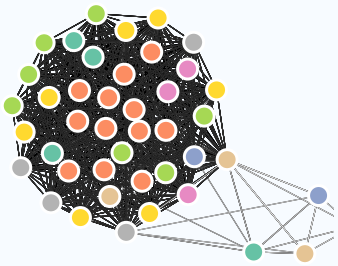
KYLE T HELZER, PH.D.

Experienced scientist interested in the analysis of large data sets to solve biological problems. My doctoral research involved investigating the genome-wide binding profile of phosphorylated estrogen receptor-a in a human breast cancer cell line. Strong background and understanding of both wet lab (molecular biology, CRISPR, cell culture, PCR) and dry lab (Linux, Python, R) skill sets.



RESEARCH EXPERIENCE

current | 2019

Postdoctoral Researcher

Proteovista LLC — Madison, WI

- Lead and performed research and development on novel array-based technology
- Developed algorithms for DNA and protein array generation

2019 | 2013

Graduate Student

Alarid Laboratory — University of Wisconsin - Madison

- Analyzed the genome-wide binding profile of the phosphorylated estrogen receptor-alpha in the MCF-7 breast cancer cell line via ChIP-seq
- Built custom python algorithm for analysis of bedgraph files
- Utilized R and ggplot2 for data analysis and figure design

2013 | 2010

Research Assistant

Olsen Laboratory — University of Michigan

- Worked in the laboratory of Dr. Laura Olsen on peroxisomal protein import and processing in Arabidopsis thaliana. As an undergraduate, I planned and performed my own experiments and projects as well as analyzed the data.
- Trained and mentored new undergraduate researchers.

EDUCATION

2019 | 2013

Ph.D., Cancer Biology

University of Wisconsin - Madison — Madison, WI

- Thesis: Effects of Phosphorylation on the DNA Binding Properties of Estrogen Receptor-alpha
- Advisor: Elaine T. Alarid, Ph.D.

2012 | 2008

B.S. (with honors), Cellular and Molecular Biology

University of Michigan — Ann Arbor, MI

- Honors Thesis: Processing of Citrate Synthase by the Peroxisomal Protease DEG15 in Arabidopsis thaliana
- Advisor: Laura J. Olsen, Ph.D.
- Minor in music

CONTACT

helzerk@gmail.com
@kylehelzer
github.com/KyleHelzer
linkedin.com/in/kylehelzer

LANGUAGE SKILLS

- Python
- R
- Bash
- Visual Basic

*Made with the R package **pagedown**.*

The source code is available on github.com/nstrayer/cv.

Last updated on 2020-07-08.

PUBLICATIONS

2019

The phosphorylated estrogen receptor a cistrome identifies a subset of active enhancers enriched for direct ER-DNA binding and the transcription factor GRHL2[1]

Molecular and Cellular Biology

- Helzer KT, Szatkowski Ozers M, Meyer MB, Benkusky NA, Solodin N, Reese RM, Warren CL, Pike JW, and Alarid, ET (2019). The Phosphorylated Estrogen Receptor a (ER) Cistrome Identifies a Subset of Active Enhancers Enriched for Direct ER-DNA Binding and the Transcription Factor GRHL2. Mol. Cell. Biol. 39.

2018

17ß-Estradiol and ICI182,780 Differentially Regulate STAT5 Isoforms in Female Mammary Epithelium, With Distinct Outcomes[2]

Journal of the Endocrine Society

- Jallow F, Brockman JL, Helzer KT, Rugowski DE, Goffin V, Alarid ET, and Schuler LA (2018). 17ß-Estradiol and ICI182,780 Differentially Regulate STAT5 Isoforms in Female Mammary Epithelium, With Distinct Outcomes. J Endocr Soc 2, 293–309.

2015

Ubiquitylation of nuclear receptors: new linkages and therapeutic implications[3]

Journal of Molecular Endocrinology

- Helzer KT, Hooper C, Miyamoto S, and Alarid ET (2015). Ubiquitylation of nuclear receptors: new linkages and therapeutic implications. J. Mol. Endocrinol. 54, R151-167.

TEACHING EXPERIENCE

2015

Oncology 675 - Readings in Cancer Biology

University of Wisconsin - Madison — Madison, WI

- Served as a TA for graduate level course on how to critically evaluate scientific literature
- Course Instructor: Dr. Bill Sugden

HONORS AND AWARDS

2017 | 2015

Cancer Biology Training Grant

NIH T32 award for training in cancer biology — UW-Madison

2012 | 2008

University Honors

For earning above a 3.5 GPA — University of Michigan

2011 | 2010

James B. Angell Scholar

For earning all As in a semester — University of Michigan

2008

Regents Scholarship

For outstanding academic achievement — University of Michigan

I am passionate about education. I believe that no topic is too complex if the teacher is empathetic and willing to think about new methods of approaching task.

PRESENTATIONS

2019 **Genome-Wide Binding Profile of Phosphorylated Estrogen Receptor Reveals Association with Direct DNA Binding**
ENDO 2019 — New Orleans, LA

2018 **Investigating the Effects of Phosphorylation on the DNA Binding Properties of ERa**
McArdle Student Seminar Series — UW-Madison

2018 **Investigating the Effects of Phosphorylation on the DNA Binding Properties of ERa**
McArdle Student Seminar Series — UW-Madison

2017 **Investigating the Effects of Phosphorylation on the DNA Binding Properties of ERa**
McArdle Student Seminar Series — UW-Madison

2017 **Investigating the Effects of Phosphorylation on the DNA Binding Properties of ERa**
O'Brien Symposium — Madison, WI

2016 **Investigating the Role of Phosphorylation on the DNA Binding Properties of ERa**
McArdle Student Seminar Series — UW-Madison

2015 **Insights into Estrogen Receptor-alpha Phosphorylation**
McArdle Student Seminar Series — UW-Madison

POSTERS

2017 **Defining the Phosphorylated ERa Cistrome**
Gordon Research Conference on Hormone Dependent Cancers — Newry, ME

2016 **Analysis of the Phosphorylated ERa Cistrome with Multiple pS118-ER Specific Antibodies**
7th Great Lakes Nuclear Receptor Conference — Cleveland, OH

2014 **The Elephant in the Room**
McArdle 75th Anniversary Open House — UW-Madison

2012 **Processing of the Peroxisomal Protease DEG15 in Arabidopsis thaliana**
MCDB Honors Research Symposium — University of Michigan

CONFERENCES ATTENDED

2019 **ENDO 2019**
Morial Convention Center — New Orleans, LA

2018 **8th Great Lakes Nuclear Receptor Conference**
University of Minnesota — Minneapolis, MN

2017 **Gordon Research Conference on Hormone Dependent Cancers**
Sunday River Resort — Newry, ME

2017 **O'Brien Symposium**
University of Wisconsin - Madison
Madison, WI

2016 **7th Great Lakes Nuclear Receptor Conference**
Case Western Reserve University
Cleveland, OH

2015 **McArdle 75th Anniversary Symposium on Cancer**
University of Wisconsin - Madison
Madison, WI

2014 **6th Great Lakes Nuclear Receptor Conference**
University of Wisconsin - Madison
Madison, WI

LINKS

1: https://pubmed.ncbi.nlm.nih.gov/30455249/
2: https://pubmed.ncbi.nlm.nih.gov/29594259/
3: https://pubmed.ncbi.nlm.nih.gov/25943391/