

Audrey Player PhD

Email: audrey.player@tsu.edu (w)

EDUCATION:

B.S. degree (Biology) The University of North Texas

Ph.D. degree (Biomedical Sciences) Wright State University

EMPLOYMENT:

1986-1988 Postdoctoral Fellow, University of California, Laboratory of Radiobiology, Jim Cleaver, Investigator

1988-1990 Research Training Fellow, National Cancer Institute, Laboratory of Population Genetics, Stuart Yuspa, Investigator

1990-2000 Research Scientist, Bayer Diagnostics/Chiron Diagnostic/Ciba/Triton

2000-2004 Staff Scientist / Biologist, National Cancer Institute, Laboratory of Population Genetics, Jin Jen, Investigator

2004-2009 Biologist, National Cancer Institute, Microarray Facility / Clinical Molecular Profiling Core, Dan Edelman, Current Head as of 2007

2009-2010 Senior Research Scientist, Experimental Therapeutics, University of Texas, MD Anderson Cancer Hospital

2010-2011 Visiting Assistant Professor, Texas Southern University, Dr W Williams, Chair

2012-present Assistant Professor, Tenure track, Texas Southern University, Dr W Williams, Chair

AWARDS AND RECOGNITION:

Who's Who of American Women (2002-2003)

Employee Recognition at Ciba Corning Diagnostics

Community / Mayoral recognition for previous years of volunteer work at the Oakland (California) "Brookdale Community Science Center", 2000 (award presented by ex-California governor, then Mayor of Oakland, Jerry Brown.)

Quoted in The Scientist Magazine (Minerd J, Minerd A *The Scientist* 19 (5):30 (14 March 2005) – expertise in manipulation of small-samples (ie, total RNA concentrations below 1ng (to 10pg)

PATENTS (AND RELATED ENTRIES):

1. Co-inventor of “Highly Sensitive Gene Detection and Localization Using in In Situ Branched-DNA Hybridization”. Application number 09/872,493(2005)
2. NIH/NCI patent attorneys assessed the TDE2 gene, uncovered in our studies, to determine the patent position (2003).
3. Single author-Internal Bayer Invention Disclosure for “Novel Method for Detection of Metalloproteinase in Urine Samples” (1993)

REVIEWER/EDITOR FOR JOURNALS:

Called to referee 2 grant applications (Yorkshire Cancer Research Oct 2005, 2006)
Called to referee a manuscript for Cell Research (April 2006)
Called to referee manuscripts for Carcinogenesis (Nov 2006, June 2007, May 2008)
Called to co-referee manuscripts for Nucleic Acid Research (Aug 2007, May 2008)
Called to referee manuscripts for BMC (May 2009)
Associate Editor for BMC Notes journal (current)

SERVICE ACCOMPLISHMENTS:Member of Honors College:

My duties begun in Fall 2011; responsible for teaching, supporting and advising Honors and freshman-level students.

Member of Admissions Committee for the Thomas Freeman’s Honor’s College TSU:

My duties began Jan 2015; responsible for helping to select students for entry into the College

Member of the Curriculum committee:

Charge: Discuss the possibility of designing programs and curriculum in the Biology Department which would offer students selection of certain areas of concentration in the Biology curriculum in which students could specialize.

Involved in Advising and Student Registration:

Charge: Make every effort to dedicate the time necessary to properly advise students on course-work and career opportunities available.

Strategic Planning-- University Committee:

Charge: Involved in formulating aims and new mission for Texas Southern University for years 2015-2020.

Research Grants:

*Recipient of University SEED grant 10/2013. Focus of research project is genetic characterization of aggressive breast cancers triple negative breast cancer patients.

*Submitted: R03/SC3 (May 2014). Gene expression analysis of triple negative/basal-like breast cancer patient samples.

*Submitted: Collaborative grant with Thurgood Marshall #RUS-14-GR-001 (August 2014)

*Submitted: Avon.org pre-proposal for breast cancer grant (December 2014)

*Submitted: Avon.org grant proposal (Feb 2015) (Dec 2016)

*Submitted: NIH R15 grant (May 2015)

Submitted: Bayer (May 2016)

Submitted : NSF grant (as collaborator, 2016)

RESEARCH:

My laboratory focuses on characterizing and better understanding genes involved in processes related to triple negative/basal-like breast cancers (TNBC). We identified a panel of six genes coordinately dysregulated in TNBC. We are in the process of validating gene expression, transcription factor regulation and protein interaction between these and other genes found to be dysregulated in these cancers.

PUBLICATIONS (outside- peer review articles as listed in PubMed)

1. Kantor GJ, **Player** AN. A further definition of characteristics of DNA-excision repair in xeroderma pigmentosum complementation group A strains. *Mutat Res* 166, 79-88 (1986).
2. Cleaver JE, Cortes F, Lutze LH, Morgan WF, **Player** AN, Mitchell DL. Unique DNA repair properties of a xeroderma pigmentosum revertant. *Mol Cell Biol* 7, 3353-7 (1987).
3. **Player** AN, Kantor GJ. The endogenous nuclease sensitivity of repaired DNA in human fibroblasts. *Mutat Res* 184, 169-78 (1987).
4. Cleaver JE, Cortes F, Karentz D, Lutze LH, Morgan WF, **Player** AN, *et al.* The relative biological importance of cyclobutane and (6-4) pyrimidine-pyrimidone dimer photoproducts in human cells: evidence from a xeroderma pigmentosum revertant. *Photochem Photobiol* 48, 41-9 (1988).
5. Cleaver JE, Vuksanovic L, **Player** AN, Lutze LH. Repair of DNA damage in shuttle vectors, virus, and chromosomal DNAs may depend on their biological imprinting--a 'Pygmalion' effect. *Mutat Res* 220, 161-8 (1989).
6. Greenhalgh DA, Welty DJ, **Player** A, Yuspa SH. Two oncogenes, v-fos and v-ras, cooperate to convert normal keratinocytes to squamous cell carcinoma. *Proc Natl Acad Sci U S A* 87, 643-7 (1990).
7. Antao V, **Player** A, Kolberg JA. *In situ hybridization using the bDNA technology. Techniques in Localization of Gene Expression.* In: Patterson B, editor. Techniques in quantitation and localization of gene expression: Birkhauser Press,81-92 (1999).
8. Nacht M, Dracheva T, Gao Y, Fujii T, Chen Y, **Player** A, *et al.* Molecular characteristics of non-small cell lung cancer. *Proc Natl Acad Sci U S A* 98, 15203-8 (2001).
9. **Player** AN, Shen LP, Kenny D, Antao VP, Kolberg JA. Single-copy gene detection using branched DNA (bDNA) in situ hybridization. *J Histochem Cytochem* 49, 603-12 (2001).
10. Fujii T, Dracheva T, **Player** A, Chacko S, Clifford R, Strausberg RL, *et al.* A preliminary transcriptome map of non-small cell lung cancer. *Cancer Res* 62, 3340-6 (2002).
11. **Player** A, Gillespie J, Fujii T, Fukuoka J, Dracheva T, Meerzaman D, *et al.* Identification of TDE2 gene and its expression in non-small cell lung cancer. *Int J Cancer* 107, 238-43

(2003). **Author Reference in NCBI for characterization of Nucleotide (NM_178865)**

12. Fukuoka J, Fujii T, Shih JH, Dracheva T, Meerzaman D, **Player A**, *et al*. Chromatin remodeling factors and BRM/BRG1 expression as prognostic indicators in non-small cell lung cancer. *Clin Cancer Res* 10, 4314-24 (2004).
13. Krop I, **Player A**, Tablante A, Taylor-Parker M, Lahti-Domenici J, Fukuoka J, *et al*. Frequent HIN-1 Promoter Methylation and Lack of Expression in Multiple Human Tumor Types. *Mol Cancer Res* 2, 489-94 (2004).
14. **Player A**, Barrett JC, Kawasaki ES. Laser capture microdissection, microarrays and the precise definition of a cancer cell. *Expert Rev Mol Diagn* 4, 831-40 (2004).
15. Kawasaki E, **Player A**. Nanotechnology, Nanomedicine, and the development of new effective therapies for cancer. *Nanomedicine: Nanotech Bio Med* 2, 101-109 (2005).
16. **Player, A.**, Wang, Y., Bhattacharya, B., Rao, M., Puri, R., Kawasaki, E. Comparisons between transcriptional regulation and RNA expression of embryonic cell preparations. *Stem Cell Dev* 15(3): 315-323 (2006)
17. Hong K, Yang S, Yi H, **Player A**, Fukuoka J, Meerzaman D, Dracheva T, Zhou Z, Hwang P, Yang P and Jin J. LLC-1 is a candidate tumor suppressor gene frequently inactivated by promoter methylation in non-small cell lung cancer. (*Intl J Cancer* 120 (11): 2353-8 (2007).
18. Miao, Z., **Player, A.**, Shankararam, U., Wang, Y., Liao, Y., Zimonjic, D., Zhang, H., Meng, L., Kawasaki, E., Weinstein, J., Pommier, Y.. Genetic and genomic and functional characterization of Topoisomerase 1 siRNA cell lines derived from human breast and colon carcinomas. *Can Res* 67:8752-8761. doi: 10.1158/0008. (Sept 2007).
19. Richardson, A., Woodson, K., Wang, Y., Linahan, M., Kawasaki, E., Emmert-Buck, M., **Player, A**. Microarray analysis of the prostate tumor microenvironment. *Diagn Mol Path.* 16 (4): 189-197. (Dec 2007).
20. Wang, Y., Kawasaki, E and **Player, A**. Characterization of the signal intensities associated with the Affymetrix Genechip. *Bioinformatics*; doi: 10.1093/bioinformatics/btm306. (2007).
21. Kino, T., Ichijo, T., Kensavapany, S., Amin, N., Wang, Y., **Player, A.**, Kawasaki, E., Pant, H., Chrousos, C. Cyclin-dependent kinase 5 and its activators p35/p25 interact with glucocorticoid receptor (GR) and suppress its transcriptional activity by phosphorylating serines 203 and 211 in its amino terminal domain. *Molecular Endocrinology*, (April 17 2007).
22. **Player, A.**, Wang, Y. Rao, M and Kawasaki, E. Gene Expression analysis of embryonic stem cells and embryoid body-derived cells using high through-put microarray platforms. In *Curr. Protoco. Stem Cell Bio*, Mick Bhatia, ed., Wiley Publishers. 2:1B.2.1-1B.2.36,

(Dec 2007).

<http://www.mrw.interscience.wiley.com/emrw/9780470151808/cp/cpsc/article/sc01b02/current/abstract> (**by invitation**)

23. Kraji, J., **Player, A.**, Munson, M., Peterson, D., Forry, S., Meltzer, P., Kawasaki, E., Locaoscia, L.. T7-based linear amplification of low mRNA concentrations using beads and microfluidics for global gene expression measurements. Lab Chip. 9 (7) (Jan 2009).
24. Mukherjee, S, Richardson, A. Erikson, H., **Player, A.**, Emmert-Buck, Mike. Identification of EpCam as a unique molecular target of prostate cancer stroma. Am J Pathol . 175 (6) (Oct 2009).
25. Byun, JS, Wong,MM, Cui W, Idelman G, Li Q, Bilke S, **Player A.**, Gardner K. Dynamic bookmarkings of primary response genes by p300 and RNA polymerase II complexes. Proc Natl Acad Sci U.S.A., Oct 2009.
26. Robertson FM, Bondy M, Yang W, Yamauchi H, Krishnamurthy S, **Player A**, Barsky SH, Lucci A, Cristafanilli M. Inflammatory breast cancer: the disease, the biology, the treatment. CA Cancer J Clin 60 (6) Dec 2010.
27. Yan W, Shih J, Canales J, Hipp J, **Player A**, Hu N, Emmert-buck M, Erickson H. Identification of unique therapeutic targets in esophageal squamous cell carcinoma. BMC, 2012 Jan 26;5:73.
28. Yan W, Shih J, Canales J, Hipp J, Tangrea M, **Player A**, Hu N, Emmert-buck M, Erickson H. Three-Dimensional mRNA Measurements Reveal Minimal Regional Heterogeneity in Esophageal Squamous Cell Carcinoma. Am J Pathol. 2013 Feb;182 (2):529-39.
29. **Player A**, Oguamanam T, Okanmelu J, Burrell K, Hollomon M. Preliminary characterization of IL32 in basal-like/triple negative compared to other types of breast cell lines and tissues. BMC Res Notes. 2014 Aug 7;7:501.
30. Burrell K and **Player A**. Characterization of the Interleukin transcript variants in triple negative breast cancers. American Journal of Immunology. 2016 Oct 16; 83.
31. **Player A**, Abraham N, Burrell K, Ondo Bengone I, Harris A, Nunez L, Willaims T, Kwende S, Walls W. Identification of candidate genes associated with triple negative breast cancer. Genes Cancer. 2017 Jul; 8(7-8):659-672. doi: 10.18632/genesandcancer.147.
32. Abraham N, Kwende S, **Player A**. Identification of genes differentially expressed in triple negative breast cancer. ARC Journal of Cancer Science, Vol 3, Issue 2, Dec 2017, pp 1-7. DOI: <http://dx.doi.org/10.20431/2455-6009.0302001>.
33. Larkins T, Tavera G, Abraham N, **Player A**. Identification of genes differentially expressed with cMYB in luminal breast cancers. JCMM, Vol 1, Issue 4, Dec 2018. DOI: 10.15761/JCMM.1000121. *In Press*

