

## CURRICULUM VITAE

### Erika L. Abel, Ph.D.

#### Present Title and Affiliation

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Clinical Professor of Biology  
Honors Program/Honors College  
Baylor University  
Waco, TX  
2018-present

#### Office Address

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Department of Biology  
BSB A.126  
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#### Education and Training

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- The University of Texas MD Anderson Cancer Center, Postdoctoral Fellowship, Department of Molecular Carcinogenesis, 2003-2007
- The University of Washington, Ph.D., School of Public Health and Community Medicine, Department of Environmental and Occupational Health Sciences, Program in Toxicology, 2003
- Texas A&M University, B.S., Biomedical Science, 1998, *Summa Cum Laude*

#### Academic Appointments

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- Clinical Professor, Honors Program, Baylor University, Waco, TX, 2018-present
- Undergraduate Program Director, Department of Biology, Baylor University, Waco, TX, 2013-2018
- Lecturer and Academic Advisor, Department of Biology, Baylor University, Waco, TX, 2011-2018
- Research Assistant Professor, Department of Carcinogenesis, The University of Texas MD Anderson Cancer Center, Smithville, TX, 2009-2011
- Instructor, Department of Carcinogenesis, The University of Texas MD Anderson Cancer Center, Smithville, TX, 2007-2009

#### Research Interests

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- Factors that influence public compliance with health guidelines and/or civic support of public health agencies, including awareness of how safe food, water and pharmaceuticals are produced
- Psychosocial, religious and political determinants of access to clean food, water, and medications, including a focus on vaccination rates
- Socioeconomic factors that influence health outcomes in long-term cancer survivorship

## Professional Experience

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- Clinical Professor, Guide students in independent research culminating in an undergraduate thesis administered by the Honors Program within the Honors College. Projects are primarily public health in nature focusing on social determinants of health including water and food quality and accessibility. Teach cellular biology and genetics in the Department of Biology, Baylor University, Waco, TX, 2018-present.
- Program Director, Baylor Life Sciences in Dublin, Facilitated design and initial implementation of this study abroad program for intended primarily for pre-medicine students at Baylor. Select students for program and facilitate pre-departure preparations as well as follow-up throughout the student experience on an annual basis, Honors Program and Center for Global Engagement, Baylor University, Waco, TX, 2018-present.
- Undergraduate Program Director, Provide oversight of issues related to curriculum, degree petitions, special programs, transfer credit, advising, and other administrative details for approximately 1000 undergraduate majors and premajors as well as students in service courses in the Department of Biology, Baylor University, Waco, TX, 2013-present
- Lecturer and Academic Advisor, Primary responsibilities include managing the academic schedules and career development for ~100 biology/pre-healthcare majors and developing inquiry based learning experiences in cell biology and biochemistry for a 150+ student population. Department of Biology, Baylor University, Waco, TX, 2011-present
- Research Assistant Professor, Development of therapies against the cutaneous effects of mustard gas exposure; project funded by the CounterACT (Countermeasures Against Chemical Threats) as a response to homeland security threats, collaboration with Dr. Michael MacLeod, Department of Carcinogenesis, The University of Texas MD Anderson Cancer Center, Smithville, TX, 2009-2011
- Research Assistant Professor, Investigation of molecular mechanisms underlying obesity-promoted pancreatic cancer development, collaboration with Dr. Susan Fischer, Department of Carcinogenesis, The University of Texas MD Anderson Cancer Center, Smithville, TX, 2009-2011
- Instructor and Postdoctoral Fellow, Dr. John DiGiovanni Laboratory, Investigation of the role of Glutathione S-transferase alpha 4 in genetic susceptibility to skin cancer, Department of Carcinogenesis, The University of Texas MD Anderson Cancer Center, Smithville, TX, 2003-2009
- Graduate Research Assistant, Dr. David Eaton Laboratory, Investigation of the effect of polymorphisms in Glutathione S-transferases on metabolism of pesticides, Department of Environmental and Occupational Health Sciences, School of Public Health and Community Medicine, University of Washington, Seattle, WA, 1998-2003

## Honors and Awards

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- Richard Couey Award for Excellence, Phi Kappa Chi Fraternity. (May 2018).
- Student Success Collaborative Innovation Award, Baylor University Office of Academic Enrollment Management. (August 2018).
- Undergraduate Research and Scholarly Achievement Mentor of the Year, URSA, Baylor University. (May 2016).
- Selected to participate in the Summer Faculty Institute offered by the Academy for Teaching and Learning at Baylor University, 2016

- Baylor University Undergraduate Research and Scholarly Achievement Mentor of the Year. 2016
- Named as a Baylor Fellow by the Academy for Teaching and Learning at Baylor University. 2015-2016
- President, Texas Genetics Society, 2016-2017
- Named as a National Academies Education Fellow in the Life Sciences, by the National Academy of Sciences (2013-2014)
- Nominated for the Baylor chapter Phi Kappa Chi fraternity's Richard Couey Award for Excellence; invited to attend the Light Your World banquet honoring Baylor faculty who significantly impact the lives of Baylor students (2012)
- Selected as the National Institute for Environmental Health and Safety, Center for Research on Environmental Disease's Career Development Program Representative (2010)
- Outstanding Postdoctoral Platform Presentation, Texas Genetics Society 32<sup>nd</sup> Annual Meeting (2005)
- The University of Texas MD Anderson Cancer Center (UT MDACC)/National Institutes of Health Research Training in Carcinogenesis and Mutagenesis Postdoctoral Training Grant Fellow (2003-2005)
- Society of Toxicology Graduate Student Travel Award (2003)
- Departmental Nominee for the Outstanding Teaching Assistant Award at the University of Washington (2001)
- National Institute of Aging-Genetic Approaches to Aging Training Grant Fellow (1999-2003)
- Achievement Rewards for College Scientists-Sam and Althea Stroum Fellow (1998)
- *Summa Cum Laude* Graduate-Texas A&M University (1998)
- McFadden Endowed Scholarship-Texas A&M University (1994-1998)

## **Education Experience**

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### **Courses Taught**

BIO 4307 and 4107: Biochemistry and Physiology of the Cell and Lab  
 BIO 3342: Molecular Cell Biology  
 BIO 2306: Genetics  
 BIO 1305: 1305 Honors: Modern Concepts of Bioscience I honors  
 BIO 1125: Biological Research Readiness

### **Other Education Experience**

- Program Development and Faculty Mentor, Baylor University, BLAST Learning Assistant Program, Academy for Teaching and Learning and the Department of Biology, 2017-present
- Program Development, Baylor University, Bachelor of Science in Science Research Fellows, 2016-2018
- Program Development, Baylor University, Bachelor of Science in Biology concentration in Tropical Disease Biology, 2015
- Guest Lecturer, Department of Environmental Science, Baylor University, "Environmental

Carcinogenesis”, 2011-present

- Seminar Series Lecturer, UT MDACC, Summer Undergraduate Research Program, Summers 2004-2010
- Guest Lecturer, Department of Animal Science, Texas A&M University, “Developmental signaling pathways in skin: Relevance to wound healing and cancer”, Fall 2010
- Graduate Teaching Assistant, University of Washington-Environmental Health 405: Toxic Chemicals in the Environment, Spring 2001
- Graduate Teaching Assistant, University of Washington-Environmental Health 405: Toxic Chemicals in the Environment, Spring 2000
- Graduate Teaching Assistant, University of Washington- Environmental Health 514: Environmental and Occupational Toxicology I, Fall 1999

### **Supervisory Teaching Experience**

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- Honors College Committee Participation and Research Oversight
  - Undergraduate Honors Thesis Committee Chair. Cyanotoxin Synthesis Gene Expression in *Microcystis aeruginosa* (December 2019 - Present).  
Advised: Sarah Jones
  - Undergraduate Honors Thesis Committee Chair. (May 2019 - Present). Use of anesthesia in pre-term infants  
Advised: Meghan Hunt
  - Undergraduate Honors Thesis Committee Chair, "The Effects of Prior Exposure to Methylphenidate on Later Methamphetamine Self-Administration," Psychology & Neuroscience. (December 2018 - May 2020).  
Advised: Clifton Haacker
  - Undergraduate Honors Thesis Committee Chair, "Preliminary Analysis of Body Mass Index and Long-Term Health Effects of Adolescent and Young Adult Hodgkin's Lymphoma." (December 2018 - May 2020).  
Advised: Lily Sandblom
  - Undergraduate Honors Thesis Committee Member, "Chemosensory receptor annotation and characterization in *Aedes albopictus*," Biology. (May 2020).  
Advised: Garrett Ray
  - Undergraduate Honors Thesis Committee Member, "The Virus that Could Kill a Nation: An Analysis of the Impact of HIV/AIDS on the Russian Population and Factors Preventing Successful Intervention and Control," Biology. (2018 - May 2020).  
Advised: Ashton Smelser
  - Exit Interview Committee, University Scholar. (2019).  
Advised: Sarah Powers
  - Undergraduate Honors Thesis Committee Member, University Scholar. (December 2018).  
Advised: Peter Mungiguerra
  - Undergraduate Honors Thesis Committee Chair, "Effects of organophosphate flame

retardants on spontaneous movement in zebrafish larvae," Chemistry and Biochemistry. (2014 - 2017).

Advised: Aparna Sarode

- Undergraduate Honors Thesis Committee Chair, "Disruption of Copper Homeostasis by Copper Chelating Agents in Embryonic Zebrafish," Biology. (2014 - 2016).  
Advised: Christina Hagan

- BIO 3V90 and CURE Student Research, Department of Biology, Baylor University

- Supervised Research. (2019 - Present). BIO 2306 CURE: a course-based undergraduate research experience. The CURE guides students in exploring gene regulation mechanisms that underlie toxin production in harmful algal blooms
- Christina Hagan, Min-Suk Kwak and Ashely Nguyen, *Effects on thiol-containing copper chelators on zebrafish development and viability*. Fall 2014-2016
- Aparna Sarode, Austin MacDonald and Raveena Patel, *Effects of organophosphate flame retardants on spontaneous movement in zebrafish larvae*, Fall 2014-2016
- Gerardo Martinez and Sammy Huseman, *Measuring inflammatory markers in zebrafish larvae after fin resection*. Fall 2014-Fall 2015
- Aleah Nichols and Atiq Haque, *Pigmentation in developing zebrafish embryos after exposure to disulfuram*. Fall 2014-Spring 2015
- Aaron Hopkins, Clayton Smith, and Aparna Sarode, *Assessment of toxicity of disulfuram in developing zebrafish embryos*. Fall 2014-2016
- Michael Cotton, *Effect of dietary energy balance on hepatic Glutathione S-transferase expression in mice*. Spring 2014
- Victor Manon and Chase Van Gorp, *Protein expression of Glutathione S-transferase alpha 4 in the liver of obese and normal weight mice*. Spring 2014
- Aaron Hopkins and Lana Joudeh, *Effect of Brominated Flame Retardant Exposure on viability and morphology in developing zebrafish*. Spring 2014
- Gerardo Martinez and Nick Norris, *Effect of Brominated Flame Retardant Exposure on Glutathione S-transferase expression and activity in zebrafish embryos*. Spring 2014
- Annie Janise and Molli Kudela, *Effect of PBDE exposure on GST expression and Acetylcholinesterase activity in zebrafish embryos*. Spring 2014.
- Rachel Shifflet, *Active Learning Models for Teaching Co-Regulation of Glycolysis and Gluconeogenesis*. Spring 2014.
- Jeremy Walder and Linh Nguyen, *Effect of chemopreventive agent treatment on hepatic Glutathione S-transferase expression in mice with fatty liver disease*. Fall 2012-2013
- Annie Janise and Taylor Jackson, *Effect of dietary energy balance on hepatic Glutathione S-transferase expression in mice*. Spring 2013
- HoSe Kim and Jason Lambert, *Effect of fatty liver disease on hepatic Glutathione S-*

*transferase enzyme activity in mice*. Spring 2013

- Nick Norris and Molli Kudela. *Comparative analysis of Glutathione S-transferase activity in muscle tissue from arctic walruses and bearded seals*. Spring 2013
- Matthew Mackay and Jessica Bucio, *Analysis of Glutathione S-Transferase enzyme activity in C. elegans*. Fall 2012
- Carlo Manzana, Fall 2012, *Analysis of Glutathione S-transferase isoform expression in C. elegans*. Fall 2012
- Anthony Nguyen, *Assessment of chemical safety needs for BIO 4107 optimization*. Fall 2012
- Honors Student Research, Department of Biology, Baylor University
  - Austin MacDonald, 2014-2016
  - Aparna Sarode, 2014-2016
  - Christina Hagan, 2015-2016
- Honors Student Committee Member, Baylor University
  - Victor Manon, *Quantifying the Genetic Basis of Yellow Pigmentation in Lake Malawi Cyclid Fish*, Dr. Patrick Danley Laboratory (2014)
  - Anju Kanapan, *Markers of an Unhealthy Pregnancy: An Assessment of The Ingestion of Soft Rocks During Pregnancy and Blood Lead Levels in Luo Women of Rural Western Kenya*, Dr. Lisa Baker Laboratory (2014)
  - Jessica Korona, *The Effect of Mother's Health on Children's Hemoglobin and Lead Levels in Rural Western Kenya*, Dr. Lisa Baker Laboratory (2014)
  - Sara Kim, *Meta-analysis of Psychotherapy and Alternative Treatments for Combat-related PTSD*, Dr. Beth Lanning Group (2013)
  - Megan Hermann, *Potential Inhibitors of Bascillus anthracis' Metallo-  $\beta$ -Lactamase by Hydroxamate Functional Groups and G-Quadruplex Aptamers*, Dr. Sung Kim Laboratory
  - Robin Van Der Pol, *Characteristics of urban constructions occupied by bats*. Department of Biology, Dr. Kenneth Wilkins Laboratory (2012)
  - Victoria Seoung, *Biochemical Studies of Cathepsin B and Cruzain Inhibitors Sharing a Thiosemicarbazone Moiety*, Department of Chemistry and Biochemistry, Dr. Mary Lynn Trawick Laboratory (2012)
  - Zachary Sartor, *Synergistic Effects of Hydroxychloroquine on the Activity of Thiomaltol against Melanoma Cancer Cells*, Department of Chemistry and Biochemistry, Dr. Patrick Farmer Laboratory (2012)
- Supervisory Graduate Student Mentor, UT MDACC/ Graduate School of Biomedical Science,
  - Ronald Bozeman, 2006 to 2009
  - Dharanija Rao, 2007 to 2009

- Summer Intern Research Mentor, UT MDACC Summer Undergraduate Research Program
  - Tyler Smith, 2010
  - Stephen Meyer, 2008
  - Natalie Korth and Jessica Campos. 2006
  - Ben Warshawsky, Tommy Coyen and Tekoah Lewis, 2005

## Research Funding

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### Funded/Completed

- Consultant, Veterinary Drug Residues and US Beef Export to China, Service Agreement M1800669, Texas A&M AgriLife Research, 2017-2018, \$10,000.
- Supervisor, Folmar Grant Recipient: Clayton Smith, Department of Biology, Baylor University, 6/1/16-9/15/16, \$1000
- Co-Principal Investigator with Crystal Usenko, Investigation of flame retardant exposures on protein homeostasis, C. Gus Glasscock, Jr Endowed Fund for Excellence in Environmental Sciences, 2016, \$4915
- Supervisor, Folmar Grant Recipients: Austin MacDonald and Christina Hagan, Department of Biology, Baylor University, 6/1/15-12/31/15, \$2000
- Co-Principal Investigator with Rebecca Sheesley, Optimization of a zebrafish model for toxicological assessment of atmospheric particulate matter, Undergraduate Research and Scholarly Achievement Program Small Grant, 6/1/2014-5/31/2015, \$1,859.18
- Principal Investigator, Obesity-induced IGF-1 modulates PGDH and COX-2 expression to promote pancreatic cancer growth, Center for Research on Environmental Disease Pilot Project Award, 12/1/2010–2011, \$30,000 (\$30,000/year)
- Co-Investigator, Obesity and Pancreatic Cancer: The Role of IGF-1, R01-CA135386-01, NIH/NCI, PI - Susan Fischer, 5/7/2009–2011, \$830,000 (\$207,500/year)
- Co-Investigator, Obesity-induced IGF-1 coordinately upregulates COX-2 and downregulates tumor suppressive PGDH resulting in enhanced pancreatic cancer growth, American Institute for Cancer Research (AICR), PI - Susan Fischer (*transfer to E. Abel in progress*), 1/1/2011–2011, \$150,000 (\$75,000/year)
- Co-Investigator, Cyclooxygenase-2 Induced Pancreatic Cancer, R01-CA124615-03, NIH/NCI, PI - Susan Fischer, 4/1/2008–2011, \$1,037,500 (\$207,500/year)
- Co-Investigator, Detoxification of electrophilic chemical threat agents by nucleophilic scavengers, U01-NS058191, NIH/NINDS, PI - Michael MacLeod, 9/30/2006–2011, \$1,875,015 (\$375,003/year)
- Co-Investigator, Identification of common pathways in tumor promotion, 5-R01-ES015718-02, NIH/NIEHS, PI - John DiGiovanni, 4/1/2008–8/31/2013, \$1,125,664 (\$281,416/year)
- Co-Investigator, Identification of tumor promotion susceptibility genes, 1-R01-ES016623, NIH/NIEHS, PI - John DiGiovanni, 4/1/2008–8/31/2013, \$1,250,000 (\$250,000/year)
- Co-Investigator, Stat3 in epithelial carcinogenesis, 01-R01-CA76520, NIH/NCI, PI - John DiGiovanni, 7/1/2008–6/30/2013, \$1,250,000 (\$250,000/year)

\*I was highly involved in writing and managing these grants; however, my work related to these projects was completed by 2011 when I transferred to a teaching position at Baylor.

### Not Funded

- Co-Principal Investigator, Undergraduate Research and Scholarly Achievement Small Grant Program, Comparison of Organophosphate Flame Retardant Toxicity, Baylor University, Spring 2015.
- Research Associate, Targeting melanoma with combination therapy based on generation of oxidative stress and inhibition of autophagy, Department of Defense, PI-Patrick Farmer, Baylor University, 8/31/12-7/31/14.
- Principal Investigator, The role of prostaglandin receptor EP1 in epithelial carcinogenesis, R01, 2/2011, NIH/NCI, 7/1/2011–6/30/2016, \$1,225,000 (\$250,000/year)
- Principal Investigator, Obesity-induced serum IGF-1 modulates the development of pancreatic tumors via repression of PGDH, National Pancreas Foundation, 4/1/2010–3/31/2011, \$50,000 (\$50,000/year)
- Principal Investigator, Identification of genetic loci that modify susceptibility to UV-induced skin cancer, 1 K01 ES018855-01, NIH/NIEHS, 4/1/2010–3/31/2015, \$375,000 (\$75,000/year)
- Principal Investigator, Obesity-induced IGF-1 coordinately upregulates COX-2 and downregulates tumor suppressive PGDH resulting in enhanced pancreatic cancer growth, American Gastroenterological Association, 7/1/2010–6/30/2013, \$180,000

### Invited Presentations

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- Invited Speaker, Graduate Student Teaching Skills Workshop, Academy for Teaching and Learning, Baylor University, Waco, TX, “Teaching in STEM Fields”, 2016
- Invited Panelist, Women in the Academy, Annual Conference, Waco, TX, “Evidence-Based Scientific Teaching” 2015
- Invited Panelist, Women in the Academy, Annual Conference, Waco, TX, “Breaking the Glass Ceiling” 2014
- Poster Presentation, NIEHS Center Director’s Annual Meeting, Louisville, KY, “Protection from 2-chloroethyl ethyl sulfide (CEES) toxicity by inducers of the glutathione detoxification pathway *in vitro* and *in vivo*”, 2010
- Platform Presentation, NIH CounterACT Network Research Symposium, San Francisco, CA, “Detoxification of Electrophilic Chemical Threat Agents by Nucleophilic Scavengers”, 2010

### Publications

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- **Book Chapters**

**Abel EL**, DiGiovanni J. Environmental carcinogenesis. In: *The Molecular Basis of Cancer, Fourth Edition*. Ed(s) JM Mendelsohn, P Howley, MA Israel, J Gray, CB Thompson. Elsevier Saunders: Philadelphia, 2015.

**Abel EL**, DiGiovanni J. Multistage Carcinogenesis. In: *Current Cancer Research: Chemical Carcinogenesis*. Ed TM Penning, Springer: New York, NY. 27-50, 2011.



Angel J, **Abel E**, DiGiovanni J. Genetic Determinants of Cancer Susceptibility. In: *Comprehensive Toxicology*. 14, 2nd. Ed(s) C McQueen. Elsevier, 371-400, 2010.

**Abel EL**, DiGiovanni J. Environmental carcinogenesis. In: *The Molecular Basis of Cancer, Third Edition*. Ed(s) JM Mendelsohn, P Howley, MA Israel, J Gray, CB Thompson. WB Saunders: Philadelphia, 2008.

- **Invited Articles**

**Abel EL**, Angel JM, Kiguchi K, DiGiovanni J. Multi-stage chemical carcinogenesis in mouse skin: fundamentals and applications. *Nat Protoc* 4(9):1350-62, 2009. e-Pub 8/2009.

- **Articles in Peer-Reviewed Journals**

Gueldner, J, Sayes, C, **Abel, E\***, Bruce E. Emerging Association of the ALDH2\*2 Polymorphism with Disease Susceptibility, *Journal of Drug Metabolism and Toxicology*, 7:2, 2016. **\*corresponding author**

Usenko, CY, **Abel, EL**, Hopkins, A, Martinez, G, Tijerina, J, Kudela M, Norris, N, Joudeh, L, Bruce, EA. Evaluation of Common Use Brominated Flame Retardant (BFR) Toxicity Using a Zebrafish Embryo Model. *Toxics*, 43(3), 21, 2016.

Rosenberg M, Abel, E, Garver, W, Osgood, M. Taking the Hassle out of Hasselbalch, *Course Source*, 3:1-10, 2016.

Usenko, CY, **Abel, EL**, Kudela, M, Janise, A, Bruce, EA. Comparison of PBDE congeners as inducers of oxidative stress in zebrafish. *Environmental Toxicology and Chemistry*. 34(5):1154-60, 2015.

Angel JM, **Abel EL**, Riggs PK, McClellan SA, DiGiovanni J. Fine mapping reveals that promotion susceptibility locus 1 (Psl1) is a compound locus with multiple genes that modify susceptibility to skin tumor development. *G3 (Bethesda)*, Apr 3;4(6):1071-9, 2014.

Bozeman R, **Abel EL**, Macias E, Cheng T, Beltran L, Digiovanni J. A novel mechanism of skin tumor promotion involving interferon-gamma (IFN $\gamma$ )/signal transducer and activator of transcription-1 (Stat1) signaling. *Mol Carcinog*. ePub, ahead of print, 2014.

**Abel EL**, Boulware S, Fields T, Mclvor E, Powell KL, Digiovanni J, Vasquez KM, Macleod MC. Sulforaphane induces phase II detoxication enzymes in mouse skin and prevents mutagenesis induced by a mustard gas analog. *Toxicol Appl Pharmacol*. 266(3):439-442. 2012

Boulware S, Fields T, Mclvor E, Powell KL, **Abel EL**, Vasquez KM, Macleod MC. 2,6-Dithiopurine, a nucleophilic scavenger, protects against mutagenesis in mouse skin treated in vivo with 2-(chloroethyl) ethyl sulfide, a mustard gas analog. *Toxicol Appl Pharmacol*. 263:203-209. 2012

Shen J, **Abel EL**, Riggs PK, Repass J, Hensley SC, Schroeder LJ, Temple A, Chau A, McClellan SA, Rho O, Kiguchi K, Ward MD, Semmes OJ, Person MD, Angel JM, Digiovanni J. Proteomic and pathway analyses reveal a network of inflammatory genes associated with differences in skin tumor promotion susceptibility in DBA/2 and C57BL/6 mice. *Carcinogenesis*. 33(11):2208-19. 2012.

Surh I, Rundhaug J, Pavone A, Mikulec C, **Abel EL**, Simper M, Fischer S. The EP1 receptor for prostaglandin E2 promotes the development and progression of malignant murine skin tumors. *Molecular Carcinogenesis*. 51(7):553-64, 2012.

**Abel EL**, Bubel JD, Simper MS, Powell L, McClellan SA, Andreeff M, MacLeod MC, DiGiovanni J. Protection against 2-chloroethyl ethyl sulfide (CEES)-induced cytotoxicity in human keratinocytes by an inducer of the glutathione detoxification pathway. *Toxicol Appl Pharmacol*. 255(2):176-83. 2011

Surh I, Rundhaug J, Pavone A, Mikulec C, **Abel EL**, Fischer S. Upregulation of the EP1 receptor for prostaglandin E2 promotes tumor progression. *Molecular Carcinogenesis*. 50(6):458-60, 2011.

Blando J, Carbajal S, **Abel EL**, Beltran L, Conti C, Fischer SM, DiGiovanni J. Cooperation between Stat3 and Akt signaling leads to prostate tumor development in transgenic mice. *Neoplasia*. 13(3):254-65, 2011.

**Abel EL**, Angel JM, Riggs PK, Langfield L, Lo HH, Person MD, Awasthi YC, Wang LE, Strom SS, Wei Q, Digiovanni J. Evidence That Gsta4 Modifies Susceptibility to Skin Tumor Development in Mice and Humans. *J Natl Cancer Inst* 102(21):1663-1675. e-Pub 10/2010.

Yasgar A, Shultz J, Zhou W, Wang H, Huang F, Murphy N, **Abel EL**, DiGiovanni J, Inglese J, Simeonov A. A High-Throughput 1,536-Well Luminescence Assay for Glutathione S-Transferase Activity. *Assay Drug Dev Technol* 8(2):200-11, 4/2010. PMID: PMC2864799.

Chan KS, Sano S, Kataoka K, **Abel E**, Carbajal S, Beltran L, Clifford J, Peavey M, Shen J, Digiovanni J. Forced expression of a constitutively active form of Stat3 in mouse epidermis enhances malignant progression of skin tumors induced by two-stage carcinogenesis. *Oncogene* 27(8):1087-94, 2/2008. e-Pub 8/2007.

Riggs PK, Angel JM, **Abel EL**, DiGiovanni J. Differential gene expression in epidermis of mice sensitive and resistant to phorbol ester skin tumor promotion. *Mol Carcinog* 44(2):122-36, 10/2005.

**Abel EL**, Lyon RP, Bammler TK, Verlinde CL, Lau SS, Monks TJ, Eaton DL. Estradiol metabolites as isoform-specific inhibitors of human glutathione S-transferases. *Chem Biol Interact* 151(1):21-32, 12/2004.

**Abel EL**, Opp SM, Verlinde CL, Bammler TK, Eaton DL. Characterization of atrazine biotransformation by human and murine glutathione S-transferases. *Toxicol Sci* 80(2):230-8, 8/2004.

**Abel EL**, Bammler TK, Eaton DL. Biotransformation of methyl parathion by glutathione S-transferases. *Toxicol Sci* 79(2):224-32, 6/2004.

- **Abstracts (past 10 years)**

Patel R, Sarode A, Smith G, **Abel E**, Usenko C. Comparative Toxicity of Organophosphate Flame Retardants in Zebrafish, SETAC regional conference, 2015.

Janise A, Kudela M, Norris N, **Abel E**, Usenko C, Bruce E. Polybrominated diphenyl ethers are unlikely to elicit toxicity via oxidative stress in zebrafish. Texas Genetics Society Annual Meeting, 4/2014.

**Abel EL**, Simper MS, Bubel JD, Powell L, McClellan A, Carbajal S, Andreef M, DiGiovanni J, MacLeod MC. Protection from 2-chloroethyl ethyl sulfide (CEES) toxicity by inducers of the glutathione detoxification pathway in vitro and in vivo. 4th Annual CounterAct Network Research Symposium, 6/2010.

**Abel EL**, Angel JM, Riggs PK, Langfield S, Jiang A, Carbajal S, Lo H, Person M, Awasthi YC, Wang L, Strom s, Wei Q and DiGiovanni J. Gsta4 modifies susceptibility to skin tumor development in mice and humans. American Association for Cancer Research Annual Meeting, 4/2010.

**Abel EL**, Angel JM, Bubel JD, Beltran LM, DiGiovanni J. Constitutive activation of PI3Kinase/Akt signaling in the basal layer of the epidermis sensitizes C57BL/6 mice to skin tumor promotion by TPA. American Association for Cancer Research Annual Meeting, 4/2009.

**Abel E**, Angel J, Meyer S, Coyne T, Riggs P, Elizondo L, DiGiovanni J. Gsta4 is a mouse skin tumor promotion susceptibility gene that maps to promotion susceptibility locus 1.2 (Psl1.2) on chromosome 9. 8th International Skin Carcinogenesis Conference, 10/2008.

**Abel EL**, Angel JM, Riggs PK, Elizondo L, DiGiovanni J. Characterization of glutathione S-transferase alpha 4 (Gsta4) as a modifier of tumor promotion susceptibility in the mouse two-stage skin carcinogenesis model. Society of Toxicology Annual Meeting, 3/2008.

**Abel E**, Angel J, Riggs P, Simper M, Elizondo L, Warshawsky B, Coyne T, DiGiovanni J. Strain-specific induction of glutathione S-transferase alpha 4 (Gsta4) in mouse epidermis following treatment with diverse tumor promoting agents. Texas Genetics Society 34th Annual Meeting, 2007.

## **Service**

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### **Department Service**

- Student Supervisor, Learning Assistant Program, Department of Biology, Baylor University. (August 2017 - Present).
- Committee Chair, Undergraduate Committee, Department of Biology, Baylor University. (2014 - 2018).
- Undergraduate Program Director, Department of Biology, Baylor University. (2014 - 2018).
- Committee Member, Undergraduate Curriculum Committee, Department of Biology, Baylor University (2011-present).

### **College Service**

- Speaker/Presenter, Annual Information Session for Honors Students Interested in Lab Research, Honors College Baylor University. (March 2019 - Present).
- Volunteer, Baylor Move-In, Baylor University. (2019 - Present).
- Program Director, Baylor University--MD Anderson Cancer Center University Outreach Summer Internship Program. (2019 - Present).
- Speaker/Presenter, Honors Line Camp Panel. Honors College, Baylor University (2019 - Present).
- Committee Chair, Honors College Science Research Grant Program, Honors College, Baylor University. (2018 - Present).
- Committee Member, College of Arts and Sciences Core Curriculum Implementation Team, Baylor

University (August 2017 - 2018).

- Organizer, Baylor University and Baylor College of Medicine, Common Grounds in Tropical Disease Biology Symposium, Baylor University (2016)
- Committee Member, College of A&S Enrollment Council, Baylor University. (2014 - 2018).
- Committee Member, Science Research Fellows Implementation Team, Baylor University. (2014 - 2018).
- Council Member, College of Arts and Science Enrollment Council, Baylor University (2014-2018).
- Committee Member, College of Arts and Sciences Curriculum Committee, Baylor University (2014-2016)

### **University Service**

- Program Organizer, Baylor in Dublin Study Abroad Program, Honors College and Center for Global Engagement, Baylor University (2019 - Present).
- Student Recruiter, Invitation to Excellence, Baylor University. (2013 - Present).
- Premedical/Pre dental Advisory Committee, Baylor University. (2012 - Present).
- Committee Member, Honors College Dean Search Committee, Baylor University. (2019 - 2020).
- Student Recruiter, Faculty Phone Campaign to Recruit Freshman Class, Baylor University. (April 2020).
- Working Group Member, Academic Capacity Committee, Provost Office, Baylor University. (2018 - 2019).
- Faculty Advisor, Multicultural Association of Prehealth Students, Baylor University. (2016 - 2018).
- Task Force Member, Provost's Task Force on Transfer Credit, Baylor University. (2016).
- Council Member, Academic Advising Council, Baylor University, (2013-2018)
- Committee Member, Paul L. Foster Success Center Public Relations Committee, Baylor University (2014-2015)
- Task Force Member, Registrar's Task Force to Address Undergraduate Course Repeat Policy, Baylor University (2014-2015)
- UT MDACC Department of Carcinogenesis Biosafety Committee Member (2010-2011)
- UT MDACC Center for Research on Environmental Disease Community Outreach Speaker (2007-2011)
- UT MDACC Postdoctoral Association Board Member (2004-2005)

### **Professional Service**

- Officer, President/Elect/Past, Texas Genetics Society Board of Directors. (2015 - 2018).
- Texas Genetics Society annual meeting (Waco, TX), Local Arrangements Coordinator (2014)

### **Professional Associations**

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- Texas Genetics Society (2005-present)
- American Gastroenterological Association (2009-2011)

- American Association for Cancer Research (2005-2011)
- Society of Toxicology (2000-2011)
- Pacific Northwest Association of Toxicology (1999-2003)

#### **Editorial and Review Activities**

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- Textbook Reviewer for Academic Press/Elsevier 2011-present
- Journal Reviewer for *Molecular Carcinogenesis* 2006-2011
- Journal Reviewer for *Toxicology Letters* 2010-2011

#### **Leadership and Community Involvement**

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- Volunteer, Feed My Sheep of Temple (2011-present)
- Volunteer, Family Promise of Temple (2016-present)
- Treasurer, Temple High School Band Booster, Temple, Texas. (August 2018 - Present)
- Committee Member, Temple ISD, Parent Teacher Organization Fundraising Committee (2013-2015)
- Colorado County or Baylor University American Cancer Society Relay for Life Team Member (2009-2011)
- Waco Area American Cancer Society Relay for Life Speaker (2006)