

Kesinee Netsomboon

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Fields of interest

- Mucosal drug delivery systems
- Nanotechnology
- Cosmetic and drug formulation
- Efflux transporters and drug resistance in chemotherapy
- Pharmacokinetics and Biopharmaceutics

Education

2016 — Ph.D. in Pharmaceutical Sciences

Department of Pharmaceutical Technology, Institute of Pharmacy, University of Innsbruck, Austria

Thesis: Strategies to improve drug permeation

Supervisor: Univ.-Prof. Mag. pham. Dr. rer. nat. Andreas Bernkop-Schnürch

2012 — M.Sc. Pharmacy

Department of Pharmaceutics and Industrial Pharmacy, Faculty of Pharmacy, Chulalongkorn University, Bangkok, Thailand

Thesis: Development of proliposomes for oral delivery of P-gp substrates

Supervisor: Asst.Prof. Nontima Vardhanabhuti, Ph.D.

2008 — B. Pharm.

Faculty of Pharmacy, Chiang Mail University, Thailand

Senior project: Antioxidant activities of the Zingiberaceous plants

Supervisor: Assn. Prof. Siriporn Okonoki, Ph.D.

Research / work experiences

October 2022-present

- Associate Professor, Division of Pharmaceutical Sciences, Faculty of Pharmacy, Thammasat University, Pathumthani, Thailand
- Associate Dean for Administration and International Affairs, Faculty of Pharmacy, Thammasat University, Pathumthani, Thailand

April 2022-October 2022

- Associate Professor, Division of Pharmaceutical Sciences, Faculty of Pharmacy, Thammasat University, Pathumthani, Thailand
- Assistant to the Dean for Pharmaceutical Sciences Internship and International Affairs, Faculty of Pharmacy, Thammasat University, Pathumthani, Thailand

April 2018-March 2022

- Assistant to the Dean for Pharmaceutical Sciences Internship and International Affairs, Faculty of Pharmacy, Thammasat University, Pathumthani, Thailand
- Assistant Professor, Division of Pharmaceutical Sciences, Faculty of Pharmacy, Thammasat University, Pathumthani, Thailand

May 2016-March 2018

- Lecturer, Division of Pharmaceutical Sciences, Faculty of Pharmacy, Thammasat University, Pathumthani, Thailand

2012

- Researcher, Department of Pharmacology, Faculty of Pharmaceutical Sciences, Chulalongkorn University, Bangkok, Thailand

2009

- Researcher, Department of Pharmaceutical Technology, Graduate School of Pharmaceutical Sciences, Chiba University, Chiba, Japan

Language skills

Thai: native

English: highly proficient in spoken and written (TOEFL score of 566)

German: basic (completion of A2 level)

List of award and research scholarship

Award:

- Outstanding research award 2020, Faculty of Pharmacy, Thammasat University, Pathumthani, Thailand
- Good research award 2018, Faculty of Pharmacy, Thammasat University, Pathumthani, Thailand

Research scholarships:

2018

- Ernst Mach Grants scholarship 2018 financed by the Austrian Federal Ministry for Education, Science and Research (BMBWF) via ASEAN-European Academic University Network (ASEA-UNINET)

2012-2017

- Praphasri-Felser-Fonds, University of Innsbruck, Austria
- Austrian Federal Ministry for Science and Research (BMWF) in the frame of the ASEA-UNINET

2011

- The 90th Anniversary of Chulalongkorn University Fund (Ratchadaphiseksomphot Endowment Fund) for Master's thesis project

2009

- Japan Student Services Organization (JASSO) for Chula-Chiba University Pharmaceutical Student Exchange Program at Chiba University, Japan,

2007

- Industrial and Research for Undergraduate Student (IRPUS) from Thailand Research Fund (TRF) for B.Pharm. senior project, 2007

Presentation on national and international conferences

Poster presentation

- Rapid induction and maintaining of P-glycoprotein function by quinidine and digoxin on Caco-2 cells, The 10th Biomedical Transporters: SLC Transporters and Ion Channels in Drug Discovery and Preclinical Development, August 10, 2017, **Lausanne, Switzerland**
- Novel *in vitro* method for screening the reversibility of P-glycoprotein inhibitors, The 6th BBBB conference of Pharmaceutical Sciences: Strategies to improve the quality and performance of modern drug delivery systems, September 10-12, 2015, **Helsinki, Finland**

Oral presentation

- Less reactive preactivated polymer: A promising excipient for mucosal drug delivery, The International Conferences on Pharmaceutical Sciences (ICPS) 2023, March 7-8, 2023, **Kuala Lumpur, Malaysia**
- Strategies to improve drug permeation, The International Conference on Chemical & Allied Science and their Applications, January 20, 2023, **Delhi, India**
- Strategies to improve drug permeation, The 2nd International Conference on "Advanced Developments in Chemistry and Allied Sciences 2023", January 18, 2023, **Sonipat, India**
- Multifunctional adhesive polymers: Preactivated thiolated chitosan-EDTA conjugates, The 4th UKM-TU Joint Research Symposium on Pharmaceutical Sciences, April 25, 2019, **Pathumthani, Thailand**
- Strategies to improve drug permeation, Pharmacy Research Colloquium 2018, April 3-4, 2018, **Kuala Lumpur, Malaysia**
- Preactivated thiomers for nasal delivery of apomorphine: Synthesis and *in vitro* evaluation, Pharma Middle East 2015, November 2-4, 2015, **Dubai, United Arab Emirates**

List of publications

Original research articles

First author

1. Kesinee Netsomboon, Aamir Jalil, Flavia Laffleur, Andrea Hupfauf, Ronald Gust and Andreas Bernkop-Schnürch. Thiolated chitosans: Are Cys-Cys ligands key to the next generation?. *Carbohydrate Polymers* 2020, 242: 116395.
2. Kesinee Netsomboon, Wongsakorn Suchaoin, Flavia Laffleur, Felix Prüfert and Andreas Bernkop-Schnürch. Multifunctional adhesive polymers: Preactivated thiolated chitosan-EDTA conjugates. *European Journal of Pharmaceutics and Biopharmaceutics* 2017, 111: 26-32.
3. Kesinee Netsomboon, Alexandra Partenhauser, Julia Rohrer, Nadine Elli Sündermann, Felix Prüfert, Wongsakorn Suchaoin, Flavia Laffleur and Andreas Bernkop-Schnürch. Preactivated thiomers for nasal delivery of apomorphine: *In vitro* and *in vivo* evaluation. *European Journal of Pharmaceutics and Biopharmaceutics* 2016, 109: 35-42.
4. Kesinee Netsomboon, Flavia Laffleur and Andreas Bernkop-Schnürch. P-glycoprotein inhibitors: Synthesis and *in vitro* evaluation of a preactivated thiomers. *Drug Development and Industrial Pharmacy* 2016, 42(4): 668-675.
5. Kesinee Netsomboon, Flavia Laffleur, Wongsakorn Suchaoin and Andreas Bernkop-Schnürch. Novel *in vitro* transport method for screening the reversibility of P-glycoprotein inhibitors. *European Journal of Pharmaceutics and Biopharmaceutics* 2016, 100: 9-14.
6. Kesinee Netsomboon, Andrea Feßler, Lena Erletzt, Felix Prüfert, Markus Ruetz, Christoph Kieninger, Bernhard Kräutler and Andreas Bernkop-Schnürch. Vitamin B₁₂ and derivatives *in vitro* permeation studies across Caco-2 cell monolayers and freshly excised rat intestinal mucosa. *International Journal of Pharmaceutics* 2016, 497(1-2): 129-135.

Co-authorships

1. Flavia Laffleur, Kesine Netsomboon, Liliana Erman and Alexandra Partenhauser. Evaluation of modified hyaluronic acid in terms of rheology, enzymatic degradation and mucoadhesion. *International Journal of Biological Macromolecules* 2019, 123: 1204-1210.
2. Flavia Laffleur, Jitka Krouská, Jakub Tkacz, Miloslav Pekař, Farid Aghai, Kesine Netsomboon. Buccal adhesive films with moisturizer- the next level for dry mouth syndrome? *International Journal of Pharmaceutics* 2018, 500(1-2): 309-315.
3. Flavia Laffleur, Benedikt Strasdat, Arshad Mahmood, Tobias Reichenberger, Melanie Gräber and Kesine Netsomboon. Nasal patches containing naphazoline for management of nasal impairments. *Journal of Drug Delivery Science and Technology* 2018, 45: 54-59.
4. Flavia Laffleur, Kesine Netsomboon, Andreas Bernkop-Schnürch, Dana Westmeire, Roland H. Staubes and Dominic Doctor. Comprehensive mucoadhesive study of anionic polymers and their derivate. *European Polymer Journal* 2017, 93: 314-322.
5. Wongsakorn Suchaoin, Arshad Mahmood, Kesine Netsomboon and Andreas Bernkop-Schnürch. Zeta-potential-changing nanoparticles conjugated with cell-penetrating peptides for enhanced transfection efficiency. *Nanomedicine* 2017, 12(9): 963-975.
6. Flavia Laffleur, Kathrin Knapp, Wongsakorn Suchaoin, Alexandra Partenhauser, Kesine Netsomboon and Andreas Bernkop-Schnürch. Comparison of mucoadhesive and cohesive features of poly(acrylic acid)-conjugates respective their molecular mass. *European Journal of Pharmaceutics and Biopharmaceutics* 2017, 113: 149-156.
7. Alexandra Partenhauser, Kesine Netsomboon, Irene Pereira de Sousa, Flavia Laffleur and Andreas Bernkop-Schnürch. Preactivated silicone oil as potential long-term vitreous replacement with nonemulsifying properties. *Journal of Biomedical Material Research. Part B, Applied Biomaterials* 2017, 105(3): 551-559.

8. Alexandra Partenhauser, [Kesinee Netsomboon](#), Gintare Leonaviciute and Andreas Bernkop-Schnürch. Evaluation of thiolated silicone oil as advanced mucoadhesive antifoaming agent. *Drug Delivery* 2016, 23(8): 2711-2719.
9. Wongsakorn Suchaoin, Irene Pereira de Sousa, [Kesinee Netsomboon](#), Hung Thanh Lam, Flavia Laffleur and Andreas Bernkop-Schnürch. Development and *in vitro* evaluation of zeta potential changing self-emulsifying drug delivery systems for enhanced mucus permeation. *International Journal of Pharmaceutics* 2016, 510(1): 255-262.
10. Wongsakorn Suchaoin, Irene Pereira de Sousa, [Kesinee Netsomboon](#), Julia Rohrer, Patricia Hoffmann Abad, Flavia Laffleur, Barbara Matuszczak and Andreas Bernkop-Schnürch. Mucoadhesive Polymers: Synthesis and *in vitro* characterization of thiolated poly(vinyl alcohol). *International Journal of Pharmaceutics* 2016, 503(1-2): 141-149.
11. Flavia Laffleur, Lukas Bacher and [Kesinee Netsomboon](#). Design, characterization and *in vitro* evaluation of a novel thiolated polymer: preactivated carboxymethyl cellulose. *Therapeutic Delivery* 2016, 7(1): 7-14.
12. Julia Anita Griebinger, Sabine Hauptstein, Flavia Laffleur, [Kesinee Netsomboon](#) and Andreas Bernkop-Schnürch. Evaluation of the impact of multivalent metal ions on the permeation behavior of Dolutegravir sodium. *Drug Development and Industrial Pharmacy* 2016, 42(7): 1118-1126.
13. Julia Rohrer, Ožbej Zupančič, Wongsakorn Suchaoin, [Kesinee Netsomboon](#), Flavia Laffleur, Sejin Oh and Andreas Bernkop-Schnürch. Synthesis and *in vitro* characterization of preactivated thiolated gelatin. *European Polymer Journal* 2015, 73: 268-277.

Review article

[Kesinee Netsomboon](#) and Andreas Bernkop-Schnürch. Mucoadhesive vs. mucopenetrating particulate drug delivery. *European Journal of Pharmaceutics and Biopharmaceutics* 2016, 98: 76-89.