Eron Saxon

eronsaxon@gmail.com | Brookfield, WI

EDUCATION

B.S. in Chemistry *cum laude* **Sept. 2015 – Dec. 2018**
University of Wisconsin – Milwaukee Milwaukee, WI

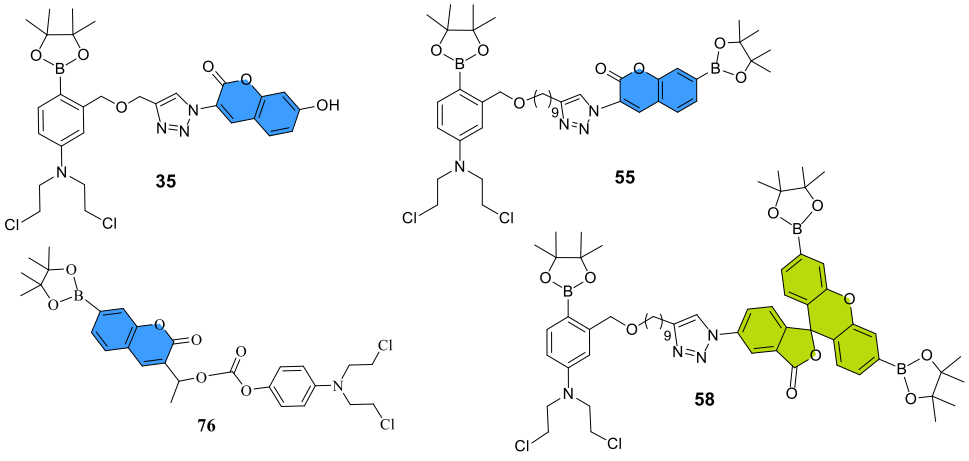
Ph.D. in Chemistry **Sept. 2019 – May 2024**
University of Wisconsin – Milwaukee Milwaukee, WI
Dissertation: "Boron-based theranostics and prodrugs: design, synthesis, mechanism and biological investigation"

EMPLOYMENT EXPERIENCE

Quality Control Lab Technician **Jan. 2018 – April 2019**
MetalTek International Waukesha, WI

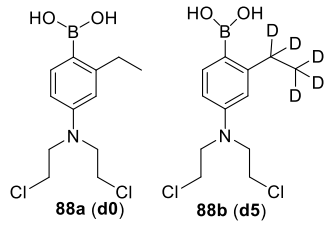
- Operated analytical instruments, including LECO carbon/sulfur and nitrogen/oxygen instruments, x-ray, and arc optical emission spectrometers
- Maintained and standardized instruments following Nadcap (National Aerospace and Defense Contractors Accreditation Program) approved protocols
- Performed routine analysis of heterogeneous metals for determination of elemental composition

Research & Teaching Assistant **Sept. 2019 – May 2024**
University of Wisconsin – Milwaukee, Advisor: Dr. Peng Milwaukee, WI



- Designed novel theranostic and prodrug nitrogen mustards as anticancer small molecules
- Performed multi-step synthetic routes (>13 steps) of oxygen-,water-, light-sensitive reaction conditions

- Isolated and purified compounds by column chromatography, distillation, precipitation, recrystallization, and trituration resulting in 4 novel theranostics
- Characterized compounds by utilizing TLC, NMR, LCMS, HRMS Q-TOF, UV/VIS, fluorescence, and fluorescence confocal microscope instruments
- Evaluated theranostics and prodrugs using cytotoxicity and fluorescence colocalization assays *in vitro* with TNBC MDA-MB-468 cell line
- Synthesized oligonucleotides by automated solid-phase synthesis with ABI 394, purification and ^{32}P radiolabeling of oligo for DNA interstrand cross-linking assays
- Determined safety and anticancer efficacy of compounds in *in vivo* CD1 and xenograft athymic mice study following IACUC approved guidelines
- Determined physiochemical properties of small molecules (solubility and permeability)
- Determined photophysical properties of fluorescent dyes
- Determined prodrug activation mechanism *in vitro* and *in vivo* through deuterium isotope-labeled mustard prodrugs



- Trained and supervised undergraduate students in research and teaching laboratories or classrooms

Research Volunteer **June 2024 – Current**
University of Wisconsin – Milwaukee, Advisor: Dr. Peng Milwaukee, WI

- Investigation of novel small molecule prodrugs and theranostics as selective anticancer and/or fluorogenic agents

SKILLS

- Synthetic organic chemistry, laboratory techniques and instrumentation
- Click CuAAC and boron chemistry
- Knowledge of the anticancer drug development process
- Microsoft Office, ChemDraw, ChemSketch, SciFinder, Reaxys, Shimadzu LabSolutions, Bruker TopSpin, ImageJ, Zeiss Zen, QuPath and GraphPad Prism

AWARDS

- UWM Chancellor's Award (2019 – 2022)
- UWM Graduate School Distinguished Dissertation Fellowship (DDF) Award (2023 – 2024)

PATENT

- Peng, X.; Saxon, E., Hydrogen Peroxide Responsive Theranostics. Patent Application 2024, US provisional patent No. 020871-0017-US01

PUBLICATIONS

- Fan, H.; Zaman, M. A. U.; Chen, W.; Ali, T.; Campbell, A.; Zhang, Q.; Setu, N. I.; **Saxon, E.**; Zahn, N. M.; Benko, A. M.; Arnold, L. A.; Peng, X., Assessment of Phenylboronic Acid Nitrogen Mustards as Potent and Selective Drug Candidates for Triple-Negative Breast Cancer. *ACS Pharmacol. Transl. Sci.* 2021, *4* (2), 687-702.
- **Saxon, E.**; Peng, X. (2021), Recent Advances in Hydrogen Peroxide Responsive Organoborons for Biological and Biomedical Applications. *ChemBioChem*. 2021, https://doi.org/10.1002/cbic.202100366
- **Saxon, E.**; Ali, T.; Peng, X. (2024), Hydrogen Peroxide Responsive Theranostics for Cancer-Selective Activation of DNA Alkylators and Real-Time Fluorescence Monitoring in Living Cells. (under review, *Eur. J. Med. Chem*)

PRESENTATIONS

- Saxon E., Peng X., DNA Sequencing: Modern Techniques and Application (2020). UWM Graduate Seminar, Milwaukee WI.
- Saxon E., Peng X., Synthesis of a Novel Phenyl Boronic Ester Nitrogen Mustard Analog (2021). Poster at the UWM Spring Symposium, Milwaukee WI.
- Saxon, E., Peng, X. Biological Application of a Novel DNA-Alkylating Theranostic Agent (2022). Poster at the ACS Fall 2022 Conference, Chicago IL.
- Saxon E., Peng X., Synthesis and Application of a Novel DNA Alkylating Theranostic Agent. (2022). Seminar at the UWM Milwaukee Institute for Drug Discovery Symposium, Milwaukee WI.