BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
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NAME	POSITION TITLE
White, Eileen	Professor
eRA COMMONS USER NAME (credential, e.g., agency login) EPWHITE	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Rensselaer Polytechnic Institute	B.S.	1977	Biology
State University of NY, Stony Brook	Ph.D.	1983	Biology
Cold Spring Harbor Laboratory	Postdoc Fellow	1983-1986	Molecular Biology, Bruce Stillman, Ph.D.

A. Personal Statement

The White Laboratory at the Cancer Institute of New Jersey has extensive expertise and experience in cancer molecular biology and has made important discoveries revealing the and roles of and mechanisms regulating apoptosis, autophagy, and metabolism in cancer. The main research focus since 2004 has been the role of autophagy in cancer. The White group has made seminal discoveries illuminating the role of autophagy in both tumor suppression and in promoting the survival of cancer cells to metabolic stress. Collaborations with leaders in the field have been established to enable deployment of state-of-the-art technology in cancer metabolomics, proteomics and high-throughput screening to determine the role of autophagy in cancer at the molecular level. The pharmaceutical industry has been engaged to support the early high-risk stages and the later, more translation aspects of the work, with resources not as readily accessible to academic laboratories. Animal models that most accurately reflect the development of human cancer have been developed to assess the role of autophagy in cancer in vivo. Human cancer models, assessment of patient samples, and development of clinical trials based on research discoveries have been incorporated into the overall research program allowing a bench to bedside research trajectory. The White group is thereby uniquely poised to address the fundamental aspects of autophagy in cancer proposed in this application in a physiologically relevant setting, and to translate those discoveries for the benefit of cancer patients.

B. Positions and Honors

Positions and Employment

1983-1986 Postdoctoral Fellow Damon Runyon-Walter Winchell Cancer Fund
1986-1990 Staff Investigator, Cold Spring Harbor Laboratory
1995-Present Program Leader, Cancer Institute of New Jersey
1997-Present Professor, Molecular Biology and Biochemistry, Rutgers University
1998-Present Adjunct Professor, Department of Surgery, University of Medicine and Dentistry of NJ
1998-2005 Investigator, Howard Hughes Medical Institute
2005-Present Associate Director for Basic Science, The Cancer Institute of New Jersey

Other Experience and Professional Memberships

Advisory Boards: Damon Runyon Scientific Advisory Board (1994, 2008-Present); Virology Study Section (1994-1998); Scientific Advisory Board, Onyx Pharmaceuticals (1995-1998); Internal Advisory Board, Dean and Betty Gallo Prostate Cancer Institute; Cancer Institute of New Jersey (1999-Present); Scientific Advisory Board, GeminX Biotechnologies (2002-2003); Board of Scientific Counselors, National Cancer Institute (2000-2005); Selection Committee, Pezcoller Foundation-AACR International Award for Cancer Research (2006); Scientific Review Board, Starr Cancer Consortium (2007-Present); Board of Directors, American Association for Cancer Research (2007-2010); CTEP DNA Damage and Programmed Cell Death Task Force (2008-present); Scientific Review Board, Cancer Prevention and Research Institute of Texas (2009-Present); External Advisory Board, Case Western Reserve Comprehensive Cancer Center (2009-present); Chairperson,

AACR Lifetime Achievement Award Selection Committee (2010); Member, NCI "Big Questions Project" headed by Dr. Harold Varmus (2010); AACR Council of Scientific Advisors (2011-2013).

Meeting Organization: Co-Organizer, Cold Spring Harbor meeting: Programmed Cell Death (1995, 97, 99, 01); Co-organizer, AACR Conference, Cell Death in Oncogenesis (2005); Co-Chair, Education Committee, AACR 2007 Annual Meeting; Chairperson, Stan Korsmeyer, Apoptotic and Non-Apoptotic Cell Death in Cancer Symposium; Program Chair, AACR 2008 Annual Meeting; Co-organizer, Keystone Meeting: Cell Death Pathways: Apoptosis, Autophagy, and Necrosis (2010); Co-organizer, Keystone Meeting: Metabolism and Cancer Progression (2010); Co-chairperson and Co-organizer, AACR Special Conference: Cell Death Mechanisms and Cancer Therapy (2010); NCI Autophagy and Cancer RFA conference (2010); Cold Spring Harbor Mechanisms and Models of Cancer (2012, 14, 16), Forbeck Foundation Forum, Tumor Metabolism (2012).

Editorial Boards: *Molecular Cancer Research* (1996-Present); *Genes & Development* (2007-Present); *Autophagy* (Associate Editor, 2007-Present); *Cancer Prevention Research* (Senior Editor, 2007-Present); *Journal of Cell Biology* (2008-Present); *Cell Death and Disease* (2009-Present); *Oncogene* (Receiving Editor, 2009-2011); *Cancer Discovery* (Scientific Editor, 2011-2013).

Honors: Red Smith Award from the Damon Runyon Foundation (1983); Damon Runyon-Walter Winchell Postdoctoral Fellowship (1983-1986); Board of Trustees' Research Fellowship (1994); Investigator, Howard Hughes Medical Institute (1998-2005); MERIT Award (R37), National Institutes of Health, National Cancer Institute; Mentoring Award, New Jersey Association for Biomedical Research (2006); Elected Fellow, American Academy of Microbiology (2007); Career Award, European Cell Death Organization (2010); Achievement Award, International Cell Death Society (2010); Elected Fellow, American Association for the Advancement of Science (2011).

Distinguished Lectures: NIH Director's Lecture (1998); Lois Miller Memorial Symposium Speaker (2000); Jim Watson 35 years/75th Birthday Celebration Speaker (2003); Distinguished Lecture, Cancer Institute of New Jersey Comprehensive Cancer Center (2005), Dana Farber/ICDS/AACR, Stanley J. Korsmeyer Memorial Symposium Speaker (2007); Distinguished Lecture, University of Miami Sylvester Comprehensive Cancer Center (2007); Distinguished Lecture, Beatson Institute for Cancer Research (2007); Keynote Speaker, Cold Spring Harbor Cell Death Meeting (2007); Distinguished Lecture, UMDNJ, NJMS-UH Cancer Center (2007), Distinguished Lecture, Babraham Institute (2007); Olof Pearson Lecture, Case Western Reserve Comprehensive Cancer Center (2008); Honorary Lecture, European Cell Death Organization, Pasteur Institute (2009); Achievement Award Lecture, International Cell Death Society (2010); Keynote Speaker, Cold Spring Harbor Mechanisms and Models of Cancer (2010); Provost Distinguished Scientist Lecture, The University of Texas MD Anderson Cancer Center (2011).

C. Selected peer-reviewed publications (in chronological order).

(Publications selected from 141 peer-reviewed publications)

Most relevant to the current application

1. Degenhardt, K., Mathew, R., Beaudoin, B., Bray, K., Anderson, D., Chen, G., Mukherjee, C., Gelinas, C., Fan, Y., Nelson, D. A., Jin, S., and **White E.** (2006). Autophagy promotes tumor cell survival and restricts necrosis, inflammation, and tumorigenesis. **Cancer Cell** 10:51-64. PMCID: PMC2857533
2. Mathew, R., Kongara, S., Beaudoin, B., Karp, C. M., Bray, K., Degenhardt, K., Chen, G., Jin, S., and **White, E.** (2007). Autophagy suppresses tumor progression by limiting chromosomal instability. **Genes & Dev**. 21:1367-1381. PMCID: PMC1877749
3. Mathew, R., Karp, M. C., Beaudoin, B., Chen, H.-Y., Chen, G., DiPaola, R. S., Karantza-Wadsworth, V., and **White, E.** (2009). Autophagy suppresses tumorigenesis through elimination of p62. **Cell** 137:1062-1075. PMCID: PMC2802318
4. Rabinowitz, J. D, and **White, E.** (2010). Autophagy and metabolism. **Science** 330:1344-1348. PMCID: PMC3010857
5. Guo, J. X., Chen, H.-Y., Mathew, R., Fan, J., Strohecker, A, M., Karsli-Uzunbas, G., Kamphorst, J. J., Chen, G., Lemmons, J. M. S., Karantza, V., Coller, H. A., DiPaola, R. S., Gelinase, C., Rabinowitz, J. D., **White, E.** (2011). Activated Ras requires autophagy to maintain oxidative metabolism and tumorigenesis. **Genes & Dev.** [Epub ahead of print] PMID:21317241

Additional recent publications of importance to the field (in chronological order)

1. Rao, L., Debbas, M., Sabbatini, P., Hockenbery, D., Korsmeyer, S., and **White, E.** (1992). The adenovirus E1A proteins induce apoptosis which is inhibited by the E1B 19K and Bcl-2 proteins. **Proc. Natl. Acad. Sci. USA** 89:7742-7746. PMCID: PMC49787
2. Debbas, M. and **White, E.** (1993). Wild-type p53 mediates apoptosis by E1A which is inhibited by E1B. **Genes & Dev.** 7:546-554. PMID: 8384580
3. Han, J., Sabbatini, P., Perez, D., Rao, L., Modha, D., **White, E**. (1996). The E1B 19K protein blocks apoptosis by interacting with and inhibiting the p53-inducible and death promoting Bax protein. **Genes & Dev**. 10:461-477. PMID: 8600029
4. Perez, D. and **White, E.** (2000). TNF-α Signals apoptosis through a Bid-dependent conformational change in Bax which is inhibited by E1B 19K. **Molecular Cell** 6:53-63. PMID: 10949027
5. Degenhardt, K., Chen, G., Lindsten, T., and **White, E.** (2002). BAX and BAK mediate p53-independent suppression of tumorigenesis. **Cancer Cell** 2:193-203. PMID: 12242152
6. Cuconati, A., Mukherjee, C., Perez, D., and **White, E**. (2003). DNA damage response and MCL-1 destruction initiate apoptosis in adenovirus-infected cells. **Genes & Dev**. 17:2922-2932. PMCID: PMC289151
7. Nelson, D. A., Tan T.-T., Rabson, A. B., Anderson, D., Degenhardt, K., and **White, E.** (2004). Hypoxia and defective apoptosis drive genomic instability and tumorigenesis. **Genes & Dev**. 18:2095-2107. PMCID: PMC515288
8. Tan, T.-T., Degenhardt, K., Nelson, D. A., Beaudoin, B., Nieves-Neira, W., Bouillet, P., Villunger, A., Adams, J. M., and **White E.** (2005). Key roles of BIM-driven apoptosis in epithelial tumors and rational chemotherapy. **Cancer Cell** 7:227-238. PMID: 15766661
9. Karantza-Wadsworth, V., Patel, S., Kravchuk, O., Chen, G., Mathew, R., Jin, S., and **White, E.** (2007). Autophagy mitigates metabolic stress and genome damage in mammary tumorigenesis. **Genes & Dev.** 21:1621-1635. PMCID: PMC1899472
10. Mathew, R., Karantza-Wadsworth, V., and **White, E.** (2007). Role of autophagy in cancer. **Nature Rev. Cancer** 7:961-967. PMCID: PMC2866167

D. Research Support

Ongoing Research Support

NIH-NCI R37 CA53370 MERIT Award — White (PI) — 01/01/91-06/30/11
Function of the Adenovirus E1B Oncogene
The goals are to determine the mechanism of apoptosis regulation in viral infection and oncogenesis.
Role: PI

NIH-NCI RO1 CA130893 — White (PI) — 07/01/08-06/30/13
Role of Autophagy in Cancer
The major goal of the project is to determine the role of autophagy in suppression of tumorigenesis.
Role: PI

NIH-NCI RO1 CA130893-02S1 — White (PI) — 08/01/09-07/31/11
Role of Autophagy in Cancer
Administrative Supplement to CA130893 to characterize genes from shRNA autophagy regulator HTP screen.
Role: PI

NIH-NCI P30 CA72720
Cancer Center Support Grant — DiPaola (PI) — 03/01/05-02/28/11
The goals of this grant are to provide an organizational focus and stimulus for the highest quality multidisciplinary cancer research.
Role: Associate Director for Basic Science; Program Leader

Wyeth Pharmaceuticals — White (PI) — 04/01/09-03/31/11
Unrestricted Gift
shRNA screens for autophagy modulators
This project is to perform shRNA screens for autophagy regulators.

Role: PI Sabatini (Co-PI)

Department of Defense DODW81XWH-09-01-0394 DiPaola (PI) 09/01/09-08/30/12
Modulating Drug Resistance in Prostate Cancer
Major goal is to modulate the resistance pathways of apoptosis and autophagy for prostate cancer therapy.
Role: Co-PI

NIH-NCI RC1 CA147961 Challenge Grant White (PI) 09/30/09-09/29/11
Role of Tumor and Stromal Cell Metabolism in Stress Adaptation and Progression
Major goal of this project is to determine the role of autophagy in modulation of metabolism in tumor cell dormancy and stromal cell quiescence.
Role: PI Rabinowitz, Coller (Co-PIs)

Johnson & Johnson White (PI) 10/15/10-10/14/12
Research Funding Agreement
Validation of novel autophagy regulators as oncology targets
Major goal is to validate hits from autophagy modifier shRNA screen and assess function in human cancer cell lines and in breast cancer models. This grant excludes the genes under investigation in the renewal of R37 CA53370.
Role: PI

Completed Research Support

09-1083-CCR-EO
New Jersey Commission on Cancer Research White (PI) 06/26/09-6/25/10
Research Development Award
Multidisciplinary Research Network Targeting the Autophagy Pathway for Cancer Therapy
The major goals of this 4 project multidisciplinary team of scientists, clinicians, and physician/scientists are to target the autophagy pathway for both cancer treatment and prevention.
Role: PI