

CURRICULUM VITAE



Contact information

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Personal Details

Full name:	Hoan NX
Date of birth:	May 19 th , 1983
Place of birth:	Hanoi, Vietnam
Gender:	Male
Nationality:	Vietnamese
Marital status:	Married (2008) and two children (born in 2009 and 2014)
Language:	Vietnamese, English, German (A1)

Educational Background

2014-2017	University of Tübingen, Tübingen, Germany; PhD
2001-2007	Hanoi Medical University, Vietnam; Medical Doctor
1999-2001	Phuong Duc school, Hanoi, Vietnam General Certificate of Secondary Education

Working Experience

7/2024- to date	Head, Office of Research Administration, 108 Institute of Clinical Medical and Pharmaceutical Science, Hanoi.
7/2021 – 7/2024	Deputy head, Department of Molecular Biology, 108 Institute of Clinical Medical and Pharmaceutical Science, Hanoi.
1/2019 – to date	Group leader, Vietnamese-German Center for Medical Research (VG-CARE) and Clinical physician, Department of Blood-Borne Infectious Diseases, 108 Institute of Clinical Medical and Pharmaceutical Science, Hanoi.
1/2018-12/2018	Postdoctoral fellow, Institute of Tropical Medicine, Faculty of Medicine Eberhard Karls Universität Tübingen (Germany).
4/2015-12/2017	PhD student, Institute of Tropical Medicine, Faculty of Medicine Eberhard Karls Universität Tübingen (Germany).
3/2014-03/2015	Molecular Biology Trainee, Institute of Tropical Medicine, Faculty of Medicine Eberhard Karls Universität Tübingen (Germany).

1/2008-12/2013

Clinical physician, Institute of Clinical Infectious Diseases, 108 Institute of Clinical Medical and Pharmaceutical Science, Hanoi.

Research Orientation

My research interests are focusing on Tropical Medicine (viral hepatitis, sepsis, dengue...) and oncology.

Most published studies focused on:

- The molecular epidemiology of hepatitis viruses (HBV, HDV and HEV)
- The human genetic association with HBV-related liver diseases
- The role of epigenetics (DNA Methylation, miRNAs and long noncoding RNAs) on clinical liver disease outcomes in HBV infected patients.

Currently my research interests are:

- Development of novel biomarkers using a multimodal approach (genomics, metabolomics and immunomics) that can aid in the early diagnosis of cancers, in particular liver cancer.
- Molecular pathology and targeting therapy.

Scholarships and Grants

Scholarship: 4-year PhD Scholarship (2014 – 12/2017)

Funder: Institute of Tropical Medicine, University of Tübingen, Tübingen, Germany

Budget: ~ 60,000 Euros

Project 1

Title: Investigating the role of molecular markers in the diagnosis of prostate cancer

Role: Main Investigator

Funder: Ministry of Science and Technology (2010-2012)

Budget: ~20,000 Euros

Project 2

Title: Application study of molecular biology in early diagnosis and prediction for hepatocellular carcinoma in patient infected with hepatitis B virus (HBV)

Role: Main Investigator

Funder: Ministry of Science and Technology (2010-2012)

Budget: ~200,000 Euros

Project 3

Title: Functional roles of JAK/STAT/SOCS signaling pathway and Interferon-stimulated gene 15 (ISG15) protein modification in hepatitis B virus -related liver diseases

Role: Main Investigator

Funder: Nafosted (2017-2020)

Budget: ~110,000 Euros

Finished: Good

Project 4

Title: Investigating the role of immune inhibitory checkpoint pathways PD-1/PD-L1 and IDO/TDO-Kyn-AhR in the clinical outcomes of patients acquired chronic HBV infections

Role: Principal Investigator (PI)

Funder: Nafosted (2019-2022)

Budget: ~65,000 Euros

Project 5

Title: Investigating and establishing a new tool for the determination of *Neisseria meningitidis* using CRISPR/Cas technology combined with LAMP/RPA
Role: Main Investigator
Funder: Ministry of Defense (2020-2023)
Budget: ~200,000 Euros

Project 6

Title: Development of Multiplex RT PCR KIT and Antigen Microarray for diagnosis, genotyping and prediction of Dengue hemorrhagic Fever
Role: Main Investigator
Funder: Ministry of Science and Technology (2020-2023)
Budget: ~200,000 Euros

Project 7

Title: Application of advanced genomic technologies for early detection of hepatocellular carcinoma in patients infected with hepatitis B virus
Role: Co-Principal Investigator (Co-PI)
Funder: VIN-IF (VIN GROUP INNOVATIVE FOUNDATION (2019-2022)
Budget: 310,000 Euros

Project 8

Title: Evaluating the roles of colon microbiota and abnormal expression of circulating genetic lesions for early surveillance and prognosis of colorectal cancer.
Role: Project manager (Project secretary)
Funder: Nafosted (2020-2023)
Budget: 60,000 Euros

Project 9

Title: Discovery of novel biomarkers to monitor the progression of hepatitis B virus related chronic liver diseases and early diagnosis of hepatocellular carcinoma
Role: Principal Investigator (PI)
Funder: VIN-IF (VIN GROUP INNOVATIVE FOUNDATION) (10/2021-10/2024)
Budget: 200,000 Euros

Honors and Fellowships

2016 Travel Grant, German Academic Exchange Service (DAAD): attending the 51th International Congress of liver diseases, April 13-17th, Barcelona, Spain

Memberships

EASL European Association for the Study of the Liver
AASLD American Association for the Study of Liver Diseases
ESCMID European Society of Clinical Microbiology and Infectious Diseases

Peer Review Activities

BMC Medical genetics, Human Immunology, PlosOne, Viral Immunology, Frontier in oncology, BMC infectious Diseases, Scientific Reports, World Journal of Gastroenterology, Journal of Viral Hepatitis....

Mentorship, Supervisions and Lecturing

Graduated students: 01 PhD and 05 Masters and several Bachelors

PhD candidate: Pham Thi Minh Huyen – Department of Biochemistry – 108 MCH

Title: Investigation of some polymorphisms of PDCD1 and CD274 genes in patients with hepatitis B virus infection

Year of thesis defense: 2022

Ongoing: 05 PhD students

1. Le Thi Thanh Xuan (2023-2026)

Title: Investigation of mPD-L1 expression, plasma sPD-L1 levels and histopathological characteristics in patients with colorectal adenocarcinoma

Role: Primary Supervisor

2. Ngo Dieu Hoa (2023 – 2026)

Title: Expression levels of plasma miRNAs in patients with chronic hepatitis, cirrhosis, and hepatocellular carcinoma caused by hepatitis B virus infection

Role: Primary Supervisor

3. Nguyen Thi Hiep (2024 – 2027)

Title: Clinical Significance of Biomarkers Related to Immune Checkpoint Inhibitory Signaling Pathways in Sepsis patients

Role: Primary Supervisor

4. Nguyen Quỳnh Tú (2024 – 2027)

Title: Expression Levels of Circulating miRNAs in Colorectal Cancer and Their Association with Clinical and Paraclinical Characteristics

Role: Secondary Supervisor

5. Nguyen Thi Quynh Trang (2024- 2027)

Title: Investigation of the Association Between HLA-C and HLA-DR Gene and Clinical and Paraclinical Characteristics in Patients with Early-Onset Plaque Psoriasis at the 108 Military Central Hospital

Role: Secondary Supervisor

Lecturing:

Currently serving as a guest lecturer for Hanoi Medical University, Hai Phong Medical University, Vinuniversity, Vietnam Military Medical University, and Hanoi Dong Do International University.

International Publications 2019-2024 (26 papers: 13 first/Corresponding Author)

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/?term=Nghiem+Xuan+Hoan+or+NX+Hoan>

(*Shared first authors; [§]Corresponding author)

1. Dong DV, Boutin S, Sang VV, Manh ND, **Hoan NX**, Quang HX, Lien TT, Trang VD, The NT, Linh LTK, Schmauder K, Ueltzhöffer V, Hafza N, Hauswaldt S, Rupp J, Kremsner PG, Song LH, Nurjadi D, Peter S, Velavan TP. Optimization of the Diagnosis of Central Nervous System Infections in Vietnamese Hospitals: Results From a Retrospective Multicenter Study. Open Forum Infect Dis. 2024 Sep
2. Van Tuyen N, Hoang Ngoc N, Quoc Hoan P, Thi Yen N, Cam Thach N[§], **Hoan NX**[§]. Differential distribution of plasma apoA-I and apoB levels and clinical significance of apoB/apoA-I ratio in ischemic stroke subtypes
3. Tung TT, Schmid J, Nghia VX, Cao LC, Linh LTK, Rungsung I, Sy BT, My TN, The NT, **Hoan NX**, Meyer CG, Wedemeyer H, Kremsner PG, Toan NL, Song LH, Bock CT, Velavan TP; Low Risk of Occult Hepatitis B Infection among Vietnamese Blood Donors. Pathogens. 2022 Dec 13;11(12):1524. doi: 10.3390/pathogens11121524. PMID: 36558858; PMCID: PMC9786887.

4. Pallerla SR, **Hoan NX***, Rachakonda S, Meyer CG, Van Tong H, Toan NL, Linh LTK, Giang DP, Kremsner PG, Bang MH, Song LH, Velavan TP. Custom gene expression panel for evaluation of potential molecular markers in hepatocellular carcinoma. *BMC Med Genomics*. 2022 Nov 7;15(1):235. doi: 10.1186/s12920-022-01386-7. PMID: 36345011; PMCID: PMC9641913.
5. **Hoan NX**, Pallerla SR, Huy PX, Krämer H, My TN, Tung TT, Hoan PQ, Toan NL, Song LH, Velavan TP. SARS-CoV-2 viral dynamics of the first 1000 sequences from Vietnam and neighbouring ASEAN countries. *IJID Reg*. 2022 Mar;2:175-179. doi: 10.1016/j.ijregi.2022.01.008. Epub 2022 Jan 20. PMID: 35721434; PMCID: PMC8770528.
6. Trung NT, Lien TT, Sang VV, **Hoan NX**, Manh ND, Thau NS, Quyen DT, Hien TTT, Hoan PQ, Bang MH, Velavan TP, Song LH. Circulating miR-147b as a diagnostic marker for patients with bacterial sepsis and septic shock. *PLoS One*. 2021 Dec 16;16(12):e0261228. doi: 10.1371/journal.pone.0261228. PMID: 34914790; PMCID: PMC8675720.
7. **Hoan NX**, Srinivas Reddy Pallerla, Pham Xuan Huy, Hannah Krämer, Truong Nhat My, Tran Thanh Tung, Phan Quoc Hoan, Nguyen Linh Toan, Le Huu Song, Thirumalaisamy P. Velavan. SARS-CoV-2 viral dynamics of the first 1000 sequences from Vietnam and neighbouring ASEAN countries. *IJID Regions*. 2022.
8. Huyen PTM, Dung DTN, Weiß PJ, Hoan PQ, Giang DP, Uyen NT, Van Tuan N, Trung NT, Velavan TP, Song LH, **Hoan NX[§]**. Circulating level of sPD-1 and PD-1 genetic variants are associated with hepatitis B infection and related liver disease progression. *Int J Infect Dis*. 2022 Feb;115:229-236. doi: 10.1016/j.ijid.2021.12.325. Epub 2021 Dec 12. PMID: 34910956.
9. **Hoan NX[§]**, Thi Minh Huyen P, Dinh Tung B, Phuong Giang D, Tat Trung N, Tien Sy B, Thi Tuan N, Thi Ngoc Dung D, Reddy Pallerla S, Velavan TP, Hong Bang M, Huu Song L. Association of PD-L1 gene polymorphisms and circulating sPD-L1 levels with HBV infection susceptibility and related liver disease progression. *Gene*. 2021 Aug 31;806:145935. doi: 10.1016/j.gene.2021.145935. PMID: 34478821.
10. Hildebrand D, Nurjadi D, **Hoan NX***, Linh MTH, Sang VV, Bang MH, Pallerla SR, Kremsner PG, Heeg K, Song LH, Velavan TP. Soluble Notch ligand DLL1 is associated with bleeding complication in patients with dengue fever infection. *J Infect Dis*. 2021 Aug 10;jiab404. doi: 10.1093/infdis/jiab404. PMID: 34375432.
11. **International MetaSUB Consortium**: A global metagenomic map of urban microbiomes and antimicrobial resistance. *Cell*. 2021 May 22:S0092-8674(21)00585-7. doi: 10.1016/j.cell.2021.05.002.
12. **Hoan NX[§]**, Huyen PTM, Binh MT, Trung NT, Giang DP, Linh BT, Dung DTN, Pallerla SR, Kremsner PG, Velavan TP, Bang MH, Song LH. Genetic variants of programmed cell death 1 are associated with HBV infection and liver disease progression. *Sci Rep*. 2021 Apr 8;11(1):7772. doi: 10.1038/s41598-021-87537-9.
13. **Hoan NX**, Hoechel M, Tomazatos A, Anh CX, Pallerla SR, Linh LTK, Binh MT, Sy BT, Toan NL, Wedemeyer H, Bock CT, Kremsner PG, Meyer CG, Song LH, Velavan TP. Predominance of HBV Genotype B and HDV Genotype 1 in Vietnamese Patients with Chronic Hepatitis. *Viruses*. 2021 Feb 22;13(2):346. doi: 10.3390/v13020346.
14. Song LH, **Hoan NX***, Bang MH, Kremsner PG, Velavan TP. Viral and serological testing of SARS-CoV-2 among health care workers and patients in Vietnam. *Lancet Reg Health West Pac*. 2021 Mar;8:100113
15. Giang NT, van Tong H, Quyet D, Hoan NX, Nghia TH, Nam NM, Hung HV, Anh DT, Van Mao C, Son HA, Meyer CG, Velavan TP, Toan NL. Complement protein levels and MBL2 polymorphisms are associated with dengue and disease severity. *Sci Rep*. 2020 Sep 10.
16. Lytton SD, Nematollahi G, van Tong H, Xuan Anh C, Hung HV, **Hoan NX**, Diez G, Schumacher T, Landt O, Melchior W, Fuchs D, Toan NL, Velavan TP, Song LH. Predominant secondary dengue infection among Vietnamese adults mostly without warning signs and severe disease. *Int J Infect Dis*. 2020 Nov.

17. Trung NT, **Hoan NX***, Trung PQ, Binh MT, Van Tong H, Toan NL, Bang MH, Song LH. Clinical significance of combined circulating TERT promoter mutations and miR-122 expression for screening HBV-related hepatocellular carcinoma. *Sci Rep*. 2020 May 18
18. Auer ED, Tong HV, Amorim LM, Malheiros D, **Hoan NX**, Issler HC, Petzl-Erler ML, Beltrame MH, Boldt ABW, Toan NL, Song LH, Velavan TP, Augusto DG. Natural killer cell receptor variants and chronic hepatitis B virus infection in the Vietnamese population. *Int J Infect Dis*. 2020 Jul
19. Tong HV, **Hoan NX**, Binh MT, Quyen DT, Meyer CG, Hang DTT, Hang DTD, Son HA, Van Luong H, Thuan ND, Giang NT, Quyet D, Bang MH, Song LH, Velavan TP, Toan NL. Upregulation of Enzymes involved in ISGylation and Ubiquitination in patients with hepatocellular carcinoma. *Int J Med Sci* 2020 Jan 20
20. Trung NT, Quyen DT, **Hoan NX**, Giang DP, Trang TTH, Velavan TP, Bang MH, Song LH. 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
21. Binh MT, **Hoan NX**, Giang DP, Tong HV, Bock CT, Wedemeyer H, Toan NL, Bang MH, Kremsner PG, Meyer CG, Song LH, Velavan TP. Upregulation of SMYD3 and SMYD3 VNTR 3/3 polymorphism increase the risk of hepatocellular carcinoma. *Sci Rep*. 2020 Feb 18.
22. **Hoan NX[§]**, Nguyen Khuyen, Dao Phuong Giang, Mai Thanh Binh, Nguyen Linh Toan, Do Tuan Anh, Ngo Tat Trung, Mai Hong Bang, Christian G. Meyer, Thirumalaisamy P Velavan, Le Huu Song. 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
23. Geisler S, Lytton SD, Toan NL, Nghia TH, Nam NM, Hung HV, Son NT, Anh DT, Tuyen HT, Tien TV, Quyet D, Van Tong H, **Hoan NX**, Song LH, Pallerla SR, Gostner JM, Fuchs D, Velavan TP. Neopterin levels and Kyn/Trp ratios were significantly increased in dengue virus patients and subsequently decreased after recovery *Int J Infect Dis*. 2020 Feb
24. **Hoan NX**, Pham Xuan Huy, Bui Tien Sy, Christian G. Meyer, Trinh Van Son, Mai Thanh Binh, Dao Phuong Giang, Dam Tu Anh, C.-Thomas Bock, Bo Wang, Hoang Van Tong, Peter G. Kremsner, Le Huu Song, Nguyen Linh Toan, Thirumalaisamy P. Velavan. High HEV positivity among domestic pigs and risk of HEV infection of individuals occupationally exposed to pigs and pork meat in Hanoi, Vietnam. *Open Forum of Infectious Diseases*. 2019.
25. Ngo Tat Trung, Le Trung Hai, Dao Phuong Giang, Phan Quoc Hoan, Mai Thanh Binh, **Hoan NX**, Nguyen Linh Toan, Christian G. Meyer, Thirumalaisamy P. Velavan, Mai Hong Bang and Le Huu Song. 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
26. 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 Jan 24.

National publications

1. Trần Đăng Ninh, Đỗ Tuấn Anh, Bùi Tiến Sỹ, Lê Văn Nam, Phạm Châu, Nguyễn Đăng Mạnh, Đặng Thị Bích, Nguyễn Việt Hà, **Nghiêm Xuân Hoàn**. Sự tương quan giữa nồng độ hbcrag với HBV DNA ở bệnh nhân viêm gan mạn tính, xơ gan do nhiễm HBV. *Tạp chí Y dược học lâm sàng* 108. Tập 19, số 3/2024
2. Lê Hà Phương, Trần Đức Long, Ngô Diệu Hoa, Mai Thanh Bình, Đào Phương Giang, Đặng Thị Ngọc Dung, **Nghiêm Xuân Hoàn**. Expression of Circulating miRNA-21 and miR-99b in HBV -related liver cirrhosis and hepatocellular carcinoma. *Tạp chí Y dược học lâm sàng* 108 (số Tiếng Anh). Tập 18, Số TA/2023

3. Nguyễn Thị Tuấn, Nguyễn Thị Duyên, Trương Thị Thu Hương, Mai Thanh Hải Linh, **Nghiêm Xuân Hoàn**. Biến đổi nồng độ kháng thể SARS-CoV-2 IgG ở một số đối tượng sau tiêm vắc xin phòng COVID-19 tại Bệnh viện TƯQĐ 108 (11/2021-2/2022). Tạp chí Y dược học lâm sàng 108. Tập 17 số 7/2022
4. Nguyễn Thị Linh Hoa, Đào Phương Giang, Trần Khánh Chi, Đặng Thị Ngọc Dung, Lê Hoàn, Phan Quốc Hoàn, Quách Xuân Hinh, Lê Thị Thanh Xuân, **Nghiêm Xuân Hoàn**. Khảo sát nhiễm HPV-16/-18 và mối liên quan với một số đặc điểm lâm sàng ở bệnh nhân ung thư phổi. Tạp chí Y học Việt Nam. Số chuyên đề, 2022, tháng 10. tập 519
5. Trinh Van Son, Vuong Phuc Duong, Quyen Dang Tuyen, Nguyen Thi Thuy, **Hoan NX**. Successful treatment of acute empyema caused by Aeromonas sobriain an advanced liver cirrhosis patient: A case report . Tạp chí Y dược học lâm sàng 108 (số Tiếng Anh). December, 2021 Vol 16.
6. **Hoan NX**, Phan Quoc Hoan, Nguyen Dang Manh, Le Huu Song. SARS-CoV-2 variants circulating in Vietnam, April 2020–October 2021. Tạp chí Y dược học lâm sàng 108 (số Tiếng Anh). December, 2021 Vol 16.
7. Nguyễn Khuyến, Lê Văn Nam, Đỗ Tuấn Anh, Đào Phương Giang, Nguyễn Bình An, Lê Hữu Song, **Nghiêm Xuân Hoàn**. Mối liên quan giữa tính đa hình gen mã hóa thụ thể vitamin D Apal với biểu hiện và tiến triển lâm sàng ở bệnh nhân nhiễm virus viêm gan B mạn tính. Tạp chí Khoa học quân sự. số 5/2020.
8. Nguyễn Khuyến, **Nghiêm Xuân Hoàn**, Nguyễn Thị Hiệp, Đỗ Tuấn Anh, Lê Hữu Song. Ảnh hưởng của sự thiếu hụt vitamin D đối với tiến triển lâm sàng ở bệnh nhân nhiễm HBV. Tạp chí Y học Việt Nam. Số 2 - 6/2020.
9. Phạm Thị Minh Huyền, Đặng Thị Ngọc Dung, Đào Phương Giang, Lê Hữu Song, Ngô Thị Uyên, Quỳ Đăng Tuyên và **Nghiêm Xuân Hoàn**. Mối liên quan giữa đa hình gen PD-L1 rs4143815 và nồng độ PD-L1 với nhiễm HBV mạn tính.
10. **Nghiêm Xuân Hoàn**, Phạm Minh Huyền, Nguyễn Đăng Mạnh, Vương Phúc Dương, Nguyễn Bình An, Quỳ Đăng Tuyên, Nguyễn Thị Tuấn, Nguyễn Thị Duyên, Đào Phương Giang, Lê Hữu Song. Association of PD-1.9 polymorphism with the risk of HBV-related hepatocellular carcinoma. Tạp chí Khoa học Y Dược Lâm sàng 108. 2020. Vol 15-Dec./2020
11. Nguyễn Khuyến, **Nghiêm Xuân Hoàn**, Đào Phương Giang, Lê Hữu Song, Đỗ Tuấn Anh. Ảnh hưởng của sự thiếu hụt vitamin D đối với tiến triển lâm sàng ở bệnh nhân nhiễm HBV. Tạp chí Khoa học Y dược Lâm sàng 108. 2016. 11/67-75
12. Đào Phương Giang, **Nghiêm Xuân Hoàn**, Mai Thanh Bình, Phan Quốc Hoàn, Lê Hữu Song. Vai trò của ISG15 trong bệnh cảnh lâm sàng do nhiễm HBV mạn tính. Tạp chí Khoa học Y dược Lâm sàng 108. 2016 11/59-68.
13. Lê Hữu Song, Đào Thanh Quyên, Ngô Tất Trung, Phan Quốc Hoàn, Nguyễn Kim Phương, Phạm Minh Long, **Nghiêm Xuân Hoàn**, Nguyễn Xuân Chính. So sánh giá trị của PCR đa mồi với cấy máu trong chẩn đoán mềm bệnh gây nhiễm khuẩn huyết. Tạp chí Y dược lâm sàng 108. Tập 8, SDB T12/2013. 533-537
14. Nguyễn Ngọc Quang; Chu Xuân Anh; **Nghiêm Xuân Hoàn**. Đặc điểm lâm sàng và cận lâm sàng ở bệnh nhân nhiễm khuẩn huyết do Tụ cầu vàng nhạy và kháng methicillin tại Bệnh viện TWQĐ 108 từ 01/2005 đến 06/2013. Tạp Chí Y dược học lâm sàng 108.
15. **Nghiêm Xuân Hoàn**, Lê Hữu Song. Nhiễm viêm gan B tiềm ẩn. Tạp chí Y dược học quân sự 2014.
16. **Nghiêm Xuân Hoàn**, Lê Hữu Song. Đột biến mất đoạn CCR5 - Δ32 là hiếm gặp ở người Việt Nam. Tạp chí y dược học quân sự. 2013. 5/46-52.