

CURRICULUM VITAE



Contact information

Dr. Ngo Tat Trung
Centre for Genetics Consultation and Cancer Screening
Research Group Leader, Vietnamese-German Center
for Medical Research (VG-CARE)
108 Military Central Hospital
No. 1 Tran Hung Dao str., Hai Ba Trung, Hanoi, Vietnam
Email: tatrungngo@gmail.com

Personal Details

Full name: Ngo Tat Trung
Date of birth: October 13th, 1978
Gender: Male
Nationality: Vietnamese

Educational Background

2004 - 2006 Master program in Biochemistry and Molecular Biology, University of Bremen, Germany DAAD Scholarship (German Academic Exchange Service)
2001 - 2003 Post graduate researcher, Department of Microbiology, Vietnamese Institute of Agricultural Engineering
1996 - 2001 Undergraduate studies in Chemical Engineering, Hanoi University of Technology, Vietnam

Working Experience

2010 - to date Centre for Genetics Consultation and Cancer Screening, Department of Molecular Biology, Vietnamese German Centre for Medical Research of 108 Military Central Hospital, Hanoi, Vietnam.
2007 - 2010 Max Planck Institute PhD fellowship Max Planck Institute for Immunobiology, Freiburg, Germany.
PhD thesis focus: Gene regulation in cells of immune system with focus on transcription factors – Promoter interaction.

Research Orientation

Due to the SARS-CoV-2/COVID-19 pandemic, global supply chain disruptions have made it difficult for Vietnam to import essential materials for molecular diagnostics and biological research. In response, Dr. Trung's research team, in collaboration with colleagues from Stanford University, Cambridge University, and ST and ST Light, has piloted the development of a production pipeline to manufacture key enzymes required for biological research and molecular diagnostics.

ENZYME OR DERIVATIVES	APPLICATION
Taq DNA polymerase	For diagnostics of Infection diseases, molecular pathogens and other biological research
Universal 2x taqman master mix	For diagnostics of Infection diseases, molecular pathogens and other biological research
Reverse transcriptase	For diagnostics of Infection diseases, molecular pathogens and other biological research
Thermostable reverse transcriptase	For diagnostics of Infection diseases, molecular pathogens and other biological research
One Step realtime PCR master mix	For diagnostics of Infection diseases, molecular pathogens and other biological research
Bst-LF (for isothermal DNA amplification)	For diagnostics of Infection diseases, molecular pathogens at point-of-care format
Thermostable Bst-LF (isothermal DNA amplification)	For diagnostics of Infection diseases, molecular pathogens at point-of-care format

Scholarships and Grants

No	Project name	Funder	Project duration
1	Optimizing clinical competent procedure to quantitatively measure the PML-RARA transcript of promyeloid leukemia	Vietnamese Ministry of Science and Technology (MOST)	1/2012-12/2012
2	Translating the use of Interleukin 12 (IL-12) to the therapeutics of hepatocellular carcinoma	MOST (KC04.06.10-15)	6/2012-6/2015
3	Translating the use of advanced techniques into the early screening, diagnosis and treatment of bronchial cancer	MOST (KC10.16.10-15)	10/2013-10/2015
4	Development of molecular kits for the diagnosis of blood stream infection and the acquired antibiotics resistance genes	MOST (KC10.13.10-15)	8/2013-12/2015
5	Evaluating the roles of serum DKK1 and abnormal circulating nucleic acid for	NAFOSTED Grant Number (106-YS.02-2016.20)	04/2017-04/2019

	identifying hepatocellular carcinoma in patients with hepatitis B virus infection		
6	Translating the uses of molecular biological techniques into the identification of leukemia related genetics lesions	MOST (KC10.43.16-20)	10/2016-10/2018
7	Developing a novel assay for diagnosis of blood stream infection	NAFOSTED Grant Number 108.06-2017.21	09/2017-08/2020
8	Application of advanced genomic technologies for early detection of hepatocellular carcinoma in patients infected with hepatitis B virus	Vingroup Innovation Foundation (VINIF) project code VINIF.2019.15	09/2019-08/2022

Honors and Fellowships

- Alexandre Yersin Prize for Outstanding Medical Publications 2017-2019 by Swiss-Vietnamese Medical Association
- Alexandre Yersin Prize for Outstanding Medical Publications 2019-2020 by Swiss-Vietnamese Medical Association
- Alexandre Yersin Prize for Outstanding Medical Publications 2022-2024 by Swiss-Vietnamese Medical Association
- Golden medal in medical engineering for young investigators from North of Vietnam (2017)
- Silver medal for young investigators with prototypes applicable in military medicines (2017)

National Patents (filed)

- Oligo used for priming the PCR detection extended betalactam resistant genes and the associated techniques used for the detection of SHV, TEM, CTX-M, NDM, (Vietnamese Patent number 17084).
- Method and associated kit used for diagnosis of blood stream infections (Vietnamese Patent number 17556)
- Method and associated kit use for non-invasive quantitative diagnosis of circulating kras gene mutation (Vietnamese Patent number 17265)
- Method for identification Calreticulin mutations by PCR based amplicon length differentiation assay for diagnosis of myeloproliferative neoplasms (Vietnamese Patent number 21445).
- Peptide clamping PCR based assay for identification of hTERT gene promoter mutation (Vietnamese Patent number 21448)
- Methods for identification of EGFR mutant variants from non-small cell lung cancer patients (Vietnamese Patent number 19914).
- Method for genotyping Cyp2C19 gene (Vietnamese Patent number 17885)
- Peptide clamping assay for identification of Kras gene mutations (Vietnamese Patent Number 17256)

Out-Source Service

- EGFR mutation diagnosis for patients sponsored by Astrazeneca Inc and Roche Inc
- Kras mutation diagnosis for patients sponsored Merck Inc.

International Publications

1. DT Thao, NP Thanh, DV Quyen, LT Khai, LH Song, **NT Trung**, [Identification of breast cancer-associated PIK3CA H1047R mutation in blood circulation using an asymmetric PCR assay](#), Plos one 19 (8), e0309209 (2024)
2. DT Huyen, J Reboud, DT Quyen, JM Cooper, TP Velavan, **NT Trung et al**, [An isothermal CRISPR- based lateral flow assay for detection of *Neisseria meningitidis*](#). Annals of Clinical Microbiology and Antimicrobials 23 (1), 28 (2024)
3. Truong Nguyen Duy ^{a 1}, Hoang Le Huy ^{b 1}, Quyen Dao Thanh ^c, Hoai Ngo Thi ^d, Hanh Ngo Thi Minh ^e, Manh Nguyen Dang ^a, Song Le Huu ^{a c}, **Trung Ngo Tat**, [Association between *Bacteroides fragilis* and *Fusobacterium nucleatum* infection and colorectal cancer in Vietnamese patients](#), June 2024 Anaerobe 88(3)
4. PT Dzung*, **NT Trung***, DD Chinh, D Van De, H Van Tong, NL Toan [Clinical association and diagnostic significance of miRNA-29a and miRNA-147b in type 2 diabetes mellitus](#) International Journal of Medical Sciences 20 (10), 1316, 2023
5. **Ngo Tat Trung**, Nghiem Xuan Hoan, Pham Quang Trung, Mai Thanh Binh, Hoang Van Tong, Nguyen Linh Toan, Mai Hong Bang & Le Huu Song, [Clinical significance of combined circulating TERT promoter mutations and miR-122 expression for screening HBV-related hepatocellular carcinoma](#), *Scientific Reports* volume 10, Article number: 8181 (2020)
6. Hoan NX, Khuyen N, Giang DP, Binh MT, Toan NL, Anh DT, **Trung NT**, Bang MH, Meyer CG, Velavan TP, Song LH, [Vitamin D receptor Apal polymorphism associated with progression of liver disease in Vietnamese patients chronically infected with hepatitis B virus](#), *BMC Med Genet*. 2019 Dec 21;20(1):201. doi: 10.1186/s12881-019-0903-y
7. **Trung NT**, Quyen DT, Hoan NX, Giang DP, Trang TTH, Velavan TP, Bang MH, Song LH
8. [Rapid, low cost and sensitive detection of Calreticulin mutations by a PCR based amplicon length differentiation assay for diagnosis of myeloproliferative neoplasms](#) - *BMC Med Genet*. 2019 Jun 27;20(1):115. doi: 10.1186/s12881-019-0819-6.
9. **Trung NT**, Thau NS, Bang MH, Song LH. [PCR-based Sepsis@Quick test is superior in comparison with blood culture for identification of sepsis-causative pathogens](#). *Sci Rep*. 2019 Sep 20;9(1):13663. doi: 10.1038/s41598-019-50150-y
10. **Trung NT**, Hai LT, Giang DP, Hoan PQ, Binh MT, Hoan NX, Toan NL, Meyer CG, Velavan TP, Bang MH, Song LH. [No expression of HBV-human chimeric fusion transcript \(HBx-LINE1\) among Vietnamese patients with HBV-associated hepatocellular carcinoma](#). *Ann Hepatol*. 2019 Mar - Apr;18(2):404-405. doi: 10.1016/j.aohep.2019.02.002.
11. Binh MT, Hoan NX, Van Tong H, Sy BT, **Trung NT**, Bock CT, Toan NL, Song LH, Bang MH, Meyer CG, Kremsner PG, Velavan TP. [NTCP S267F variant associates with decreased susceptibility to HBV and HDV infection and decelerated progression of related liver diseases](#). *Int J Infect Dis*. 2019 Mar;80:147-152. doi: 10.1016/j.ijid.2019.01.038
12. **Tat Trung N**, Van Tong H, Lien TT, Van Son T, Thanh Huyen TT, Quyen DT, Hoan PQ, Meyer CG, Song LH. [Clinical utility of an optimised multiplex real-time PCR assay for the identification of pathogens causing sepsis in Vietnamese patients](#). *Int J Infect Dis*. 2018 Feb;67:122-128. doi: 10.1016/j.ijid.2017.12.015

13. **Tat Trung N**, Duong DC, Tong HV, Hien TTT, Hoan PQ, Bang MH, Binh MT, Ky TD, Tung NL, Thinh NT, Sang VV, Thao LTP, Bock CT, Velavan TP, Meyer CG, Song LH, Toan NL [Optimisation of quantitative miRNA panels to consolidate the diagnostic surveillance of HBV-related hepatocellular carcinoma.](#) PLoS One. 2018 Apr 19;13(4):e0196081. doi: 10.1371/journal.pone.019608
14. **Trung NT**, Van Son T, Quyen DT, Anh DT, Sang VV, Lam NX, Manh ND, Duong VP, Cuong BT, Tuyen QD, Chinh NX, Hoan PQ, Van Tong H, Meyer CG, Song LH. [Significance of nucleic acid testing in diagnosis and treatment of post-neurosurgical meningitis caused by multidrug-resistant Acinetobacter baumannii: a case report.](#) J Med Case Rep. 2016 Nov 3;10(1):313
15. Hoan NX, Khuyen N, Binh MT, Giang DP, Van Tong H, Hoan PQ, **Trung NT**, Anh DT, Toan NL, Meyer CG, Kreamsner PG, Velavan TP, Song LH.
16. [Association of vitamin D deficiency with hepatitis B virus - related liver diseases.](#) BMC Infect Dis. 2016 Sep 23;16(1):507
17. **Trung NT**, Kremmer E, Mittler G. [Biochemical and cellular characterization of transcription factors binding to the hyperconserved core promoter-associated M4 motif.](#) BMC Genomics. 2016 Aug 30;17:693. doi: 10.1186/s12864-016-3033-3
18. **Trung NT**, Hien TT, Huyen TT, Quyen DT, Van Son T, Hoan PQ, Phuong NT, Lien TT, Binh MT, Van Tong H, Meyer CG, Velavan TP, Song le H [Enrichment of bacterial DNA for the diagnosis of blood stream infections.](#) BMC Infect Dis. 2016 May 31;16:235. doi: 10.1186/s12879-016-1568-1
19. **Trung NT**, Hien TT, Huyen TT, Quyen DT, Binh MT, Hoan PQ, Meyer CG, Velavan TP, Song le H. [Simple multiplex PCR assays to detect common pathogens and associated genes encoding for acquired extended spectrum betalactamases \(ESBL\) or carbapenemases from surgical site specimens in Vietnam.](#) Ann Clin Microbiol Antimicrob. 2015 Apr 12;14:23. doi: 10.1186/s12941-015-0079-z
20. Sartelli M, **Trung et al.** [Antimicrobials: a global alliance for optimizing their rational use in intra-abdominal infections \(AGORA\).](#) World J Emerg Surg. 2016 Jul 15;11:33