Ardie Barry Sailis

Researcher · Toxicology and molecular biology
Petaling Jaya, Selangor, Malaysia

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Profile

Toxicology researcher studying how e-cigarette use affects male reproductive health. My doctoral work compares cigarette smokers, e-cigarette users and dual users in Malaysia, linking exposure to testosterone-related microRNAs, mitochondrial function and blood cell changes. I have published 15 peer-reviewed papers as sole or first author and review manuscripts for seven international journals. Open to roles in research, medical affairs, regulatory science and science communication.

Education

Doctor of Philosophy in Pharmacy (Health) Dec 2023 – Dec 2026 (expected)
Malaysia

Thesis on testosterone-related microRNAs, blood cell abnormalities and sexual desire in Malaysian cigarette smokers, e-cigarette users and dual users.

Bachelor of Science in Microbiology, With Distinction 2019 – 2023
Malaysia

Experience

Doctoral Researcher Dec 2023 – present
Doctoral research, Malaysia

- Conducted a comparative study of cigarette smokers, e-cigarette users and dual users in Malaysia.
- Analyzed testosterone-related microRNAs by qPCR alongside hormone and blood cell profiles.
- Used transmission electron microscopy to assess mitochondrial damage in e-cigarette users and controls.
- Wrote mechanistic and systematic reviews on e-cigarette toxicology, reproductive health and redox signaling.
- Developed an independent project, Cellular Signalling as Dynamic Regulatory Circuits, producing conceptual models of signal resolution in NRF2–KEAP1 redox signaling and YAP/TAZ mechanotransduction.

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Peer Reviewer 2025 – present

for

American Journal of Preventive Medicine, Journal of Hazardous Materials Advances, Pharmacological Reviews, Progress in Biophysics and Molecular Biology, Toxicology Reports, PLOS One and International Journal of General Medicine.

Intern Oct 2022 – Jan 2023

Indah Water Konsortium Sdn Bhd

Supported laboratory operations during a full-time internship, covering microbiology procedures, water quality testing, sample handling, documentation and technical reporting under standard operating procedures.

Publications

15. **The unfolded protein response as a proteotoxic stress-resolution circuit: branch-selective signaling and failed resolution in environmental immunotoxicity.**
Ardie Barry Sailis
Chemico-Biological Interactions, 2026. doi.org/10.1016/j.cbi.2026.112392

14. **YAP/TAZ as a mechanochemical signal-resolution circuit.**
Ardie Barry Sailis
Progress in Biophysics and Molecular Biology, 2026.
doi.org/10.1016/j.pbiomolbio.2026.101960

13. **Transcriptional condensates as kinetic filters for temporal control of gene expression.**
Ardie Barry Sailis
Gene Reports, 2026. doi.org/10.1016/j.genrep.2026.102599

12. **Mitochondrial mechanisms in the potential male reproductive toxicity of e-cigarette-derived metal-containing nanoparticles.**
Ardie Barry Sailis
Journal of Applied Toxicology, 2026. doi.org/10.1002/jat.70382

11. **Ferroptosis in e-cigarette aerosol-associated respiratory injury.**
Ardie Barry Sailis
Archives of Toxicology, 2026. doi.org/10.1007/s00204-026-04486-w

10. **Could e-cigarette devices generate inhalable micro- and nanoplastics? Exposure plausibility and reproductive relevance.**
Ardie Barry Sailis
Toxicology Mechanisms and Methods, 2026. doi.org/10.1080/15376516.2026.2695155

9. **Adipose as a Driver, Not a Bystander: A Modern Synthesis of Obesity-Related Erectile Dysfunction.**
Ardie Barry Sailis, Muhamad Alfakri Mat Noh
Diabetes, Obesity and Metabolism, 2026. doi.org/10.1111/dom.70818

8. **E-cigarette aerosol constituents modulate Leydig cell steroidogenic pathways: Evidence from experimental models.**
Ardie Barry Sailis, Muhamad Alfakri Mat Noh, Bey Fen Leo, Farid Nazer Faruqu, Anne Yee, Maw Shin Sim
Molecular and Cellular Endocrinology, 2026. doi.org/10.1016/j.mce.2026.112786

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7. **MicroRNA-mediated disruption of testosterone signaling associated with e-cigarette** [illegible]e,
Environmental Toxicology and Pharmacology, 2026. doi.org/10.1016/j.etap.2026.104994

6. **NRF2-KEAP1 as a redox signal-resolution circuit: Beyond the antioxidant switch.**
Ardie Barry Sailis
Progress in Biophysics and Molecular Biology, 2026.
doi.org/10.1016/j.pbiomolbio.2026.03.005

5. **E-cigarettes and erectile dysfunction: biological mechanisms and research challenges.**
Ardie Barry Sailis, Muhamad Alfakri Mat Noh, Bey Fen Leo, Farid Nazer Faruqu, Hui Yin Yow, Anne Yee, Maw Shin Sim
International Journal of Impotence Research, 2026. doi.org/10.1038/s41443-026-01300-0

4. **E-cigarette aerosols as systemic metabolic disruptors: integrated mitochondrial, circadian, and neurobehavioral mechanisms.**
Ardie Barry Sailis
Toxicology Mechanisms and Methods, 2026. doi.org/10.1080/15376516.2026.2658739

3. **CYP1A1 as a conserved metabolic circuit linking environmental sensing to immune regulation.**
Ardie Barry Sailis
Archives of Toxicology, 2026. doi.org/10.1007/s00204-026-04384-1

2. **Effects of secondhand exposure to e-cigarette aerosol on lung health: a systematic review.**
Ardie Barry Sailis, Muhamad Alfakri Mat Noh, Bey Fen Leo, Farid Nazer Faruqu, Anne Yee, Maw Shin Sim
Journal of Public Health, 2026. doi.org/10.1007/s10389-026-02740-0

1. **Mitochondrial dysfunction induced by E-cigarettes.**
Ardie Barry Sailis, Muhamad Alfakri Mat Noh, Bey Fen Leo, Farid Nazer Faruqu, Anne Yee, Maw Shin Sim
Toxicology, 2025. doi.org/10.1016/j.tox.2025.154339

Talks and conferences

Doctoral thesis seminar 1 Oct 2026

Sexual Desire and Nicotine Dependence Among Smokers, E-Cigarette Users, and Dual Users in Malaysia: A Comparative Study
2024
Poster presentation, ISAM Regional Meeting

Early Career Researchers–Postgraduates Research Symposium 2024

ic-PHIR Conference 2023
UiTM Puncak Alam

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[illegible]ematic Literature Review and Meta-Analysis Workshop 2025
[illegible]/isible Double Beam Spectrophotometer Workshop, Shimadzu 2025

Quantitative PCR (qPCR) Workshop, Vazyme 2024

23

Ardie Barry Sailis

Skills

Laboratory	qPCR, transmission electron microscopy, molecular biology techniques
Data	SPSS, bioinformatics, data interpretation
Evidence	Systematic reviews, literature synthesis, mechanistic toxicology
Writing	Scientific writing, manuscript preparation, peer review, research conceptualization
Research areas	E-cigarette and tobacco toxicology, reproductive health, pharmacology, toxicogenomics, molecular systems biology, mechanotransduction and YAP/TAZ signaling

Languages

Malay	Native or bilingual proficiency
English	Professional working proficiency

References

Available on request.