

Yates, Clayton

Annotated Curriculum Vitae

Clayton C. Yates, Ph.D.

Department of Biology and Center for Cancer Research

Tuskegee University, Tuskegee AL 36088

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Place of Birth Tuskegee, Alabama
Citizenship United States

A. Education:

1998	B.S. in Biology	Tuskegee University – Tuskegee, AL 36088
2001	Masters of Science Dept of Biology	Tuskegee University – Tuskegee, AL 36088
2005	Doctor of Philosophy, Dept. of Pathology	University of Pittsburgh School of Medicine Pittsburgh, PA 15261
2005	Certification in Tissue Engineering	University of Pittsburgh School of Medicine Pittsburgh, PA 15261
2007	Post-Doctoral Fellowship, Dept of Urology	Emory School of Medicine, Atlanta, GA 30312

B. Employment History:

2013- Present	Professor-Tuskegee University
2011-2013	Associate Professor- Tuskegee University
2007-2011	Assistant Professor- Tuskegee University
2006- 2007	<u>Post-Doctoral Fellow</u> - Emory University School of Medicine Mentor: Leland Chung Ph.D
2005 - 2006	<u>Post-Doctoral Fellow</u> - University of Pittsburgh School of Medicine Mentor: Alan Wells MD DMS
2003 – 2004	<u>NIH Training Fellow</u> - <i>Cellular Approaches to Tissue Engineering and Regenerative Medicine</i> - University of Pittsburgh. Mentor: Alan Wells MD DMS
2001- 2003	<u>Graduate Student Research Assistant</u> - University of Pittsburgh and VA Medical Center Pittsburgh, PA. Mentor: Alan Wells MD DMS
1998- 2000	<u>MBRS Graduate Research Assistant</u> - Tuskegee University Tuskegee, AL Mentor: Timothy Turner PhD

C. Honors and Awards

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Research and Professional Experience:

1998-2001 Teaching Assistant/Graduate Student Tuskegee University Department of Biology
2001-2005 Graduate Student, University of Pittsburgh, School of Medicine, PA
2005-2006 Post-Doctoral Fellow, University of Pittsburgh, School of Medicine
2006-2007 Post-Doctoral Fellow Emory University, School of Medicine
2007-Present Assistant Professor, Department of Biology and Center for Cancer Research
2011-Present Associate Professor, Department of Biology and Center for Cancer Research
2009-Present Associate Professor, Materials Science and Engineering
2010-Present Adjunct Faculty, Clark Atlanta University Prostate Cancer Center

Academic and Professional Honors

1998 AACR Minority Scholar Travel Award
1999 NIH Training Grant for Cellular Approaches to Tissue Engineering and Regenerative Medicine
2000 University of Pittsburgh, Department of Pathology, 1st prize (graduate presentation)
2001 McGowan Institute for Regenerative Medicine 2nd prize (poster competition)
2005 AACR Scholar in Training Award (AstraZeneca) Anaheim, CA
2002 Paul E. Strandjord Young Investigator Award (ACLPS)
2010 Who's Who in Science and Engineering
2010 Keynote Speaker, Human Cell Transformation Conference. Montreal CA
2011 Invited Speaker, Frontiers in Cancer Stem Cells, Howard University
2011 Invited Speaker, Health Disparities Conference, Tuskegee University, AL
2012 Plenary Session Invited Speaker AACR Health Disparities Conference, Atlanta, GA
2016 Invited Speaker at NCI Inaugural Health Disparities Symposium Bethesda, MD
2017 AACR Health Disparities Distinguished Lectureship Howard University,
2018 Minority in Cancer Research Council (MICR) of AACR- 3-year term

Other Experience and Professional Activities

2010 Outstanding Research Faculty (Tuskegee University)
2011 Guest Editor: Prostate Cancer Special Edition "Epigenetics and Hormonally Regulated Prostate Cancer"
2011 CDMRP PCR Cell Biology Review Panel-2 (CBY-2)
Ad-Hoc Reviewer, Cancer Research
Ad-Hoc Reviewer, The Prostate
Ad-Hoc Reviewer, Biochemical Pharmacology
Ad-Hoc Reviewer, RNA Biology
2013 CDMRP PCR Cell Biology Review Panel-1
2012 Ad-Hoc Reviewer, NIH/NIDDK Urologic and Genitourinary Physiology and Pathology Study Section [UGPP] Se Urology and Pathology
2013 CDMRP BCRP (Breast Cancer PathoBiology) Review Panel-1
2013 CDMRP PCR Pre-application-Cell Biology-1, PRE-CBY-1)
2013 CDMRP PCR Post-Doctoral and Physician Training Awards
2014 CDMRP PCR Cell Biology-1, PRE-CBY-1)
2015 CDMRP BCRP – PathoBiology
2015 NIH/NCI P20/ U54 Health Disparities partnership section
2016 NIH/NCI SBIR Health Disparities Panel
2017 Prostate Cancer Transatlantic Prostate (CaPTC) Consortium Chair
2019 co-chair AACR Cancer Health Disparities Symposium (San Francisco, CA)
2019 NIH/NCI Developmental Therapeutics Study Session

Peer Reviewed Journal Review

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Ad Hoc - Cancer Research
Ad Hoc - Oncogene
Ad Hoc - RNA Biology
Ad Hoc - Clinical Cancer Research
Ad Hoc – Prostate
Ad Hoc – American Journal of Pathology
Ad Hoc – Pathology
Ad Hoc- Plos one

B. Publications

1. A Wells, S Kharait, **C Yates**, L Satish (2004). Calpain proteases in prostate carcinomas. In *Immunohistochemistry and In Situ Hybridization of Human Carcinomas*, volume 1 (Ed: MA Hayat, Elsevier Science/Academic Press).
 2. **C Yates**, DB Stolz, LG Griffith (2005). Imaging Invasion and Metastasis ex vivo. In *Cell Motility in Cancer Invasion and Metastasis* (Ed: A Wells, Kluwer Academic Press, Amsterdam).
 3. Sourabh Kharait, Kien Tran, **Clayton Yates** and Alan Wells (2005) Cell Motility in Prostate Tumor invasion and metastasis. In *Cell Motility in Tumor Progression* (ed: A Wells). Kluwer Academic Publishers (Amsterdam).
 4. **Yates C**, Wells A, Turner T. Luteinising hormone-releasing hormone analogue reverses the cell adhesion profile of EGFR overexpressing DU-145 human prostate carcinoma subline. *British journal of cancer* 2005;92:366-75. PMID: 15655536
 5. **Yates C**, Shepard CR, Papworth G, Dash A, Beer Stolz, Tannenbaum S, Griffith L, Wells A. (2007) "Direct Visualization of Prostate Cancer Progression utilizing a Novel Organotypic Liver Bioreactor as Metastatic Target Organ". *Advances in Cancer Research* .2007;97:225-466. PMID: 17419948
 6. **Yates C**, Shepard CR, Stolz DB, Wells, A (2007) "Co-culturing human prostate carcinoma cells with hepatocytes lead to increased expression of E-cadherin". *Br J Cancer*. Apr 23;96 (8):1246-52. PMID: 17406365
 7. Ritu Aneja, Jun Zhou, **Clayton Yates**, Binfei Zhou, Surya N. Vangapandu Harish C. Joshi "Multidrug Resistance-Associated Protein – Overexpressing Teniposide-Resistant Human Lymphomas Undergo Apoptosis by a Tubulin-Binding Agent." *Cancer Res*. 2008 Mar 1;68(5):1495-503. PMID: 18316614
 8. Alan Wells, **Clayton Yates**, Christopher Shepard. (2008) "E-cadherin as an indicator of mesenchymal to epithelial reverting transitions during the metastatic seeding of disseminated carcinomas". *Clinical Experimental Metastasis* July 4: 25(6): 621-628 PMID: 18600305 **[Highly Accessed]**
 9. Karna, P., S. M. Sharp, **Yates, C**, Aneja R. (2009). "EM011 activates a survivin-dependent apoptotic program in human non-small cell lung cancer cells." *Mol Cancer* **8**: 93. PMID: 19878573
 10. Mohamed O. Abdalla, Ritu Aneja, Derrick Dean, Vijay Rangari, Albert Russell Jessie Jaynes, **Clayton Yates** and Timothy Turner (2010) "Synthesis and characterization of noscapine loaded magnetic polymeric nanoparticles" *Journal of Magnetism and Magnetic Materials* Volume 322, Issue 2, p 190-196 PMID: 20161408
 11. Sajni Jossou, Starlette Sharp, Ritu Aneja, Ruoxiang Wang, Timothy Turner, Leland W.K Chung, **Clayton Yates** "Tumor-Stromal Interactions Influence Radiation Sensitivity in Epithelial- versus Mesenchymal-Like Prostate Cancer Cells," *Journal of Oncology*, vol. 2010, Article ID 232831, 10 pages, 2010. PMID: 20798867
 12. Shaniece Theodore, Timothy Turner, Johng Rhim, **Clayton Yates** (2010) "miRNA 26a Expression in a Novel Panel of African American Prostate Cancer Cell Lines". *Ethnicity and Disease* Volume 20, Supp 1, Pages S1-96-100 PMID: 20521394
 13. Ritu Aneja, Tohru Miyagi, **Clayton Yates**, Leland W. K. Chung, and Harish C. Joshi "Non-toxic treatment of hormone-refractory prostate cancer in mice" *European Journal of Cancer* Volume 46, Issue 9, Pages 1668-1678 (June 2010) PMID: 20303260
 14. Sajni Jossou, Cynthia S. Anderson, Shian-Ying Sung, Peter A. S. Johnstone, Hiroyuki Kubo, Chia-Ling Hsieh, Rebecca Arnold, Murali Gururajan, **Clayton Yates**, and Leland W. K. Chung "Inhibition of
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ADAM9 expression induces epithelial phenotypic alterations and sensitizes human prostate cancer cells to radiation and chemotherapy" Prostate. 2011 Feb 15;71(3):232-40

15. **C. Yates***, S. Sharp, J. Jones, D. Topps, M. Coleman, R. Aneja, J. Jaynes, T. Turner, "LHRH-conjugated lytic peptides directly target prostate cancer cells". Biochem Pharmacol. 2011 Jan 1;81(1):104-10. (*corresponding author)

16. Shaniece Theodore, Star Sharp, Jianjun Zhou, Timothy Turner, ***Clayton Yates**, *John Rhim. "Establishment of a Novel non-malignant and malignant cell line paired cell line from African American Prostate Cancer Patient" Int J Oncol. 2010 Dec;37(6):1477-82. PMID:21042716 (*corresponding author)

17. Timothy Turner, Stephen Sodeke, Vivian Carter, Will Tarver, Isaac Mwase and **Clayton Yates** "Your Prostate, Your Life," African American Perspectives (Sept 2010 issue), p32-35 ISSN 1948-0946

18. Mohamed O. Abdalla, Prasanthi Karna, Hari Krishna Sajja, Hui Mao, **Clayton Yates**, Timothy Turner, Ritu Aneja "Enhanced nospapine delivery using uPAR-targeted optical-MR imaging trackable nanoparticles for prostate cancer therapy" J Control Release. 2011 Feb 10;149(3):314-22.

19. R. Renee Reams, Krishna Rani Kalari, Honghe Wang, Folakemi T. Odedina, **Clayton Yates** "Detecting gene-gene interactions in prostate disease in African American men" Infectious Agents and Cancer 2011 6(Suppl 2):S1. doi:10.1186/1750-9378-6-S2-S1

20. **Clayton Yates**, "Prostate Tumor Cell Plasticity: A Consequence of the Microenvironment" Adv Exp Med Biol. 2011;720:81-90. PMID: 21901620

21. Prasanthi Karna, Tucker Ezell, Sushma Reddy Gundala, Margaret Long, Meenakshi Vij Gupta, Ralphenia D. Pace, **Clayton Yates**, Satya Narayan and Ritu Aneja "Polyphenol-rich sweet potato greens extract inhibits proliferation and induces apoptosis in prostate cancer cells in vitro and in vivo" Carcinogenesis. 2011 Sep 26. PMID: 21948980

22. Honghe Wang, Jacqueline Jones, Qinghua P. He, Shana Hardy, William E. Grizzle, Timothy Turner, Danny Welch, and **Clayton Yates**. Clinical and biological significance of KISS1 expression in prostate cancer. (*Am J Pathol*) 2012 180(3):1170-1178

23. Jitender Madan¹, Bharat Baruah², Mulpuri Nagaraju³, Mohamed O. Abdalla⁴, **Clayton Yates**⁵, Timothy Turner⁵, Vijay Rangari⁶, Donald Hamelberg³, and Ritu Aneja^{1*} Molecular cycloencapsulation augments solubility and improves therapeutic index of brominated nospapine in prostate cancer cells Mol Pharm. 2012 May 7;9(5):1470-80. Epub 2012 Apr 27. PMID: 22540277 PMCID:PMC3428378

24. *Cerwinka WH, Sharp SM, Boyan BD, Zhau HE, Chung LWK and Yates C*, "Differentiation of Human Mesenchymal Stem Cell Spheroids under Microgravity Conditions " Cell Regeneration 2012, 1:2 (28 June 2012).

25. . **Clayton Yates**, Timothy Turner, Jesse Jaynes. "Lytic Peptides as Anti-Cancer Therapeutics: Lessons Learned From a Novel Design Approach" Small Wonders: Peptides for Disease Control Chapter 5, pp 79–91 *ACS Symposium Series*, Vol. 1095 April 4, 2012 (web)

26. Karna P, Rida PC, Turaga RC, Gao J, Gupta MV, Fritz A, Werner E, **Yates C**, Zhou J, Aneja R. "A novel microtubule-modulating agent inhibits angiogenesis by repressing the HIF-1 α axis and disrupting cell polarity and migration" Carcinogenesis (2012) Epub June 7 PMID: 22678119

27. Mohamed O. Abdalla, Timothy Turner, and **Clayton Yates** "Chemotherapy of Prostate Cancer by Targeted Nanoparticles Trackable by Magnetic Resonance Imaging" Volume 2012, Article ID 407429, 9 pages

28. Jianjun Zhou, Honghe Wang, Virginetta Cannon, Karen Marie Scott, Hongbin Song, **Clayton Yates** "Side population rather than CD133+ cells distinguishes enriched tumorigenicity in hTERT-immortalized primary prostate cancer cell" Molecular Cancer 2011 Sep 14;10(1):112. PMID: 21917149 [**Highly Accessed**] **Impact Factor 5.13**

29. **Clayton Yates**, "Prostate Tumor Cell Plasticity: A Consequence of the Microenvironment" Adv Exp Med Biol. 2011;720:81-90. PMID: 21901620 **Impact Factor 1.83**

30. Honghe Wang, Jacqueline Jones, Qinghua P. He, Shana Hardy, William E. Grizzle, Timothy Turner, Danny Welch, and **Clayton Yates**. Clinical and biological significance of KISS1 expression in prostate cancer. (*Am J Pathol*) 2012 180(3):1170-1178. **Impact Factor 4.67**

31. Jacqueline Jones*, Honghe Wang*, Jianjun Zhou, Shana Hardy, David Austin, Qinghua He, Timothy Turner, Alan Wells, William Grizzle, **Clayton Yates** "Nuclear Kaiso Indicates Aggressive Prostate Cancers and Promotes Migration and Invasiveness of Prostate Cancer Cells " Am J Pathol. 2012 Sep

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10. pii: S0002-9440(12)00605-0. doi: 10.1016/j.ajpath.2012.08.008. [Epub ahead of print]

PMID:22974583 PMCID:PMC348381 **Impact Factor 4.67**

32. Jacqueline Jones, Honghe Wang, and William Grizzle, **Clayton Yates** "MicroRNAs that contribute to Aggressive Prostate Cancer: Emphasis on African American Prostate Tumors" Review: *Biotechnic & Histochemistry* 2013, **Early Online: 1–15**. DOI:10.3109/10520295.2013.807069 [Epub ahead of print] PMID: 23901944 **Impact Factor. 0 .67**

33. Jianjun Zhou, Lionel Feigenbaum, Carole Yee, Hongbin Song, and **Clayton Yates**, "Mouse Prostate Epithelial Luminal Cells Lineage Originate in the Basal Layer Where the Primitive Stem/Early Progenitor Cells Reside: Implications for Identifying Prostate Cancer Stem Cells," *BioMed Research International*, vol. 2013, Article ID 913179, 8 pages, 2013. doi:10.1155/2013/913179 PMID: 23819124 PMCID: PMC3683430 **Impact Factor 2.88**

34. Jacqueline Jones*, Honghe Wang, Shaniece Theodore, Danny Welch, **William Grizzle, Clayton Yates** Nuclear localization of Kaiso promotes the poorly differentiated phenotype and EMT in infiltrating ductal carcinomas. *Clinical & experimental metastasis* DOI: 10.1007/s10585-014-9644-7 [Epub ahead of print] PMID:24570268 **Impact Factor 3.46**

35. Arora R, **Yates C**, Gary BD, McClellan S, Tan M, Xi Y, Reed E, Piazza GA, Owen LB and Dean-Colomb W. Panepoxydone Targets NF-kB and FOXM1 to Inhibit Proliferation, Induce Apoptosis and Reverse Epithelial to Mesenchymal Transition in Breast Cancer. *PloS one*. 9(6):e98370. **Impact factor 3.73**

36. Myisha Roberson, Vijaya Rangari, Shaik Jeelani, Temesgen Samuel, **Clayton Yates** "Synthesis and Characterization Silver, Zinc Oxide and Hybrid Silver/Zinc Oxide Nanoparticles for Antimicrobial Applications" *Nano Life* Vol: 04 Iss: 1 pp14400

37. Shaniece Theodore, Melissa Davis , Fu Zhou , Honghe Wang, Jhong Rhim , Timothy Turner, Weidong Ji , Guohua Zeng , **William Grizzle, Clayton Yates** "MicroRNA profiling of novel African American and Caucasian Prostate Cancer cell lines reveals a reciprocal regulatory relationship of miR-152 and DNA methyltransferase 1." *Oncotarget* 5(11): 3512-25. **Impact Factor 6.7**

38. Bethany N. Smith, Liza J. Burton, Veronica Henderson, Diandra D. Randle, Derrick J. Morton, Basil A. Smith, Latonia Taliaferro-Smith, Peri Nagappan, **Clayton Yates**, Majd Zayzafoon, Leland W. K. Chung, Valerie A. Odero-Marah "Snail Promotes Epithelial Mesenchymal Transition in Breast Cancer Cells in Part via Activation of Nuclear ERK2" *PloS one*. 9(8): e104987. **Impact factor 3.73**

39. Madan J, Gundala SR, Baruah B, Nagaraju M, **Yates C**, Turner T, Rangari VK, Hamelberg D, Reid MD, Aneja R.. Cyclodextrin complexes of reduced bromonoscipine in guar gum microspheres enhance colonic drug delivery. *Molecular Pharmaceutics*. 2014 Oct 28. [Epub ahead of print] **Impact Factor 4.6**

44. Ritu Arora, David Schmitt, Sanjeev Srivastava, Ming Tan, **Clayton Yates**, Windy Dean-Colomb "Inhibition of the Warburg effect with a natural compound reveals a novel metric for determining the metastatic potential of breast cancer" *Oncotarget* 2015 Jan 7. [Epub ahead of print] **Impact Factor 6.7**

45. R. Renee Reams, Jacqueline Jones-Triche, Owen T. M Chan, Brenda Y. Hernandez Karam F. A. Soliman and **Clayton Yates**. Immunohistological Analysis of ABCD3 Expression in Caucasian and African American Prostate Tumors" *BioMed Research International* (in press) **Impact Factor 2.88**

46. Christina C. Pierre, Joseph Longo, Meaghan Mavor, Snezana B. Milosavljevic, Roopali Chaudhary, Ebony Gilbreath, **Clayton Yates**, Juliet M. Daniel "Kaiso overexpression promotes intestinal inflammation and potentiates intestinal tumorigenesis in *Apc^{Min/+}* mice" *Biochimica et Biophysica Acta (BBA) - Molecular Basis of Disease*. In press **Impact factor 5.089**

47. Honghe Wang, Wei Liu, ShaNekkie Black, Omari Turner, Juliet M. Daniel, Windy Dean-Colomb, Qinghua P. He, Melissa Davis, Clayton Yates. Kaiso, a transcriptional repressor, promotes cell migration and invasion of prostate cancer cells through regulation of miR-31 expression *Oncotarget* 2015 Dec 30. [Epub ahead of print] **Impact Factor 6.7**

48 **Yates C**, Long MD, Campbell MJ, Sucheston-Campbell L. [miRNAs as drivers of TMPRSS2-ERG negative prostate tumors in African American men](#). *Front Biosci (Landmark Ed)*. 2017 Jan 1;22:212-229. Review. PMID: 27814612

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49. Sanchez TW, Zhang G, Li J, Dai L, Mirshahidi S, Wall NR, **Yates C**, Wilson C, Montgomery S, Zhang JY, Casiano CA. Immunoseroproteomic Profiling in African American Men with Prostate **Cancer**: Evidence for an Autoantibody Response to Glycolysis and Plasminogen-Associated Proteins. *Mol Cell Proteomics*. 2016 Dec;15(12):3564-3580. Epub 2016 Oct 14. PMID: 27742740

50. Jones J, Mukherjee A, Karanam B, Davis M, Jaynes J, Reams RR, Dean-Colomb W, **Yates C**. African Americans with pancreatic ductal adenocarcinoma exhibit gender differences in Kaiso expression. *Cancer Lett*. 2016 Oct 1;380:513-22. doi: 10.1016/j.canlet.2016.06.025. Epub 2016 Jul 15. PMID: 27424525

51. Myers JS, Vallega KA, White J, Yu K, **Yates CC**, Sang QA. Proteomic characterization of paired non-malignant and malignant African-American prostate epithelial cell lines distinguishes them by structural proteins. *BMC Cancer*. 2017 Jul 11;17(1):480. PMID: 28697756 PMCID: PMC5504803

52. Ahmed MSU, Salam AB, **Yates C**, Willian K, Jaynes J, Turner T, Abdalla MO. Double-receptor-targeting multifunctional iron oxide nanoparticles drug delivery system for the treatment and imaging of prostate cancer. *Int J Nanomedicine*. 2017 Sep 19;12:6973-6984. PMID: 29033565 PMCID: PMC5614798.

53. Woods-Burnham L, Basu A, Cajigas-Du Ross CK, Love A, **Yates C**, De Leon M, Roy S, Casiano CA. The 22Rv1 prostate cancer cell line carries mixed genetic ancestry: Implications for prostate cancer health disparities research using pre-clinical models. *Prostate*. 2017 Dec;77(16):1601-1608. PMID: 29030865 PMCID: PMC5687283

54. Henderson HJ, Karanam B, Samant R, Vig K, Singh SR, Yates C, Bedi D. Neuroligin 4X overexpression in human breast cancer is associated with poor relapse-free survival. *PLoS One*. 2017 Dec 15;12(12):e0189662. doi: 10.1371/journal.pone.0189662. eCollection 2017. PMID: 29244827

55. Abisoye-Ogunniyan A, Lin H, Ghebremedhin A, Salam A, Karanam B, Theodore S, Jones-Trich J, Davis M, **Grizzle W**, Wang H, **Yates C**. Transcriptional Repressor Kaiso Promotes Epithelial to Mesenchymal Transition and Metastasis in Prostate Cancer through Direct Regulation of miR-200c. *Cancer Lett*. 2018 May 8. pii: S0304-3835(18)30319-7. doi: 10.1016/j.canlet.2018.04.044. [Epub ahead of print] PMID:29751044

56. Tripathi S, Davis M, Hughley R, He Q. Bae S, Karanam B, Marini R, Colomb WD, **Grizzle WE**, **Yates C**. Quadruple Negative Breast Cancers in African American women have an enriched basal and immune signature, *PLoS One*. 2018 Jun 18;13(6):e0196909. doi: 10.1371/journal.pone.0196909. eCollection 2018

58. Mukherjee A, Hollern DP, Williams OG, Rayburn TS, Byrd WA, Yates C, Jones JD "A Review of FOXI3 Regulation of Development and Possible Roles in Cancer Progression and Metastasis" *Front Cell Dev Biol*. 2018 Jul 3;6:69. doi: 10.3389/fcell.2018.00069. eCollection 2018.

59. Anusha Angajala, Sangbin Lim, Joshua B. Phillips, Jin-Hwan Kim¹, Clayton Yates², Zongbing You and Ming Tan Diverse Roles of Mitochondria in Immune Responses: Novel Insights Into Immuno-Metabolism *Front. Immunol.*, 12 July 2018 | <https://doi.org/10.3389/fimmu.2018.01605>

60. Christina Pierre, Shawn Hercules, **Clayton Yates**, Juliet Daniel "Dancing from bottoms up – roles of the POZ-ZF transcription factor Kaiso in Cancer" *Journal: BBA - Reviews on Cancer* **In Press**

61. Jaynes et al. Clayton Yates* Udo Rudloff "Mannose receptor (CD206) activation in tumor-associated macrophages enhances adaptive and innate antitumor immune response" *January 2020 Science translational medicine* 12(530):6337 DOI: [10.1126/scitranslmed.aax6337](https://doi.org/10.1126/scitranslmed.aax6337) * **Corresponding Author**

62. Maura J. O'Neill¹, King Chana¹, Jesse M. Jaynes^b, Zachary Knott^{sc}, Xia Xua, Abisola Abisoye-Ogunniyan^{b,d}, Theresa Guerine, Jerome Schlomere, Dandan Lic, Jeffrey W. Caryf,

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Kanniah Rajasekaranf, Clayton Yatesb, Serguei Kozlove, Thorkell Andressona,*, Udo Rudloff
LC-MS/MS assay coupled with carboxylic acid magnetic bead affinity capture to quantitatively
measure cationic host defense peptides (HDPs) in complex matrices with application to
preclinical pharmacokinetic studies January 2020 Journal of Pharmaceutical and Biomedical
Analysis 181:113093

63. A Qualitative Assessment of the Living Donor Navigator Program to Identify Core
Competencies and Promising Practices for Implementation December 2019 Progress in
transplantation (Aliso Viejo, Calif.) 30(1):152692481989291 DOI: [10.1177/1526924819892919](https://doi.org/10.1177/1526924819892919)

64. Peter Ntiamoah, Ngozi R. Monu,; Fatimah B. Abdulkareem; Kayode A. Adeniji, ; John O.
Obafunwa, Akinwumi O. Komolafe, ; Clayton Yates, ; Ernest Kaninjing, John D. Carpten,
Bodour Salhia, Folake T. Odedina, Marcia Edelweiss, T. Peter Kingham, and Olusegun I.
Alatise, Pathology Services in Nigeria: Cross-Sectional Survey Results From Three Cancer
Consortia August 2019 Journal of Global Oncology DOI: [10.1200/JGO.19.00138](https://doi.org/10.1200/JGO.19.00138)

65. Anusha Angajala, Sangbin Lim, Joshua B. Phillips, Jin-Hwan Kim, Clayton Yates,
Zongbing You and Ming Tan* [Diverse Roles of Mitochondria in Immune Responses: Novel
Insights Into Immuno-Metabolism](https://doi.org/10.3389/fimmu.2018.01605) Frontiers in Immunology published: 12 July 2018 doi:
10.3389/fimmu.2018.01605

Patents

1. **Lytic peptides having anti-proliferative activity against prostate cancer cells** Clayton
Yates, Jesse Jaynes, Timothy Turner Patent number: 8461118
2. **Peptide-based methods for treating pancreatic cancer** Udo Rudloff, Jesse M. Jaynes,
Henry W. Lopez, George R. Martin, Clayton Yates Patent number: 10016480
3. **Peptides having anti-inflammatory properties** Jesse M. Jaynes, Henry W. Lopez, George R.
Martin, Clayton Yates, Charles E. Garvin Patent number: 9492499

Completed Support

AWARD # DOD PC073977

Dates of Award: 3/1/08 - 2/28/11

Role: Pilot Project PI – 25%

Amount: \$321,000.00

Title Influence of the Tumor Microenvironment on Molecular Regulation of Prostate Cancer Progression

Goal: The major goal of this project is to determine the influence of the tumor on molecular signaling pathways that influence cellular behavior throughout cancer progression.

List of Specific Aims: Specific Aim one is to determine the role of p120ctn signaling within the liver microenvironment. Specific Aim 2 is to determine the role of nuclear p120-ctn-Kaiso in the reversal of EMT with in the liver microenvironment.

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AWARD # 1 U54 CA118623-01

Dates of Award: 9/1/07 - 8/3/11

Role: Pilot Project PI – 50%

Amount: \$320,000.00

Title: **Influence of the Tumor Microenvironment on BRMS1 and Kaiso Expression in Breast Cancer**

Brief Description of Project Goals:

Pilot Project Goals: *Determine the role of BRMS-1 and Kaiso influence on gene expression within the liver and bone tumor microenvironment during Breast Cancer progression.*

List of Specific Aims

The specific aims in this project are to investigate the role of BRMS1 on EGFR mediated p120-Kaiso cytoplasmic to nuclear localization. Aim 2 is to determine the methylation status of currently available metastasis genes in breast and prostate cancer cell lines. Aim 3 is determine the role of the tumor microenvironment on BRMS1 expression and Kaiso localization.

AWARD # 1 U54 CA118623-01

Dates of Award: 9/1/12-8/31/15

Role: Project PI: (YatesTU/Grizzle UAB)– 50%

Amount: \$825,000.00

Title: Kaiso as a Potential Biomarker in Breast Cancer

Brief Description of Project Goals:

Specific Goal of this project are to evaluate the relationship between nuclear Kaiso expression and hormone receptor status in breast cancer patients. Determine if Kaiso regulates hormone receptors and EMT through methylation-dependent transcriptional silencing. And lastly to establish the function of Kaiso expression/localization utilizing an experimental metastasis model involving MDA-MB-231 cells..

Justification for Requested Support:

This research study has the ability to identify that Kaiso is a potential biomarker for advanced breast cancer patients.

Overlap: None

AWARD # G12 RR03059-21A1

Dates of Award: 4/1/10 - 6/30/15

Role: Pilot Project PI – 25%

Amount: \$558,928.00

Title: Identification of molecular targets for African American prostate cancer patients using miRNA profiling (PI: Timothy Turner)

Brief Description of Project Goals:

The major goal of this project is determine the miRNA profile of African American compared to Caucasians prostate cancer patients with emphasis on the role of the tumor microenvironment.

List of Specific Aims:

Our Primary Objective is:

To Identify and compare cancer-specific miRNA signatures of African American and Caucasian prostate cancer patients. Determine the influence of the prostatic tumor microenvironment on the miRNA profiles of African American and Caucasian prostate cancer cells. Lastly we will utilize three-dimension (3-D) co-culture models to determine the role of metastatic tumor microenvironment on the molecular regulation of miRNA expression in African American and Caucasian prostate cancer cells.

AWARD # DOD PC11359

Dates of Award: 8/1/2013-7/31/2016

Role: PI Yates– 25% Sub- W. Grizzle (UAB)

Amount: \$375,000.00

Title: Transcriptional Repressor Kaiso Promotes Metastasis through Epithelial to Mesenchymal

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Brief Description of Project Goals:

The major goal of this project is to validate Kaiso expression as marker for human aggressive vs non-aggressive tumors. And determine how Kaiso promotes castrations resistant metastasis during androgen deprivation therapy.

Overlap: None

AWARD # 1 R21 CA188799-01

Dates of Award: 9/1/14 - 8/30/16

Role: PI Yates 25% Sub A. Wells (Univ. Pittsburgh)

Amount \$275,000.00

Title: Role of Transcriptional Repressor Kaiso in the Breast Cancer Tumor Microenvironment.

Goal: In this proposal we are focusing on a novel transcriptional repressor Kaiso, as the regulator of DNA molecular machinery that enables successful metastasis through epigenetic regulation of gene expression. This proposal will determine Kaiso's role and whether this can be targeted to limit tumor metastasis.

AWARD # 1 U54 CA118623-01

Dates of Award: 9/1/14-8/31/16

Role: Project PI: Yates Sub W. Grizzle (UAB)

Amount: \$240,000.00

Title: Exosome profiling of in aggressive in breast cancer patients

Brief Description of Project Goals:

Specific Goal of this project are to evaluate the relationship between nuclear Kaiso expression and hormone receptor status in breast cancer patients. Determine if Kaiso regulates hormone receptors and EMT through methylation-dependent transcriptional silencing. And lastly to establish the function of Kaiso expression/localization utilizing an experimental metastasis model involving MDA-MB-231 cells.

AWARD # 1 U54 CA118623-01 NIH/NCI

Dates of Award 9/1/15 - 8/31/16

Amount \$1,105,986

Role: Project P

Brief Description of Project Goals:

“Morehouse School of Medicine/Tuskegee University/UAB Comp Cancer Center Partnership”

The major objectives of this tripartite Partnership funding are to establish an effective cancer research program at MSM and TU and increase and enhance the capability of the UABCCC to conduct cancer health disparity research. This will be accomplished by strategic enhancement of three existing programs, Developmental Research, Research Training and Career Development, and Community Outreach. Three (3) Shared Resources support these Programs: Biostatistics, Bioethics, and Recruitment and Retention.

Role: PD/PI

9/1/15 – 8/31/16

3 G12MD007585-25S1 (Yates)

Amount \$1,138,990

NIH/NIMHD RCMI

The specific goal of research centers in minority institutions (RCMI) is to provide research support for infrastructure and pilot research funds to under-represented minority intuitions.

Role: PI/PD

9/1/15-8/31/16

1 U54 CA118623-01 Administrative Supplement (PI Yates)

Amount \$199,999.00

NIH/NCI

The goal of this award is to genetically and molecularly characterize African American Prostate Cancer cell lines developed in my laboratory.

Role PI/PD

Yates, Clayton

7/1/16 – 6/30/17

AWARD # 3 G12MD007585-25S1 (Yates)

Amount \$1, 138,990

NIH/NIMHD RCMI

The specific goal of research centers in minority institutions (RCMI) is to provide research support for infrastructure and pilot research funds to under-represented minority intuitions.

Role: PI/PD

Current Support

9/1/16- 8/31/21

AWARD # 1 U54 CA118623-01 MPI Yates/Troy

Amount 5,300,000.00

NIH/NCI

Morehouse School of Medicine/Tuskegee University/UAB Comp Cancer Center Partnership

The major objectives of this tripartite Partnership funding are to establish an effective cancer research program at MSM and TU and increase and enhance the capability of the UABCCC to conduct cancer health disparity research. This will be accomplished by strategic enhancement of three existing programs, Developmental Research, Research Training and Career Development, and Community Outreach. Three (3) Shared Resources support these Programs: Biostatistics, Bioethics, and Recruitment and Retention.

Role: PD/PI

9/1/16- 8/31/19

AWARD # 1 U54 CA118623-01 PI Yates

Amount: 420,000.00

NIH/NCI

Molecular Regulation of Kaiso in Prostate Cancer

Determine how Kaiso is regulated and influences DNA methylation patterns.

9/1/17 - 8/30/22

9/1/17- 8/31/22

AWARD # 2 U54 MD007585-26 PI Yates

Amount: 8,500,000.00

NIH/NIMHD RCMI

Tuskegee University Center for Biomedical Research to Address Health Disparities

05/01/2018- 04/31/2021

PC170315 PI Yates

Amount: 1,100,000.00

DOD/PCRP

A Precision Medicine Study of How Inflammation May Underlie the Excessive Burden of Prostate Cancer in Men of African Ancestry

9/1/15-8/31/2020

1 UL1TR001417 (Yates)

Amount \$73,162

NIH/CTSA

The specific goal for Tuskegee University as a partner in the University of Alabama at Birmingham, Center for Clinical and Translational Science (CCTS) is provide opportunities for Tuskegee University investigators to connect with tools, technology, research and inter-institutional resources through the south east region.

Role: site PD/PI

H. Teaching

Selected Students Trainee under my Supervision

Mentored Undergraduate Students

Shenekkia Black - Summer undergraduate research with collaborator at MIT in Bioengineering/NIH summer program, Currently in my lab as MS student

Zachery Phillips - Summer undergraduate research at University of Pittsburgh, Department of Pathology

Anisha Ellis- Letters to Physician assistance programs (Accepted)

Natalia Hardy- assisted entrance to graduate programs at Georgia Southern University

Malendia Gaines- TyCobb scholarship

Shannon Walker- Assisted with obtaining McNair Scholarship.

Jamilah Jenkins – Summer research at University of Pittsburgh, Department of Pathology

Ryan Burke- Summer research at University of Pittsburgh, Department of Pathology

Santanna Small- Summer research at University of Pittsburgh, Department of Pathology

Marcus Johnson- Summer research at University of Pittsburgh, Department of Pathology

Darian Morgan- Summer research at University of Pittsburgh, Department of Pathology

Laura Dewberry- Summer research at University of Pittsburgh, Department of Pathology

Mentored Graduate Students (Completed Theses)

Charnita Davidson – (Biology)- Completed M.S degree, Currently Graduate Program Assistant

Shaniece Theodore (Biology) – Completed M.S. degree, currently enrolled as IBS student

Jacqueline Jones – 1st UNCF/MERCK Fellow in TU campus currently Doctoral Degree Awarded

David Austin (Biology) M.S- Completed M.S Degree, Currently enrolled a Vanderbilt Ph.D program

Leah Oneal (Biology) M.S – Completed thesis 2012

Sherwin Jack (Biology) M.S - Completed M.S. degree, currently enrolled as IBS student

Mohamed Abdalla IBS- Completed Ph.D. degree, currently Assistant Professor in Dept of Chemistry

Star Sharp Biology (Biology) M.S.- Completed M.S. degree, currently enrolled as Ph.D at University of Iowa

Daphne Topps (Biology) M.S. –completed M.S Degree. Currently Faculty at Alabama State

Mathew Coleman (Biology) M.S. –completed M.S Degree. Currently Health Inspector, Gwinnett GA

Phylicia Morgan M.S- Co-mentored with Norma Dawkins, Completed MS degree food nutritional sciences, Currently enrolled in Medical School

Shamima Nasrin- M.S. Co-mentored with Marcia Martinez, Currently enrolled in Auburn University Ph.D program

Mentored Doctoral Students

Shana Hardy- M.S – completed 2012

Dominique Gales M.S –completed M.S thesis 2012

Mysia Robinson M.S –Co-mentored Vijay Ranjari M.S completed thesis 2012

Jacqueline Jones – 1st UNCF/MERCK Fellow in TU campus currently completed doctorate degree

Shaniece Theodore (Biology) – Completed M.S. degree, currently enrolled as IBS student

Sherwin Jack (Biology) M.S - Completed M.S. degree, currently enrolled as IBS student

Shanekkia Black (Biology) M.S Completed M.S degree, 2012

LaShandra Mosely, M.S. Completed M.S. degree 2012

Abisola Ogunniyan M.S. Completed 2015

Anghesom Grehimain M.S Completed 2016 now enrolled in PhD.

Abiosola Ogunniyan PhD Completed 2017

Yates, Clayton
Dominique Gales PhD Completed 2017

Current Doctoral Students

Jason White
Md Ahmed Shakir
Anusha Angajala
Ahmad Salam
Ruskana Amin
Raymond Hughley

Mentored Pre-Doctoral Trainee Grant Funded

Jackie Jones (Kaiso expression and localization in EMT/Metastasis)
UNCF/MERK Graduate Initiative 2010-2011 \$52,000 5/2010 12/2012
Mentor: Clayton Yates
