BIOGRAPHICAL SKETCH

Name: Ho Thi Nhan, MD, PhD

Position title: Research Expert & Pediatrician, Vinmec Healthcare System, Vietnam

Education/training

Institution and location	Degree *(if applicable)*	Completion date *(mm/yyyy)*	Field of study
Columbia University Medical Center, New York, USA	Postdoctoral	08/2018	Perinatal and Neurological Epidemiology
Princeton University, Princeton, New Jersey, USA	Postdoctoral	04/2016	Mathematical modeling
Michigan State University, East Lansing, Michigan, USA	PhD	12/2012	Epidemiology
Paris 5 University, Paris, France	Hospital Resident Doctor	11/2006	Pediatrics
University of Medical Sciences, Ho Chi Minh City, Vietnam	Specialist Level 1, Hospital Resident Doctor	05/2008	Pediatrics
University of Medical Sciences, Ho Chi Minh City, Vietnam	Doctor of Medicine	05/2003	General Medicine

I. Personal Statement

I have 15 years of experience in epidemiological, clinical and omics research as well as research methodology, biostatistics and bioinformatics. I also have more than 15 years of experience in clinical medicine in various hospital settings. I did my pediatric residency in Hochiminh City University of Medical Sciences, Vietnam and Paris V University, France and worked at Children Hospital No 1 and Children Hospital No 2 in Hochiminh City and Saint Vincent de Paul Hospital in Paris, France. I received my PhD in Epidemiology from Michigan State University, US. Since then, I had worked for Oxford University Clinical Research Unit as a Researcher, Princeton University-New Jersey-US as a Visiting Scholar and Columbia University Medical Center- New York-US as a Fellow before joining Vinmec in 2018. Currently, I am in charge of Research Training and Consulting for Vinmec Healthcare System, and I am also a Pediatrician at Vinmec Times City Hospital.

II. Positions and research experience

2018- present Research Expert and Pediatrician, Vinmec Health Care System, Ha Noi, Vietnam.

- In charge of Research Training and Consulting:
    - Conducting certificate and CME training programs in Research Methodology and Biodata Analysis for Vietnamese and international participants

    - Consulting, mentoring research projects and programs
- Developing, leading research projects:
    - Vinkiddata: Mining electronic health check database hosted by Vinmec Healthcare System of a large cohort of Vinschool children from nursery to high school (~40,000 subjects). *Role: co-PI (on-going).*
    - Vincohort: Mining electronic health check database hosted by Vinmec Healthcare System of a large cohort of employees (~100,000 subjects). *Role: co-PI (on-going).*
    - Accelerated integrated phase 1, 2, 3a, 3b, 3c randomized, controlled trials to evaluate the safety and immunogenicity and efficacy of the self-amplifying mRNA ARCT-154 COVID-19 vaccine. *Role: core researcher (on-going).*
    - Detection of novel variants and mutations related to Macrolide resistance of Mycoplasma pneumoniae in community acquired pneumonia in children. *Role: co-PI (on-going).*
    - Molecular typing of Adenovirus associated pneumonia in children. *Role: co-PI.*
    - Emerging pathogens associated with acute respiratory infections in children after the COVID-19 pandemic. *Role: co-PI*.
    - Mining database of Asia Cohort Consortium to study the association between diabetes and liver cancer incidence and mortality. *Role: lead researcher.*
    - International multi-centered, randomized, controlled clinical trial evaluating clinical benefits of PGTA & ERA in IVF patients. *Role: Site PI*.
- Pediatrician in Pediatric Center, Vinmec Times City International Hospital

2016-2018 Post-doctoral Research Fellow, Columbia University Medical Center, New York, USA

- Led a microbiome data meta-analysis project in collaborating with multiple microbiome research centers in the US;
- Developed methodology and an R package for microbiome data analysis.
- Led a data analysis project for Rare Epilepsy Network (REN).
- Participated (as a Biostatistician) in an international multi-centered, randomized, controlled clinical trial in HIV.

2016-2016 Visiting Scholar, Princeton University, New Jersey, USA

- Participated in a mathematical modeling project for measles.

2013-2016 Biostatistician & Researcher, Oxford University Clinical Research Unit (OUCRU), Ho Chi Minh City, Vietnam

- Led an infectious disease spatiotemporal modeling project using hospital electronic databases.
- Led predictive modeling work for two Dengue projects.
- Participated (as a Biostatistician) in several multi-centered, randomized, controlled clinical trials and clinical studies in infectious diseases.
- Provided consultation and support in biostatistics.
- Mentored undergraduate and graduate students

2014-2015 Invited lecturer in Pediatrics and Medical English for medical students at Tan Tao University, Long An, Vietnam.

2009-2012 Graduate Research Assistant, Department of Epidemiology and Biostatistics, Michigan State University, Michigan, USA

- Led a research project evaluating gene expression in newborn dried blood spots.

- Participated in a research project evaluating functional scales of children with cerebral palsy.

2008-2009 Pediatrician, Children Hospital No. 2, Ho Chi Minh City, Vietnam

2005-2006 Hospital Resident Doctor in Pediatrics, Saint Vincent de Paul Hospital, Paris, France

2003-2008 Hospital Resident Doctor in Pediatrics, Children Hospital No. 1 and No. 2, Ho Chi Minh City, Vietnam

III. Awards and Honors

Research Support

- SA-mRNA COVID-19 vaccine ARCT-154 2021- present

Funder: Vingroup & Arcturus Therapeutics Inc. Phase 1/2/3a/3b/3c randomized, controlled trials to evaluate the safety and immunogenicity and efficacy of the self-amplifying mRNA ARCT-154 COVID-19 vaccine. Role: core researcher.

- Vincohort 2020- present

Funder: Vingroup. Mining electronic health check database hosted by Vinmec Healthcare System of a large cohort of employees. Role: co-PI.

- IGX1-P&E-DV-17-08 Nhan T Ho 2020

Funder: Igenomix, Spain. International multi-centered, randomized, controlled clinical trial evaluating clinical benefits of PGTA & ERA in IVF patients. Role: Site PI.

- Microbiome methodology Nhan T Ho 2016

Funder: Columbia University Medical Center. This was as part of the fellowship for microbiome research. Role: fellow.

- Hospital Database Project 2015

Funder: OUCRU/Wellcome Trust. Mining electronic hospital databases in southern Vietnam to model spatial temporal trends, longitudinal admission patterns and long-term outcomes of childhood diseases. Role: co-PI.

Honors

2016-2018 Mervyn Susser Fellowship of Columbia University Medical Center, New York, US

2016 Fellowship of Princeton University, New Jersey, US

2011 Tuition and travel Scholarship of the University of Washington at Seattle for Summer Institute in Statistical Genetics.

2009-2012 Vietnam Education Foundation's Fellowship for PhD program in Epidemiology at Michigan State University, US.

2005-2006 Fellowship in Pediatrics, Paris, France.

1999, 2000 Tokyo Mitsubishi Scholarship for excellent medical students.

1997 Vietnam third national prize in Chemistry for high school students.

IV. Languages

- Vietnamese (mother language)
- English (advanced)
- French (intermediate – advanced)
- German (beginner)

V. Scientific contribution

A. Software

- metamicrobiomeR: an R package for Microbiome Data Analysis & Meta-Analysis with GAMLSS-BEZI & Random Effects. DOI: 10.32614/CRAN.package.metamicrobiomeR . (*Author & Creator*)

B. Books

English

- **Ho NT**, et al. Introduction to Bio-Medical Data Analysis with R. MDPI Books (2025) (Accepted). Preprint: https://bookdown.org/nhanhocumc/biodata-r/ . (*Editor & Primary Author*)

Vietnamese

- **Hồ Thị Nhân** và cộng sự. Phương Pháp Nghiên Cứu Lâm Sàng – Cơ Bản. NXB Y Hoc (2025). ISBN: 978-604-66-7328-6. (*Chủ Biên & Tác Giả Chính*) / Clinical Research Methodology – Basics. Medical Publishing House. ISBN: 978-604-66-7328-6. (*Editor & Primary Author*)

C. Editing, reviewing

- Associate Editor: Frontier in Public Health
- Reviewers: for many Journals such as Bioinformatics, Epilepsy, Frontier in Nutrition, Frontier in Public Health, BMC Infectious Diseases, BMC Public Health,…

D. Journal articles

1. Oda Y, **Ho NT**, Nguyen XH, et al. Immunogenicity of ARCT-154, a self-amplifying mRNA COVID-19 vaccine, in different booster settings. Vaccine: X, 17 July 2025, 100693. https://doi.org/10.1016/j.jvacx.2025.100693.
2. **Ho NT**, Nguyen HTT, et al. Emerging pathogens associated with acute respiratory infections in children in Hanoi, Vietnam: an analysis of microbiology assay data from 2019 to 2023. F1000Research, 2025, 14:505. https://doi.org/10.12688/f1000research.164631.1.
3. **Ho NT**, Smolenov I, et al. Safety profile of self-amplifying mRNA SARS-CoV-2 vaccine ARCT-154 in adults: a pooled Phase 1/2/3 randomized clinical study. Expert Review of Vaccines. (2025). https://doi.org/10.1080/14760584.2025.2487542.

4. **Ho NT**, Hughes S, et al. A randomized trial comparing safety immunogenicity and efficacy of self-amplifying mRNA and adenovirus-vector COVID-19 vaccines. npj Vaccines **9**, 233 (2024). https://doi.org/10.1038/s41541-024-01017-5.
5. **Ho NT**, Abe SK, et al. Diabetes is associated with increased liver cancer incidence and mortality in adults: a report from Asia Cohort Consortium. International Journal of Cancer, 2024 Apr 25. doi: 10.1002/ijc.34965.
6. **Ho NT**, Hughes SG, et al. Safety and immunogenicity and efficacy of the self-amplifying mRNA ARCT-154 COVID-19 vaccine: pooled phase 1, 2, 3a and 3b randomized, controlled trials. Nature Communications, 15, 4081 (2024). https://doi.org/10.1038/s41467-024-47905-1.
7. Nguyen DD#, **Ho NT#**, et al. Novel variant and known mutation in the 23S rRNA gene of Mycoplasma pneumoniae in a community acquired pneumonia outbreak in children in Northern Vietnam in 2023. Emerging Infectious Diseases, 2024 Apr 4;30(5). doi: 10.3201/eid3005.231632. *(#joint-first author*).
8. **Ho NT**, Tran MT, et al. Prevalence of metabolic syndrome among Vietnamese adult employees, Nutrition, Metabolism and Cardiovascular Diseases, 2024 Feb;34(2):326-333. https://doi.org/10.1016/ j.numecd.2023.10.002.
9. Nguyen DD, …, **Ho NT***. Molecular subtypes of Adenovirus-associated acute respiratory infection outbreak in children in Northern Vietnam and risk factors of more severe cases. PLoS Neglected Tropical Diseases. 2023 Nov 7;17(11):e0011311. doi: 10.1371/journal.pntd.0011311. *(*last, corresponding author*)
10. Le THN, **Ho NT**, et al. Biphasic pattern in the effect of severe measles infection: the difference between additive and multiplicative scale. BMC Infectious Diseases. 2021 Dec 14;21(1):1249. doi: 10.1186/s12879-021-06930-x.
11. **Ho NT**, Li F, et al. metamicrobiomeR: an R package for analysis of microbiome relative abundance data using zero-inflated beta GAMLSS and meta-analysis across studies using random effects models. BMC Bioinformatics, 2019, 20:188. DOI: 10.1186/s12859-019-2744-2.
12. Daniels B, Coutsoudis A, Moodley-Govender E, Mulol H, Spooner E, Kiepiela P, Reddy S, Zako L, **Ho NT**, et al. Effect of co-trimoxazole prophylaxis on morbidity and mortality of HIV-exposed, HIV-uninfected infants in South Africa: a randomised controlled, non-inferiority trial. Lancet Global Health. Volume 7, Issue 12, Pe1717-E1727, December 01, 2019. doi: 10.1016/S2214-109X(19)30422-X.
13. Radmard S, Reid S, Ciryam P, Boubour A, **Ho NT**, Zucker J, et al. Clinical Utilization of the FilmArray Meningitis/Encephalitis (ME) Multiplex Polymerase Chain Reaction (PCR) Assay. Frontier in Neurology. 2019 Mar 26:10:281. doi: 10.3389/fneur.2019.00281.
14. **Ho NT**, Li F, et al. Metaanalysis of effects of exclusive breastfeeding on infant gut microbiota across populations. Nature Communications. 2018 Oct 9;9(1):4169. doi: 10.1038/s41467-018-06473-x.
15. **Ho NT**, Kroner B, et al. Comorbidities of Rare Epilepsies: Results from the Rare Epilepsy Network. Journal of Pediatrics, 2018, 203, 249-258. doi: 10.1016/j.jpeds.2018.07.055.
16. Hidecker MJC, Slaughter J, Abeysekara P, **Ho NT**, et al. Early predictors and correlates of communication function in children with cerebral palsy. Journal of Child Neurology. 2018 Mar; 33(4): 275–285. doi: 10.1177/0883073817754006.
17. **Ho NT**, Hoang VMT, et al. A spatial and temporal analysis of paediatric central nervous system infections from 2005 to 2015 in Ho Chi Minh City, Vietnam. Epidemiology & Infection. 2017 Nov;145(15):3307-3317. doi: 10.1017/S095026881700228X.
18. **Ho NT**, Corine Thompson, et al. Retrospective analysis assessing the spatial and temporal distribution of paediatric acute respiratory tract infections in Ho Chi Minh City, Vietnam. BMJ Open, 2017. https://doi.org/10.1136/bmjopen-2017-016349.

19. Nguyen MT, **Ho NT**, et al. An Evidence-Based Algorithm for Early Prognosis of Severe Dengue in the Outpatient Setting. Clinical Infectious Diseases. 2017 Mar 1;64(5):656-663. doi: 10.1093/cid/ciw863.
20. NM Tuan, **Ho NT**, et al. Sensitivity and specificity of a novel classifier for the early diagnosis of dengue. PLoS Neglected Tropical Diseases (2015), 9 (4), e0003638. doi: 10.1371/journal.pntd.0003638.
21. Le T, Kinh NV, Cuc NTK, Tung NLN, Lam NT, Thuy PTT, Cuong DD, Phuc PTH, Vinh VH, Hanh DTH, Tam VV, Thanh NT, Thuy TP, Hang NT, Long HB, **Ho NT**, et al. A Trial of Itraconazole or Amphotericin B for HIV-Associated Talaromycosis. New England Journal of Medicine. 2017 Jun 15;376(24):2329-2340. doi: 10.1056/NEJMoa1613306.
22. Arjyal A, Basnyat B, **Ho NT**, Koirala S, et al. Gatifloxacin versus ceftriaxone for uncomplicated enteric fever in Nepal: an open-label, two-centre, randomised controlled trial. Lancet Infectious Diseases. 2016 May;16(5):535-545. doi:10.1016/S1473-3099(15)00530-7.
23. Duy Pham Thanh, Abhilasha Karkey, Sabina Dongol, **Ho NT**, et al. A novel ciprofloxacin-resistant subclade of H58 Salmonella Typhi is associated with fluoroquinolone treatment failure. Elife 5, e14003 (2016). doi: 10.7554/eLife.14003.
24. Phung DT, …, **Ho NT**, et al. A Randomized Comparison of Chloroquine versus Dihydroartemisinin–Piperaquine for the Treatment of Plasmodium vivax Infection in Vietnam. American Journal of Tropical Medicine and Hygiene. 2016 Apr 6; 94(4): 879–885. doi: 10.4269/ajtmh.15-0740.
25. **Ho NT**, Julia V Busik JV, et al. Effect of storage time on gene expression data acquired from unfrozen archived newborn blood spots. Molecular Genetic Metabolism, 2016 Nov;119(3):207-213. doi: 10.1016/j.ymgme.2016.08.001.
26. Do CG, Tran ND, Dang TMH, **Ho NT**, et al. Prospective evaluation of GeneXpert for the diagnosis of HIV- negative pediatric TB cases. BMC Infectious Diseases volume 15, Article number: 70 (2015). doi: 10.1186/s12879-015-0814-2.
27. **Ho NT**, Furge K, et al. Gene expression in archived newborn blood spots distinguishes infants who will later develop cerebral palsy from matched controls. Pediatric Research. 2013 Apr;73(4 Pt 1):450-6. doi: 10.1038/pr.2012.200.
28. Resau JH, **Ho NT**, et al. Evaluation of sex-specific gene expression in archived dried blood spots (DBS). International journal of molecular sciences (2012) 13 (8), 9599-9608. doi: 10.3390/ijms13089599.
29. Hidecker MJC, **Ho NT**, et al. Inter-relationships of functional status in cerebral palsy: analyzing gross motor function, manual ability, and communication function classification systems in children. Developmental Medicine & Child Neurology (2012) 54 (8), 737-742. doi: 10.1111/j.1469-8749.2012.04312.x.

E. Book chapters

English

1. **Ho NT**. Introduction to R. In: Introduction to Bio-Medical Data Analysis with R. MDPI Books (2025) (Accepted). Preprint: https://bookdown.org/nhanhocumc/biodata-r/intror.html .
2. Bui TT, **Ho NT**. Data visualization with R. In: Introduction to Bio-Medical Data Analysis with R. MDPI Books (2025) (Accepted). Preprint: https://bookdown.org/nhanhocumc/biodata-r/datviz.html .
3. Bui TT, **Ho NT**. R programming. In: Introduction to Bio-Medical Data Analysis with R. MDPI Books (2025) (Accepted). Preprint: https://bookdown.org/nhanhocumc/biodata-r/rprogram.html .

4. Nguyen H, **Ho NT**. Basic statistics with R. In: Introduction to Bio-Medical Data Analysis with R. MDPI Books (2025) (Accepted). Preprint: https://bookdown.org/nhanhocumc/biodata-r/basicstatr.html .
5. **Ho NT**. Linear regression with R. In: Introduction to Bio-Medical Data Analysis with R. MDPI Books (2025) (Accepted). Preprint: https://bookdown.org/nhanhocumc/biodata-r/linearr.html .
6. Chu TMP & **Ho NT**. Logistic regression with R. In: Introduction to Bio-Medical Data Analysis with R. MDPI Books (2025) (Accepted). Preprint: https://bookdown.org/nhanhocumc/biodata-r/logisticr.html .
7. **Ho NT**. Survival analysis with R. In: Introduction to Bio-Medical Data Analysis with R. MDPI Books (2025) (Accepted). Preprint: https://bookdown.org/nhanhocumc/biodata-r/survival.html .
8. **Ho NT**. Longitudinal analysis with R. In: Introduction to Bio-Medical Data Analysis with R. MDPI Books (2025) (Accepted). Preprint: https://bookdown.org/nhanhocumc/biodata-r/longitudinalr.html
9. **Ho NT**. Clinical trial data analysis with R. In: Introduction to Bio-Medical Data Analysis with R. MDPI Books (2025) (Accepted). Preprint: https://bookdown.org/nhanhocumc/biodata-r/trialr.html .
10. **Ho NT**. Analysis & Metaanalysis of Microbiome Data with "metamicrobiomeR" package. In: Introduction to Bio-Medical Data Analysis with R. MDPI Books (2025) (Accepted). Preprint: https://bookdown.org/nhanhocumc/biodata-r/metamicrobiomer.html .

Vietnamese

1. **Hồ Thị Nhân**. Một số thiết kế nghiên cứu lâm sàng thường dùng. Trong cuốn sách: Phương Pháp Nghiên Cứu Lâm Sàng – Cơ Bản. NXB Y Học. ISBN: 978-604-66-7328-6 / Some common study designs for clinical research. In: Clinical Research Methodology – Basics. Medical Publishing House. ISBN: 978-604-66-7328-6.
2. **Hồ Thị Nhân**. Sai lệch, gây nhiễu, tương tác. Trong cuốn sách: Phương Pháp Nghiên Cứu Lâm Sàng – Cơ Bản. NXB Y Học. ISBN: 978-604-66-7328-6 / Bias, Confounding, Interaction. In: Clinical Research Methodology – Basics. Medical Publishing House. ISBN: 978-604-66-7328-6.
3. **Hồ Thị Nhân**. Suy luận nguyên nhân – kết quả. Trong cuốn sách: Phương Pháp Nghiên Cứu Lâm Sàng – Cơ Bản. NXB Y Học. ISBN: 978-604-66-7328-6 / Causal Inference. In: Clinical Research Methodology – Basics. Medical Publishing House. ISBN: 978-604-66-7328-6.
4. **Hồ Thị Nhân**. Xét nghiệm chẩn đoán, sàng lọc. Trong cuốn sách: Phương Pháp Nghiên Cứu Lâm Sàng – Cơ Bản. NXB Y Học. ISBN: 978-604-66-7328-6 / Diagnostic, screening test. In: Clinical Research Methodology – Basics. Medical Publishing House. ISBN: 978-604-66-7328-6.
5. **Hồ Thị Nhân**. Kiểm định giả thuyết nghiên cứu. Trong cuốn sách: Phương Pháp Nghiên Cứu Lâm Sàng – Cơ Bản. NXB Y Học. ISBN: 978-604-66-7328-6 / Hypothesis testing. In: Clinical Research Methodology – Basics. Medical Publishing House. ISBN: 978-604-66-7328-6.
6. **Hồ Thị Nhân**. Một số phép kiểm thống kê thường dùng. Trong cuốn sách: Phương Pháp Nghiên Cứu Lâm Sàng – Cơ Bản. NXB Y Học. ISBN: 978-604-66-7328-6 / Common statistical tests. In: Clinical Research Methodology – Basics. Medical Publishing House. ISBN: 978-604-66-7328-6.
7. **Hồ Thị Nhân**. Cỡ mẫu, lực nghiên cứu. Trong cuốn sách: Phương Pháp Nghiên Cứu Lâm Sàng – Cơ Bản. NXB Y Học. ISBN: 978-604-66-7328-6 / Power – sample size. In: Clinical Research Methodology – Basics. Medical Publishing House. ISBN: 978-604-66-7328-6.

8. **Hồ Thị Nhân**. Đặt câu hỏi, tìm kiếm y văn. Trong cuốn sách: Phương Pháp Nghiên Cứu Lâm Sàng – Cơ Bản. NXB Y Học. ISBN: 978-604-66-7328-6 / Research question, search for evidence. In: Clinical Research Methodology – Basics. Medical Publishing House. ISBN: 978-604-66-7328-6.
9. **Hồ Thị Nhân**. Bình duyệt, áp dụng y văn. Trong cuốn sách: Phương Pháp Nghiên Cứu Lâm Sàng – Cơ Bản. NXB Y Học. ISBN: 978-604-66-7328-6 / Critical appraisal and clinical application of evidence. In: Clinical Research Methodology – Basics. Medical Publishing House. ISBN: 978-604-66-7328-6.

VI. Artistic contribution

In my forties, I started my hobbies as a poet, song composer and singer. My rhymes are written in English, French and Vietnamese to promote good shape and good mind (Good Shape Good Mind is my pen name). My songs may be found on my Youtube channel, and my poems may be found on my Facebook page. I embrace changes as one of my poems goes:

"*Demain*

Sera un autre chemin

Qu'on ne peut pas voir

Ce martin

*

Aujourd'hui

N'existera plus

Même si on s'arrête

Il deviendra déja vu"