
YEONG KENG YOON, KEN

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School of Science,
Monash University Malaysia
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RESEARCH INTERESTS

Medicinal chemistry, drug design and discovery, organic synthesis, theranostic molecules

EDUCATION

**Institute for Research in Molecular Medicine (INFORMM),
Universiti Sains Malaysia**

- **Ph.D.**
- Thesis title – Synthesis and Biological Activity of Benzimidazole Analogs Targeted at Sirtuin Enzyme
- Research areas: Medicinal Chemistry, Organic Synthesis, Sirtuin Enzymes

AWARDS

- Universiti Sains Malaysia Golden Pavilion Award (Best PhD thesis)
- Universiti Sains Malaysia Golden Pavilion Award (Best Research Project)
- Best Publishing Award from Institute for Research in Molecular Medicine (INFORMM)
- MyBrain15 Scholarship from the Ministry of Education Malaysia

**School of Chemical Sciences,
Universiti Sains Malaysia**

- **M.Sc.**
- Thesis title – Complexation Studies of Crown Ethers with Alkali Metal Cations in Methanol
- Research areas: Organic Synthesis and Supramolecular Chemistry

AWARDS

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- PASCA Graduate Scholarship from Universiti Sains Malaysia

**School of Chemical Sciences,
Universiti Sains Malaysia**

- **B.Sc.**, Chemistry
- Dean's List

SELECTED PUBLICATIONS

1. **Yeong K.Y.**, Chia T.S., Quah C.K., Tan S.C., **2018**, *Synthesis and Crystal Structures of Ethyl 2-(4-Methoxyphenyl)-1H-benzo[d]imidazole-5-carboxylate Dihydrate and Its Building Block 4-Fluoro-3-nitrobenzoic Acid*, *Journal of Chemical Crystallography*, 48, 170-176.
2. Tan Y.J., Lee Y.T., **Yeong K.Y.**, Petersen S.H., Kono K., Tan S.C., Oon C.E. *Anti-cancer activities of a benzimidazole compound through sirtuin inhibition in colorectal cancer*, *Future Medicinal Chemistry*, 10, 2039-2057.
3. Gurjar A.S., Darekar M.N., **Yeong K.Y.**, Ooi L., **2018**, *In silico studies, synthesis and pharmacological evaluation to explore multi-targeted approach for imidazole analogues as potential cholinesterase inhibitors with neuroprotective role for Alzheimer's disease*, *Bioorganic and Medicinal Chemistry*, 26, 1511-1522.
4. Lee M.J., Ramanathan S., Mansor S.M., **Yeong K.Y.**, Tan S.C., **2018**, *Method validation in quantitative analysis of phase I and phase II metabolites of mitragynine in human urine using liquid chromatography-tandem mass spectroscopy*, *Analytical Biochemistry*, 543, 146-161.
5. **Yeong K.Y.**, Tan S.C., Mai C.W., Leong C.O., Chung F.F.L., Lee Y.K., Chee C.F., Rahman N.A., **2018**, *Contrasting sirtuin and Poly(ADP-ribose)polymerase activity of selected 2,4,6-trisubstituted benzimidazoles*, *Chemical Biology and Drug Design*, 91, 213-219.
6. **Yeong K.Y.**, Liew W.L., Murugaiyah V., Ang C.W., Osman H., Tan S.C. **2017**, *Ethyl nitrobenzoate: a novel scaffold for cholinesterase inhibition*, *Bioorganic Chemistry*, 70, 27-33
7. **Yoon Y.K.**, Osman H., Choon T.S. **2016**, *Potent sirtuin inhibition with 1,2,5-trisubstituted benzimidazoles*, *MedChemComm*, 7, 2094-2099.
8. **Yoon Y.K.**, Oon C.E. **2016**, *Sirtuin inhibitors: An overview from medicinal chemistry perspective*, *Anticancer Agents Med. Chem.*, 16, 1003-1016.

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9. **Yoon Y.K.**, Choon T.S. **2016**, Sirtuin inhibitors: Structural modification of benzimidazoles via multi-step synthesis and their impact on activity, *Arch. Pharm. Chem. Life Sci.*, 349, 1-8.
 10. **Yoon Y.K.**, Ali M.A., Wei A.C., Choon T.S., Shirazi A.N., Parang K. **2015**, Discovery of a potent and highly fluorescent sirtuin inhibitor, *MedChemComm*, 6, 1857-1863.
 11. **Yoon Y.K.**, Ali M.A., Wei A.C., Choon T.S., Ismail R., **2015**, Synthesis and evaluation of antimycobacterial activity of new benzimidazole aminoesters, *European Journal of Medicinal Chemistry*, 93, 614-624.
 12. Oon C.E., Strell C., **Yoon Y.K.**, Östman A., Prakash J. **2015**, SIRT1 inhibition in pancreatic cancer models: Contrasting effect *in vitro* and *in vivo*, *European Journal of Pharmacology*, 757, 59-67.
 13. **Yoon Y.K.**, Ali M.A., Wei A.C., Shirazi A.N., Parang K., Choon T.S. **2014**, Benzimidazoles as new scaffold of sirtuin inhibitors: Green synthesis, *in vitro* studies, molecular docking analysis and evaluation of their anti-cancer properties, *European Journal of Medicinal Chemistry*, 83, 448-454.
 14. **Yoon Y.K.**, Ali M.A., Wei A.C., Choon T.S., Osman H. **2014**, A one-pot tandem synthesis of various 1,2-disubstituted benzimidazoles, *Tetrahedron Letters*, 55, 4697-4700.
 15. **Yoon Y.K.**, Ali M.A., Wei A.C., Choon T.S., Osman H., Parang K., Shirazi A.N. **2014**, Synthesis and evaluation of novel benzimidazole derivatives as sirtuin inhibitors with antitumor activities, *Bioorganic and Medicinal Chemistry*, 22, 703-710.
 16. **Yoon Y.K.**, Ali M.A., Wei A.C., Choon T.S., Khaw K.Y., Murugaiyah V., Osman H., Masand V.H. **2013**, Synthesis, characterization and molecular docking analysis of novel benzimidazole derivatives as cholinesterase inhibitors, *Bioorganic Chemistry*, 49, 33-39.
 17. Wei A.C., Ali M.A., **Yoon Y.K.**, Ismail R., Choon T.S., Kumar R.S. **2013**, A facile three-component [3+2]-cycloaddition for the regioselective synthesis of highly functionalised dispiropyrrolidines acting as antimycobacterial agents, *Bioorganic and Medicinal Chemistry Letters*, 23, 1383-1386.
 18. Wei A.C., Ali M.A., **Yoon Y.K.**, Ismail R., Choon T.S., Kumar R.S., Arumugam N., Almansour A.I., Osman H., **2012**, Antimycobacterial activity: A facile three-component [3+2]-cycloaddition for the regioselective synthesis of highly functionalised dispiropyrrolidines, *Bioorganic and Medicinal Chemistry Letters*, 22, 4930-4933.
 19. Kumar R.S., Ali M.A., Osman H., Ismail R., Choon T.S., **Yoon Y.K.**, Wei A.C., Pandian S., Manogaran E. **2011**, Synthesis and discovery of novel hexacyclic cage compounds as inhibitors of acetylcholinesterase, *Bioorganic and Medicinal Chemistry Letters*, 21, 3997-4000.
 20. Ali M.A., Ismail R., Choon T.S., **Yoon Y.K.**, Wei A.C., Pandian S., Kumar R.S., Osman H., Manogaran E. **2010**, Substituted spiro [2.3] oxindolespiro[3.2"]-5,6-dimethoxy-
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indane-1"-one-pyrrolidine analogue as inhibitors of acetylcholinesterase, *Bioorganic and Medicinal Chemistry Letters*, 20, 7064-7066.

CONFERENCES

1. **Yeong K.Y.**, Ali M.A., Oon C.E., Shirazi A.N., Parang K., Tan S.C., "Functionalized benzimidazoles as novel theranostic sirtuin inhibitors", 11th AFMC International Medicinal Chemistry Symposium (AIMECS), 24th-26th July 2017, Melbourne, Australia.
2. **Y.K. Yoon**, M.A. Ali, C.E. Oon, T.S. Choon, "Discovery of 1,2-disubstituted benzimidazoles as sirtuin inhibitors", Golden Jubilee Chemistry Conference (GJCC), 6th -8th August, 2015, National University of Singapore, Singapore.
3. **Y.K. Yoon**, W.T. Ng, M. Zheng, "Development of a sensitive antibody against ergot alkaloids", 8th Conference of the World Mycotoxin Forum, 10th-12th November, 2014, Vienna, Austria.
4. **Y.K. Yoon**, W.T. Ng, M. Zheng, G. Haubl, "Development of a sensitive antibody against Aflatoxin M1", International Mycotoxin Conference 2014, 19th-23rd May, 2014, Beijing, China.
5. **Y.K. Yoon**, W.T. Ng, K. Ong, M. Zheng, "Development of an enzyme linked immunosorbent assay for fast screening of cimaterol residues in various matrices", 1st International Conference on Molecular Diagnostic and Biomarker Discovery, 23rd-25th October, 2013, Penang, Malaysia.
6. **Y.K. Yoon**, M.A. Ali, T.S. Choon, R. Ismail, A.C. Wei, "Discovery of benzimidazole derivatives as sirtuin inhibitors", 4th Regional Conference on Molecular Medicine, 9th - 11th October, 2011, Penang, Malaysia.
7. Separation Science Singapore 2010, 5th - 6th August 2010, Biopolis Science Park, Singapore.

GRANTS

1. Fundamental Research Grant Scheme (FRGS), Malaysia Ministry of Higher Education, 2017-2020 - RM172,780 (Co-PI)

Role of sirtuins in the regulation of *Toxoplasma Gondii* interconversion between Tachyzoite and Bradyzoite cysts.

2. Global Asia in the 21st Century (GA21) Platform, Monash University Malaysia, 2018-2019 - RM23350 (Co-PI)

National Key Economic Plant 'Orthosiphon Stamineus' Leaf for the Treatment of Epilepsy

3. Tropical Medicine and Biology Platform Seed Fund, Monash University Malaysia, 2018 - RM5000 (PI)

Development of a novel BChE inhibitor for AD.

4. Tropical Medicine and Biology Platform Seed Fund, Monash University Malaysia, 2017 - RM5000 (PI)

Synthesis and Investigation of nitrofurans-based derivatives as antibacterial agents.

5. School of Science Seed Fund, Monash University Malaysia, 2017-2018 - RM30000

RESEARCH COLLABORATION (EXTERNAL)

- University of Queensland, Australia
- Institut de Recherche Biomédicale des Armées (IRBA), France
- University of Northern British Columbia, Canada
- Kyoto Prefectural University, Japan
- University of Ankara, Turkey
- University Malaya (UM), Malaysia
- University Science Malaysia (USM), Malaysia

REVIEWER (Journal):

- *European Journal of Medicinal Chemistry (Elsevier)*
- *Biomedicine and Pharmacotherapy (Elsevier)*
- *Bioorganic and Medicinal Chemistry (Elsevier)*
- *Current Medicinal Chemistry (Bentham Science)*
- *New Journal of Chemistry (RSC)*
- *Anti-cancer Agents in Medicinal Chemistry (Bentham Science)*
- *Toxicology and Applied Pharmacology (Elsevier)*
- *Tetrahedron Letters (Elsevier)*
- *Bioorganic Chemistry (Elsevier)*
- *Journal of Advanced Research (Elsevier)*

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- *PLOS ONE (PLOS)*
 - *Archiv der Pharmazie (Wiley)*
 - *Chemistry Select (Wiley)*
 - *Synthetic Communications (Taylor and Francis)*
 - *Combinatorial Chemistry and High Throughput Screening (Bentham Science)*
 - *Letters in Organic Chemistry (Bentham Science)*
 - *Letters in Drug Design and Discovery (Bentham Science)*
 - *Medicinal Chemistry Research (Springer)*
 - *Zeitschrift für Naturforschung C (de Gruyter)*
 - *Heterocyclic Communications (de Gruyter)*
 - *Journal of Agricultural and Food Chemistry (ACS)*

PATENTS (Co-inventor)

1. ANTI-ANGIOGENIC AGENTS AND USES THEREOF
WIPO-PCT (WO2017/052359A1)
2. COMPOUNDS FOR USE AS ANTI-CANCER AGENTS
WIPO-PCT (WO2017/052360A1)
3. Compound And Method For Inhibiting Sirtuin Activities
(APPLICATION NO: PCT/MY2016/050029)
4. A fluorescent dye compound
(APPLICATION NO: PI 2014703421)
5. Cucurmin Compounds and Their Preparation Thereof.
WIPO-PCT (WO2012/099454A1)
6. Pyrrolothiazole Containing Cucurmin Compounds.
WIPO-PCT (WO2012/099453A1)
7. Cucurmin Compounds with Superior Structural Stability and Processes for their Preparation Thereof.
WIPO-PCT (WO2012/099452A1)
8. Cucurmin Compounds Containing Indolizine and Their Preparation Thereof.
WIPO-PCT (WO2012/099451A1)