

Curriculum Vitae

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Place of Birth: New York, NY

Statement

The goal of my research program is to understand how renal cell carcinoma (RCC) develops at the molecular level and to translate our discoveries into advances in patient care. We have created a pipeline spanning from the genetics of the disease to the clinic. This pipeline is assembled on 5 pillars: (i) molecular genetics, (ii) signaling, (iii) drug identification, (iv) animal models, and (v) clinical trials (<http://www3.utsouthwestern.edu/brugarolaslab/>). In the 11 years of its existence, milestones have been reached in each area. (i) We have established the foundation for the first molecular genetic classification of sporadic clear-cell RCC (ccRCC, the most common type) (Pena-Llopis et al. *Nat Genet* 2012, Kapur et al. *Lancet Oncol* 2013, Joseph and Kapur et al. *J Urol* 2015), reported the first comprehensive genomic analysis of non-clear cell tumors (Durinck et al. *Nat Genet* 2015), identified the first ccRCC somatically-mutated gene that may predict for drug responsiveness (Kucejova et al. *Mol Can Res* 2011), and defined a novel familial renal cancer syndrome (Farley et al. *Mol Can Res* 2013). (ii) We characterized a feedback loop linking the two dominant signaling pathways (the VHL/HIF and mTORC1 pathways) (Kucejova et al. *Mol Can Res* 2011, Wolff et al. *Mol Cell Biol* 2011, Vega Rubin de Celis et al. *Biochem* 2010), identified a novel mTORC1 effector (Pena-Llopis et al. *EMBO J* 2011, Vega Rubin de Celis et al. *Autophagy* 2017), and established that HIF is sufficient to inhibit mitochondrial respiration *in vivo* (Kucejova et al. *Oncogene* 2011). (iii) We developed a broadly applicable chemical genetic screening platform to identify compounds synthetic lethal with genes mutated in RCC (Wolff et al. *Oncotarget* 2015), completed a 200,000 small molecule screen, and validated HIF-2 as a target in ccRCC (Chen et al. *Nature* 2016). (iv) We generated the first genetically-engineered mouse models that reproduce the mutations of human ccRCC (Wang et al. *PNAS* 2014; Gu et al. *Cancer Discovery* 2017) and the first animal model reproducing the drug

responsiveness of RCC in patients (Sivanand et al. *Sci Transl Med* 2012, Pavia-Jimenez et al. *Nat Protoc* 2014). (v) Finally, we explored, for the first time, the therapeutic potential of glycolysis inhibition in a patient with an unusual form of RCC resulting from a mutation disrupting fumarate hydratase (Yamasaki et al. *Nat Rev Urol* 2011), opened an investigator-initiated phase 2 clinical trial to probe into mechanisms of resistance to mTORC1 inhibitors and have spearheaded several clinical trials evaluating the role of stereotactic ablative body radiation therapy (SABR) in kidney cancer. Our research program has provided a foundation for an institutional Kidney Cancer Program (KCP; www.utsouthwestern.edu/kidneycancer), which is my privilege to lead. The KCP involves approximately 20 physicians and has over 60 affiliated laboratories. Our mission is to bring together the strengths of UT Southwestern in both basic research and clinical medicine to improve the lives of kidney cancer patients. Culminating this programmatic effort, a Specialized Program of Research Excellence (SPORE) grant application was awarded in 2016 (<http://www.utsouthwestern.edu/research/kidney-cancer/awards/index.html>). This is the second SPORE grant in kidney cancer since 1992, when the SPORE program began.

Education

Year	Degree (Honors)	Field of Study (Thesis advisor for PhDs)	Institution
1987-1993	M.D.	Medicine	University of Navarra Medical School, Spain
1993-1998	Ph.D.	Biology Mentor: Tyler Jacks, Ph.D.	Massachusetts Institute of Technology, USA

Postdoctoral Training

Year(s)	Titles	Specialty/Discipline (Lab PI for postdoc research)	Institution
1998-1999	Intern	Internal Medicine	Duke University Medical Center
1999-2001	Resident	Internal Medicine	Duke University Medical Center
2001-2003	Fellow	Medical Oncology	Dana-Farber Cancer Institute Brigham and Women's Hospital Massachusetts General Hospital
2002-2003	Postdoctoral Fellow	Mentor: William G. Kaelin, Jr., M.D.	Dana-Farber Cancer Institute

Faculty Academic Appointments

Year(s)	Academic Title	Department	Academic Institution
2003-2006	Instructor	Medicine	Harvard Medical School
2006-2013	Assistant Professor	Developmental Biology	UT Southwestern Medical Center
2006-2013	Assistant Professor	Internal Medicine, Hematology/Oncology	UT Southwestern Medical Center
2013-2015	Associate Professor with Tenure	Developmental Biology	UT Southwestern Medical Center

2013-present	Associate Professor with Tenure	Internal Medicine, Hematology/Oncology	UT Southwestern Medical Center
2017-present	Professor with Tenure	Internal Medicine, Hematology/Oncology	UT Southwestern Medical Center

Current Licensure and Certification

Licensure

Texas

Board and Other Certification

2001, Internal Medicine

2003 and 2013, Medical Oncology

Honors and Awards

Year	Name of Honor/Award	Awarding Organization
2003	Claudia Adams Barr Award in Innovative Basic Cancer Research	Dana-Farber Cancer Institute
2004	Young Investigator Award	Department of Medicine, Brigham and Women's Hospital, William Randolph Hearst Foundation
2006	Virginia Murchison Linthicum Endowed Scholar in Medical Research	UT Southwestern Medical Center
2007	Basil O'Connor Starter Scholar Research Award	March of Dimes Foundation
2007	Clinical Scientist Development Award	Doris Duke Charitable Foundation
2007	V Scholar Award	The V Foundation for Cancer Research
2008	Research Scholar Award	American Cancer Society
2013	Member Elect	American Society for Clinical Investigation
2017	Sherry Wigley Crow Endowed Chair in Cancer Research in Honor of Robert Lewis Kirby, M.D.	UT Southwestern Medical Center

Appointments at Hospitals/Affiliated Institutions

<u>Past</u>			
Year(s)	Position/Title	Department/Division	Institution
2003-2006	Staff Physician	Internal Medicine, Hematology/Oncology	Dana-Farber Cancer Institute

2004-2006	Affiliate Physician	Internal Medicine, Hematology/Oncology	Brigham and Women's Hospital
<u>Current</u>			
Year(s)	Position/Title	Department/Division	Institution
2006-present	Active Medical Staff	Internal Medicine, Hematology/Oncology	UT Southwestern University Hospital - Zale Lipshy
2006-2014	Active Medical Staff	Internal Medicine, Hematology/Oncology	UT Southwestern University Hospital - St. Paul
2006-2014	Active Medical Staff	Internal Medicine, Hematology/Oncology	Parkland Health & Hospital System
2014-present	Active Medical Staff	Internal Medicine, Hematology/Oncology	UT Southwestern Clements University Hospital

Other Professional Positions

Year(s)	Position Title	Institution
2013-present	Chair, Scientific Advisory Board	Bethyl Laboratories

Administrative/Leadership Positions

Year(s)	Position/Title	Institution
2008-present	Director, Renal Cell Carcinoma Tumor Board	Harold C. Simmons Comprehensive Cancer Center, UT Southwestern Medical Center
2011-2014	Co-Leader, Cancer Cell Networks Scientific Program	Harold C. Simmons Comprehensive Cancer Center, UT Southwestern Medical Center
2012-present	Organizer, Physician/Scientist Laboratory-based Cancer-focused Faculty Seminar Series	Harold C. Simmons Comprehensive Cancer Center, UT Southwestern Medical Center
2013-present	Founding Director, Kidney Cancer Program	Harold C. Simmons Comprehensive Cancer Center, UT Southwestern Medical Center
2016-present	Member, Renal Task Force, Scientific Steering Committee for NCI Clinical Trials Enterprise	National Cancer Institute
2017-present	Chair, Vision Setting and Integration Panel	Congressionally Directed Medical Research Program – Kidney Cancer Research Program

Committee Service

Year(s)	Name of Committee	Institution/Organization
2013	Clinical Trial Planning Meeting	Renal Cancer Task Force, National Cancer Institute
2013	External Advisory Board, Kidney Cancer SPORE Planning Program	MD Anderson Cancer Center
2014	GU Program Advisory Board Member	Roswell Park Cancer Institute
2014-2015	External Advisory Board, Kidney Cancer PO1 Planning Program	MD Anderson Cancer Center
2016-present	External Advisory Board, GI SPORE	Vanderbilt-Ingram Cancer Center
2016-present	Scientific Advisory Board	KC Cure
2017-present	Annual Meeting Education Committee Genitourinary (Nonprostate) Cancer	American Society of Clinical Oncology
2017	AACR Annual Meeting Genetics and Genomics Scientific Committee	American Association for Cancer Research

Grant Support

<u>Present</u>	
	1P50CA196516
	Specialized Research Center/National Cancer Institute
	Principal Investigator
	<i>The University of Texas Southwestern Medical Center SPORE in Kidney Cancer</i>
	08/01/2016-07/31/2021
	1P50CA196516
	Specialized Research Center/National Cancer Institute
	Director
	<i>Administrative Core</i>
	08/01/2016-07/31/2021
	1P50CA196516
	Specialized Research Center/National Cancer Institute
	Principal Investigator
	<i>Targeting HIF-2 for the treatment of clear cell renal carcinoma</i>
	08/01/2016-07/31/2021
	RP160440
	Individual Investigator Research Award

	Cancer Prevention and Research Institute of Texas
	Principal Investigator
	<i>Targeting the undruggable: a first-in-class inhibitor of the HIF-2 transcription factor</i>
	03/01/2016-02/28/2019
	OPA0008454
	Arrowhead Research Corp
	Principal Investigator
	<i>Targeting HIF-2α using nanoparticles</i>
	11/30/2015- Present
	1R01CA175754
	National Cancer Institute/National Institutes of Health
	Principal Investigator
	<i>Evaluation of the BAP1 tumor suppressor gene in renal cell carcinoma</i>
	12/01/2013 - 11/30/2018
<u>Past</u>	
	RP130603
	Individual Investigator Research Award
	Cancer Prevention and Research Institute of Texas
	Principal Investigator
	<i>Evaluation of the role of the BAP1 tumor suppressor gene in renal cancer</i>
	6/1/13 - 11/31/16
	High Impact High Risk
	Cancer Prevention and Research Institute of Texas
	Principal Investigator
	6/1/13 - 5/31/15
	OTD-105466
	Peloton Therapeutics
	Principal Investigator
	10/23/13- 10/22/15
	5P30CA142543-04
	Cancer Center Support Grant
	National Cancer Institute/National Institutes of Health
	Principal Investigator (Willson)

	8/3/2010 – 12/31/2014
	1RO1CA129387
	National Cancer Institute/National Institutes of Health
	Principal Investigator
	9/15/08 - 7/31/14
	CRAD001LUS67T
	Novartis
	Principal Investigator
	9/1/10 - 2/1/14
	RP101075
	Individual Investigator Research Award
	Cancer Prevention and Research Institute of Texas
	Principal Investigator
	8/1/10 – 7/31/13
	86893
	Research Scholar Grant
	American Cancer Society
	Principal Investigator
	7/1/08 – 6/30/12
	Clinical Scientist Development Award
	Doris Duke Charitable Foundation
	Principal Investigator
	8/01/07 - 7/31/10
	K08NS051843
	National Institute of Neurological Disorders and Stroke
	National Institutes of Health
	Principal Investigator
	5/15/05 - 2/28/10
	Pilot Grant Award
	North and Central Texas Clinical and Translational Science Initiative
	Principal Investigator
	1/1/2009 – 12/31/09

	V Scholar Award
	The V Foundation for Cancer Research
	Principal Investigator
	11/01/07 - 10/31/09
	Basil O'Connor Starter Scholar Research Award
	March of Dimes Foundation
	Principal Investigator
	2/01/07 - 1/31/09
	ACS-IRG-02-196
	American Cancer Society
	Principal Investigator
	8/01/07 - 7/31/08
	Young Investigator Award
	William Randolph Hearst Foundation
	Department of Medicine, Brigham and Women's Hospital
	Principal Investigator
	1/01/05 - 12/31/05
	Claudia Adams Barr Award for Innovative Basic Cancer Research
	Dana-Farber Cancer Institute
	Principal Investigator
	6/01/03 - 5/31/05

Clinical Trial Activities

<u>Present</u>	
	STU 042017-047
	University of Texas Southwestern Medical Center
	Principal Investigator (UT Southwestern)
	<i>A Phase III, Multicenter, Randomized, Placebo-Controlled, Double-Blind Study of Atezolizumab (Anti-PD-L1 Antibody) as Adjuvant Therapy in Patients with Renal Cell Carcinoma at High Risk of Developing Metastasis Following Nephrectomy</i>
	10/27/2017-Present
	STU 062017-018

	University of Texas Southwestern Medical Center
	Co-Investigator (PI, Hammers)
	<i>Phase II study of Front Line Therapy with Nivolumab and Salvage Nivolumab + Ipilimumab in Patients with Advanced Renal Cell Carcinoma</i>
	11/08/2017- Present
	STU 042016-045
	University of Texas Southwestern Medical Center
	Co-Investigator (PI, Courtney)
	<i>A Phase I/1b, Open-Label, Multicenter, Repeat-Dose, Dose-Selection Study of CPI-444 as Single Agent and in Combination with Atezolizumab in Patients with Selected Incurable Cancers</i>
	11/03/2017- Present
	STU 082015-079
	NCI
	Co-Investigator (PI, Khan)
	<i>EAY131 Molecular Analysis for Therapy Choice (MATCH)</i>
	10/31/2017- Present
	STU 012013-041
	University of Texas Southwestern Medical Center
	Co-Investigator (Investigator-initiated study; PI, Hannan)
	<i>A Phase II Trial of High Dose IL-2 and Stereotactic Ablative Body Radiation Therapy (SABR) for Patients With Metastatic Clear Cell Renal Cell Cancer (mRCC)</i>
	07/05/2013-Present
	STU 122013-030
	University of Texas Southwestern Medical Center
	Co-Investigator (Investigator-initiated study; PI, Hannan)
	<i>A Phase II Trial of Stereotactic Ablative Body Radiation Therapy (SABR) for patients with primary Renal Cancer (RCC)</i>
	5/2/2014-Present
	STU 022015-058
	University of Texas Southwestern Medical Center
	Co-Investigator (Investigator-initiated study; PI, Hannan)
	<i>Safety Lead-in Phase II Trial of Neo-adjuvant SABR for IVC Tumor Thrombus in Newly Diagnosed RCC</i>
	6/3/2015-Present

	STU 072016-044
	University of Texas Southwestern Medical Center
	Co-Investigator (PI, Hammers)
	<i>A Phase II Trial of Stereotactic Body Radiation Therapy in Combination with Nivolumab Plus Ipilimumab in Patients with Metastatic Renal Cell Cancer</i>
	10/25/2017-Present
	STU 112015-068
	University of Texas Southwestern Medical Center
	Co-Investigator (PI, Beg)
	<i>A Phase 1a/1b Study of Cabiralizumab in Combination with Nivolumab in Patients with Selected Advanced Cancers</i>
	10/23/2017-Present
	STU 052011-080
	University of Texas Southwestern Medical Center
	Co-Investigator (PI, Pedrosa)
	<i>Advanced MR Imaging Techniques in the Characterization of Renal Cell Carcinoma: Correlation with Pathology and Gene Expression Profiles</i>
	8/15/2017-Present
	STU 082016-071
	Merck
	Co-Investigator (PI, Hammers)
	<i>A Phase III Randomized, Open-Label Study to Evaluate Efficacy and Safety of Pembrolizumab (MK-3475) in Combination with Axitinib versus Sunitinib Monotherapy as a First-line Treatment for Locally Advanced or Metastatic Renal Cell Carcinoma (mRCC) (KEYNOTE-426)</i>
	11/06/2017-Present

Bibliography

Research Articles

- | | |
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| 1. | <u>Brugarolas J, Chandrasekaran C, Gordon JI, Beach D, Jacks T, Hannon GJ. Radiation-induced cell cycle arrest compromised by p21 deficiency. <i>Nature</i>. 1995;377(6549):552-7. Epub 1995/10/12. doi: 10.1038/377552a0. PubMed PMID: 7566157.</u> |
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2.	Attardi LD, Lowe SW, <u>Brugarolas J</u> , Jacks T. Transcriptional activation by p53, but not induction of the p21 gene, is essential for oncogene-mediated apoptosis. EMBO J . 1996;15(14):3693-701. Epub 1996/07/15. PubMed PMID: 8758936; PMCID: 452024.
3.	Montes de Oca Luna R, Amelse LL, Chavez-Reyes A, Evans SC, <u>Brugarolas J</u> , Jacks T, Lozano G. Deletion of p21 cannot substitute for p53 loss in rescue of mdm2 null lethality. Nat Genet . 1997;16(4):336-7. Epub 1997/08/01. doi: 10.1038/ng0897-336. PubMed PMID: 9241268.
4.	<u>Brugarolas J</u> , Bronson RT, Jacks T. p21 is a critical CDK2 regulator essential for proliferation control in Rb-deficient cells. J Cell Biol . 1998;141(2):503-14. Epub 1998/05/23. PubMed PMID: 9548727; PMCID: 2148461.
5.	Xu Y, Yang EM, <u>Brugarolas J</u> , Jacks T, Baltimore D. Involvement of p53 and p21 in cellular defects and tumorigenesis in Atm ^{-/-} mice. Mol Cell Biol . 1998;18(7):4385-90. Epub 1998/06/25. PubMed PMID: 9632822; PMCID: 109022.
6.	Al-Douhaji M, <u>Brugarolas J</u> , Brown PA, Stehman-Breen CO, Alpers CE, Shankland SJ. The cyclin kinase inhibitor p21WAF1/CIP1 is required for glomerular hypertrophy in experimental diabetic nephropathy. Kidney Int . 1999;56(5):1691-9. Epub 1999/11/26. doi: 10.1046/j.1523-1755.1999.00728.x. PubMed PMID: 10571777.
7.	<u>Brugarolas J</u> , Moberg K, Boyd SD, Taya Y, Jacks T, Lees JA. Inhibition of cyclin-dependent kinase 2 by p21 is necessary for retinoblastoma protein-mediated G1 arrest after gamma-irradiation. Proc Natl Acad Sci U S A . 1999;96(3):1002-7. Epub 1999/02/03. PubMed PMID: 9927683; PMCID: 15340.
8.	Kim YG, Alpers CE, <u>Brugarolas J</u> , Johnson RJ, Couser WG, Shankland SJ. The cyclin kinase inhibitor p21CIP1/WAF1 limits glomerular epithelial cell proliferation in experimental glomerulonephritis. Kidney Int . 1999;55(6):2349-61. Epub 1999/06/03. doi: 10.1046/j.1523-1755.1999.00504.x. PubMed PMID: 10354282.
9.	<u>Brugarolas JB</u> , Vazquez F, Reddy A, Sellers WR, Kaelin WG, Jr. TSC2 regulates VEGF through mTOR-dependent and -independent pathways. Cancer Cell . 2003;4(2):147-58. Epub 2003/09/06. PubMed PMID: 12957289.
10.	<u>Brugarolas J</u> , Lei K, Hurley RL, Manning BD, Reiling JH, Hafen E, Witters LA, Ellisen LW, Kaelin WG, Jr. Regulation of mTOR function in response to hypoxia by REDD1 and the TSC1/TSC2 tumor suppressor complex. Genes Dev . 2004;18(23):2893-904. Epub 2004/11/17. doi: 10.1101/gad.1256804. PubMed PMID: 15545625; PMCID: 534650.
11.	Majumder PK, Febbo PG, Bikoff R, Berger R, Xue Q, McMahon LM, Manola J, <u>Brugarolas J</u> , McDonnell TJ, Golub TR, Loda M, Lane HA, Sellers WR. mTOR inhibition reverses Akt-dependent prostate intraepithelial neoplasia through regulation of apoptotic and HIF-1-dependent pathways. Nat Med . 2004;10(6):594-601. Epub 2004/05/25. doi: 10.1038/nm1052. PubMed PMID: 15156201.
12.	Zhou J, <u>Brugarolas J</u> , Parada LF. Loss of Tsc1, but not Pten, in renal tubular cells causes polycystic kidney disease by activating mTORC1. Hum Mol Genet . 2009;18(22):4428-41. Epub 2009/08/21. doi: 10.1093/hmg/ddp398. PubMed PMID: 19692352.
13.	Vega-Rubin-de-Celis S, Abdallah Z, Kinch L, Grishin NV, <u>Brugarolas J*</u> , Zhang X*. Structural analysis and functional implications of the negative mTORC1 regulator REDD1. Biochemistry . 2010;49(11):2491-501. Epub 2010/02/20. doi: 10.1021/bi902135e. PubMed PMID: 20166753; PMCID: 3046781. *, shared correspondence.
14.	Cost NG, Delacroix SE, Jr., Sleeper JP, Smith PJ, Youssef RF, Chapin BF, Karam JA, Culp S, Abel EJ, <u>Brugarolas J</u> , Raj GV, Sagalowsky AI, Wood CG, Margulis V. The impact of targeted molecular therapies on the level of renal cell carcinoma vena caval tumor thrombus. Eur Urol . 2011;59(6):912-8. Epub 2011/03/04. doi: 10.1016/j.eururo.2011.02.032. PubMed PMID: 21367518.

15.	Kucejova B, Pena-Llopis S, Yamasaki T, Sivanand S, Tran TA, Alexander S, Wolff NC, Lotan Y, Xie XJ, Kabbani W, Kapur P, <u>Brugarolas J</u> . Interplay between pVHL and mTORC1 pathways in clear-cell renal cell carcinoma. Mol Cancer Res . 2011;9(9):1255-65. Epub 2011/07/30. doi: 10.1158/1541-7786.MCR-11-0302. PubMed PMID: 21798997; PMCID: 3234675.
16.	Kucejova B, Sunny NE, Nguyen AD, Hallac R, Fu X, Pena-Llopis S, Mason RP, Deberardinis RJ, Xie XJ, Debose-Boyd R, Kodibagkar VD, Burgess SC, <u>Brugarolas J</u> . Uncoupling hypoxia signaling from oxygen sensing in the liver results in hypoketotic hypoglycemic death. Oncogene . 2011;30(18):2147-60. Epub 2011/01/11. doi: 10.1038/onc.2010.587. PubMed PMID: 21217781; PMCID: 3135264.
17.	Mata MA, Satterly N, Versteeg GA, Frantz D, Wei S, Williams N, Schmolke M, Pena-Llopis S, <u>Brugarolas J</u> , Forst CV, White MA, Garcia-Sastre A, Roth MG, Fontoura BM. Chemical inhibition of RNA viruses reveals REDD1 as a host defense factor. Nat Chem Biol . 2011;7(10):712-9. Epub 2011/09/13. doi: 10.1038/nchembio.645. PubMed PMID: 21909097; PMCID: 3329801.
18.	Pena-Llopis S, Vega-Rubin-de-Celis S, Schwartz JC, Wolff NC, Tran TA, Zou L, Xie XJ, Corey DR, <u>Brugarolas J</u> . Regulation of TFEB and V-ATPases by mTORC1. EMBO J . 2011;30(16):3242-58. Epub 2011/08/02. doi: 10.1038/emboj.2011.257. PubMed PMID: 21804531; PMCID: 3160667.
19.	Wolff NC, Vega-Rubin-de-Celis S, Xie XJ, Castrillon DH, Kabbani W, <u>Brugarolas J</u> . Cell-type-dependent regulation of mTORC1 by REDD1 and the tumor suppressors TSC1/TSC2 and LKB1 in response to hypoxia. Mol Cell Biol . 2011;31(9):1870-84. Epub 2011/03/09. doi: 10.1128/MCB.01393-10. PubMed PMID: 21383064; PMCID: 3133225.
20.	Yamasaki T, Tran TA, Oz OK, Raj GV, Schwarz RE, Deberardinis RJ, Zhang X, <u>Brugarolas J</u> . Exploring a glycolytic inhibitor for the treatment of an FH-deficient type-2 papillary RCC. Nat Rev Urol . 2011;8(3):165-71. Epub 2011/02/10. doi: 10.1038/nrurol.2010.234. PubMed PMID: 21304509; PMCID: 3055922.
21.	Pena-Llopis S, Vega-Rubin-de-Celis S, Liao A, Leng N, Pavia-Jimenez A, Wang S, Yamasaki T, Zhrebker L, Sivanand S, Spence P, Kinch L, Hambuch T, Jain S, Lotan Y, Margulis V, Sagalowsky AI, Summerour PB, Kabbani W, Wong SW, Grishin N, Laurent M, Xie XJ, Haudenschild CD, Ross MT, Bentley DR, Kapur P, <u>Brugarolas J</u> . BAP1 loss defines a new class of renal cell carcinoma. Nat Genet . 2012;44(7):751-9. Epub 2012/06/12. doi: 10.1038/ng.2323. PubMed PMID: 22683710.
22.	Sivanand S, Pena-Llopis S, Zhao H, Kucejova B, Spence P, Pavia-Jimenez A, Yamasaki T, McBride DJ, Gillen J, Wolff NC, Morlock L, Lotan Y, Raj GV, Sagalowsky A, Margulis V, Cadeddu JA, Ross MT, Bentley DR, Kabbani W, Xie XJ, Kapur P, Williams NS, <u>Brugarolas J</u> . A validated tumorgraft model reveals activity of dovitinib against renal cell carcinoma. Sci Transl Med . 2012;4(137):137ra75. Epub 2012/06/08. doi: 10.1126/scitranslmed.3003643. PubMed PMID: 22674553.
23.	Farley MN, Schmidt LS, Mester JL, Pena-Llopis S, Pavia-Jimenez A, Christie A, Vocke CD, Ricketts CJ, Peterson J, Middleton L, Kinch L, Grishin N, Merino MJ, Metwalli AR, Xing C, Xie XJ, Dahia PL, Eng C, Linehan WM, <u>Brugarolas J</u> . A novel germline mutation in BAP1 predisposes to familial clear-cell renal cell carcinoma. Mol Cancer Res . 2013;11(9):1061-71. doi: 10.1158/1541-7786.MCR-13-0111. PubMed PMID: 23709298; PMCID: PMC4211292.
24.	Hasan M, Koch J, Rakheja D, Pattnaik AK, <u>Brugarolas J</u> , Dozmorov I, Levine B, Wakeland EK, Lee-Kirsch MA, Yan N. Trex1 regulates lysosomal biogenesis and interferon-independent activation of antiviral genes. Nat Immunol . 2013;14(1):61-71. Epub 2012/11/20. doi: 10.1038/ni.2475. PubMed PMID: 23160154; PMCID: 3522772.

25.	Kapur P, Pena-Llopis S, Christie A, Zhrebker L, Pavia-Jimenez A, Rathmell WK, Xie XJ, <u>Brugarolas J</u> . Effects on survival of BAP1 and PBRM1 mutations in sporadic clear-cell renal-cell carcinoma: a retrospective analysis with independent validation. The Lancet Oncology . 2013;14(2):159-67. Epub 2013/01/22. doi: 10.1016/S1470-2045(12)70584-3. PubMed PMID: 23333114.
26.	Tran TA, Kinch L, Pena-Llopis S, Kockel L, Grishin N, Jiang H, <u>Brugarolas J</u> . Platelet-Derived Growth Factor/Vascular Endothelial Growth Factor Receptor Inactivation by Sunitinib Results in Tsc1/Tsc2-Dependent Inhibition of TORC1. Mol Cell Biol . 2013;33(19):3762-79. Epub 2013/07/24. doi: 10.1128/MCB.01570-12. PubMed PMID: 23878397.
27.	Joseph RW, Kapur P, Serie DJ, Eckel-Passow JE, Parasramka M, Ho T, Cheville JC, Frenkel E, Rakheja D, <u>Brugarolas J*</u> , Parker A*. Loss of BAP1 protein expression is an independent marker of poor prognosis in patients with low-risk clear cell renal cell carcinoma. Cancer . 2014;120(7):1059-67. Epub 2014/01/03. doi: 10.1002/cncr.28521. PubMed PMID: 24382589. *, shared correspondence.
28.	Kapur P, Christie A, Raman JD, Then MT, Nuhn P, Buchner A, Bastian P, Seitz C, Shariat SF, Bensalah K, Rioux-Leclercq N, Xie XJ, Lotan Y, Margulis V, <u>Brugarolas J</u> . BAP1 Immunohistochemistry Predicts Outcomes in a Multi-Institutional Cohort with Clear Cell Renal Cell Carcinoma. J Urol . 2014;191(3):603-10. Epub 2013/10/01. doi: 10.1016/j.juro.2013.09.041. PubMed PMID: 24076305.
29.	Wang SS, Gu YF, Wolff N, Stefanius K, Christie A, Dey A, Hammer RE, Xie XJ, Rakheja D, Pedrosa I, Carroll T, McKay RM, Kapur P, <u>Brugarolas J</u> . Bap1 is essential for kidney function and cooperates with Vhl in renal tumorigenesis. Proc Natl Acad Sci U S A . 2014;111(46):16538-43. Epub 2014/11/02. doi: 10.1073/pnas.1414789111. PubMed PMID: 25359211; PMCID: 4246264.
30.	Wolff NC, McKay RM, <u>Brugarolas J</u> . REDD1/DDIT4-independent mTORC1 inhibition and apoptosis by glucocorticoids in thymocytes. Mol Cancer Res . 2014;12(6):867-77. Epub 2014/03/13. doi: 10.1158/1541-7786.MCR-13-0625. PubMed PMID: 24615339.
31.	Denard B, Pavia-Jimenez A, Chen W, Williams NS, Naina H, Collins R, <u>Brugarolas J</u> , Ye J. Identification of CREB3L1 as a Biomarker Predicting Doxorubicin Treatment Outcome. PLoS One . 2015;10(6):e0129233. doi: 10.1371/journal.pone.0129233. PubMed PMID: 26110425; PMCID: 4482141.
32.	Durinck S, Stawiski EW, Pavia-Jimenez A, Modrusan Z, Kapur P, Jaiswal BS, Zhang N, Toffessi-Tcheuyap V, Nguyen TT, Pahuja KB, Chen YJ, Saleem S, Chaudhuri S, Heldens S, Jackson M, Pena-Llopis S, Guillory J, Toy K, Ha C, Harris CJ, Holloman E, Hill HM, Stinson J, Rivers CS, Janakiraman V, Wang W, Kinch LN, Grishin NV, Haverty PM, Chow B, Gehring JS, Reeder J, Pau G, Wu TD, Margulis V, Lotan Y, Sagalowsky A, Pedrosa I, de Sauvage FJ, <u>Brugarolas J*</u> , Seshagiri S*. Spectrum of diverse genomic alterations define non-clear cell renal carcinoma subtypes. Nat Genet . 2015;47(1):13-21. Epub 2014/11/18. doi: 10.1038/ng.3146. PubMed PMID: 25401301. *, shared correspondence.
33.	Gayed BA, Gillen J, Christie A, Pena-Llopis S, Xie XJ, Yan J, Karam JA, Raj G, Sagalowsky AI, Lotan Y, Margulis V*, <u>Brugarolas J*</u> . Prospective Evaluation of plasma levels of ANGPT2, TuM2PK, and VEGF in patients with Renal Cell Carcinoma. BMC urology . 2015;15(1):24. doi: 10.1186/s12894-015-0019-4. PubMed PMID: 25885592. *, shared correspondence.
34.	Ho TH, Kapur P, Joseph RW, Serie DJ, Eckel-Passow JE, Parasramka M, Cheville JC, Wu KJ, Frenkel E, Rakheja D, Stefanius K, <u>Brugarolas J*</u> , Parker AS*. Loss of PBRM1 and BAP1 expression is less common in non-clear cell renal cell carcinoma than in clear cell renal cell carcinoma. Urol Oncol . 2015;33(1):23 e9- e14. Epub 2014/12/04. doi: 10.1016/j.urolonc.2014.10.014. PubMed PMID: 25465300; PMCID: 4274200. *, shared correspondence.

35.	Kim H, Rodriguez-Navas C, Kollipara RK, Kapur P, Pedrosa I, <u>Brugarolas J</u> , Kittler R, Ye J. Unsaturated Fatty Acids Stimulate Tumor Growth through Stabilization of beta-Catenin. Cell Rep. 2015;13(3):495-503. doi: 10.1016/j.celrep.2015.09.010. PubMed PMID: 26456834; PMCID: 4618234.
36.	Wolff NC, Pavia-Jimenez A, Tcheuyap VT, Alexander S, Vishwanath M, Christie A, Xie XJ, Williams NS, Kapur P, Posner B, McKay RM, <u>Brugarolas J</u> . High-throughput simultaneous screen and counterscreen identifies homoharringtonine as synthetic lethal with von Hippel-Lindau loss in renal cell carcinoma. Oncotarget. 2015;6(19):16951-62. PubMed PMID: 26219258.
37.	Gayed BA, Youssef R, Darwish O, Kapur P, Bagrodia A, <u>Brugarolas J</u> , Raj G, DiMaio JM, Sagalowsky A, Margulis V. Multi-disciplinary surgical approach to the management of patients with renal cell carcinoma with venous tumor thrombus: 15 year experience and lessons learned. BMC urology. 2016;16(1):43. doi: 10.1186/s12894-016-0157-3. PubMed PMID: 27435269; PMCID: PMC4952069.
38.	Ho TH, Kapur P, Joseph RW, Serie DJ, Eckel-Passow JE, Tong P, Wang J, Castle EP, Stanton ML, Cheville JC, Jonasch E, <u>Brugarolas J</u> , Parker AS. Loss of histone H3 lysine 36 trimethylation is associated with an increased risk of renal cell carcinoma-specific death. Mod Pathol. 2016;29(1):34-42. doi: 10.1038/modpathol.2015.123. PubMed PMID: 26516698; PMCID: PMC4697879.
39.	Joseph RW, Kapur P, Serie DJ, Parasramka M, Ho TH, Cheville JC, Frenkel E, Parker AS*, <u>Brugarolas J</u> *. Clear Cell Renal Cell Carcinoma Subtypes Identified by BAP1 and PBRM1 Expression. J Urol. 2016;195(1):180-7. doi: 10.1016/j.juro.2015.07.113. PubMed PMID: 26300218. *, shared correspondence.
40.	Kucejova B, Duarte J, Satapati S, Fu X, Ilkayeva O, Newgard CB, <u>Brugarolas J</u> , Burgess SC. Hepatic mTORC1 Opposes Impaired Insulin Action to Control Mitochondrial Metabolism in Obesity. Cell Rep. 2016;16(2):508-19. doi: 10.1016/j.celrep.2016.06.006. PubMed PMID: 27346353; PMCID: PMC4951107.
41.	Tran TA, Leong HS, Pavia-Jimenez A, Fedyshyn S, Yang J, Kucejova B, Sivanand S, Spence P, Xie XJ, Pena-Llopis S, Power N, <u>Brugarolas J</u> . Fibroblast Growth Factor Receptor-Dependent and -Independent Paracrine Signaling by Sunitinib-Resistant Renal Cell Carcinoma. Mol Cell Biol. 2016;36(13):1836-55. doi: 10.1128/MCB.00189-16. PubMed PMID: 27141054; PMCID: PMC4911743.
42.	Yuan Q, Kapur P, Zhang Y, Xi Y, Carvo I, Signoretti S, Dimitrov IE, Cadeddu JA, Margulis V, <u>Brugarolas J</u> , Madhuranthakam AJ, Pedrosa I. Intratumor Heterogeneity of Perfusion and Diffusion in Clear-Cell Renal Cell Carcinoma: Correlation With Tumor Cellularity. Clin Genitourin Cancer. 2016. doi: 10.1016/j.clgc.2016.04.007. PubMed PMID: 27209349.
43.	Zhang Y, Kapur P, Yuan Q, Xi Y, Carvo I, Signoretti S, Dimitrov I, Cadeddu JA, Margulis V, Muradyan N, <u>Brugarolas J</u> , Madhuranthakam AJ, Pedrosa I. Tumor Vascularity in Renal Masses: Correlation of Arterial Spin-Labeled and Dynamic Contrast-Enhanced Magnetic Resonance Imaging Assessments. Clin Genitourin Cancer. 2016;14(1):e25-36. doi: 10.1016/j.clgc.2015.08.007. PubMed PMID: 26422014; PMCID: PMC4698181.
44.	Zhou J, Luo J, Wu K, Yun EJ, Kapur P, Pong RC, Du Y, Wang B, Authement C, Hernandez E, Yang J, Xiao G, Cha TL, Wu HC, Wu D, Margulis V, Lotan Y, <u>Brugarolas J</u> , He D, Hsieh JT. Loss of DAB2IP in RCC cells enhances their growth and resistance to mTOR-targeted therapies. Oncogene. 2016;35(35):4663-74. doi: 10.1038/onc.2016.4. PubMed PMID: 26876207.
45.	Chen W, Hill H, Christie A, Kim MS, Holloman E, Pavia-Jimenez A, Homayoun F, Ma Y, Patel N, Yell P, Hao G, Yousuf Q, Joyce A, Pedrosa I, Geiger H, Zhang H, Chang J, Gardner KH, Bruick RK, Reeves C, Hwang TH, Courtney K, Frenkel E, Sun X, Zojwalla N, Wong T, Rizzi JP, Wallace EM, Josey JA, Xie Y, Xie XJ, Kapur P, McKay RM, <u>Brugarolas J</u> . Targeting Renal Cell

	Carcinoma with a HIF-2 antagonist. Nature . 2016. doi: 10.1038/nature19796. PubMed PMID: 27595394.
46.	Vega-Rubin-de-Celis S, Pena-Llopis S, Konda M, <u>Brugarolas J</u> . Multistep regulation of TFEB by MTORC1. Autophagy . 2017;13(3):464-72. doi: 10.1080/15548627.2016.1271514. PubMed PMID: 28055300; PMCID: PMC5361595.
47.	De Velasco G, Xie W, Donskov F, Albiges L, Beuselinck B, Srinivas S, Agarwal N, Lee JL, <u>Brugarolas J</u> , Wood LA, Rha SY, Kollmannsberger C, North S, Kaneshwaran R, Rini BI, Broom R, Yamamoto H, Kaymakcalan MD, Heng DY, Choueiri TK. Discontinuing VEGF-targeted Therapy for Progression Versus Toxicity Affects Outcomes of Second-line Therapies in Metastatic Renal Cell Carcinoma. Clin Genitourin Cancer . 2017;15(3):403-10 e2. doi: 10.1016/j.clgc.2017.01.005. PubMed PMID: 28254206.
48.	Eckel-Passow JE, Serie DJ, Chevillat JC, Ho TH, Kapur P, <u>Brugarolas J</u> , Thompson RH, Leibovich BC, Kwon ED, Joseph RW, Parker AS. BAP1 and PBRM1 in metastatic clear cell renal cell carcinoma: tumor heterogeneity and concordance with paired primary tumor. BMC urology . 2017;17(1):19. doi: 10.1186/s12894-017-0209-3. PubMed PMID: 28327121; PMCID: PMC5361787.
49.	Hwang S, Nguyen AD, Jo Y, Engelking LJ, <u>Brugarolas J</u> , DeBose-Boyd RA. Hypoxia-inducible factor 1alpha activates insulin-induced gene 2 (Insig-2) transcription for degradation of 3-hydroxy-3-methylglutaryl (HMG)-CoA reductase in the liver. J Biol Chem . 2017;292(22):9382-93. doi: 10.1074/jbc.M117.788562. PubMed PMID: 28416613; PMCID: PMC5454117.
50.	Wang CJ, Christie A, Lin MH, Jung M, Weix D, Huelsmann L, Kuhn K, Meyer J, Desai N, Kim DWN, Pedrosa I, Margulis V, Cadeddu J, Sagalowsky A, Gahan J, Laine A, Xie XJ, Choy H, <u>Brugarolas J</u> , Timmerman R, Hannan R. Safety and Efficacy of Stereotactic Ablative Radiation Therapy for Renal Cell Carcinoma Extracranial Metastases. Int J Radiat Oncol Biol Phys . 2017;98(1):91-100. doi: 10.1016/j.ijrobp.2017.01.032. PubMed PMID: 28587057.
51.	Bowman IA, Pedrosa I, Kapur P, <u>Brugarolas J</u> . Renal Cell Carcinoma With Pulmonary Metastasis and Metachronous Non-Small Cell Lung Cancer. Clin Genitourin Cancer . 2017. doi: 10.1016/j.clgc.2017.01.026. PubMed PMID: 28258962.
52.	Gu YF, Cohn S, Christie A, McKenzie T, Wolff NC, Do QN, Madhuranthakam A, Pedrosa I, Wang T, Dey A, Busslinger M, Xie XJ, Hammer RE, McKay RM, Kapur P, <u>Brugarolas J</u> . Modeling Renal Cell Carcinoma in Mice: Bap1 and Pbrm1 Inactivation Drive Tumor Grade. Cancer Discov . 2017. doi: 10.1158/2159-8290.CD-17-0292. PubMed PMID: 28473526.
53.	Dwivedi DK, Chatzinoff Y, Zhang Y, Yuan Q, Fulkerson M, Chopra R, <u>Brugarolas J</u> , Cadeddu JA, Kapur P, Pedrosa I. Development of a Patient-Specific Tumor Mold Using MRI and 3D Printing Technology for Targeted Tissue Procurement and Radiomics Analysis of Renal Masses. Urology . 2017. doi: 10.1016/j.urology.2017.08.056. PubMed PMID: 29056576.
54.	Ho TH, Kapur P, Eckel-Passow JE, Christie A, Joseph RW, Serie DJ, Chevillat JC, Thompson RH, Homayoun F, Panwar V, <u>Brugarolas J</u> , Parker AS. Multicenter Validation of Enhancer of Zeste Homolog 2 Expression as an Independent Prognostic Marker in Localized Clear Cell Renal Cell Carcinoma. J Clin Oncol . 2017;35(32):3706-13. doi: 10.1200/JCO.2017.73.3238. PubMed PMID: 28976794.
55.	Xi Y, Yuan Q, Zhang Y, Madhuranthakam AJ, Fulkerson M, Margulis V, <u>Brugarolas J</u> , Kapur P, Cadeddu JA, Pedrosa I. Statistical clustering of parametric maps from dynamic contrast enhanced MRI and an associated decision tree model for non-invasive tumour grading of T1b solid clear cell renal cell carcinoma. European Radiology . 2017. doi: 10.1007/s00330-017-4925-6. PubMed PMID: 28681074.
56.	Zhang Y, Udayakumar D, Cai L, Hu Z, Kapur P, Kho EY, Pavia-Jimenez A, Fulkerson M, de Leon AD, Yuan Q, Dimitrov IE, Yokoo T, Ye J, Mitsche MA, Kim H, McDonald JG, Xi Y,

<p>Madhuranthakam AJ, Dwivedi DK, Lenkinski RE, Cadeddu JA, Margulis V, <u>Brugarolas J</u>, DeBerardinis RJ, Pedrosa I. Addressing metabolic heterogeneity in clear cell renal cell carcinoma with quantitative Dixon MRI. JCI Insight. 2017;2(15). doi: 10.1172/jci.insight.94278. PubMed PMID: 28768909; PMCID: PMC5543910.</p>

Case Reports

1.	<u>Brugarolas J</u> , Lotan Y, Watumull L, Kabbani W. Sirolimus in metastatic renal cell carcinoma. J Clin Oncol . 2008;26(20):3457-60. Epub 2008/07/10. doi: 10.1200/JCO.2008.16.4590. PubMed PMID: 18612163.
2.	Wolff N, Kabbani W, Bradley T, Raj G, Watumull L, <u>Brugarolas J</u> . Sirolimus and temsirolimus for epithelioid angiomyolipoma. J Clin Oncol . 2010;28(5):e65-8. Epub 2010/01/06. doi: 10.1200/JCO.2009.26.3061. PubMed PMID: 20048172.
3.	Bowers DC, Kucejova B, Margraf L, Gargan L, <u>Brugarolas J</u> . mTORC1 activation in childhood ependymoma and response to sirolimus. J Neurooncol . 2011;103(3):797-801. Epub 2010/11/16. doi: 10.1007/s11060-010-0455-7. PubMed PMID: 21076853.
4.	Jacobs C, Kim DW, Straka C, Timmerman RD, <u>Brugarolas J</u> . Prolonged survival of a patient with papillary renal cell carcinoma and brain metastases using pazopanib. J Clin Oncol . 2013;31(7):e114-7. Epub 2013/01/16. doi: 10.1200/JCO.2012.46.0501. PubMed PMID: 23319695.
5.	Straka C, Kim DW, Timmerman RD, Pedrosa I, Jacobs C, <u>Brugarolas J</u> . Ablation of a Site of Progression With Stereotactic Body Radiation Therapy Extends Sunitinib Treatment From 14 to 22 Months. J Clin Oncol . 2013. Epub 2013/06/26. doi: 10.1200/JCO.2012.47.7455. PubMed PMID: 23796996.
6.	Huelsmann L, Kim DN, Hannan R, Watumull LM, <u>Brugarolas J</u> . Selective Efficacy of Temsirolimus on Bone Metastases in Chromophobe Renal Cell Carcinoma. Clin Genitourin Cancer . 2014. Epub 2015/01/27. doi: 10.1016/j.clgc.2014.12.007. PubMed PMID: 25620636.
7.	Hannan R, Margulis V, Chun SG, Cannon N, Kim DW, Abdulrahman RE, Sagalowsky A, Pedrosa I, Choy H, <u>Brugarolas J</u> , Timmerman RD. Stereotactic radiation therapy of renal cancer inferior vena cava tumor thrombus. Cancer Biology & Therapy . 2015;16(5):657-61. doi: 10.1080/15384047.2015.1026506. PubMed PMID: 25800036.

Reviews, Monographs and Editorials

1.	<u>Brugarolas J</u> , Jacks T. Double indemnity: p53, BRCA and cancer. p53 mutation partially rescues developmental arrest in Brca1 and Brca2 null mice, suggesting a role for familial breast cancer genes in DNA damage repair. Nat Med . 1997;3(7):721-2. Epub 1997/07/01. PubMed PMID: 9212093.
2.	<u>Brugarolas J</u> , Haynes BF, Nevins JR. Towards a genomic-based diagnosis. Lancet . 2001;357(9252):249-50. Epub 2001/02/24. doi: 10.1016/S0140-6736(00)03608-4. PubMed PMID: 11214124.
3.	<u>Brugarolas J</u> , Clark JW, Chabner B. Using "rationally designed drugs" rationally. Lancet . 2003;361(9371):1758-9. Epub 2003/06/05. doi: 10.1016/S0140-6736(03)13446-0. PubMed PMID: 12781531.
4.	<u>Brugarolas J</u> , Kaelin WG, Jr. Dysregulation of HIF and VEGF is a unifying feature of the familial hamartoma syndromes. Cancer Cell . 2004;6(1):7-10. Epub 2004/07/21. doi: 10.1016/j.ccr.2004.06.020. PubMed PMID: 15261137.

5.	<u>Brugarolas J.</u> Renal-cell carcinoma--molecular pathways and therapies. N Engl J Med. 2007;356(2):185-7. Epub 2007/01/12. doi: 10.1056/NEJMe068263. PubMed PMID: 17215538.
6.	<u>Brugarolas J.</u> Molecular Pathways and Targeted Therapies for Renal Cell Carcinoma. <i>American Society of Clinical Oncology Educational Book</i> 2009:710-5.
7.	Pena-Llopis S, <u>Brugarolas J.</u> TFEF, a novel mTORC1 effector implicated in lysosome biogenesis, endocytosis and autophagy. Cell Cycle. 2011;10(23):3987-8. Epub 2011/11/22. doi: 10.4161/cc.10.23.18251. PubMed PMID: 22101272; PMCID: 3272281.
8.	Kinch L, Grishin NV, <u>Brugarolas J.</u> Succination of Keap1 and activation of Nrf2-dependent antioxidant pathways in FH-deficient papillary renal cell carcinoma type 2. Cancer Cell. 2011;20(4):418-20. Epub 2011/10/22. doi: 10.1016/j.ccr.2011.10.005. PubMed PMID: 22014567; PMCID: 3226726.
9.	Jonasch E, Futreal PA, Davis IJ, Bailey ST, Kim WY, <u>Brugarolas J.</u> Giaccia AJ, Kurban G, Pause A, Frydman J, Zurita AJ, Rini BI, Sharma P, Atkins MB, Walker CL, Rathmell WK. State of the Science: An Update on Renal Cell Carcinoma. Molecular Cancer Research. 2012;10(7):859-80. doi: 10.1158/1541-7786.mcr-12-0117.
10.	Sudarshan S, Karam JA, <u>Brugarolas J.</u> Thompson RH, Uzzo R, Rini B, Margulis V, Patard JJ, Escudier B, Linehan WM. Metabolism of kidney cancer: from the lab to clinical practice. Eur Urol. 2013;63(2):244-51. Epub 2012/10/16. doi: 10.1016/j.eururo.2012.09.054. PubMed PMID: 23063455.
11.	Pena-Llopis S, <u>Brugarolas J.</u> Simultaneous isolation of high-quality DNA, RNA, miRNA and proteins from tissues for genomic applications. Nat Protoc. 2013;8(11):2240-55. Epub 2013/10/19. doi: 10.1038/nprot.2013.141. PubMed PMID: 24136348.
12.	Pena-Llopis S, Christie A, Xie XJ, <u>Brugarolas J.</u> Cooperation and Antagonism among Cancer Genes: The Renal Cancer Paradigm. Cancer Res. 2013;73(14):4173-9. Epub 2013/07/09. doi: 10.1158/0008-5472.CAN-13-0360. PubMed PMID: 23832661.
13.	<u>Brugarolas J.</u> PBRM1 and BAP1 as novel targets for renal cell carcinoma. Cancer J. 2013;19(4):324-32. Epub 2013/07/23. doi: 10.1097/PPO.0b013e3182a102d1. PubMed PMID: 23867514.
14.	<u>Brugarolas J.</u> Molecular genetics of clear-cell renal cell carcinoma. J Clin Oncol. 2014;32(18):1968-76. doi: 10.1200/JCO.2012.45.2003. PubMed PMID: 24821879; PMCID: 4050206.
15.	Pavia-Jimenez A, Tcheuyap VT, <u>Brugarolas J.</u> Establishing a human renal cell carcinoma tumorgraft platform for preclinical drug testing. Nat Protoc. 2014;9(8):1848-59. Epub 2014/07/11. doi: 10.1038/nprot.2014.108. PubMed PMID: 25010905.
16.	<u>Brugarolas J.</u> Predictive Biomarkers for Molecularly Targeted Therapies in Renal Cell Carcinoma. J Natl Compr Canc Netw. 2016;14(7):925-7. PubMed PMID: 27407131.

Book / Textbook Chapters

1.	<u>Brugarolas J.</u> mTORC1 Signaling and Hypoxia. In: Polunovsky VAA, Houghton PJJ, editors. <i>mTOR Pathway and mTOR Inhibitors in Cancer Therapy</i> : Humana Press; 2010. p. 75-97.
2.	<u>Brugarolas J.</u> Research Translation and Personalized Medicine. In: Figlin RA, Rathmell WK, Rini BI, editors. <i>Renal Cell Carcinoma: Translational Biology, Personalized Medicine, and Novel Therapeutic Targets</i> : Springer US; 2012. p. 161-91.

Seminars

Year(s)	Title	Location
International		
1995	Role of p21/CIP1/WAF1 in differentiation, apoptosis and the G1 arrest response to DNA damage	U. of Navarra School of Medicine, Pamplona, Spain
2003	HIF regulation by the TSC2 tumor suppressor protein	Annual Meeting of the British Society for Cell Biology and British Association for Cancer Research, Oxford University, Oxford, UK
2004	Regulation of the hypoxia-inducible factor by the TSC2 tumor suppressor protein	<i>The proteins controlling cell growth and their role in tumor formation: mTOR, TSC, and PTEN</i> , Juan March Foundation, Madrid, Spain
2004	TSC and Hypoxia signaling	TSC International Research Conference, University of Cambridge, Cambridge, UK
2005	Regulation of mTOR function in response to hypoxia by REDD1 and the TSC1/TSC2 tumor suppressor complex	<i>Cell and Molecular Biology of Cancer</i> , Swiss Institute for Experimental Cancer Research (ISREC), Lausanne, Switzerland
2005	The genetic basis of cancer	Eurasian National University, Astana, Kazakhstan
2005	Tumor suppression by the TSC1/TSC2 complex	Spanish National Cancer Center (CNIO), Madrid, Spain
2005	Tumor suppression by the TSC1/TSC2 complex	Centro de Investigacion del Cancer, Salamanca, Spain
2007	Translational research in renal cell carcinoma	33 rd Annual Meeting of the Korean Cancer Association, Seoul, Korea
2007	Renal cell carcinoma – molecular pathways and therapies	33 rd Annual Meeting of the Korean Cancer Association, Seoul, Korea
2008	VEGF and anti-VEGF resistance	European Society Medical Oncology Annual Meeting (ESMO), Stockholm, Sweden
2009	Biologic and molecular basis of RCC	5 th Interdisciplinary Oncology Course, Instituto Universitario de Oncologia, Oviedo, Spain
2009	Molecular basis and management of adverse effects associated with molecularly targeted therapies in RCC	5 th Interdisciplinary Oncology Course, Instituto Universitario de Oncologia, Oviedo, Spain
2011	Renal cell carcinoma, genome and research translation	Instituto de Investigacion Sanitaria de Santiago, Santiago de Compostela, Spain
2011	Kidney cancer and personalized therapy	Hospital San Jaime, Alicante, Spain

2013	Plenary Lecture: From the Molecular Genetics of Renal Cancer to the Clinic	Canadian Kidney Cancer Forum, Toronto, Canada
2013	Personalized medicine for metastatic RCC	Canadian Kidney Cancer Forum, Toronto, Canada
2014	Key signaling pathways and mechanisms of resistance	5 th Annual Conference of Renal Cancer Experts, Plenary Lecture Prague, Czech Republic
2014	Unusual manifestations of RCC	5 th Annual Conference of Renal Cancer Experts, Discussion Leader Prague, Czech Republic
2014	Translating cancer genome discoveries into patient care	Spanish National Cancer Research Center, CNIO, Madrid, Spain
2014	Towards a molecular genetic and functional classification of renal cancer	Centro de Investigación Príncipe Felipe, Valencia, Spain
2014	Modelo de Investigación Traslacional Integrado en Cáncer de Riñón	Máster Universitario en Desarrollos Avanzados de Oncología Multidisciplinar Personalizada, Universidad Católica de Murcia, Murcia, Spain
2014	Towards a molecular genetic and functional classification of renal cancer	Vall D'Hebron Institute of Oncology, Barcelona, Spain
2014	Towards a molecular genetic and functional classification of renal cancer	Centre for Genomic Regulation, Barcelona, Spain
2014	Genomics will determine the management of locally advanced RCC	6 th European Multidisciplinary Meeting on Urological Cancers, Lisbon, Portugal
2015	Kidney cancer: molecular genetics, biology and translation	Universidad de Valencia, Valencia, Spain
2015	Clinical relevance of cancer genes	International Kidney Cancer Symposium, Lyon, France
2015	Molecular Genetics of Renal Cell Carcinoma: Present and Future	6 th Scientific Meeting of the Spanish Oncology Genitourinary Group, Madrid, Spain
2016	Renal Cancer	1 st Annual Best of the American Urological Association – Spain, San Sebastian, Spain
2016	Molecular characterization in renal cell carcinoma	7 th Scientific Meeting of the Spanish Oncology Genitourinary Group, Madrid, Spain
2017	BAP1 in renal cancer	8 th Weinman Symposium, University of Hawaii Cancer Center, Honolulu, HI
2017	What is renal cancer	DUO Desafios en Uro-Oncología “Cancer Renal” San Sebastian, Spain

National		
1996	Effectors of the G1 arrest response to DNA damage	<i>The Cell Cycle</i> , Cold Spring Harbor Laboratories, Cold Spring Harbor, NY
1998	Exploring the role of p21 in cell proliferation, apoptosis and cancer	Onyx Pharmaceuticals, Emeryville, CA
2004	Regulation of the Hypoxia-inducible Factor by the TSC2 tumor suppressor protein	The Lymphangi leiomyomatosis (LAM) Foundation International Research Conference, Cincinnati, OH
2004	Activation of the TSC tumor suppressor pathway by hypoxia	<i>Cancer Genetics and Tumor Suppressor Genes</i> , Cold Spring Harbor Laboratories, Cold Spring Harbor, NY
2005	Tumor suppression by the TSC1/TSC2 complex	Molecular Neurogenetics Program, Massachusetts General Hospital, Charlestown, MA
2005	Tumor suppression by the TSC1/TSC2 complex	Inaugural Lymphangi leiomyomatosis (LAM)/Tuberous Sclerosis (TS) International Research Conference, Cincinnati, OH
2006	TORC1 regulation by hypoxia	The Lymphangi leiomyomatosis (LAM) Foundation International Research Conference, Cincinnati, OH
2006	TORC1 regulation by hypoxia	<i>Nutrient Sensing, Insulin Signaling and Hamartoma Syndromes</i> , National Institutes of Health, Bethesda, MD
2006	Tumor suppression by the TSC1/TSC2 complex	Merck Research Laboratories, Boston, MA
2006	TSC1/TSC2: significance in RCC	3 rd International Congress on Kidney and Bladder Cancer, Orlando, FL
2006	pVHL and mTOR pathways converge to regulate HIF	5 th International Kidney Cancer Symposium, Kidney Cancer Association, Chicago, IL
2007	Understanding the role of mTOR inhibition in cancer and potential side effects	<i>Cancer Management in the Era of Targeted Agents</i> , 5 th International Symposium on Supportive Care in Oncology, New York, NY

2007	Regulation of mTOR function in response to hypoxia by REDD1 and the TSC1/TSC2 complex	<i>Tuberous Sclerosis Complex: from genes to new therapeutics</i> , Tuberous Sclerosis Complex Alliance, Annapolis, MD
2008	Mechanism of action of mTOR inhibitors in renal cell cancer	Genitourinary Cancers Annual Symposium, American Society of Clinical Oncology (ASCO), San Francisco, CA
2008	Renal cell carcinoma, molecular pathways and therapies	10 th Anniversary Clinical Scientist Meeting, Doris Duke Foundation, Newport, RI
2009	Targeting mTOR	<i>Molecular Oncology: The Sixth Vital Sign, What Every Oncologist Should Know</i> , Phoenix, AZ
2009	Molecular pathways and targeted therapies in kidney cancer	Annual Meeting, American Society of Clinical Oncology (ASCO), Orlando, FL
2009	The molecular basis and rationale for the use of VEGFR2 and mTOR inhibitors in VHL and TSC patients	Annual Meeting, American Society of Clinical Oncology (ASCO), Orlando, FL
2009	Emerging molecular targets in RCC	9 th International Congress on Genitourinary Malignancies, Washington, DC
2010	Genome evaluation, functional studies, and research translation in renal cell carcinoma	<i>Personal Genomes</i> , Cold Spring Harbor Laboratories, Cold Spring Harbor, NY
2010	Renal cell carcinoma, genome and translation	Van Andel Research Institute, Grand Rapids, MI
2011	Regulation of V-ATPases and endocytosis by mTORC1	<i>PI-3-Kinase Signaling Pathways</i> , Keystone Symposium, Keystone, CO
2011	Molecular Insights in Renal Cell Carcinoma	10 th International Kidney Cancer Symposium, Kidney Cancer Association, Chicago, IL
2011	Molecular Mechanisms and Translational Research in Kidney Cancer	University of Illinois at Chicago, Chicago, IL
2011	Exploring and exploiting metabolic abnormalities in RCC	Kidney Cancer Collaborative Symposium, MD Anderson Cancer Center, Houston, TX
2012	A Research Translation Platform: From the Molecular Genetics of RCC to the Clinic	Think Tank, Inaugural Conference CTNeT – Statewide Clinical Trials Network of Texas, Houston, TX
2012	RCC: molecular genetics and translation	2 nd Western New York & Southern Ontario Kidney Cancer Symposium, Roswell Park Cancer Institute, Buffalo, NY

2012	Molecular Biology of Renal Cell Carcinoma: Therapeutic Implications	Annual Meeting, American Society of Clinical Oncology (ASCO), Chicago, IL
2012	Molecular Mechanisms and Translational Research in Kidney Cancer	Genentech, San Francisco, CA
2012	Renal cell carcinoma: research and translation	Fox Chase Cancer Center, Philadelphia, PA
2012	<i>Keynote:</i> Models to dissect RCC-induced angiogenesis and drug responsiveness	Renal Cell Carcinoma SPORE Program, Dana-Farber Cancer Institute, Boston, MA
2012	<i>Moderator</i>	10 th International Kidney Cancer Symposium, Kidney Cancer Association, Chicago, IL
2012	Renal Cell Carcinoma: from the Genetics to the Clinic	Institute for Cancer Genetics, Columbia University, New York, NY
2012	State of the Art: Renal Tumor Genetics in 2012	13 th Annual Meeting of the Society of Urologic Oncology, Rockville, MD
2012	Renal cell carcinoma: research and translation	Duke University Medical Center, Hematology/Oncology Grand Rounds, NC
2013	Regulation of TFEB, an oncogene and master regulator of the lysosome	<i>Dysregulated endocytosis and cancer workshop</i> , National Cancer Institute, Bethesda, MD
2013	Toward a molecular genetic classification of clear cell renal cell carcinoma	Genitourinary Cancers Annual Symposium, American Society of Clinical Oncology (ASCO), Orlando, FL
2013	Renal Cancer: Molecular Genetics, Biology and Translation	Department of Translational Hematology & Oncology Research, Cleveland Clinic, Cleveland, OH
2013	Renal Cancer: From the Molecular Genetics to the Clinic	Department of Cancer and Cell Biology, University of Cincinnati, Cincinnati, OH
2013	Emerging Targets and Future Directions in Renal Cancer	Department of Cancer Biology, Cleveland Clinic, Cleveland, OH
2013	Targeting Syntenic Differences to Generate a Mouse Model of Renal Cancer	3 rd Symposium Mechanisms and Models of Cancer Conference, Salk Institute of Biological Studies, La Jolla, CA
2013	Translational Biology of RCC: What is Next	12 th International Kidney Cancer Symposium, Kidney Cancer Association, Chicago, IL

2013	Developing a new functional & molecular classification for renal cancer	Department of Cellular and Structural Biology, University of Texas Health Science Center in San Antonio, San Antonio, TX
2014	Toward a molecular genetic and functional classification of renal cell carcinoma	Genitourinary Cancers Annual Symposium, American Society of Clinical Oncology (ASCO), San Francisco, CA
2014	Towards a molecular and functional classification of sporadic renal cancer	4 th Annual GU Program Research Retreat, Buffalo, NY
2014	Kidney Cancer Precision Medicine	Texas FreshAIR Conference, Houston, TX
2014	Biology-Based Classification of RCC	13 th International Kidney Cancer Symposium, Chicago, IL
2014	Genetics of Kidney Cancer: Paving the Way for the Next Generation of Therapies	Chemotherapy Foundation Symposium: Innovative Cancer Therapy for Tomorrow, New York, NY
2014	Towards a Molecular Genetic and Functional Classification of Renal Cancer	Society of Urologic Oncology Annual Meeting, Bethesda, MD
2015	Personalizing Medicine for the Kidney Cancer Patient	Texas Academy of Medicine, Engineering, Science of Texas, Houston, TX
2015	Renal Cancer: molecular genetics, biology, and translation	Roswell Park Cancer Institute, Buffalo, NY
2015	RCC: biology and translation	Genentech, San Francisco, CA
2015	BAP1: lessons from renal cell carcinoma	16 th International Association for the Study of Lung Cancer World Conference, Denver, CO
2015	Moderator, Biology and Targets	13 th International Kidney Cancer Symposium, Chicago, IL
2016	Renal cancer tumorgrafts: a validated model to evaluate novel targeted therapies	American Association for Cancer Research (AACR) Patient-Derived Cancer Models, New Orleans, LA
2016	Kidney cancer: molecular subtypes and novel therapies	University of Texas Health Science Center in San Antonio, San Antonio, TX
2016	RCC: molecular pathways and novel therapies	12 th International VHL Medical Symposium, Boston, MA
2016	Personalized Medicine for Renal Cell Carcinoma	2016 Urologic Oncology Symposium, American Urological Association, San Diego, CA
2016	UTSW Kidney Cancer SPORE	NCI Renal Task Force (WebEx)

2016	RCC: molecular pathways and novel therapies	Center for Cancer Targeted Therapies Seminar Series, Vanderbilt-Ingram Cancer Center, Nashville, TN
2016	Molecular selection of patients	13 th International Kidney Cancer Symposium, Chicago, IL
2017	Best of Journals: Renal Cancer	Genitourinary Cancers Annual Symposium, American Society of Clinical Oncology (ASCO), Orlando, FL
2017	Renal Cancer: from bench to bedside	City of Hope, Duarte, California, CA
2017	The Dynamic Landscape of RCC Biomarkers: Can We Predict Prognosis, Treatment Response, and Outcome? (Poster Discussion)	Annual Meeting, American Society of Clinical Oncology (ASCO), Chicago, IL
2017	Renal cancer: A tale of genetics, epigenetics and angiogenesis	Cold Spring Harbor Laboratories, Cold Spring Harbor, NY
Regional		
2006	Targeting mTOR and other novel pathways in kidney cancer	Current Trends in GU Malignancies Dallas, TX
2007	Targeting the mTOR signaling pathway in renal cell carcinoma	Evening of Experts, Dallas, TX
2007	Targeting the mTOR pathway in RCC	Paul C. Peters Urology Symposium, Dallas, TX
2010	Tuberous Sclerosis Complex: A case and an introduction to the biology	Tuberous Sclerosis Alliance Town Hall Meeting, Scottish Rite Hospital for Children, Dallas, TX
2011	Targeted Therapy for RCC – When, What and Why?	Paul C. Peters Urology Symposium, Dallas, TX
2012	Kidney Cancer: Personalized Medicine and Research Translation	American Cancer Society, Cattle Baron's Ball, Harold C. Simmons Comprehensive Cancer Center, Dallas, TX
2012	Clinical Updates in Renal Cancer	Emerging Topics in Oncology, Harold C. Simmons Comprehensive Cancer Center, Dallas, TX
2012	Clinical Updates in Renal Cancer	Urology Symposium, Society of Urologic Nurses and Associates, Fort Worth, Dallas, TX
2013	Kidney Cancer: Personalized Medicine and Research Translation	Peloton Therapeutics, Dallas, TX
2015	Leveraging a PDX platform to study a HIF-2 inhibitor	Peloton Therapeutics, Dallas, TX
2016	Systemic Therapy for RCC: New Advances	Texas Urological Society, Dallas, TX