UNIT 3 –MEDICAL AND PHARMACEUTICAL ENGINEERING
NON-DESTRUCTIVE BIOMEDICAL AND PHARMACEUTICAL RESEARCH CENTRE
SMART MANUFACTURING RESEARCH INSTITUTE
UNIVERSITI TEKNOLOGI MARA MALAYSIA

ORGANIZATION CHART

Principal Fellow
Professor Dr Wong Tin Wui

Associate Fellow
Dr Nor Khaizan Anuar (Pharmacy)
Dr Heo Chong Chin (Medical)
Dr Mohd Shahezwan Abd. Wahab (Pharmacy)
Associate Professor Wang Seok Mui (Medical)

Research officer
Idanawati Naharudin (Pharmacy)

Professor Dr Wong Tin Wui

Unit 3 – Medical and Pharmaceutical Engineering

Non-Destructive Biomedical and Pharmaceutical Research Centre

Smart Manufacturing Research Institute
Universiti Teknologi MARA
42300 Puncak Alam
Selangor
Malaysia
Email: wongtinwui@uitm.edu.my
HP: 60 193594691

Professor Dr Wong Tin Wui obtained his PhD degree from the National University of Singapore in 1999. He is presently the lecturer and principal fellow at the Non-Destructive Biomedical and Pharmaceutical Research Centre, Smart Manufacturing Research Institute, Universiti Teknologi MARA. His research areas are primarily focused on particle/scaffold design for oral, transdermal and pulmonary drug delivery, and design of pharmaceutical processors for innovative dosage form manufacture. He has published over 120 peer reviewed articles. He is the editorial board member of Asian Journal of Pharmaceutical Sciences, Associate Editor of Drug Development and Industrial Pharmacy, Drug Design, Development and Therapy, and Technology in Cancer Research and Treatment, and Regional Editor of Current Drug Delivery.

Professor Wong is the founder of Non-Destructive Biomedical and Pharmaceutical Research Centre, Malaysia and Sino-Malaysia Molecular Oncology and Traditional Chinese Medicine

Delivery Joint Research Centre, Medical College, Yangzhou University. China. He is the advisory board member/outstanding scientists jury/chief jury for several international conference and innovation awards (eg. Maurice-Marie Janot Award and Lecture, Tefarco Innova-PharmaTech Scientist Award, Malaysia Technology Expo Innovation Awards). He serves as the visiting professor of UCSI University, Malaysia and National University of Singapore, lecture professor of Yangzhou University, China, and adjunct professor of Nirma University, India.

Publication

1. Mohd Saufi Harun, Tin Wui Wong, Chee Wai Fong. Advancing skin delivery of α-tocopherol and γ-tocotrienol for dermatitis treatment via nanotechnology and microwave technology. International Journal of Pharmaceutics 593, 120099, 2021.

2. Nafisha Shaedi, Idanawati Naharudin, Chee Yan Choo, Tin Wui Wong. Design of oral intestinal-specific alginate-vitexin nanoparticulate system to modulate blood glucose of diabetic rats. Carbohydrate Polymers 254, 117312, 2021.

3. Ainnur Marlyana Abd Majid, Mohd Hezri Fazalul Rahiman, Tin Wui Wong. Non-dispersive impact technology for powder flow characterization. International Journal of Pharmaceutics 605, 120786, 2021.

4. Ruhisy Mohd Rasul, M Tamilarasi A/P Muniandy, Zabliza Zakaria, Kifayatullah Shah, Chin Fei Chee, Ali Dabbagh, Noorsaadah Abd Rahman, Tin Wui Wong. A review on chitosan and its development as pulmonary particulate anti-infective and anti-cancer drug carriers. Carbohydrate Polymers 250, 116800, 2020.

5. Sharipah Razali, Anirbandeep Bose, Pee Win Chong, Camillo Benetti, Paolo Colombo, Tin Wui Wong. Design of multi-particulate "Dome matrix" with sustained-release melatonin and delayed-release caffeine for jet lag treatment. International Journal of Pharmaceutics 587, 119618, 2020.

6. Nasser Alhajj, Zabliza Zakaria, Idanawati Naharudin, Fakhrul Ahsan, Wenji Li, Tin Wui Wong. Critical physicochemical attributes of chitosan nanoparticles admixed lactose-PEG3000 microparticles in pulmonary inhalation. Asian Journal of Pharmaceutical Sciences 12, 374-384, 2020.

7. Nafisah Musa, Tin Wui Wong. Design of polysaccharidic nano-in-micro soft agglomerates as primary oral drug delivery vehicle for colon-specific targeting. Carbohydrate Polymers 247, 116673, 2020.

8. Musalli AH, Talukdar PD, Roy P, Kumar P, Wong TW. Folate-induced nanostructural changes of oligochitosan nanoparticles and their fate of cellular internalization by melanoma. Carbohydrate Polymers 244, 116488, 2020.

9. Harjoh N, Wong TW, Caramella C. Transdermal insulin delivery with microwave and fatty acids as permeation enhancers. International Journal of Pharmaceutics 584, 119416, 2020.

Research project

1. Nanodelivery of cancer therapeutics – Sino-Malaysia Molecular Oncology and Traditional Chinese Medicine Delivery Joint Research Centre, Medical College, Yangzhou University. China Collaborative Research

We are looking for 2 PhD/MSc candidates (Scholarship by merit).

2. Nanotherapeutics for lung cancer treatment.- UiTM-Sydney University Australia-Coruna University Spain Inhalation Collaborative Research

We welcome 6-12 months international outcome-based attachment.

3. Nanomedicine design for asthma treatment - UiTM-Industry research project

We are looking for 1 PhD/MSc candidate.

Dr Nor Khaizan Anuar

Faculty of Pharmacy
Universiti Teknologi MARA
42300 Puncak Alam
Selangor
Malaysia
Email: norkhaizan2874@uitm.edu.my
HP: 60 192114004

Research area/interest

1. Design of transdermal drug delivery system, which when applied to the intact skin allows the delivery of drugs at a controlled rate to the systemic circulation.
2. Design of moisture-retentive wound dressing that aimS to optimize the wound healing process.

Research scope

Dr Nor Khaizan Anuar is a senior lecturer in Department of Pharmaceutics, Faculty of Pharmacy, UiTM since 2013. She received Bachelor of Engineering (Chemical Engineering – Polymer) from Universiti Teknologi Malaysia in 2004, Master of Science and PhD in Pharmaceutics from Universiti Teknologi MARA in 2007 and 2013 respectively. Currently,

her research study focuses on physicochemical analysis of natural polymer, especially polysaccharides and their mechanistic roles in drug release modulation, as well as drug permeation for the application in transdermal drug delivery and wound healing study. Polysaccharides are continuously being explored in the development of new and effective drug delivery system. Such endeavour nevertheless can be challenging due to the inherent diversity of the polysaccharide structure.

Recently, our team investigated the ability of Hibiscus rosa-sinensis L. leaves mucilage, a novel source of polysaccharide in modifying skin barrier for transdermal drug delivery. Hibiscus rosa-sinensis L. leaves mucilage in the form of a gel altered the barrier and permeability of skin by perturbing the lipid and protein structures of skin, acting on the helical keratin filaments as well as through the O–H and/or N–H interactions. The diffusional resistance for drug transport was reduced with increased drug permeation (Saidin et al. 2021). Another study on cross-linked pectin hydrogel wound dressing design for the treatment of diabetic burn wounds is recognised with a Gold Award at the Malaysia Technology Expo (MTE) 2021. This project suggested that a cross-linked pectin without the need to combine with other polymers or excipients is able to function as an excellent wound dressing material.

Publication

1) N. M. Saidin, **N. K. Anuar**, T. W. Wong, M. M. R. Meor Mohd Affandi and W. R. Wan Engah. "Skin barrier modulation by *Hibiscus rosa-sinensis* L. mucilage for transdermal drug delivery," *Polymer Bulletin*, In press.
2) M. A. H. Osman, T. W. Wong and **N. K. Anuar**. "A revisit to the effects of zinc salt on skin wound healing," *British Journal of Dermatology*, vol. 16, pp. 1-4, 2019.
3) L. Zakaria, T. W. Wong, **N. K. Anuar**, I. Naharudin, M. Tripathy, R. Sheshala, Z. Hussain, "Enhancing Sustained Drug Release Property of Chitosan in Spheroids through Crosslinking Reaction and Coacervation," *Powder Technology*, vol. 354, pp. 815–821, 2019.
4) R. Sheshala, **N. K. Anuar**, N. H. A. Samah, and T. W. Wong, "*In Vitro* Drug Dissolution/Permeation Testing of Nanocarriers for Skin Application: a Comprehensive Review," *AAPS PharmSciTech*, vol. 20, pp. 164, 2019.
5) Hussain M, Sahudin S, Abu Samah NH, and **N. K. Anuar,** "Students Perception of an Industry-Based Approach Problem-Based Learning (PBL) and their Performance in Drug Delivery Courses," *Saudi Pharmaceutical Journal*, vol. 27, pp. 274-282, 2019.
6) N. M. Saidin, **N. K. Anuar** and M. M. R. Meor Mohd Affandi "Roles of Polysaccharides in Transdermal Drug Delivery System and Future Prospects," *Journal of Applied Pharmaceutical Sciences*, vol. 8, pp. 141-157, 2018.
7) **N. K. Anuar** and T. W. Wong. Chapter 12: Pectin and its roles in transdermal drug delivery. Handbook of Sustainable Polymers: Processing and Applications. Edited by Vijay Kumar Thakur and ManjuKumari Thakur. ISBN 978-981-4613-53-8 (Hardcover), 978-981-4613-54-5 (eBook). Pan Stanford Publishing Pte. Ltd., Singapore (2015).
8) **N. K. Anuar** and T. W**.** Wong. "Microwave: Effects and Implications in Transdermal Drug Delivery," *Progress in Electromagnetics Research*, vol. 141, pp. 619–643, 2013.

9) T. W. Wong and **N. K. Anuar**, “Physicochemical Modulation of Skin Barrier by Microwave for Transdermal Drug Delivery,” *Pharmaceutical Research*, vol. 30, pp. 90–103, 2013.
10) **N. K. Anuar**, T. W. Wong, and T. Mohd Nasir, “Microwave Modified Non-Crosslinked Pectin Films with Modulated Drug Release,” *Pharmaceutical Development and Technology*, vol. 17, pp. 110–117, 2012.
11) T. W. Wong, D. K. Ghodgaonkar, T. Mohd Nasir and **N. K. Anuar**, “Microwave Non-Destructive Testing Technique for Characterization of HPMC-PEG 3000 Films," *International Journal of Pharmaceutics*, vol. 343, pp. 122-130, 2007.
12) **N. K. Anuar**, T. W. Wong, D. K. Ghodgaonkar and T. Mohd Nasir, “Characterization of Hydroxypropylmethylcellulose Films using Microwave Non-Destructive Testing Technique,” *Journal of Pharmaceutical and Biomedical Analysis*, vol. 43, pp. 549-557, 2007.

Research Project

1. Development of biologic wound dressing from plant-derived active biomolecules

PhD/MSc vacancy is available.

Dr. Heo Chong Chin

Department of Medical Microbiology and Parasitology
Faculty of Medicine
Universiti Teknologi MARA
Sungai Buloh Campus, Jalan Hospital, 47000 Sungai Buloh, Selangor, MALAYSIA
Email: chin@uitm.edu.my
Website: http://heochongchin.weebly.com/
Tel: +6-03-61267439
HP: +6-017-3714833

Dr. Heo Chong Chin obtained his Bachelor in Biomedical Sciences (Hons.) and Master in Medical Science (Parasitology) from the National University of Malaysia. He then earned his Ph.D. from the Department of Entomology, Texas A&M University in 2016. He is currently a senior lecturer at the Department of Medical Microbiology and Parasitology, Faculty of Medicine, Universiti Teknologi MARA, Malaysia. Prior to that, he was a research officer at the Entomology Unit, Institute for Medical Research, Kuala Lumpur. As of 2020, he has published 65 peer-reviewed journal articles, one book and two book chapters. He received the Nadchatram Medal from the Malaysian Society of Parasitology and Tropical Medicine (MSPTM) in 2018, and John Henry Comstock Graduate Student Award from the Entomological Society of America at Denver, Colorado in 2017. In addition, Dr. Heo is a Board-Certified Entomologist (BCE) since 2016.

Publication

1. Azmiera, N., Low, V. L., & **Heo, C. C.** (2021) Colonization of Rabbit Carcasses by Drain Fly Larvae, *Psychoda* sp. (Diptera: Psychodidae): The First Report. Acta Parasitologica, 1-4.

2. Kurahashi, H & **Heo, C. C.** (2020). A New Species of Musca from Peninsular Malaysia, with the Revised Key to the Known Species (Diptera: Muscidae). Japanese Journal of Systematic Entomology, **26** (2): 275–280.

3. Singh, S., Yong, S. K., Jalaludin, N. H., Brau, E., Shamsudin, N. N., Keawbaingam, N., & **Heo, C. C.** (2020). Preliminary observation on the lepidopteran colonization on rat and rabbit carcasses in Malaysia. Tropical Biomedicine, 37(4), 1146-1151.

4. **Heo, C. C.,** Tomberlin, J. K., & Aitkenhead-Peterson, J. A. (2020). Soil chemistry dynamics of Sus scrofa carcasses with and without delayed Diptera colonization. Journal of Forensic Sciences, 00:1–13

5. Zaini, N. A., Ivorra, T., Azmiera, N., Natasha, N. A., & **Heo, C. C.** (2020). Commentary on article: Aerobic microbe community and necrophagous insects associated with decomposition of pig carrion poisoned with lead by Aneyo et al. Legal Medicine (Tokyo, Japan), 48, 101818.

6. **Heo, C. C.,** Crippen, T. L., Thornton, S. N., & Tomberlin, J. K. (2020). Differential Carbon Utilization by Bacteria in the Soil Surrounding and on Swine Carcasses with Dipteran Access Delayed. Pure and Applied Geophysics, 1-18.

7. Ivorra, T., Hauser, M., Low, V. L., Tomberlin, J. K., Aliah, N. A. N., Cammack, J. A., & **Heo, C. C**. (2020). *Hermetia illucens* and *Hermetia fenestrata* (Diptera: Stratiomyidae) Colonization of "Spoiled" Stingless Bee *Geniotrigona thoracica* (Hymenoptera: Apidae) Hives in Malaysia. Insects, **11**(11), 737.

8. Azmiera, N., Mariana, A., Pimsler, M. L., & **Heo, C. C.** (2020). Review of mites found on various animal hosts and at different localities in Malaysia. Journal of Medical Entomology, **57**(5), 1354-1363.

9. Sharifah N, **Heo CC**, Ehlers J, Houssaini J, & Tappe D. (2020). Ticks and tick-borne pathogens in animals and humans in the island nations of Southeast Asia: A review. Acta Tropica, 105527.

10. Singh S, Abdullah NAB, Carbaugh J & **Heo CC** (2020). Ants associated with a rat carcass: its implications in forensic entomology with special emphasis on *Carebara diversa* (Hymenoptera: Formicidae). *International Journal of Tropical Insect Science*. https://doi.org/10.1007/s42690-020-00110-1.

11. Azmiera N, Singh S & **Heo CC** (2020). The first report of cigarette beetle infestation on dreid fish crackers in Malaysia. *Malaysian Journal of Health Sciences* **18**(1): 25-28.

Research Projects

1. Isolation and Identification of Variegated Squirrel Bornavirus 1 in Malaysia

    - We are looking for **ONE (1)** Research Assistant (RA) with a possible MSc/PhD opportunity.

Dr Mohd Shahezwan Abd. Wahab

Department of Pharmacy Practice
Faculty of Pharmacy
Universiti Teknologi MARA (UiTM)
Puncak Alam Campus, 42300 Puncak Alam
Selangor, Malaysia
E-mail: mohdsh2790@uitm.edu.my
Tel: 019-2160710

Dr. Mohd Shahezwan Abd Wahab graduated from Universiti Teknologi MARA (UiTM) with Bachelor of Pharmacy (Honours) in 2006. He later obtained Master of Clinical Pharmacy from the School of Pharmacy and Medical Sciences, University of South Australia (UNISA), Australia in 2010. In 2018, he received his PhD degree in Pharmaceutical Care from the Faculty of Pharmaceutical Sciences, Chulalongkorn University, Thailand. He is a registered pharmacist with Pharmacy Board Malaysia. Currently Dr. Mohd Shahezwan Abd Wahab is the Deputy Dean for Academic Affairs at the Faculty of Pharmay, UiTM and the Head of Cardiology Therapeutics Research Interest Group at UiTM.

His research interests include pharmaceutical care, pharmacy practice, herbal and dietary supplements, and pharmacy education. He is currently exploring the social and behavioural aspects of herbal and dietary supplement use among the public and patients. Additionally, he is collaborating with the Malaysian Pharmacists Society to produce a guideline on herbal and dietary supplement use during the COVID-19 pandemic. On top of that, his research team is conducting several projects to enhance appropriate and safe use of medicine among elderly patients. These projects include the development of an educational material about drugs that may increase risk of fall among the elderly and the development of a board game to enhance knowledge of pharmacists on potentially inappropriate medicine in the elderly. As of June 2021, Dr. Mohd Shahezwan has published 20 peer reviewed articles and one book chapter. He is the editor of the Malaysian Journal of Pharmacy.

Publication

1. Rani NS, Wahab MSA, Zulkifly HH, Mohamad SH. Factors associated with disease progression among hormone receptor-positive breast cancer patients treated with endocrine therapy: A 5-year cross-sectional, retrospective follow-up study. Journal of Applied Pharmaceutical Science. 2021 Jan;11(01):072-7.

2. Wahab MSA, Zaini MH, Ali AA, Sahudin S, Mehat MZ, Hamid HA, Mustaffa MF, Othman N, Maniam S. The use of herbal and dietary supplement among community-

dwelling elderly in a suburban town of Malaysia. BMC Complementary Medicine and Therapies. 2021 Dec;21(1):1-3.

3. Hussain M, Sahudin S, Fauzi SM, Manaf NA, Wahab MSA. Exploring pharmacy students chosen career path: a year-on-year perspective. Higher Education. 2021 Jun;81(6):1257-72.

4. Ariffin SH, Wahab IA, Hassan Y, Wahab MSA. Adulterated Traditional-Herbal Medicinal Products and Its Safety Signals in Malaysia. Drug, Healthcare and Patient Safety. 2021;13:133.

5. Wahab MSA, Sakthong, P, Winit-Watjana W. Development and validation of novel scales to determine pharmacist's care for herbal and dietary supplement users. Research in Social and Administrative Pharmacy, 2020, 16.4: 475-487.

6. Azhari FA, Jasmi NN, Wahab MSA, Jofrry SM, Lee KS, Ming LC. Azhari FA, Jasmi NN, Abd Wahab MS, Mohd S, Jofrry KS, Ming LC. Students' Perceptions about Social Constructivist Learning Environment in e-learning. Indian Journal of Pharmaceutical Education and Research. 2020 Apr 1;54(2):271-8.

7. Nur AS, Hamid F, Wahab MSA, Senek MZF, Ismail AK. The prevalence of hypersensitivity reactions to snake antivenoms administered in Sultanah Nur Zahirah hospital from 2013 to 2016. The Medical Journal of Malaysia. 2020 May 1;75(3):216-20.

8. Wahab MSA, Abd Malik NA, Sahudin S, Affandi MM, Othman N, Ali AA. Exploring the factors associated with the intention to assess customers' herbal and dietary supplement use by community pharmacists in Kuala Lumpur, Malaysia. Journal of Applied Pharmaceutical Science. 2019 Dec;9(12):108-16.

9. Wahab MSA, Sakthong P, Winit-Watjana W. Qualitative exploration of pharmacist care for herbal and dietary supplement users in Thai community pharmacies. Journal of Pharmaceutical Health Services Research. 2019; 10(1): 57-66.

10. Wahab MSA, Othman N, Othman NH, Jamari AA, Ali AA. Exploring the use of and perceptions about honey as complementary and alternative medicine among the general public in the state of Selangor, Malaysia. Journal of Applied Pharmaceutical Science. 2017; 7(12):144-50.

11. Wahab MSA, Othman N, Kowalski SR, Zulkifly HH, Ali AA, Ming LC, Majeed AB. Pharmacy students' and pharmacists' perceptions about geriatric pharmacotherapy education. Pharmacy Education. 2017; 17.

12. Ting CY, Wahab MSA, Lee KS, Tan RT, Ming LC. A cross-sectional study on the use of, preference for, and perceived reliability of mass media for drug-related information among the general public in Sarawak. Therapeutic Innovation & Regulatory Science. 2017; 51(2): 212-20.

Associate Professor Dr. Wang Seok Mui

Department of Medical Microbiology and Parasitology
Faculty of Medicine
Universiti Teknologi MARA
Sungai Buloh Campus
Jalan Hospital, Sungai Buloh
47000, Selangor, Malaysia
Email: wangsm@uitm.edu.my
HP: 60 12 8813602

Associate Professor Dr. Wang Seok Mui holds a BSc (Hons) in Applied Biology/Biotechnology from the Royal Melbourne Institute of Technology University, Australia, a MSc and a PhD, both in Medical Biotechnology from the Universiti Malaysia Sarawak, Malaysia, under the supervision of Professor Dr Mary Jane Cardosa. She then underwent a three-year post-doctoral training in Professor Dr. Shamala Devi Sekaran's laboratory in the University of Malaya.

Dr. Wang joined the Faculty of Medicine, Universiti Teknologi MARA (UiTM), as a senior lecturer in 2012. She is presently the Head of Diagnostic Molecular Microbiology Research Interest Group, a scholar and advisor of the Institute for Medical Molecular Biotechnology, UiTM, and an associate member of Institute of Pathology, Laboratory and Forensic Medicine, UiTM. Her research areas are molecular virology, primarily focused on molecular diagnostics, antiviral and disease pathogenesis of flavivirus (dengue, chikungunya), herpesvirus and SARS-CoV-2. Dr. Wang has published over 35 peer reviewed articles. She is currently the vice-president of the Malaysian Society for Molecular Biology and Biotechnology and is also an Associate Editor of the Asia Pacific Journal of Molecular Biology and Biotechnology.

Publication

1. Radzi Ikhsan Ahmad, Fadzilah Mohd Nor, Wang Seok Mui, Thuhairah Hasrah Abdul Rahman. The role of apolipoproteins in dengue infection: A review. International Medical Journal Malaysia 20(2), 187-193, 2021.
2. Rasha Saleh Basurra, Seok Mui Wang, Mohammed A Alhoot. Nigella sativa (black seed) as a natural remedy against viruses. Journal of Pure and Applied Microbiology 15(1), 29-41, 2021.
3. Noor Fahitah Abu Hanipah, Noor Farah Omar Ahmad, Minaketan Tripathy, Elena Gureeva, Michail Novikov, Yulia Gushchinae, Olga Butranovae, Nafeeza Hj Mohd Ismail, Seok Mui Wang, Anna Krasilnikova. Determination of potential solvents for novel N-substituted 5-(phenylamino)uracil derivatives and evaluation of their cytotoxic effects on Vero 76 cell. Asia Pacific Journal of Molecular Biology and Biotechnology 27(4), 19-29, 2019.
4. Fuzia Elfiture Muftah Eltariki, Bashir Abdulmajeed Melitan, Seok Mui Wang, Mohammed Abdelfatah Alhoot. Effect of fungal filtrates on germination of wheat grains and the biological control of these fungi using black pepper extract. Asia Pacific Journal of Molecular Biology and Biotechnology 27(4), 10-18, 2019.
5. Mohammed Abdelfatah Alhoot, Mohammed Abdelfatah Alhoot, Ridzuan PM, Tiwari Kartikeya, Wang Seok Mui. The inhibitory effect of the mentha piperita leaves extracts on

the mycotoxin producer aspergilus niger. International Journal of Medical Toxicology & Legal Medicine 22,179-183, 2019.
6. Al-Talib Hassanain, Julia Ashazila, Jamal Hussaini, Seok Mui Wang, Mohd Shah Nurul Azura, Al-khateed Alyaa. A quadriplex PCR assay for rapid detection of diarrhoe causing parasitic protozoa from spiked stool samples. Tropical Biomedicine 36(2), 348-356, 2019.
7. Fazilah Mohd Nor, Siti Noraihan Khamis, Seok Mui Wang, Mohd Mokhtar, Muhamad Yazli Yuhana, Boon Peng Hoh. Evaluation of CXCL10 as potential biomarker for early detection of severe dengue. International Journal of Infectious Diseases 73, 395, 2018.
8. Nik Nairan Abdullah, Suzanna Daud, Seok Mui Wang, Zamalia Mahmud, Noor Kaslina Mohd Kornain, Waqar-Al-Kubaisy. Human papilloma virus (HPV) self-sampling: do women accept it? Journal of Obstetrics and Gynaecology 38(3), 402-407, 2018.
9. Al-Obaidi MM, Bahadoran A. Wang Seok Mui, Rishya Manikam, Chandramathi Samudi Raju, Shamala Devi Sekeran. Disruption of the blood brain barrier is vital property of the central nervous system. Acta Virologica 1, 16-27, 2018.
10. Sau Har Lee, Nadia Atiya, Seok Mui Wang, Rishya Manikam, Chandramathi Samudi Raju, Shamala Devi Sekaran. Loss of transfected human brain micro-vascular endothelial cell integrity during herpes simplex virus infection. Intervirology 61(4), 193-203, 2018.

Idanawati Naharudin

Unit 3 – Medical and Pharmaceutical Engineering
Non-Destructive Biomedical and Pharmaceutical Research Centre
Smart Manufacturing Research Institute
Universiti Teknologi MARA
42300 Puncak Alam
Selangor
Malaysia
Email: idana482@uitm.edu.my
HP : 013-3462509

Idanawati Naharudin graduated from Universiti Malaysia Sabah in 2002 with BSc (Hons) in Industrial Chemistry. She is presently the Senior Research Officer at Non-Destructive Biomedical and Pharmaceutical Research Centre and Faculty of Pharmacy, Universiti Teknologi MARA. Idanawati specializes in water quality in therapeutic processing. She has rich research experiences in particle production and characterization for pharmaceutical and biomedical applications. Idanawati has joined Universiti Teknologi MARA since 2003. She has a vast interest in innovation development. Her latest venture in EMOTEE Face Mask and Da-Ilang Cube is recognized by Invention, Innovation & Design Exposition (IIDEX) 2020 awards. Idanawati is a qualified Atomic Energy Licensing Board (AELB) radiation technical staff since 2013.

Publication

Nafisha Shaedi, Idanawati Naharudin, Chee Yan Choo, Tin Wui Wong. Design of oral intestinal-specific alginate-vitexin nanoparticulate system to modulate blood glucose of diabetic rats. Carbohydrate Polymers 254, 117312, 2021.

Nasser Alhajj, Zabliza Zakaria, Idanawati Naharudin, Fakhrul Ahsan, Wenji Li, Tin Wui Wong. Critical physicochemical attributes of chitosan nanoparticles admixed lactose-PEG3000 microparticles in pulmonary inhalation. Asian Journal of Pharmaceutical Sciences 12, 374-384, 2020.

Zakaria L, Wong TW, Anuar NK, Naharudin I, Tripathy M, Sheshala R, Hussain Z. Enhancing sustained drug release property of chitosan in spheroids through crosslinking reaction and coacervation. Powder Technology 354, 815-821, 2019.

Md Ramli SH, Wong TW, Naharudin I, Bose A. Coatless alginate pellets as sustained-release drug carrier for inflammatory bowel disease treatment. Carbohydrate Polymers 152, 370-381, 2016.

Siti Haziyah MC, Asif N, Kifayatullah S, Idanawati N, Wong TW. *In Vitro* investigation of influences of chitosan nanoparticles on fluorescein permeation into alveolar macrophages. Pharmaceutical Research 33(6), 1497-1508, 2016.