

## Curriculum Vitae of Randolph C. Elble, Ph.D.

Department of Pharmacology  
Simmons Cancer Institute  
School of Medicine  
**Southern Illinois University**  
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### EDUCATION

*Histopathology of Neoplasia*, **American Association for Cancer Research**. (1995)  
Course and workshop, Keystone, Colorado.  
*Molecular Genetics of Fission Yeast*, **Cold Spring Harbor Laboratory**. (1989)  
Intensive course.  
*Post-doctoral training*, **Cornell University**, Molecular biology. (1986–1990)  
Mentor: Professor Bik-Kwoon Tye.  
*Ph.D.*, **Indiana University**, Genetics. (1986)  
Thesis: *Synthesis and Interaction of RNA Molecules Involved in Regulation of ColE1 Replication*  
Advisor: Professor Barry Polisky.  
*B.A.*, **DePauw University**, Zoology. (1977)

### PROFESSIONAL EXPERIENCE

<i>Associate Professor</i> , <b>Southern Illinois University School of Medicine</b>	August 2011-present
<i>Assistant Professor</i> , <b>Southern Illinois University School of Medicine</b>	August 2005-present
<i>Senior Research Associate (and Research Associate III)</i> , <b>Cornell University</b> . Cancer Biology Program Department of Molecular Medicine and Department of Pathology Laboratory of Professor Bendicht Pauli	1992–2005
<ul style="list-style-type: none"><li>• Co-discovered CLCA gene family and its role in stress and tumorigenesis.</li><li>• Served as primary mentor for graduate student, Janel Beckley.<ul style="list-style-type: none"><li>• Thesis: <i>A Detachment-inducible chloride channel suppresses growth of metastatic breast cancer cells.</i></li></ul></li><li>• Trained and supervised technicians and graduate students.</li><li>• Co-founded departmental journal club.</li></ul>	
<i>Research Associate II</i> , <b>Cornell University</b> . Biotechnology Institute and Department of Biochemistry Laboratory of Professor Bik-Kwoon Tye	1991–1992
<ul style="list-style-type: none"><li>• Developed a simple and efficient technique for the transformation of yeast.</li><li>• Studied transcriptional regulation of and by MCM1.</li></ul>	
<i>Post-doctoral Research Associate</i> , <b>Cornell University</b> . Biotechnology Institute and Department of Biochemistry	1986–1990

Laboratory of Professor Bik-Kwoon Tye

- Found relation between MCM1 and Serum Response Factor.

*Graduate student researcher, Indiana University.*

1979–1985

Department of Genetics

Laboratory of Professor Barry Polisky

- Developed techniques for studying small RNAs in vivo.
- Discovered regulatory RNA processing event.
- Investigated the basis of high copy number mutants.

*Teaching Assistant, Indiana University.*

1980–1981, 1984

Department of Biology

- Taught Cell Physiology and Introductory Biology laboratories.
- Led student discussion groups.

## **GRANTS, last ten years**

State of Illinois Excellence in Academic Medicine Grant 560794, “CLCA2 partners with EVA1 to oppose breast cancer.” Role: PI. 07/01/14-06/30/15 Major goal: Investigating the mechanisms whereby CLCA2 and EVA1 maintain epithelial homeostasis.

*IR15CA151094-01.* Role: PI. 7-1-10 to 6-30-13. “A novel biotherapeutic for triple-negative breast cancer”, total direct cost \$300,000.

Major goals: Determine whether soluble CLCA2 can suppress triple-negative breast cancer and describe mechanism.

*Department of Defense Peer Reviewed Cancer Research Program, “A novel therapy for metastatic melanoma”* 9-1-10 to 6-30-11, extended to 6-30-13

Role: PI. Cost, \$75,000

1.2 calendar

Major goal: to determine whether AAV-delivery of CLCA2 can inhibit growth of melanoma cells in vitro and in vivo.

*Department of Defense Breast Cancer Research Program, “Prospecting the venom of a tropical predatory ant for anti-cancer drugs.”* 9-1-10 to 6-30-11, extended to 6-30-12

Role: PI. \$75,000

2.4 calendar

Major goal: test ant venom for anti-cancer activity

*Department of Defense Breast Cancer Research Program, “Biotherapy of triple-negative breast cancer with a secreted tumor suppressor.”* 9-1-10 to 6-30-11, extended to 6-30-12

Role: PI. \$75,000

1.2 calendar

Major goal: to determine whether soluble CLCA4 has similar tumor suppressor properties to CLCA2.

*Excellence in Academic Medicine Near-miss Award.* Role: PI. 1-1-10 to 12-31-10. “Tumor suppression by a p53-inducible chloride regulator” \$25,000

*Excellence in Academic Medicine Award.* Role: PI. 1-1-10 to 6-30-10. “A novel biotherapeutic for triple-negative breast cancer”, \$50,000

*Central Research Committee Award.* Role: PI. 2009-2010. “Does the loss of hCLCA2 promote breast cancer?” Cost, \$11,000

**Pending:**

*National Institutes of Health*, “A novel mitogenic axis in HNSCC.” \$300,000 direct costs. Role: PI.

*Department of Defense* PRCRP, “A targeted immunotherapy for squamous cancers of the head and neck.” Direct cost, \$350,000. Role: PI.

**HONORS AND AWARDS**

Invited to editorial board of *Biomedicines*

Session chair, SCCI Research Symposium, 2007, 2009, 2015.

Selected for interview featuring basic cancer research on PBS series *Hometown Housecall*, 2008.

Designated *Medical Miracle Maker* by Southern Illinois University and Sangamon County Medical Society (2006)

*First prize*, Cornell University Department of Molecular Medicine and Field of Pharmacology Poster Competition. (2003)

“Detachment-inducible Cl-channel hCLCA2 inhibits proliferation of breast cancer cells.”

*Fellowship*, *National Institutes of Health*, Genetics Training Grant 1978–1981

*DePauw Alumni Scholarship*, **DePauw University**, full tuition (1973–1977)

**GRANT REVIEWS**

DoD Breast Cancer Research Program  
Philip Morris External Research Program  
Excellence in Academic Medicine, State of Illinois  
Penny Severns/Ticket for the Cure  
American Cancer Society, Illinois  
Asthma UK  
Central Research Committee, SIU Med.

**REFEREE SERVICE**

Oncogene  
Cell and Tissue Research  
BMC Genomics  
Biotechniques  
DNA and Cell Biology  
Journal of Cellular Physiology  
Cancer Research  
Frontiers in Biological Sciences  
PLOS One  
Molecular Cancer Therapeutics  
Stem Cells and Development  
Journal of Histochemistry and Cytochemistry  
Journal of Clinical Investigation  
Cellular & Molecular Biology Letters  
International Journal of Cancer  
Inflammation

Cellular Physiology and Biochemistry  
International Journal of Molecular Sciences  
Science Translational Medicine

### **UNIVERSITY AND DEPARTMENT/INSTITUTE COMMITTEE SERVICE**

Information Management Policy Committee, 2005-2006  
Central Research Committee, 2006-2008  
Library Advisory Committee, 2009-present (chair)  
Space Allocation Committee, 2007  
Faculty Recruitment Committee, 2005-2008  
Tissue Banking Committee, 2007-present  
Equipment Committee, 2006-2008  
Year Four Elective Coordinator, 2011-present  
Research Policy Committee, 2011-present  
Director of Year Two Endocrine, Reproductive and Gastrointestinal Unit, 2014-2018  
Library Director Search Committee, 2015-present  
Retreat to Lebanon Organizing Committee, 2015-present  
Simmons Cancer Institute Basic Science Symposium Organizing Committee, 2013 (chair), 2015 (member)  
Grant Review Committee, 2018

### **TEACHING RESPONSIBILITIES**

#### **Medical Lectures**

Antineoplastic Agents  
Anticancer Drugs, Brain  
Anticancer Drugs, Colon  
Anticancer Drugs, Lung  
Immunopharmacology of Multiple Sclerosis  
Immunopharmacology of Rheumatoid Arthritis  
Immunopharmacology of Myasthenia Gravis  
Pharmacology of Anti-estrogen and Anti-Her2 therapies

Problem-Based Learning Tutor: Endocrine, Reproductive and Gastrointestinal Pathology, 10 weeks  
Year 2 Remediation, NMB and HII, June 2011

#### **Graduate Lectures**

Anticancer Pharmacology  
Cancer biology and p53  
Immunopharmacology  
Gene Therapy  
Cell Signaling  
Topics in Cancer Biology

### **THESIS COMMITTEE SERVICE**

2005-2009 Fangting Wu, MMICB  
2006-2010 Yong Tang, MMICB  
2007-2010 Man-tzu Wang, MMICB  
2006-2010 Deshou Cao, Pharmacology

2006-2009 Hailong Wu, MMICB  
 2007-2010 Wen Liu, MMICB  
 2009-present Sandeep Rajput, MMICB  
 2008-2012 Jun Ma, MMICB  
 2008-2009 Katie DeClerck, MMICB  
 2007-2011 Mohit Sachdeva, MMICB  
 2010-2012 Puspa Pandey  
 2010-2012 Fei Xing  
 2009-2014 Hongmei Jiang  
 2011-2013 Nanjiang Zhou  
 2010-2013 Navneet Singh  
 2010-2015 Chenfei Huang  
 2009-2013 Mroovil Abooj  
 2009-2013 Sumedha Karmarkar  
 2009-2013 Sandeep Sheth  
 2009-2014 Yiwen Shen  
 2009-2014 Sandeep Rajput (Ran)  
 2013-present Rana al-Fardan  
 2012-present Yu Cao (Cao)  
 2013-present Hinissan Pascaline Kohio (Ran)  
 2013-present Cassie Jaeger (Tischkau)  
 2013-present Caitlin Griggs (Ran)  
 2015-present Sumana Ghosh (Ramkumar)  
 2014-present Justin Darcy (Bartke)  
 2015-present Entkhab Alanisi (Nie)  
 2014-present Abeer Almiman (Nie)  
 2015-present Ramina Khoshaba (Cao)

## MENTEES

### At SIU-SOM

#### **Postdoctoral fellows:**

2006-2008 Ming Ding, presently research faculty at University of Illinois-Chicago

#### **Graduate students:**

2005-2010 Vijay Walia, doctoral graduate student (Major advisor) (defended Ph.D. March 2010) Thesis: "hCLCA2 is a p53-regulated gene required for mesenchymal to epithelial transition in breast." Presently a Research Fellow at NIH

2007-2009 Sumit Kumar, master's graduate student (Major advisor) (defended Master's April 2009) Thesis: "Regulation of hCLCA2 by PI3-kinase/AKT signaling and its role in anoikis." Presently employed in pharmaceutical industry.

- 2009-2014 Yang Yu, doctoral graduate student (Major advisor) Presently Instructor at University of Tianjin, China.
- 2010-2015 Grace Ramena, doctoral graduate student (Major advisor) Presently an assistant professor at U. Arkansas-Pine Bluff
- 2010-present Aarushi Sharma, doctoral graduate student (Major advisor)
- 2015-present Yufang Yu, doctoral graduate student (Major advisor)

**Student interns:**

- 2008 Dustin Rickman
- 2009 Dylan Downs
- 2010 Ravi Reddy
- 2011 Edith Graham
- 2012 Mitchell Elting
- 2013 Jackson Graves

**Technicians trained and supervised:**

- 2005-2007 Xiaoyi Lin
- 2007-2008 Shubam Gautam
- 2008-present Michelle Lowy

At Cornell

**Graduate student:**

- 2000-2003 Janel Beckley, Master's student (co-Advisor). Thesis: "The mouse ortholog of calcium-activated chloride channel hCLCA2—detachment-inducible mClca5." Presently a Research Assistant Professor at Vanderbilt.

**Postdoctoral fellow:**

- 2000-2001 Haitao Sun (lab supervisor). Presently a patent lawyer.

**Rotation students supervised:**

- 1987 Margaret Merchant
- 1988 Yanru Chen
- 1989 Julio Mulero
- 2003 Ann Park

**Student interns supervised:**

- 1993,1994 Eileen Adamo
- 1998 Esther Wissink
- 2002 John DiBiasio

## Technicians trained and supervised:

1997-2000	Lin Yu
2000-2003	Heather Archibald
2003-2005	Richard Isom

## PATENTS

Pauli, B. U., Elble, R. C., and Gruber, A. D. 2002. Nucleotide sequences encoding mammalian calcium-activated chloride channel-adhesion molecules. U.S. patent #6309857 and 6692939.

Pauli, B. U., Elble, R. C., and Gruber, A. D. 2008. Calcium-activated chloride channel proteins and their use in antimetastatic therapy. U.S. patent #7338937.

## PEER-REVIEWED PUBLICATIONS

### *Articles: CLCA, connexins, and cancer mechanisms*

Aarushi Sharma, Grace Ramena, Yufang Yin, Louis Premkumar, and **Randolph C. Elble**. CLCA2 is a positive regulator of store-operated calcium entry and TMEM16A. 2018. PLOS One, in press.

Porretti J, Dalton GN, Massillo C, Scalise GD, Farré PL, **Elble R**, Gerez EN, Accialini P, Cabanillas AM, Gardner K, De Luca P, De Siervi A. CLCA2 epigenetic regulation by CTBP1, HDACs, ZEB1, EP300 and miR-196b-5p impacts prostate cancer cell adhesion and EMT in metabolic syndrome disease. *Int J Cancer*. 2018. PMID: 29536528

Yu, Y., Lowy, M. and **Elble, R.C.** Tet-On lentiviral transductants lose inducibility when silenced for extended intervals in mammary epithelial cells. 2016. *Metabolic Engineering Communications* **3**, pp. 64-67. DOI information: 10.1016/j.meteno.2016.03.001

Yu, Y., and **Elble, R.C.** Homeostatic Signaling by Cell–Cell Junctions and Its Dysregulation during Cancer Progression. 2016. *Journal of Clinical Medicine*, Feb 18;5(2). pii: E26. doi: 10.3390/jcm5020026. *Invited review*.

Ramena, G., Yin, Y., Yu, Y., Walia, V., and **Elble, R. C.** 2016. CLCA2 interactor EVA1 is required for differentiation of mammary epithelial cells. *PLOS ONE*, Mar 1;11(3):e0147489. doi: 10.1371/journal.pone.0147489.

Walia V, Prickett TD, Kim JS, Gartner JJ, Lin JC, Zhou M, Rosenberg SA, **Elble R.C.**, Solomon DA, Waldman T, Samuels Y. 2014. Mutational and functional analysis of the tumor-suppressor PTPRD in human melanoma. *Hum Mutat*.35(11):1301-1310.

Yu, Y, Walia, V., and **Elble, R.C.** 2013. Loss of CLCA4 promotes epithelial-to-mesenchymal transition in breast cancer cells. *PLOS ONE* 8(12):e83943.

Yu, Y., Ramena, G., and **Elble, R.C.** 2012. The role of cancer stem cells in relapse of solid tumors. *Frontiers in Biosciences* 4, 1528-1541.

Walia, V., Yang, Y., Cao, D., Cheng, J., Rao, K., Hollier, B., Mani, S., Sun, M., Premkumar, L. and **Elble, R. C.** 2012. Loss of breast epithelial marker hCLCA2 promotes epithelial to mesenchymal transition and metastasis. *Oncogene* 31, 2237-2246.

Walia, V., Kakar, S., and **Elble, R.C.** 2011. Micromanagement of mitochondrial apoptosis by p53. *Frontiers in Biosciences* 16:749-758.

Walia, V., and **Elble, R. C.** 2010. Enrichment for breast cancer cells with stem/progenitor properties by differential adhesion. *Stem Cells and Development* 19(8): 1175-1182.

DeClerck, K., and **Elble, R. C.** 2010. The role of hypoxia and acidosis in promoting metastasis and resistance to chemotherapy. *Frontiers in Biosciences* 15, 213-225.

Walia, V., Ding, M., Kumar, S., Nie, D., Premkumar, L., and **Elble, R. C.** 2009. hCLCA2 is a p53-inducible inhibitor of breast cancer cell proliferation. *Cancer Research* 69, 6624-6632.

Wu, F., Sachdeva, M., Walia, V., **Elble, R. C.**, Watabe, K., and Mo, Y. 2009. p53 represses c-Myc through induction of the tumor suppressor miR-145. *Proc Natl Acad Sci U S A* 106, 3207-3212.

Green, K.S., Huan, C., Shui, B., Spizz, G., Sun, H., Doran, R., Fisher, P. Roberson, M. S., **Elble, R. C.**, and Kotlikoff, M. I. 2008. mCLCA4 Processing and Secretion Require Luminal Sorting Motifs. *American Journal of Physiology-Cell Physiology* 295, C279-C287.

Kumar, S., Walia, V., Ray, M., and **Elble, R. C.** 2007. p53 in breast cancer: mutation and countermeasures. *Frontiers in Bioscience* 12, 4168-4178. *Invited review.*

**Elble, R. C.**, Walia, V., Cheng, H., Connon, C., Mundhenk, L., Gruber, A., and Pauli, B. U. 2006. The putative chloride channel hCLCA2 has a single carboxy terminal transmembrane segment. *Journal of Biological Chemistry* **281**, 29448-29454. (*Corresponding author*)

Mundhenk, L., Alfalah, M., **Elble, R. C.**, Pauli, B. U., Naim, H. Y., Gruber, A. D. 2006. Both cleavage products of the mCLCA3 protein are secreted soluble proteins. *Journal of Biological Chemistry* **281**, 30072-30080.

\*Talhouk, R. S., \***Elble, R. C.**, Bassam R., Daher M., Sfeir A, Hilda El-Khoury, Samar Hamoui and M. E. El-Sabban. 2005. A comprehensive profile of connexins in the murine mammary gland reveals a predominant role for Cx30 in lactogenesis. *Cell and Tissue Research* **319**, 49-59.

\*equal contribution

Beckley, J. R., Pauli, B. U., and **Elble, R. C.** 2004. Detachment-inducible Cl<sup>-</sup> channel mCLCA5 inhibits proliferation of breast cancer cells. *Journal of Biological Chemistry* **279**, 41634-41641. (*Corresponding author*)

Abdel-Ghany, M., Cheng, H-C, Elble, R.C., Lin, H, DiBiasio, J, and Pauli, B.U. 2003. The interacting binding domains of the beta 4 integrin and CLCA in Metastasis. *Journal of Biological Chemistry* **278**, 49406-49416.



Elble, R. C., Ji, G., Nehrke, K., DiBiasio, J., Kingsley, P. D., Kotlikoff, M. I., and Pauli, B. U. 2002. Molecular and functional characterization of a murine calcium-activated chloride channel expressed in smooth muscle. *Journal of Biological Chemistry* **277**, 18586-18591. (Corresponding author)

Abdel-Ghany, M., Cheng, H-C., Elble, R. C., and Pauli, B. U. 2002. Focal adhesion kinase activated by beta 4 integrin ligation to mCLCA1 mediates early metastatic growth. *Journal of Biological Chemistry* **277**, 34391-34400.

Elble, R. C., and Pauli, B. U. 2001. Tumor suppression by a pro-apoptotic calcium-activated chloride channel in mammary epithelium. *Journal of Biological Chemistry* **276**, 40510-40517. (Corresponding author)

Abdel-Ghany, M., Cheng, H. C., Elble, R. C., and Pauli, B. U. 2001. Breast cancer metastasis of the lungs is mediated by beta 4 integrin adhesion to endothelial hCLCA2. *Journal of Biological Chemistry* **276**, 25438-25446.

Gruber, A. D., Fuller, C. M., Elble, R. C., Benos, D., and Pauli, B. U. 2000. The CLCA gene family: A novel family of chloride channels. *Current Genomics* **1**, 201-222.

Pauli, B.U., Abdel-Ghany, M., Cheng, H.C., Gruber, A.D., and Elble, R.C. 2000. Molecular characteristics and functional diversity of CLCA family members. *Clinical and Experimental Pharmacology and Physiology* **27**, 901-905.

Fuller, C.M., H-L. Ji, A. Tousson, Elble, R. C., B.U. Pauli, and D.J. Benos. 2001. Ca<sup>2+</sup>-activated Cl<sup>-</sup> channels: a newly emerging anion transport family. *Pfluegers Archiv-European Journal of Physiology*, in press.

Cheng, H.C., Abdel-Ghany, M., Elble, R.C., and Pauli, B.U. 1998. Lung endothelial DPP IV promotes adhesion and metastasis of rat breast cancer cells via tumor cell surface-associated fibronectin. *Journal of Biological Chemistry* **273**, 24207-24215.

Gruber, A.D., R.C. Elble, H. L. Ji, C. Fuller and B. U. Pauli. 1998. Genomic cloning, molecular and functional characterization of human intestinal chloride channel CLCA1. *Genomics* **54** (2), 200-214.

Gandhi, R., R. Elble, H. L. Ji, C. Fuller and B. U. Pauli. 1998. Molecular and functional characterization of a calcium-sensitive chloride channel from mouse lung. *Journal of Biological Chemistry* **273**, 24207-24215.

Elble, R. C., J. Widom, A. D. Gruber, M. Abdel-Ghany, R. Levine, A. Goodwin, H. C. Cheng, and B. U. Pauli. 1997. Cloning and characterization of Lung-Endothelial Cell Adhesion Molecule-1 suggest it is an endothelial chloride channel. *Journal of Biological Chemistry* **272**, 27853-27861.

### **Articles: Yeast and Cole1**

Elble, R. and B.-K. Tye. 1992. Chromosome loss, hyperrecombination and cell cycle arrest in a yeast *mcm1* mutant. *Molecular Biology of the Cell* **3**, 971-980.

Elble, R. C. 1992. A simple and efficient procedure for transformation of yeasts. *BioTechniques* **13**, 18-20.

Elble, R. C., and B.-K. Tye. 1991. MCM1 is required for activation and repression of  $\alpha$ -mating-type-specific genes in yeast. *Proceedings of the National Academy of Sciences* **88**, 10966-10970.

Passmore, S., Elble, R. C., and B.-K. Tye. 1989. A protein involved in minichromosome maintenance in yeast binds a transcriptional enhancer conserved in eukaryotes. *Genes and Development* **3**, 921-935.

Passmore, S., Maine, G. T., Elble, R., Christ, C. and B.-K. Tye. 1988. *Saccharomyces cerevisiae* protein involved in plasmid maintenance is necessary for mating of MAT $\alpha$  cells. *Journal of Molecular Biology* **204**, 593-606.

Fitzwater, T., Zhang, X.-Y., Elble, R. and B. Polisky. 1988. Conditional high copy number Cole1 mutants: resistance to RNA1 inhibition in vivo and in vitro. *EMBO Journal*. **7**, 3289-3297.

### **GenBank submissions**

X14187, Yeast MCM1 gene, protein involved in replication of ARS and expression of mating-type alpha specific genes

AF001261, Bos taurus clone 1 endothelial adhesion molecule Lu-ECAM-1

AF001261, Bos taurus clone 2 endothelial adhesion molecule Lu-ECAM-1

AF001263, Bos taurus clone 3 endothelial adhesion molecule Lu-ECAM-1

AF001264, Bos taurus clone 4 endothelial adhesion molecule Lu-ECAM-1

NM\_009899, Mus musculus chloride channel calcium activated 1 (Clca1)

NM\_030601, Mus musculus chloride channel calcium activated 2 (Clca2)

AY008277, Mus musculus calcium-activated chloride channel 4 (Clca4)

AY161007, Mus musculus calcium-activated chloride channel 5 (Clca5)

AF039400, Homo sapiens calcium-dependent chloride channel 1 (hCLCA1)

### **Book Chapters**

Gruber, A. D., Elble, R. C., and Pauli, B. U. 2002. Discovery and cloning of the CLCA gene family. In *Calcium-activated chloride channels*, volume 53 of Current Topics in Membranes. Ed. C. M. Fuller. Academic Press, London.

Elble, R. C., and Pauli, B.U. 1996. Lu-ECAM-1 and DPP IV in lung metastasis. In *Attempts to understand metastasis formation I*, Vol. 213/I of Current Topics in Microbiology and Immunology. Eds: U. Guenther and W. Birchmeier. Springer-Verlag, Berlin-Heidelberg.

Elble, R., Schneider, J., Tamm, J., Muesing, M., and B. Polisky. 1983. Analysis of recessive high copy number mutants of Cole1. In *Mechanisms of DNA replication and recombination*. UCLA Symposium on Molecular and Cellular Biology 1983.

### **Abstracts, last 10 years**

Yin, Y., Sharma, A., and Elble, R.C. **CLCA2 promotes EGFR signaling and survival of detached HNSCC**. American Association for Cancer Research Annual Meeting, 2018, Chicago, Illinois.

Yufang Yin, Aarushi Sharma, and Randolph Elble. **The Role of CLCA2 in Cell Proliferation of HNSCC-----Potential Biomarker for Prediction of Sensitivity to EGFR Inhibitors**. SIU Trainee Symposium, April 2018.

Yufang Yin and Randolph Elble. Role of CLCA2 in proliferation of certain growth factor receptor dependent cancers. American Association for Cancer Research Annual Meeting, 2017, Washington, D.C.

Aarushi Sharma, Grace Ramena, Melissa McGovern, Louis Premkumar, and Randolph Elble, CLCA2 regulates calcium-activated chloride channel Ano1 by modulating release of intracellular calcium. FASEB Meeting-American Physiological Society, San Diego, CA 4/2016 (won travel awards from Simmons Cancer Institute and American Physiological Society)

Ramena, G., Yufang Yin, Yang Yu, Vijay Walia, and R. C. Elble, CLCA2 interactor EVA1 is required for epithelial differentiation. Poster, AACR Annual Meeting, New Orleans, La., April 19, 2016.

Sharma, A., and Elble, R.C., CLCA2 Regulates Ano1 CaCC by Modulating Release of Intracellular Calcium. SIU Cancer Symposium, poster, 11/2015. (won second prize)

Sharma, A., and Elble, R.C., CLCA2 regulates calcium-activated chloride channels by modulating intracellular calcium levels in mammary epithelial cells, SIU Trainee Symposium, 4/2015

Walia, V. et al., Mutational and functional analysis of the tumor-suppressor PTPRD in human melanoma. American Association for Cancer Research Annual Meeting. 4/2015

Grace Ramena and Randolph Elble, CLCA2-interactor EVA1 maintains epithelial differentiation of human mammary epithelial cells. SIU Trainee Symposium, 2015.

Grace Ramena and Randolph Elble, Human CLCA2 is a p53-dependent self-cleaving zinc metalloprotease. UIS basic science symposium, 2015.

Walia V, Prickett TD, Kim JS, Gartner JJ, Lin JC, Zhou M, Rosenberg SA, Elble RC, Solomon DA, Waldman T, Samuels Y. 2014. Mutational and functional analysis of the tumor-suppressor PTPRD in human melanoma. AACR Annual Meeting, 2014.

Grace Ramena, Vijay Walia, and Randolph Elble. CLCA2 interactor EVA1 maintains epithelial differentiation of HMEC. AACR Annual Meeting, 2012.

Yang Yu and Randolph Elble. Biotherapy of triple-negative breast cancer with a secreted tumor suppressor. Breast Cancer ERA of Hope Meeting, 8-2-11, Orlando Florida.

Yang Yu, Steve Johnson, and Randolph Elble. Prospecting the venom of a predatory neotropical ant for anti-cancer drugs. Breast Cancer ERA of Hope Meeting, 8-2-11, Orlando Florida.

Yang Yu, Vijay Walia, and Randolph Elble. Loss of CLCA4 promotes EMT in breast cancer. AACR Annual Meeting, March 30-April 4, 2012

Aarushi Sharma and Randolph Elble. Treating melanoma with target-specific gene therapy, UIS Science Symposium, April 12-13, 2012.

Grace Ramena, Vijay Walia, and Randolph Elble. CLCA2 is a self-cleaving metalloprotease that suppresses the growth of breast cancer cells. UIS Science Symposium, April 12-13, 2012.

Yang Yu, Vijay Walia, and Randolph Elble. Loss of CLCA4 promotes EMT in breast cancer, SIU SoM Trainee Symposium, April 20, 2012.

Yang Yu, Grace Ramena, Vijay Walia, and Randolph Elble. CLCA2 promotes senescence and inhibits proliferation of breast cancer cells. SIU SoM Trainee Symposium, April 20, 2012.

Grace Ramena, Vijay Walia, and Randolph Elble. CLCA2 is a self-cleaving metalloprotease that suppresses growth of human breast cancer cells. SIU SoM Trainee Symposium, April 20, 2012.

Aarushi Sharma and Randolph Elble. Treating melanoma with gene therapy. SIU SoM Trainee Symposium, April 20, 2012.

Vijay Walia<sup>1</sup>, Steven A. Rosenberg<sup>2</sup>, Randolph C. Elble<sup>3</sup>, Todd Waldman<sup>4</sup>, Yardena Samuels<sup>1</sup>, Mutational and functional analysis of the tyrosine phosphatase gene family in melanoma. AACR Annual Meeting, 2011.

Walia, V., and Elble, R.C. p53 target gene hCLCA2 is required for epithelial differentiation. AACR Annual meeting, 2010.

Walia, V., Lowy, M., and Elble, R.C. Knockdown of hCLCA2 induces EMT in breast cancer cells. SIU School of Medicine Trainee Symposium, May 2010.

Walia, V., and Elble, R.C. p53 target gene hCLCA2 is required for epithelial differentiation. UIS Science Symposium, Springfield, Illinois, April 2010.

Walia, V., Lowy, M., and Elble, R.C. Role of p53 target gene hCLCA2 in epithelial differentiation and EMT. SimmonsCooper Cancer Institute Basic Research Symposium, November 2009.

Walia, V., and **Elble, R. C.** 2009. p53 target gene hCLCA2 is required for epithelial differentiation. SIU Trainee Symposium, Springfield, Illinois, May 2009. *Awarded third prize.*

Walia, V., and **Elble, R. C.** 2009. p53 target gene hCLCA2 in breast differentiation and tumor suppression. UIS Science Symposium, Springfield, Illinois, 2009. *Awarded first prize.*

Walia, V., Kumar, S., and **Elble, R. C.** 2009. p53 target gene hCLCA2 inhibits breast cancer cell proliferation. Proceedings of the American Association for Cancer Research, 2009.

Wu, F., Sachdeva, M., Walia, V., **Elble, R. C.**, Watabe, K., and Mo, Y. 2009. p53 represses c-Myc through induction of the tumor suppressor miR-145. Proceedings of the American Association for Cancer Research, 2009.

Walia, V., Ding, M., Kumar, S., and **Elble, R.C.** p53 is a direct transcriptional regulator pro-apoptotic hCLCA2. Proceedings of the American Association for Cancer Research, 2008.

Kumar, S., Walia, V., and Elble, R. C. Regulation of hCLCA2 by the PI3K-AKT pathway and its role in anoikis. Proceedings of the American Association for Cancer Research, 2008.

Walia, V., Ding, M., Kumar, S., and Elble, R. C. p53 is a direct transcriptional regulator pro-apoptotic hCLCA2. Trainee Research Symposium, April 23, 2008.

Kumar, S., Walia, V., and Elble, R. C. Regulation of hCLCA2 by the PI3K-AKT pathway and its role in anoikis. Trainee Research Symposium, April 23, 2008.

Walia, V., S. Kumar, M. Ding, X. Lin and Elble, R. C. Breast tumor suppressor hCLCA2 is induced by p53 and multiple forms of stress. SIU Annual Trainee Symposium, April 25, 2007. (Poster and Talk)

Walia, V., S. Kumar, M. Ding, X. Lin and Elble, R. C. Breast tumor suppressor hCLCA2 is induced by p53 and multiple forms of stress. SIU Annual Trainee Symposium, April 25, 2007. (Poster and Talk)

Walia, V., S. Kumar and Elble, R. C. Breast cancer tumor suppressor hCLCA2 is induced by p53 and multiple forms of stress. Proceedings of American Association of Cancer Research Annual Meeting, Los Angeles, California, April 15, 2007. (Poster)

Walia, V., Connon, C., Pauli, B.U., and Elble, R.C. A revised topology of breast tumor suppressor hCLCA2. 16<sup>th</sup> Annual Trainee Research Symposium, April 19<sup>th</sup>, 2006, SIU School of Medicine.

Beckley, J., and Elble, R. C. Channel regulator CLCA2 is induced by cell detachment and DNA damage and inhibits survival of breast cancer cells. 16<sup>th</sup> Annual Trainee Research Symposium, April 19<sup>th</sup>, 2006, SIU School of Medicine.

Elble, R. C., Connon C., Cheng, H.C., and Pauli, B. U. 2006. Putative tumor suppressor hCLCA2 has a single C-terminal transmembrane segment and cannot be a channel. *Proceedings of the American Association for Cancer Research* **47**, #3374.

Elble, R. C., Beckley, J. R., and B. U. Pauli. 2005. Chloride channel hCLCA2 is induced by detachment and DNA damage and inhibits growth and survival of breast cancer cells. *Proceedings of the American Association for Cancer Research* **46**, p223.

Beckley, J., Pauli, B. U., and Elble, R. C. 2003. The mouse ortholog of hCLCA2 is differentially regulated in development and neoplasia. *Proceedings of the American Association for Cancer Research* **44**, 225.

Beckley, J., Pauli, B. U., and Elble, R. C. 2002. Loss of hCLCA2 expression in breast cancer is biphasic and independent of p53, Rb or Ras mutation. *Proceedings of the American Association for Cancer Research* **43**, 619.

Elble, R. C., El-Sabban, M. E., and Pauli, B. U. 2001. Divergent regulation in apoptosis, loss from tumor cells, and growth suppression by two closely related chloride channels in mammary epithelium. *Proceedings of the American Association for Cancer Research* **42**, 595.

Fuller, C. M., Ji, H.-L, Elble, R., Pauli, B.U., and Benos, D. J. 2000. Calcium-activated chloride channels: a newly emerging anion transport family. *Excerpta Med. Int.*

Fuller, C.M., H-L. Ji, A. Tousson, R. Elble, B.U. Pauli, and D.J. Benos. 2001. Ca<sup>2+</sup>-activated Cl<sup>-</sup> channels: a newly emerging anion transport family. *Pfluegers Archiv-European Journal of Physiology* **443**, 107-110.

## **SELECTED INVITED TALKS**

How CLCA2 interaction with EVA1 promotes epithelial differentiation. Seminar to SIUC, Department of Physiology, February 25, 2016.

Histiocytic sarcoma in the mClca5 knockout mouse. SIU Basic Science Retreat to Lebanon; Lebanon, IL, June 12, 2015.

The role of CLCA2 in junctional signaling and mammary epithelial homeostasis. Nov. 7, 2015. SCI Research Symposium: The biology and treatment of cancers of the reproductive system. SIU School of Medicine.

CLCA2 promotes epithelial differentiation by multiple mechanisms. Nov. 11, 2015. SIU School of Medicine, Department of Pharmacology.

A new class of breast tumor suppressor. Feb. 23, 2012. DePauw University, Greencastle, Indiana.

CLCA2, a p53-induced protein required for epithelial differentiation. SIU School of Medicine, Department of Pharmacology. November 2011.

hCLCA2: a p53-inducible factor required for breast epithelial differentiation. MMICB dept. at SIU-SOM, June 5, 2009.

Tumor suppression by p53-inducible hCLCA2. SimmonsCooper Cancer Institute Retreat. Springfield, Illinois, June 15, 2007.

CLCA: a different sort of tumor suppressor. University of Illinois-Springfield, March 27, 2007.

A new class of tumor suppressor: chloride current regulator hCLCA2. Invited lecture, Washington University School of Medicine, February 5, 2007.

A new class of tumor suppressor: chloride current regulator hCLCA2. The SimmonsCooper Cancer Institute Inaugural Research Symposium. SIU School of Medicine, September 29, 2006. Session chair.

CLCA2: A new class of tumor suppressor. SIU Cancer Institute Second Annual Retreat, April 28, 2006.

Tumor suppression by stress-inducible chloride channels. Southern Illinois University, 2004.

Tumor suppression by a stress-inducible chloride channel. University at Buffalo, 2004.

CLCAs: tumor suppression by stress-inducible chloride channels. University of Memphis, 2004.

CLCAs: stress-inducible Cl<sup>-</sup> channels that inhibit survival of mammary tumor cells, University of Vermont, Burlington, 2003.

CLCAs: Chloride Channels with Multiple Relevance to Human Pathology. ICOS Corporation, Seattle, WA, 2003.

CLCA: Calcium-activated chloride channels and tumor suppressors. Morehouse Medical College, Atlanta, Georgia, 2001.

Loss of apoptosis-associated chloride channels from mammary tumor cells. Ontario and Western New York Ion Channel Interest Group Annual Meeting, 2000.

A constitutive lung endothelial cell adhesion molecule mediates adhesion and lung metastasis of melanoma cells. Eighth Meeting of the International Society of Differentiation, Hiroshima, Japan, 1994.

## **PROFESSIONAL SOCIETIES**

American Association for Cancer Research  
American Association for the Advancement of Science  
American Society for Pharmacology and Experimental Therapeutics  
American Society for Biochemistry and Molecular Biology  
Genetics Society of America  
American Society for Cell Biology