

TRINH PHAN-CANH, Pharm, MSc. BIT.

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EDUCATION -----

- Ph.D. Candidate in Molecular Genetics & Immunology** Jan 2021 – Present
- Medical University of Vienna – Max Perutz Labs Vienna, Vienna Biocenter Campus
 - Thesis: *Antifungal Multidrug Resistance and Virulence of Candida auris*
 - Advisor: Prof. Dr. Karl Kuchler
- M.Sc. in Pharmacy (Highest Distinction)** Sep 2017 – Sep 2019
- University of Medicine and Pharmacy at Ho Chi Minh City (UMP)
 - Thesis: *Morphology, chemical composition and antimicrobial activity of Dirinaria applanata*
- B.Sc. in Information Technology (Distinction)** Oct 2015 – Feb 2018
- Vietnam National University – Ho Chi Minh City (VNU-HCM)
 - Focus: Management Information Systems (Distance Education Program)
- Pharmacist Degree (First Class Honor)** Sep 2010 – Sep 2015
- University of Medicine and Pharmacy at Ho Chi Minh City (UMP)
 - Thesis: *Fermentation conditions for Bacillus subtilis KP3 spores' production*

SELECTED AWARDS AND DISTINCTIONS -----

- **Bernd Rode Award** – ASEA-UNINET Junior Researcher Award (2024)
- **Youth Travel Award** – FEBS Advanced Lecture Course, France (2024)
- **ESCMID Research Grant** – Outstanding project in fungal pathogenesis (2023)
- **FEMS Travel Grant** – Candida and Candidiasis Meeting, Canada (2023)
- **Ernst Mach Grant** – PhD Fellowship, ASEA-UNINET (2021–2023)
- **Pilot International Research Grant** – TRAC Sweden-Vietnam (2019)
- **Dean's List, Master's Degree of Pharmacy**, UMP Vietnam (2019)
- **Youth Leaders Award** – Rector's Board, UMP Vietnam (2017–2019)
- **Homtamin Scholarship** – Korea United Pharm – Awarded for academic excellence (2015)
- **Daewoong Scholarship** – Daewoong Pharmaceutical – Awarded for academic excellence (2013)
- **First Prize – Scientific Research Contest: Seeking Elixir** – UMP (2012)

PUBLICATIONS-----

1. **Phan-Canh T**, Penninger P, Seiser S, et al, A Elbe-Bürger & K Kuchler. *The carbonic anhydrase Nce103 controls fungal fitness and skin tropism of Candida auris*. In revision, **Nature Microbiology**, 2025.
2. **Phan-Canh T**, Jenull S, Bitencourt, et al. & K Kuchler. *White-Brown switching controls phenotypic plasticity and virulence of Candida auris*. **Cell Reports**, Jul 9;44(7): 115976. <https://doi.org/10.1016/j.celrep.2025.115976>
3. **Phan-Canh T**, Nguyen MLD, Phuc-Loi L, et al. & K Kuchler. *Rapid in vitro evolution of flucytosine resistance in Candida auris*. **mSphere**, 2025. <https://doi.org/10.1128/msphere.00977-24>
4. **Phan-Canh T**, Bitencourt T & K Kuchler. *Gene dosage of PDR16 modulates azole susceptibility in Candida auris*. **Microbiology Spectrum**, 2025. <https://doi.org/10.1128/spectrum.02659-24>
5. **Phan-Canh T** & K Kuchler. *Do morphogenetic switching and intraspecies variation enhance virulence of Candida auris?* **PLOS Pathogens**, 2024. <https://doi.org/10.1371/journal.ppat.1012559> (**Highlighted in MicrobeTV Podcast** – https://www.youtube.com/watch?v=DcHq_R8JaQM&t=1752s).

6. **Phan-Canh T**, et al. & K Kuchler. *Targeting the cytochrome bc1 complex subunit Rip1 potentiates caspofungin activity in Candida auris*. **In preparation, 2025**.
7. **Phan-Canh T**, et al, N Chauhan & K Kuchler. *Antifungal resistance can emerge in Candida auris without drug selection pressure*. **In preparation, 2025**.
8. Tsymala I, Penninger P, Nogueira F, Jenull S, **Phan-Canh T**, et al. & K Kuchler. *Innate lymphoid cells integrate sensing and plasticity to control fungal infections*. **In revision, Cell Reports, 2025**.
9. Cerbu D, Seiser S, **Phan-Canh T**, et al, K Kuchler & A Elbe-Bürger. *Octenidine effectively reduces Candida auris colonisation on human skin*. **Scientific Reports. Accepted, 2025**.
10. Kavaklıoğlu G, Podhornik A, Vcelkova T, Marjanovic M, Beck MA, **Phan-Canh T**, et al. *L1TD1 associates with ORF1p to promote LINE-1 retrotransposition*. **eLife**, 2025. <https://doi.org/10.7554/eLife.96850.3>
11. Penninger P, Brezovec H, Tsymala I, Teufel M, **Phan-Canh T**, et al. & K Kuchler. *HDAC1 fine-tunes Th17 polarization in fungal infections*. **Cell Reports**, 2024. <https://doi.org/10.1016/j.celrep.2024.114993>
12. Bitencourt T, Nogueira F, Jenull S, **Phan-Canh T**, et al. K Kuchler, T Lion. *Multiomics reveals interspecies interaction pathways between A. fumigatus and K. pneumoniae*. **Communications Biology**, 2024. <https://doi.org/10.1038/s42003-024-07145-x>
13. Seiser S, Arzani H, Ayub T, **Phan-Canh T**, et al. & K Kuchler, A Elbe-Bürger. *Human and mouse skin models to study Candida auris infection*. **Microbes and Infection**, 2023. <https://doi.org/10.1016/j.micinf.2023.105234>
14. Jenull S, Shivarathri R, Tsymala I, Penninger P, **Phan-Canh T**, et al. & K Kuchler. *Transcriptomics defines echinocandin resistance in Candida auris*. **mBio**, 2022. <https://doi.org/10.1128/mbio.00799-22>
15. Shivarathri R, Chauhan M, Mazumdar R, **Phan-Canh T**, et al. & K Kuchler & N Chauhan. *A proteomic approach for the quantification of post-translational protein lysine acetylation in Candida albicans*. In: **Candida species: Methods in Molecular Biology**, 2022. https://doi.org/10.1007/978-1-0716-2549-1_3

ABSTRACTS, POSTERS, AND PRESENTATIONS -----

- **Poster & Poster Slam** – *Annual YSA PhD Symposium*, Medical University of Vienna (2025)
- **Poster** – *Host-pathogen interactions and virulence in human fungal pathogens*, FEBS Advanced Lecture Course, France (2024)
- **Poster** – *Candida and Candidiasis*, Microbiology Society, Montreal, Canada (2023)
- **Oral** – *Immune Control of Tissue Homeostasis*, TissueHome Symposium, Vienna (2023)
- **Poster** – VBC PhD Symposium, Vienna Biocenter Campus (2022)
- **Oral** – *Scientific Seminar of Young Vietnamese Intellectuals*, Prague, Czech Republic (2022)
- **Poster** – *Host-pathogen interactions and virulence in human fungal pathogens*, FEBS Advanced Lecture Course, France (2022)

RESEARCH EXPERIENCE-----

PhD Candidate, Karl Kuchler Lab, Medical University of Vienna	2021–Present
<ul style="list-style-type: none"> ▪ Genetic manipulation, CRISPR screening, multi-omics (RNA-seq, proteomics, WGS) ▪ Host-pathogen and interkingdom interactions (yeast, <i>in vitro</i>, <i>in vivo</i> models) ▪ Drug resistance, microbial immunology, microbiome and fungal pathogenesis 	
Lecturer, UMP, Vietnam	2016–2021
<ul style="list-style-type: none"> ▪ Led antimicrobial discovery projects using Myxobacteria and Streptomyces ▪ Supervised undergraduates and coordinated the Mycology Laboratory 	
Pharmacist & System Administrator, Drug Interactions Checker	2015–2017
<ul style="list-style-type: none"> ▪ Built and maintained drug info database; led safety content review and UX 	

OTHER TECHNICAL SKILLS-----

- Programming & Data Analysis: R (proficient), Python, Bash, SQL, Nextflow
- Visualization: ggplot2, GraphPad Prism, FlowJo, Adobe Illustrator, Photoshop, InDesign
- Languages: English (professional fluency), Vietnamese (native)

REVIEWING EXPERIENCE -----

Regular Reviewer for ASM Microbiology Spectrum, Pathogens and Disease, Fungal Genetics and Biology...

MENTORING & TEACHING -----

- Supervised many students (Master's, diploma, internships); **some won national research awards:**
 - **School research competition in Institute of Science and Technology Austria (ISTA)** 2023
Mentees: Maja Prettner, and Katja Walter
 - **National Eureka Award research competition, Vietnam** 2019
Mentee: Duong Nguyen Phi Long
 - **Finding Elixir Competition at UMP, Vietnam** 2018
Mentees: Tran Quoc Vuong, Nguyen Xuan Loc, Nguyen Thi Loan
 - **Summer Research Program at UMP, Vietnam** 2017, 2018, 2019
Mentees: Vo Linh Tu, Pham Tran Kim Quyen, Tran Thi Thu Ha
- Developed curriculum and led student research groups at UMP 2016–2021

LEADERSHIP & OUTREACH-----

- Founder, **PhD Talk**: Seminar series for Vietnamese biologists in Austria 2021-2022
- President, Vietnamese Student Association in Austria 2022–2024
- Organizer of national and university science conferences 2020–2021
- Member, Executive Committee, Vietnamese Youth and Student Federation in Europe 2021–2024
- Editor, Pharmacy Brief News: A bilingual outreach publication 2020
- Founder, President, Pharmacy Soft Skill Club 2011–2015

REFERENCES-----

Karl Kuchler, PhD

Professor of Molecular Biology, Medical University of Vienna, Austria

Adelheid Elbe-Bürger, PhD

Associate Professor of Dermatology & Immunology, Medical University of Vienna, Austria

Neeraj Chauhan, PhD

Associate Professor, HMH Center for Discovery and Innovation, USA