

August 2023

CURRICULUM VITAE

**Michael G. Kemp**

*Academic Address*

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Wright State University Boonshoft School of Medicine  
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**EDUCATION**

<u>Institution</u>	<u>Concentration</u>	<u>Degree/Date</u>
Wright State University Dayton, Ohio	Biomedical Sciences	Ph.D., 2006
Wright State University Dayton, Ohio	Biological Sciences	B.S., 1999

**POST GRADUATE EDUCATION**

Postdoctoral	Skin biology and aging Dept of Pharmacology & Toxicology Wright State University Boonshoft School of Medicine Dayton, Ohio	2016-2017
Postdoctoral	DNA repair and damage signaling Dept of Biochemistry & Biophysics University of North Carolina at Chapel Hill School of Medicine & Lineberger Comprehensive Cancer Center Chapel Hill, North Carolina	2006-2011

**ACADEMIC EXPERIENCE**

<u>Institution</u>	<u>Position</u>	<u>Dates</u>
Wright State University, Dayton, Ohio Dept of Pharmacology & Toxicology	Assistant Professor Research Assistant Professor	2019-present 2017-2019
Wake Technical Community College, Raleigh, North Carolina	Adjunct Instructor	2014
University of North Carolina, Chapel Hill, North Carolina	Research Assistant Professor	2013-2016
Florida Institute of Technology, Melbourne, Florida	Assistant Professor	2012-2013
University of North Carolina, Chapel Hill, North Carolina	Research Assistant Professor	2011-2012

## **OTHER PROFESSIONAL EXPERIENCE**

<u>Institution</u>	<u>Position</u>	<u>Dates</u>
Dayton VA Medical Center, Dayton, Ohio	Research Health Scientist, Department of Education and Research	2021-present
American Journal Experts, Durham, North Carolina	Contract Editor	2010-2014
Wright State University, Dayton, Ohio	Graduate Research Assistant	2001-2006
Procter & Gamble Pharmaceuticals Cincinnati, Ohio	Summer Intern	2000
Lab Support Inc., Cincinnati, Ohio	Laboratory Technician	1999-2000

## **PROFESSIONAL MEMBERSHIP**

<u>Association</u>	<u>Status</u>	<u>Dates</u>
Society for Investigative Dermatology	Member	2017-present
American Society for Photobiology	Member	2016-present
Environmental Mutagenesis & Genomics Society	Member	2016-present
American Society for Biochemistry & Molecular Biology	Member	2015-present

## **PROFESSIONAL AWARDS**

<u>Title of Award</u>	<u>Granting Association</u>	<u>Date</u>
Newly Independent Investigators Engagement Program	Environmental Mutagenesis & Genomics Society	2019
Travel Award	Society for Investigative Dermatology	2018
Emerging Scientist Travel Award	Environmental Mutagenesis & Genomics Society	2016
1 <sup>st</sup> Place, Platform Presentation	18 <sup>th</sup> Annual Midwest DNA Repair Symposium	2016
1 <sup>st</sup> Place, Platform Presentation	13 <sup>th</sup> Annual Midwest DNA Repair Symposium	2011
1 <sup>st</sup> Place, Platform Presentation	12 <sup>th</sup> Annual Midwest DNA Repair Symposium	2010
NIH-NRSA T32 Institutional Postdoctoral Training Fellowship	Lineberger Comprehensive Cancer Center University of North Carolina at Chapel Hill	2006-2008
Oral Presentation Award	Wright State University Molecular Biology Retreat	2006
Student Excellence Award	Wright State University Biomedical Sciences Ph.D. Program	2003
Sigma Xi Student Membership Award	Wright State University	2002

## CLASSROOM TEACHING

<u>Course</u>	<u>Institution</u>	<u>Date</u>
<i>Course Direction</i> PTX-8020 Pharmacology & Toxicology of DNA Damaging Agents	Wright State University Boonshoft School of Medicine Dayton, Ohio	Spring 2020, 2021, 2023
PTX-8007 Career Planning in Pharmacology & Toxicology	Wright State University Boonshoft School of Medicine Dayton, Ohio	Spring/Fall 2019, Fall 2020, Spring 2021, Fall 2022, Spring 2023
PTX-7002 Journal Club: Genome Stability and Human Disease	Wright State University Boonshoft School of Medicine Dayton, Ohio	Summer 2021, Fall 2021, 2022
General Biology I Laboratory	Wake Technical Community College Raleigh, North Carolina	Spring 2014
Biological Discovery I	Florida Institute of Technology Melbourne, Florida	Spring 2013
Genomic Instability & Human Disease	Florida Institute of Technology Melbourne, Florida	Spring 2013
<i>Other Teaching</i> PTX-6002 Cell Biology	Wright State University Boonshoft School of Medicine Dayton, Ohio	Fall 2017

## SCIENTIFIC MENTORING AND TRAINING

### *Current Trainees at Wright State University (WSU)*

<u>Name</u>	<u>Institution &amp; Degree Program</u>	<u>Date</u>
Aleena Alex	WSU Pharm/Tox MS	2023-present
Sri Meghana Yerrapragada	WSU Biomedical Sciences PhD	2022-present
William Cvammen	WSU Biomedical Sciences PhD	2020-present
Alex Carpenter, PhD	Postdoctoral Trainee	2020-present

### *Past Trainees at Wright State University (WSU)*

<u>Name</u>	<u>Institution &amp; Degree Program</u>	<u>Date</u>
Hrishikesh Kadam	WSU Pharm/Tox MS	2022-present
Prashant Gaikwad	WSU Pharm/Tox MS	2022-present
Swathi Kavuri, PharmD	WSU Pharm/Tox MS	2022-present
Saman Khan, PhD	Postdoctoral Trainee	2021-2022
Vivek Gogusetti	WSU Pharm/Tox MS	2020-2021
Meghana Ginugu	WSU Pharm/Tox MS	2020-2021
Nadeen Anabtawi, PharmD	WSU Pharm/Tox MS	2020-2021
Amber Castellanos	WSU Anatomy	2019-2020
Mariyyah Madkhali	WSU Pharm/Tox MS	2019-2020
Abdulrahman Alkawar	WSU Pharm/Tox MS	2019-2020
Rebekah Hutcherson	WSU Biochem/Mol Biol Honors BS	2018-2019
Kavya Shaj, Pharm D	WSU Pharm/Tox MS	2017-2019

***Dissertation and Thesis Committees at Wright State University (WSU)***

<u>Name</u>	<u>Institution &amp; Degree Program</u>	<u>Date</u>
Taskin Sabit	WSU Pharm/Tox MS (Travers)	2023-present
Kajal Davi	WSU Pharm/Tox MS (Xu)	2023-present
Yeseswi Guduri	WSU Pharm/Tox MS (Xu)	2023-present
Bryan Mayville	WSU Biomedical Sciences PhD (Hussein)	2022-present
Miliben Bhakta	WSU Biomedical Sciences PhD (Sulentic)	2021-present
Resha Shretha	WSU Biomedical Sciences PhD (Leffak)	2021-present
Rushab Lohade	WSU Pharm/Tox MS (Travers)	2022-2023
Nathen Zavada	WSU Biochem/Mol Bio MS (Leffak)	2022-2023
Krishna Awasthi	WSU Pharm/Tox MS (Sahu)	2022-2023
Chad Brewer	WSU Pharm/Tox MS (Travers)	2021-2022
Mashaal Alyaha	WSU Pharm/Tox MS (Xu)	2021-2022
Lea Christian	WSU Pharm/Tox MS (Travers)	2020-2021
Shweta Bhadri	WSU Pharm/Tox MS (Travers)	2020-2021
Sravya Arikatla	WSU Pharm/Tox MS (Travers)	2020-2021
Sydney White	WSU Pharm/Tox MS (Sulentic)	2020-2022
Sankhadip Bhadra	WSU Biomedical Sciences PhD (Xu)	2020-present
Venicia Hawach	WSU Biomedical Sciences PhD (Leffak)	2020-2023
Rujuta Gadgil	WSU Biomedical Sciences PhD (Leffak)	2019-2023
Eric Reed	WSU Biomedical Sciences PhD (Sulentic/Nelson)	2019-present
Avinash Mahajan	WSU Pharm/Tox MS (Travers)	2019-2020
Alaah Madhi	WSU Pharm/Tox MS (Xu)	2019-2020
Pariksha Thapa	WSU Pharm/Tox MS (Travers)	2018-2019
Rittu Samuel	WSU Pharm/Tox MS (Xu)	2018-2019
Darlington Osei Abrefa	WSU Micro/Immunol MS (Xu)	2018-2019

***Past Trainees at University of North Carolina (UNC)***

<u>Name</u>	<u>Institution &amp; Degree Program</u>	<u>Date</u>
Gulnihal Kulaksiz Erkmen, MD, PhD	UNC Visiting Scientist	2015
Ozdermirhan Sercin	UNC BBSP PhD (Sancar)	2007-2011
Secil Yilmaz	Visiting PhD student (Sancar)	2009-2011
Zafer Akan	Visiting PhD student (Sancar)	2007-2008

***Past Trainees at Florida Institute of Technology (FIT)***

<u>Name</u>	<u>Institution &amp; Degree Program</u>	<u>Date</u>
Ivana Rocha	FIT/Brevard County Science Fair	2012-2013
Ghaidaa Kashgari	FIT Biotech MS Internship	2012-2013
Vekata Perumalla Raghavandra	FIT Biotech MS Internship	2012-2013
Barani Govindarajan	FIT Biotech MS Internship	2012-2013
Amy Sutphin	FIT Biology BS Undergrad Research	2012-2013
Janie Griffin	FIT Biology BS Undergrad Research	2012-2013
Sagar Patel	FIT Biotech MS Research Experience	Fall 2012
Sesha Vankamamidi	FIT Biotech MS Research Experience	Fall 2012
Niveditha Krishna	FIT Biotech MS Research Experience	Fall 2012

## PRINTED SCHOLARSHIP

A full list of published works can be found here:

<https://www.ncbi.nlm.nih.gov/myncbi/michael.kemp.1/bibliography/public/>

### Articles

*Peer-Reviewed Original Research Articles:*

1. Gaikwad P and **Kemp MG**. (2022). Cathepsin L inhibition prevents the cleavage of multiple nuclear proteins upon lysis of quiescent human cells. *MicroPub Biology*. eCollection 2022.
2. Carpenter MA, Ginugu M, Khan S, and **Kemp MG**. (2022). DNA containing cyclobutane pyrimidine dimers is released from UVB-irradiated keratinocytes in a caspase-dependent manner. *J Investigative Dermatology*. 142(11): 3062-3070.
3. Kim SH, Kim GH, **Kemp MG\***, and Choi J-H\*. (2022). TREX1 degrades the 3' end of the small DNA oligonucleotide products of nucleotide excision repair in human cells. *Nuc Acids Res*. 50(7):3974-3984. (**\*co-corresponding author**)
4. Cvammen W and **Kemp MG**. (2022). Flavonoid nobiletin exhibits differential effects on cell viability in keratinocytes exposed to UVA versus UVB radiation. *Photochemistry & Photobiology*. 98(6): 1372-1378.
5. Khan S, Cvammen W, Anabtawi N, Choi J-H, and **Kemp MG**. (2022). XPA is susceptible to proteolytic cleavage by cathepsin L during lysis of quiescent cells. *DNA Repair*. 109: 103260.
6. Mahajan AS, Arikatla VS, Thyagarajan A, Zhelay T, Sahu RP, **Kemp MG**, Spandau DF, and Travers JB. (2021). Creatine and nicotinamide prevent oxidant-induced senescence in human fibroblasts. *Nutrients*. 13(11): 4102.
7. Spandau DF, Chen R, Wargo JJ, Rohan CA, Southern D, Zhang A, Loesch M, Weyerbacker J, Tholpady SS, Lewis DA, Kuhar M, Tsai WY, Castellanos AJ, **Kemp MG**, Markey M, Cates E, Williams AR, Knisely C, Bashir S, Gabbard R, Hoopes R, and Travers JB. (2021). Randomized controlled trial of fractionated laser resurfacing on aged skin as prophylaxis against actinic neoplasia. *J Clin Invest*. 131(19): e150972.
8. Anabtawi N, Cvammen W, and **Kemp MG**. (2021). Pharmacological inhibition of cryptochrome and REV-ERB promotes DNA repair and cell cycle arrest in cisplatin-treated human cells. *Scientific Reports*. 11(1): 17997.
9. Carpenter MA and **Kemp MG**. (2021). Topical treatment of human skin and cultured keratinocytes with high-dose spironolactone reduces XPB expression and induces toxicity. *JID Innovations*. 1(3): 100023.
10. Sarkar S, Porter KI, Dakup PP, Gajula RP, Koritala BSC, Hylton R, **Kemp MG**, Wakamatsu K, and Gaddameedhi S. (2021). Circadian clock protein BMAL1 regulates melanogenesis through MITF in melanoma cells. *Pigment Cell Melanoma Res*. 34(5): 955-965.
11. Liu L, Awayemi AA, Fahy KE, Thapa P, Borchers C, Wu BY, McGlone CL, Schmeusser B, Sattouf Z, Rohan CA, Williams AR, Cates EE, Knisely C, Kelly LE, Bihl J, Cool DR, Sahu RP, Wang J, Chen Y, Rapp CM, **Kemp MG**, Johnson RM, and Travers JB. (2021). Keratinocyte-derived microvesicle particles mediate ultraviolet B radiation induced system immunosuppression. *Journal of Clinical Investigation*. 131(10): e144963.
12. Hutcherson RJ, Gabbard RD, Castellanos AJ, Johnson RM, Travers JB, **Kemp MG**. (2021). Age and insulin-like growth factor-1 (IGF-1) impact PCNA mono-ubiquitination in UVB-irradiated human skin. *Journal of Biological Chemistry*. 296: 100570.
13. Alkawar AMM, Castellanos AJ, Carpenter MA, Hutcherson RJ, Madkhali MAO, Johnson RM, Bottomley M, **Kemp MG**. (2020). Insulin-like Growth Factor-1 Impacts p53 Target Gene Induction in UVB-irradiated Keratinocytes and Human Skin. *Photochemistry & Photobiology*. 96(6): 1332-1341.
14. Choi J-H, Han S, and **Kemp MG**. (2020). Detection of the small oligonucleotide products of nucleotide excision repair in UVB-irradiated human skin. *DNA Repair*. 86: 102766.
15. Travers JB, **Kemp MG**, Weir NM, Cates E, Alkawar AM, Mahajan AS, Spandau DF. (2020). Wounding with a microneedling device corrects the inappropriate ultraviolet B radiation response in geriatric skin. *Arch Dermatol Res*. 312(1): 1-4.

16. Shaj K, Hutcherson RJ, **Kemp MG**. (2020). ATR kinase activity limits mutagenesis and promotes the clonogenic survival of quiescent human keratinocytes exposed to UVB radiation. *Photochemistry & Photobiology*. 96(1): 105-112.
17. Hutcherson RJ and **Kemp MG**. (2019). ATR kinase inhibition sensitizes quiescent human cells to the lethal effects of cisplatin but increases mutagenesis. *Mutation Research*. 816-818: 111678.
18. **Kemp MG**, Krishnamurthy S, Kent MN, Schumacher DL, Sharma P, Excoffon KJDA, Travers JB. (2019). Spironolactone depletes the XPB protein and inhibits DNA damage responses in UVB-irradiated human skin. *J Invest Dermatology*.139(2): 448-454.
19. Poudel S, Yao J, **Kemp MG**, Leffak M. (2018). Interaction between DUE-B and Treslin is required to load Cdc45 on chromatin in human cells. *J Biol Chem*. 293(37): 14497-14506.
20. Dakup PP, Porter KI, Little AA, Gajula RP, Zhang H, Skorynakov E, **Kemp MG**, Van Dongen HPA, and Gaddameedhi S. (2018). The circadian clock regulates cisplatin-induced toxicity and tumor regression in melanoma mouse and human models. *Oncotarget*. 9(18): 14524-14538.
21. Baek S, Han S, Kang D, **Kemp MG\***, Choi JH\*. (2018). Simultaneous detection of nucleotide excision repair events and apoptosis-induced DNA fragmentation in genotoxin-treated cells. *Scientific Reports*. 8(2265): 1-11. (**\*co-corresponding author**).
22. **Kemp MG**. (2017). DNA damage-induced ATR kinase activation in non-replicating cells is regulated by the XPB subunit of transcription factor II-H (TFIIH). *J Biol Chem*. 292(30): 12424-12435.
23. **Kemp MG**, Spandau DF, Simman R, and Travers JB. (2017). Insulin-like Growth Factor-1 Receptor Signaling is Required for Optimal ATR-CHK1 Kinase Signaling in Ultraviolet B (UVB)-irradiated Human Keratinocytes. *J Biol Chem*. 292(4): 1231-9.
24. Canturk F, Karaman M, Selby CP, **Kemp MG**, Kulaksiz-Erkmen G, Hu J, Li W, Lindsey-Boltz LA, and Sancar A. (2016). Nucleotide excision repair by dual incisions in plants. *Proc Natl Acad Sci USA*.113(17): 4706-10.
25. **Kemp MG** and Sancar A. (2016). ATR kinase inhibition protects non-cycling cells from the lethal effects of DNA damage and transcription stress. *J Biol Chem*. 291(17): 9330-42.
26. Lindsey-Boltz LA, **Kemp MG**, Hu J, and Sancar A. (2015). Analysis of ribonucleotide removal from DNA by human nucleotide excision repair. *J Biol Chem*. 290(50): 29801-7.
27. Choi JH, Kim SY, Kim SK, **Kemp MG**, and Sancar A. (2015). An integrated approach for analysis of the DNA damage response in mammalian cells: Nucleotide excision repair, DNA damage checkpoints, and apoptosis. *J Biol Chem*. 290(48): 28812-21.
28. Hao J, Li Y, de Renty C, Xiao H, **Kemp MG**, DePamphilis ML, and Zhu W (2015). And-1 coordinates with Claspin for efficient Chk1 activation in response to replication stress. *EMBO J*. 34(15): 2096-110.
29. **Kemp MG**, Lindsey-Boltz LA, and Sancar A. (2015). UV light potentiates STING (stimulator of interferon genes)-dependent innate immune signaling through deregulation of ULK1 (Unc51-like kinase 1). *J Biol Chem*. 290(10): 12184-94.
30. Gaddameedhi S, Selby CP, **Kemp MG**, Ye R, and Sancar A. (2015). The circadian clock controls sunburn apoptosis and erythema in mouse skin. *J Invest Dermatology*. 135(4): 1119-27.
31. Lindsey-Boltz LA\*, **Kemp MG\***, Capp C, and Sancar A. (2015). RHINO forms a stoichiometric complex with the 9-1-1 checkpoint clamp and mediates ATR-Chk1 signaling. *Cell Cycle*. 14(1): 99-108. (**\*co-first author**)
32. **Kemp MG**, Gaddameedhi S, Choi JH, Hu J, and Sancar A. (2014). DNA repair synthesis and ligation affect the processing of excised oligonucleotides generated by human nucleotide excision repair. *J Biol Chem*. 289: 26574-26583.
33. Choi JH, Gaddameedhi S, Kim SY, Hu J, **Kemp MG**, and Sancar A. (2014). Highly specific and sensitive method for measuring nucleotide excision repair kinetics of ultraviolet photoproducts in human cells. *Nuc Acids Res*. 42: e29.
34. Lindsey-Boltz LA, **Kemp MG**, Reardon JT, Derocco V, Iyer RR, Modrich P, and Sancar A. (2014). Coupling of human DNA excision repair and ATR-mediated DNA damage checkpoint in a defined in vitro system. *J Biol Chem*. 289: 5074-5082.

35. Hu J, Choi JH, Gaddameedhi S, **Kemp MG**, Reardon JT, and Sancar A. (2013). Nucleotide excision repair in human cells: Fate of the excised oligonucleotide carrying DNA damage in vivo. *J Biol Chem.* 288: 20918-20926.
36. Hassan BH, Lindsey-Boltz LA, **Kemp MG**, and Sancar A. (2013). Direct role for the replication protein Treslin (Ticrr) in the ATR-mediated checkpoint response. *J Biol Chem.* 288: 18903-18910.
37. **Kemp MG**, Reardon JT, Lindsey-Boltz LA, and Sancar A. (2012). Mechanism of release and fate of excised oligonucleotides during nucleotide excision repair. *J Biol Chem.* 287: 22889-99.
38. Yilmaz S, Sancar A, and **Kemp MG**. (2011). Multiple ATR-Chk1 pathway proteins preferentially associate with checkpoint-inducing DNA substrates. *PLoS One* 6(7): e22986.
39. **Kemp MG**, Lindsey-Boltz LA, and Sancar A. (2011). The DNA damage response kinases DNA-dependent protein kinase (DNA-PK) and Ataxia telangiectasia mutated (ATM) are stimulated by bulky adduct-containing DNA. *J Biol Chem.* 286: 19237-46.
40. Sercin O and **Kemp MG**. (2011). Characterization of functional domains in human Claspin. *Cell Cycle.* 10(10): 1599-1606.
41. Choi JH, Lindsey-Boltz LA, **Kemp M**, Mason AC, Wold MS, and Sancar A. (2010). Reconstitution of RPA-covered single-stranded DNA-activated ATR-Chk1 signaling. *Proc Natl Acad Sci USA.* 107(31): 13660-5.
42. Gaddameedhi S, **Kemp MG**, Shields JM, Reardon JT, Smith-Roe SL, Kaufmann WK, and Sancar A. (2010). Nucleotide excision repair capacity of melanocytes and melanoma cell lines. *Cancer Res.* 70(12): 4922-30.
43. **Kemp MG**, Akan Z, Yilmaz S, Grillo M, Smith-Roe SL, Kang TH, Cordeiro-Stone M, Kaufmann WK, Abraham RT, Sancar A, and Unsal-Kacmaz K. (2010). Tipin-RPA interaction mediates Chk1 phosphorylation by ATR in response to genotoxic stress. *J Biol Chem.* 285(22): 16562-71.
44. Chowdhury A, Liu G, **Kemp M**, Chen X, Katrangi N, Myers S, Ghosh M, Yao J, Gao Y, Bubulya P, Leffak M. (2010). The DNA unwinding element binding protein DUE-B interacts with Cdc45 in preinitiation complex formation. *Mol Cell Biol.* 30(6): 1495-507.
45. **Kemp MG**, Mason AC, Carreira A, Reardon JT, Haring SJ, Borgstahl GE, Kowalczykowski SC, Sancar A, and Wold MS. (2010). An alternative form of replication protein A expressed in normal human tissues supports DNA repair. *J Biol Chem.* 285(7): 4788-97.
46. Kang TH, Reardon JT, **Kemp M**, and Sancar A. (2009). Circadian oscillation of nucleotide excision repair in mammalian brain. *Proc Natl Acad Sci USA.* 106(8):2864-7.
47. **Kemp M**, Bae B, Yu JP, Ghosh M, Leffak M, and Nair SK. (2007). Structure and function of the c-myc DNA-unwinding element-binding protein DUE-B. *J Biol Chem.* 282(14): 10441-8.
48. Ghosh M, **Kemp M**, Liu G, Ritzi M, Schepers A, and Leffak M. (2006). Differential binding of replication proteins across the c-myc replicator. *Mol Cell Biol.* 26(14): 5270-83.
49. Casper JM\*, **Kemp MG\***, Ghosh M, Randall GM, Vaillant A, and Leffak M. (2005). The c-myc DNA-unwinding element-binding protein modulates the assembly of DNA replication complexes in vitro. *J Biol Chem.* 280(13): 13071-83. (\*co-first author)
50. **Kemp MG**, Ghosh M, Liu G, and Leffak M. (2005). The histone deacetylase inhibitor trichostatin A alters the pattern of DNA replication origin activity in human cells. *Nuc Acids Res.* 33(1): 325-336.

*Peer-Reviewed Review Articles:*

1. Frommeyer TC, Rohan CA, Spandau DF, **Kemp MG**, Wanner MA, Tanzi E, Travers JB. (2022). Wounding Therapies for Prevention of Photocarcinogenesis. *Frontiers in Oncology.* 11: 813132.
2. Lubov JE, Cvammen W, and **Kemp MG**. (2021). The Impact of the Circadian Clock on Skin Physiology and Cancer Development. *Int J Mol Sci.* 22(11), 6112.
3. Ume AC, Pugh JM, **Kemp MG**, and Williams CR. (2020). Calcineurin inhibitor (CNI)-associated skin cancers: New insights on exploring mechanisms by which CNIs downregulate DNA repair machinery. *Photoderm Photoimmunol Photomed.* 36(6): 433-440.
4. Gabbard RD, Hoopes RR, and **Kemp MG**. (2020) Spironolactone and XPB: An Old Drug with a New Molecular Target. *Biomolecules,* 10(5): 756.

5. Khan AQ, Travers JB, and **Kemp MG**. (2018). Roles of UVA Radiation and DNA Damage Responses in Melanoma Pathogenesis. *Environmental and Molecular Mutagenesis*, 59(5): 438-60.
6. **Kemp MG**, Spandau DF, and Travers JB. (2017). Impact of Age and Insulin-like Growth Factor-1 on DNA Damage Responses in UV-irradiated Human Skin. *Molecules*. 22(3).
7. **Kemp MG**. (2017). Crosstalk Between Apoptosis and Autophagy: Environmental Genotoxins, Infection, and Innate Immunity. *J Cell Death*. 1-6.
8. **Kemp MG** and Hu J. (2017). Post-Excision Events in Human Nucleotide Excision Repair. *Photochem Photobiol*. 93(1): 178-91.
9. Song J, **Kemp MG** and Choi J-H. (2017). Detection of the Excised, Damage-containing Oligonucleotide Products of Nucleotide Excision Repair in Human Cells. *Photochem Photobiol*. 93(1): 192-8.
10. Sancar A, Lindsey-Boltz LA, Gaddameedhi S, Selby CP, Ye R, Chiou YY, **Kemp MG**, Hu J, Lee SH and Ozturk N. (2015). Circadian Clock, Cancer, and Chemotherapy. *Biochemistry*. 54(2): 110-23.

#### *Invited Commentaries*

1. **Kemp MG** and Sancar A. (2012). DNA excision repair: Where do all the dimers go? *Cell Cycle*. 11(16): 2997-3001.
2. **Kemp M** and Sancar A. (2009). DNA distress: just ring 9-1-1. *Current Biology*. 19(17): R2864-7.

#### *Non Peer-Reviewed Writing*

1. Yan S, Zhao J, **Kemp M**, and Sobol RW. (2022). Editorial: Mechanistic studies of genome integrity, environmental health, and cancer etiology. *Front Cell Dev Biol*. 10: 1026326.
2. **Kemp MG**. (2015). NextGen's tools for the future. *Science*. 347(6230): 34.
3. **Kemp MG**. (2015). NextGen's course catalog. *Science*. 347(6217): 24.
4. **Kemp MG**. (2014). NextGen Voices: Science advocacy. *Science*. 344(6179): 37.

## **PRESENTATIONS**

### **International**

1. "Detection of the small, excised DNA products of nucleotide excision repair in UVB-irradiated human skin." Oral presentation. 18th Congress of the European Society for Photobiology/17th International Congress on Photobiology, Barcelona, Spain, August 2019.
2. "The Circadian Clock and Aging Influence UV DNA Damage Responses in Skin Epidermis." Oral presentation. 17th Congress of the European Society for Photobiology, Pisa, Italy, September 2017.

### **National**

1. "Where to all the dimers go? On the fate of UV photoproducts in damaged DNA." Invited Webinar, American Society for Photobiology Monthly Webinar Series, August 3, 2023.
2. "Circadian clock-modulating compounds impact cellular responses to UV radiation." Oral presentation. 40th Meeting of the American Society for Photobiology, Albuquerque, New Mexico, September 2022.
3. "Retinoic acid receptor-related orphan receptor (ROR) agonism impacts cellular responses to UV radiation in human keratinocytes." Poster presentation. Annual Meeting of the Society for Investigative Dermatology, Portland, Oregon, May 2022.
4. "Topical treatment of human skin and cultured keratinocytes with high-dose spironolactone reduces XPB expression and induces toxicity." Poster presentation. Annual Meeting of the Society for Investigative Dermatology (virtual), May 2021.
5. "Monitoring and Manipulating UVB DNA Damage Responses in Human Skin." Oral presentation. University of Georgia College of Public Health Department of Environmental Health Science, Athens, Georgia (online via Zoom), February 2021.



6. "Translesion Synthesis Pathway Activation in UVB-irradiated Human Skin is Impacted by Age and IGF-1 Receptor Status." Oral presentation. 51st Annual Meeting of the Environmental Mutagenesis and Genomic Society (virtual), September 2020.
7. "Age and IGF-1 impact translesion synthesis (TLS) pathway activation in human keratinocytes and skin." Oral presentation. Annual Meeting of the Society for Investigative Dermatology (virtual), May 2020.
8. "ATR Kinase Activity Promotes the Viability and Proliferative Capacity of Quiescent Human Keratinocytes Exposed to UVB Radiation." Poster presentation. 50th Annual Meeting of the Environmental Mutagenesis and Genomics Society, Washington D.C., September 2019.
9. "Detection of the small, excised, damage-containing DNA oligonucleotide (sedDNA) products of nucleotide excision repair in the epidermis of UVB-irradiated human skin." Poster presentation. Annual Meeting of the Society for Investigative Dermatology, Chicago, Illinois, May 2019.
10. "Genome Protection by Nucleotide Excision Repair and the ATR Protein Kinase." Poster presentation. Florida International University Biomolecular Sciences Institute, Miami, Florida, April 2019.
11. "Regulation of the UV DNA damage response in aged vs young human skin." Oral presentation. 49th Annual Meeting of the Environmental Mutagenesis and Genomic Society, San Antonio, Texas, September 2018.
12. "DNA damage responses in human skin: Effects of age and UVB light." Oral presentation. North Carolina State University Toxicology Program, Raleigh, North Carolina, September 2018.
13. "Spironolactone depletes the XPB protein and inhibits the UVB DNA damage response in human skin." Oral presentation. 5<sup>th</sup> International Investigative Dermatology Meeting, Orlando, Florida, May 2018.
14. "Regulation of the DNA damage response in aged vs young human skin." Oral presentation. 39th Biennial Meeting of the American Society for Photobiology Joint ASP/ESP Symposium on "Cutaneous DNA damage: new insights and approaches from translational human studies", Tampa, Florida, May 2018.
15. "Functions of the ATR Kinase in the Cellular Response to DNA Damage." Oral presentation. 47th Annual Meeting of the Environmental Mutagenesis and Genomics Society, Kansas City, Missouri, September 2016.
16. "Multiple Roles for the ATR Kinase in the Cellular Response to UV-induced DNA Damage." Oral presentation. 38th Biennial Meeting of the American Society for Photobiology, Tampa, Florida, May 2016.
17. "UV Light and Autoimmunity: A Role for Small Excised DNA Oligonucleotides." Oral presentation. NIEHS R21 Grantee Meeting on "The Role of Environmental Exposures in Autoimmune Disease", Research Triangle Park, North Carolina, December 2015.
18. "DNA Excision Repair and sedDNA Processing During the Cellular Response to Genotoxic Stress." Oral presentation. University of Mississippi Department of Biochemistry, Jackson, Mississippi, December 2014.
19. "Mechanism of release and fate of excised oligonucleotides during nucleotide excision repair." Oral presentation. 43rd Annual Meeting of the Environmental Mutagen Society (oral presentation), Bellevue, Washington, September 2012.
20. "Putting the Pieces Together: DNA Damage Checkpoint Signaling." Oral presentation. Florida Institute of Technology, Melbourne, Florida, November 2011.
21. "Putting the Pieces Together: DNA Damage Checkpoint Signaling." Oral presentation. Tufts University Department of Biology, Medford, Massachusetts, January 2011.
22. "Characterization of the c-myc DNA unwinding element binding protein DUE-B." Poster presentation, Eukaryotic DNA Replication Meeting, Cold Spring Harbor Laboratory, New York, September 2005.
23. "The histone deacetylase inhibitor trichostatin A modulates replication origin activity in human cells." Poster presentation, Eukaryotic DNA Replication Meeting, Cold Spring Harbor Laboratory, New York, September 2003.

## **Regional**

1. "Genome protection by the DNA damage response in human cells and skin." University of Cincinnati College of Medicine Department of Molecular Genetics, Biochemistry, and Microbiology, Cincinnati, October 2019.
2. "Detection of the ssDNA products of nucleotide excision repair in the epidermis of UVB-irradiated human skin." Poster presentation. 21<sup>st</sup> Annual Midwest DNA Repair Symposium, St. Louis, Missouri, May 2019.
3. "Spironolactone depletes the XPC protein and inhibits the UVB DNA damage response in human skin." Poster presentation. 20<sup>th</sup> Annual Midwest DNA Repair Symposium, Case Western Reserve University, Cleveland, Ohio, May 2018.
4. "Role of Aging and Insulin-like Growth Factor-1 (IGF-1) in the Suppression of DNA Synthesis in UV-irradiated Human Keratinocytes." Poster presentation. 19<sup>th</sup> Annual Midwest DNA Repair Symposium, Wright State University, Dayton, Ohio, May 2017.
5. "Protecting the genome through nucleotide excision repair and DNA damage checkpoints." Oral presentation. Indiana University Department of Dermatology, Indianapolis, Indiana, November 2016.
6. "Protecting the genome through nucleotide excision repair and DNA damage checkpoints." Oral presentation. University of Kentucky Department of Toxicology and Cancer Biology, Lexington, Kentucky, October 2016.
7. "ATR Kinase Inhibition Protects Non-cycling Cells from the Lethal Effects of DNA Damage and Transcription Stress." Oral presentation. 18<sup>th</sup> Annual Midwest DNA Repair Symposium, Ohio State University, Columbus, Ohio, May 2016.
8. "UV light potentiates STING-dependent innate immune signaling through deregulation of ULK1." Poster presentation. 17<sup>th</sup> Annual Midwest DNA Repair Symposium, Indiana University, Bloomington, Indiana, June 2015.
9. "Interplay between cellular responses to foreign and damaged DNA in cancer and autoimmunity." Oral presentation. University of Toledo Department of Biochemistry and Cancer Biology, Toledo, Ohio, April 2015.
10. "Cellular processing of ssDNAs during nucleotide excision repair." Oral presentation. 16<sup>th</sup> Annual Midwest DNA Repair Symposium, Wayne State University, Detroit, Michigan, May 2014.
11. "Mechanism of release and fate of excised oligonucleotides during nucleotide excision repair." Poster presentation. 14<sup>th</sup> Annual Midwest DNA Repair Symposium, University of Cincinnati, Cincinnati, Ohio, May 2012.
12. "The DNA damage response kinases DNA-dependent protein kinases DNA-PK and ATM are stimulated by bulky adduct-containing DNA." Oral presentation. 13<sup>th</sup> Annual Midwest DNA Repair Symposium, University of Toledo, Toledo, Ohio, May 2011.
13. "Tipin-RPA interaction mediates Chk1 phosphorylation by ATR in response to genotoxic." Poster presentation. Genetics and Environmental Mutagenesis Society Meeting, Durham, North Carolina, October 2010.
14. "Tipin-RPA interaction mediates Chk1 phosphorylation by ATR in response to genotoxic." Oral presentation. 12<sup>th</sup> Annual Midwest DNA Repair Symposium, University of Louisville, Louisville, Kentucky, May 2010.

## **Other Local Presentations**

1. "Mechanisms of double-strand break generation and repair in quiescent human cells." Oral presentation, Wright State University Department of Biochemistry & Molecular Biology Brownbag Seminar Series, February 14, 2023.
2. "Monitoring and manipulating DNA damage responses in human skin to protect against environmental exposures." Oral presentation. Wright State University Department of Pharmacology & Toxicology, Dayton, Ohio, October 20, 2021.

3. "Human skin as a model system for studying the DNA damage response." Oral presentation. Wright State University Department of Biochemistry & Molecular Biology, Dayton, Ohio, January 2020.
4. "Novel insights into the DNA damage response in UV-irradiated human skin." Oral presentation. Wright State University Department of Biochemistry & Molecular Biology, Dayton, Ohio, January 2018.
5. "Protecting the genome through nucleotide excision repair and DNA damage checkpoints." Oral presentation. Wright State University Department of Biochemistry & Molecular Biology, Dayton, Ohio, September 2016.

## GRANTS AND CONTRACTS

### *Grants as Principal Investigator (PI):*

- Kemp, Michael (PI) (October 1, 2021-September 30, 2024). Mapping DNA repair and mutagenic DNA synthesis in geriatric skin. Veterans Administration (Clinical Merit I01CX002241), \$1,072,787 total costs.
- Kemp, Michael (PI) (July 1, 2020-June 30, 2022). Circadian clock modulating drugs in cancer prevention and treatment. Ohio Cancer Research (Project #5020), \$60,000 total costs.
- Kemp, Michael (PI) (February 1, 2019-January 31, 2024). DNA damage response kinase signaling in non-replicating human cells and tissues. National Institute of General Medical Sciences (R01GM130583), \$1,478,000 total costs.
- Kemp, Michael (PI) (April 1, 2014-March 31, 2015). A novel role for UV-generated sedDNAs in inflammation and autoimmunity. University of North Carolina Center for Environmental Health and Susceptibility (Pilot grant), \$25,000 total costs.

### *Other grants:*

- Gaddameedhi, Shobhan (PI; North Carolina State University); Kemp, Michael (sub-contract PI) (August 1, 2020-July 31, 2025). Circadian clock disruption: a risk factor for environmental mutagenesis. National Institute of Environmental Health Sciences (R01ES030113), \$140,316 total costs for sub-contract.
- Sancar, Aziz (PI; University of North Carolina); Kemp, Michael (Co-investigator) (August 1, 2014-July 30, 2016). UV light and autoimmunity: a role for small excised DNA oligonucleotides. National Institute of Environmental Health Sciences (R21ES024425). \$400,000 total costs.

## SERVICE AND ACADEMIC OUTREACH

### Professional Service

<u>Grant Reviewer</u>	<u>Position</u>	<u>Dates</u>
Oak Ridge Associated Universities (ORAU) Nazarbayev University Research Council	Ad-hoc Member	Aug-Sept 2022
NIH Cancer Prevention Study Section (R01/R21)	Ad-hoc Member	Feb 2022
United Kingdom Medical Research Council Predoctoral Clinical Research Fellowship	Ad-hoc Member	Oct 2021
NIH/NINDS CounterAct Program (U01/U54)	Ad-hoc Member	Mar 2021
United Kingdom Medical Research Council Career Development Award	Ad-hoc Member	June 2020
University of Iowa Center for Health Effects of Environmental Contamination	Ad-hoc Member	Feb 2019
Netherlands Organization for Scientific Research	Ad-hoc Member	July 2018
Netherlands Organization for Scientific Research	Ad-hoc Member	July 2017

<u>Scientific Society Committee Service</u>	<u>Position</u>	<u>Dates</u>
Environmental Mutagenesis & Genomics Society Awards & Honors Committee	Chair Member	2019-present 2017-present
FASEB Excellence in Science Award Committee	Member (appointed)	2020-2023

<u>Scientific Conference Organization</u>	<u>Position</u>	<u>Dates</u>
American Society for Photobiology Meeting Symposium title: "Impact of circadian rhythm and aging on UV DNA damage responses and photocarcinogenesis"	Co-chair	Sept 2022
Society for Investigative Dermatology Meeting Mini-Symposium 16: Photobiology	Co-chair	May 2022
Environmental Mutagenesis & Genomics Society Meeting; Special Symposium: "Circadian clock disruption and its impact on genomic instability and environmental mutagenesis"	Co-chair	Aug 2019
Annual Midwest DNA Repair Symposium	Co-organizer	May 2017
Environmental Mutagenesis & Genomics Society Meeting; DNA Repair Session	Co-chair	Aug 2016

### **University Committee Service**

<u>University Committee</u>	<u>Position</u>	<u>Dates</u>
Research & Sponsored Programs committee to recommend applicants for NSF MRI	Ad-hoc Member	Jan 2023

<u>Biomedical Sciences PhD Program</u>	<u>Position</u>	<u>Dates</u>
Curriculum Committee	Member (appointed)	2022-2023
Admissions Committee	Member (appointed)	2021-2022
Nominations Committee	Member (appointed)	2020-2021

<u>Department Committee</u>	<u>Position</u>	<u>Dates</u>
Education Committee	Member	2021-present
Website Re-design Committee	Member	2020

<u>Dayton VA Medical Center</u>	<u>Position</u>	<u>Dates</u>
Sub-committee on Research Safety (SRS)	Member	2020-present