cancer Undergraduate Research Experience (CURE) Program Kuhn-Hicks Labs 2015 – 2019; *Now: Systems Integration Engineer/Scientist 2, Illumina*
98. Mr. Benjamin H. Ormseth, Student Researcher, Cancer Undergraduate Research Experience (CURE) Program Kuhn-Hicks Labs 2017 – 2018; Research Lab Technician II, USC 2018 – 2019; *Now: Medical Student, Ohio State University College of Medicine.*
99. Ms. Sujin Jeong, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2018 – 2019; *Now: Medical Student, UC Davis School of Medicine*
100. Ms. Preeya Katti, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs USC 2017 – 2019. *Now: Medical Student, St. George's University School of Medicine*
101. Mr. Rahul Masson, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2016 – 2019. *Now: Medical Student, Keck School of Medicine, USC*
102. Mr. Matthew Lin, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2016 – 2019. *Now: Medical Student, Keck School of Medicine, USC*
103. Mr. Dillon McKinley, BS Student, Biomedical Engineering, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2016 – 2019. *Now: Medical Student, University of Colorado Anschutz School of Medicine*

104. Ms. Divya Sripathy, BS Student, Biological Sciences, Student Researcher, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2017 – 2019. *Now: Technical Data Analyst, Intel Corporation*
105. Ms. Angela Chen, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2017 – 2019. *Now: Regulatory Affairs Associate, Mirati Therapeutics*
106. Mr. Ankur Rastogi, BS Student, Computer Science, Biomedical Engineering, Student Researcher, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2017 – 2019; *Now: Engineer, Retool*
107. Dr. Paymaneh Malihi, Research Assistant, PhD Graduate Student, USC, 2015 – 2019; *Now: Manager, Global Strategic Marketing, J&J Vision*
108. Dr. Varsha Sundaresan, Postdoctoral Scholar – Research Associate, USC, 2019 – 2019; *Now: Oncology Clinical Biomarker Lead, Takeda*
109. Dr. Mohan Singh, Sr. Research Associate, USC 2019 – 2019; *Now: Investigator: Imaging Mass Cytometry, GSK.*
110. Dr. Liya Xu, Postdoctoral Scholar – Research Associate, USC, 2014-2019; *Now: Assistant Professor of Research Ophthalmology, Children's Hospital Los Angles, USC Roski Eye Institute, Keck School of Medicine, USC.*
111. Dr. Stephanie Shishido, Postdoctoral Scholar – Research Associate, USC, 2015-2019; *Now: Research Scientist, USC.*
112. Ms. Kate Rappard, BS Student, Human Sciences, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2016-2019; Research Lab Technician II, USC 2020-2021. *Now: Research Associate, Acrivon Therapeutics, Inc.*
113. Ms. Kate Cunningham, BS Student, Quantitative Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs USC 2018 – 2020. *Now: Medical Student (MD-PhD), Columbia University Irving Medical Center*
114. Dr. Drahomir Kolencik, MD, Graduate Student Fulbright Scholar, USC-Charles University, 2019-2020 Fulbright Scholar. *Now: Medical Science Liaison, AstraZeneca*
115. Dr. Milind Pore, Postdoctoral Scholar – Research Associate, USC, 2015-2020; *Now: Scientist, Frederick National Laboratory for Cancer Research*
116. Mr. Daniel Liu, BS Student, Biochemistry, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2021. *Now: Associate Career Discovery Program, Amgen*
117. Dr. Peng (Patrick) Chen-Ching, USC-Taiwan Postdoctoral Fellowship, USC 2018 – 2020. *Now: Postdoctoral Scholar, CHLA*
118. Ms. Xiomara Villasenor, Research Associate, USC 2014 – 2021. *Now: Clinical Operations Project Manager, USC*
119. Mr. Paul Lanctot, Programmer, USC 2018 – 2021. *Now: Full-stack Developer, Debt Collective*
120. Ms. Ruu Hsu, Specialized Laboratory Technician, USC, 2019 – 2021. *Now: PhD Student, Baylor College, Graduate School of Biomedical Sciences*
121. Ms. Oliva Hart, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2022. *Now: Graduate Program, Medical Physiology, USC*
122. Mr. Ryan Storgard, BS Student, Biological Sciences, Student Researcher, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2017 – 2021. *Now: Medical Student, Weill Medical College of Cornell University*

123. Ms. Carlisle Maney, BS Student, Global Health, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2021. *Now: Clinical Data Analyst, Flatiron Health*
124. Mr. Sean Solomon BS Student, Mathematics, Economics, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2021. *Now: Medical Student, UC Irvine School of Medicine*
125. Mr. Kien Nguyen, PhD Graduate Student, Computer Science, USC, 2018 – 2021. *Now: Research Scientist, Meta Platforms, Inc.*
126. Ms. Maddie Walker, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2021. *Now: update pending*
127. Ms. Aidan Moriarty, PhD Graduate Student, Biomedical and Biological Sciences (PIBBS), USC, 2020 – 2021. *Now: PhD student, University of Maryland*
128. Ms. Tayebeh Hossein, Specialized Lab Technician, USC, 2021 – 2022.
129. Mr. Nicholas Matsumoto, Programmer Analyst II, USC, 2017 – 2022. *Now: Lead Programmer Analyst, Cedars-Sinai Department of Computational Biomedicine*
130. Mr. Joseph Larsen, PhD Graduate Candidate, Quantitative and Computational Biology, USC, 2016-2022. *Now: Department of Veterans Affairs, BD-STEP, Boston, MA.*
131. Mr. Shoujie Chai, PhD Graduate Student, Molecular Biology, USC, 2018 – 2022. *Now: Scientist, Grail*
132. Mr. Libere Ndacayisaba, PhD Graduate Candidate, Medical Biophysics (PIBBS), USC, 2018–2022. *Now: Senior Computational Biologist, Vitra Labs*
133. Mr. Cameron Baab, BS Student, Computer Science, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2018 – 2022. *Now: Software Engineer, Notable*
134. Ms. Arushi Agrawal, BS Student, Neuroscience, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2022. *Now: Medical Student, Keck School of Medicine, USC*
135. Mr. Sachin Narayan, BS Student, Biochemistry, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2022. *Now: Medical Student, Stanford University*
136. Mr. Mihir Kumar, BS Student, Health & Human Sciences, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2022. *Now: Analyst, Cornerstone Research*
137. Ms. Vera Hsu, BS Student, Biochemistry, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2022. *Now: Biostatistician, UCSF*
138. Mr. Eric Yang, BS Student, Quantitative Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2022. *Now: Analyst, Roivant Sciences*
139. Mr. Jaden Mullen, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2022. *Now: Graduate Program, USC*
140. Ms. Jena Tran, BS Student, Quantitative Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2022. *Now: Graduate Program, Quantitative Biology*
141. Mr. Rithik Rajani, BS Student, Computer Science, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2022. *Now: Software Engineer, Arena*
142. Mr. Aidan Plant, BS Student, Neuroscience, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2022. *Now: pending*

143. Mr. Nathan Kristanto, BS Student, Biomedical Engineering, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2022. *Now: Solutions Engineer, Deloitte*
144. Ms. Annie Amacker, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2022. *Now: Medical Student, Keck School of Medicine, USC*
145. Mr. Andrew Chen, BS Student, Biochemistry, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2022. *Now: Research Associate, City of Hope*
146. Mr. Hari Mellacheruvu, BS Student, Quantitative Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2022. *Now: Graduate Program, Quantitative Biology*
147. Mr. Alexander Hill, BS Student, Quantitative Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2022. *Now: PhD Student, UC Santa Cruz*
148. Ms. Amanda Hmelar, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2022. *Now: Field Clinical Representative, Cardiac Rhythm Management*
149. Mr. Samuel Lee, Specialized Lab Technician, USC, 2021 – 2022. *Now: pending*
150. Mr. Eduardo Ayala, Laboratory Manager, USC, 2021 – 2022. *Now: Biotechnology Instructor, El Camino College*
151. Ms. Sara Ma, Project Administrator, USC, 2018 – 2023. *Now: pending*
152. Dr. Rishvanth Kaliappan Prabakar, Postdoctoral Scholar, USC 2020 – 2023. *Now: Postdoctoral Scholar, Cold Springs Harbor Laboratory*
153. Dr. George Courcoubetis, Postdoctoral Scholar, USC 2021 – 2023. *Now: Research Associate, USC*
154. Mr. Dean Tessone, BS Student, Biological Sciences, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2019 – 2023. *Now: PhD Student, USC*
155. Mr. Salmaan Sayeed, BS Student, Computational Neuroscience, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2023. *Now: Research Associate, THANC Foundation*
156. Ms. Lily Bai, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2023. *Now: Medical Student, Vanderbilt University*
157. Ms. Carla Collier, BS Student, Biochemistry, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2023. *Now: Graduate Student, USC*
158. Ms. Audrey Limb, BS Student, Biochemistry, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2023. *Now: Medical Student, Albert Einstein College of Medicine*
159. Ms. Emmeline Lin, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2020 – 2023. *Now: pending*
160. Ms. Carli Kaleta, BS Student, Quantitative Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2021 – 2023. *Now: Analyst, Riovant Sciences*
161. Mr. Sankalp Mrutyunjaya, BS Student, Quantitative Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2021 – 2023. *Now: pending*
162. Ms. Maryam Setayesh, PhD Candidate, Molecular Biology, USC, 2020 – 2023. *Now: Investment Partner, Civilization Ventures*

Current Staff:

1. Dr. Anand Kolatkar, Staff Scientist, USC 2014 – present
   Funding Source: Grants
2. Mr. Rafael Nevarez, Research Programmer, USC, 2014 – present
   Funding Source: Grants
3. Dr. Stephanie Shishido, Staff Scientist, USC, 2022 – present
   Funding Source: Grants
4. Ms. Valerie Hennes, Research Lab Specialist, USC, 2019 – present
   Funding Source: Grants
5. Mr. Andres Rivera, Supervisor Research Lab Technician, USC, 2021 – present
   Funding Source: Grants
6. Mr. William Kim, Programmer Analyst II, USC, 2021 – present
   Funding Source: Grants
7. Ms. Avery Lin, Specialized Lab Technician, USC, 2022 – present
   Funding Source: Grants
8. Mr. Rajiv Nagaraju, Associate Data Scientist, USC, 2022 – present
   Funding Source: Grants
9. Dr. George Courcoubetis, Research Associate, USC, 2023 – present
   Funding Source: Grants
10. Dr. Mohamed Saleh, Staff Scientist, USC, 2023 – present
    Funding Source: Grants
11. Dr. Kahlen Ouyang, Research Associate, USC, 2023 – present
    Funding Source: Grants

Current Postdoctoral Fellows:

1. Dr. Liz Qi, Postdoctoral Scholar, USC, 2020 – present
   Funding Source: Grants and Gifts

Current Graduate Students:

1. Ms. Jiyoun Seo, PhD Graduate Student, Computational Biology and Bioinformatics, USC, 2018 – present
   Funding Source: Schlegel Family Fellowship, Institutional
2. Ms. Nikki Higa, PhD Candidate, Cancer Biology and Genomics, (PIBBS), USC 2019 – present
   Funding Source: Alan Joseph Endowed Fellowship; Grants
3. Mr. Amin Naghdloo, PhD Graduate Student, Mechanical Engineering, USC, 2020 – present
   Funding Source: Winnie and James Hart Endowed Fellowship, Grants
4. Mr. Michael Schmidt, PhD Candidate, Biomedical & Biological Sciences (PIBBS), USC, 2020 – present
   Funding Source: Grants
5. Ms. Doanna Pham, PhD Graduate Student, Molecular Biology, USC, 2022 – present
   Funding Source: Grants, Institutional
6. Ms. Mina Tolou Ghani, PhD Graduate Student, Molecular Biology, USC, 2022 – present
   Funding Source: Institutional
7. Mr. Dean Tessone, PhD Graduate Student, Molecular Biology, USC, 2023 – present
   Funding Source: Grants

Current Undergraduate Students:

1. Ms. Amy Huang, BS Student, Biological Sciences, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2021 - present
2. Mr. Emmett Liljegren, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2021 - present
3. Ms. Divya Suresh, BS Student, Biological Sciences, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2021 - present
4. Ms. Christina Chang, BS Student, Biochemistry, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2021 – present
5. Ms. Anya Shah, BS Student, Global Health, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2022 – present
6. Mr. Srikar Kollur, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2022 - present
7. Ms. Theresa Luo, BS Student, Biochemistry, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2022 - present
8. Ms. Amelia Marvit, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2022 - present
9. Ms. Monica Rodriguez, BS Student, Quantitative Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2022 - present
10. Ms. Kaelyn Cho, BS Student, Biomedical Engineering, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2022 - present
11. Mr. Andrew Udov, BS Student, Human Biology, Cancer Undergraduate Research Experience Program (CURE) Kuhn-Hicks Labs, USC 2022 – present