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# Anh Pham

April 11, 1995, Vietnam

PhD students aim to study the molecular mechanism of diseases, emphasizing genomic instability. Further career prospects in developing innovative methods that allow earlier diagnosis and precise treatment options for patients.

Past experience: Research assistant and lab technician with three years of experience in developing and performing genetics testing for prenatal care, inherited disorders, and cancer. Strong analytical and sharp interpersonal skills to coordinate with colleagues, clinical staff, IT, and vendors in executing research projects, training, and application. Hardworking with a high sense of commitment, driven by a great passion for integrating research into practice.

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## Education

AUGUST 2022- NOW

**PhD student in Molecular, Cellular, and Developmental Biology/**, College of Agriculture and Life Sciences, Iowa State University.

Supervisor: Hua Bai, Ph.D and Ping Kang, Ph.D.

OCTOBER 2021

**Master's degree in Genetics- (Good 7.7/10)/** Viet Nam National University Ho Chi Minh City, University of Science.

Thesis titles: "Analysis of genetic aberrations in Non-small cell lung cancer patients treated with erlotinib".

Grade: 9.5/10 • Supervisor: Hoa Giang, Ph.D.

OCTOBER 2017

**Bachelor of Science in Biotechnology- (Very Good 8.08/10)/** Viet Nam National University Ho Chi Minh City, University of Science.

Thesis titles: "Cloning, expression, and purification of protein GFP fused with targeting M cell peptides deduced from HSP60 of Brucella abortus". Grade: 9.5/10 • Supervisor: TRAN-VAN Hieu, Ph.D. Associate Professor and Nguyen Thi Thanh Hoa, BSc, PhD student.

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## Experience

MAY 2018- MARCH 2022

**Research assistant/** Medical Genetics Institute, Vietnam.

Developing ultra-deep massively parallel sequencing with unique molecular identifier tagging protocol for liquid biopsy and evaluating its ability of detection and quantification of mutations in lung cancer and colorectal cancer • Developing Droplet digital polymerase chain reaction-based assay to detect actionable mutations in lung cancer and colorectal cancer • Adopting DNA nanoball sequencing technique for different types of samples in research projects and commercial tests.

JULY 2018- MARCH 2022

**Senior lab technician/ Gene Solutions, Vietnam.**

Manage a team performing Non-Invasive Prenatal Test (NIPT) to detect chromosomal disorders, from DNA extraction to sequencing, both in Illumina and MGI platform • Adopting and performing rhAmp-Seq protocol for DNA Talent test assess certain innate abilities of a child.

SEPTEMBER 2016- JULY 2017

**Undergraduate researcher/ Molecular Biotechnology Lab, University of Science, Vietnam.**

Cloning, expression, and purification of protein.

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## Publications

[1] L. S. Tran, **H. T. Pham**, V. U. Tran, T. T. Tran, et al., "Ultra-deep massively parallel sequencing with unique molecular identifier tagging achieves comparable performance to droplet digital PCR for detection and quantification of circulating tumor DNA from lung cancer patients," PLoS One, 2019. **Co-first author, data curation, and formal analysis.**

[2] H. T. Nguyen, D. H. Tran, Q. D. Ngo, **H. T. Pham**, et al., "Evaluation of a Liquid Biopsy Protocol using Ultra-Deep Massive Parallel Sequencing for Detecting and Quantifying Circulation Tumor DNA in Colorectal Cancer Patients," Cancer Invest, 2020. **Data curation and formal analysis.**

[3] A. H. Dang, V. U. Tran, T. T. Tran, **H. A. Thi Pham**, et al., "Actionable Mutation Profiles of Non-Small Cell Lung Cancer patients from Vietnamese population," Sci Rep, 2020. **Performed experiments.**

[4] L. S. Tran, Q. T. Nguyen, C. V. Nguyen, V. U. Tran, et al., "Ultra-Deep Massive Parallel Sequencing of Plasma Cell-Free DNA Enables Large-Scale Profiling of Driver Mutations in Vietnamese Patients With Advanced Non-Small Cell Lung Cancer," Front Oncol, 2020. **Performed experiments.**

[5] H. N. Nguyen, N. T. Cao, T. C. Van Nguyen, K. N. D. Le, et al., "Liquid biopsy uncovers distinct patterns of DNA methylation and copy number changes in NSCLC patients with different EGFR-TKI resistant mutations," Sci Rep, 2021. **Data curation.**

[6] N. H. Tran, T. B. Vo, V. T. Nguyen, **H. T. Pham**, et al., "Genetic profiling of Vietnamese population from large-scale genomic analysis of non-invasive prenatal testing data," Sci Rep, 2020. **Performed experiments.**

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## Scientific Communication

OCTOBER 11-13, 2019

**Poster presenter/ The 2019 ASCO Breakthrough Summit, Bangkok, Thailand.**

Abstract: **H.-A. T. Pham**, L. S. Tran, U. V. Tran, T.-T. Tran, et al., "An optimized ultra-deep massively parallel sequencing with unique molecular identifier tagging for detection and quantification of circulating tumor DNA from lung cancer patients," 2019. DOI: [10.1200/JGO.2019.5.suppl.55](https://doi.org/10.1200/JGO.2019.5.suppl.55)

MAY 14, 2019

**Oral presenter/ Oncology Roadshow: Updating solutions in implementing cancer application, Ho Chi Minh City, Vietnam.**

Ultra-deep massively parallel sequencing and UMI for detection and quantification of actionable mutations from lung cancer patients.

SEPTEMBER 30, 2018

[Oral presenter/](#) Genomics application in medical diagnosis conference, University Medical Center, Vietnam.

Application of Droplet Digital PCR for mutation detection in cancer.

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## Other Professional Activities

FEBRUARY AND MARCH 2020

[Training Course/](#) Gene Solutions, Vietnam.

MGIEasy cfDNA and MGIEasy FS DNA library preparation and PE100 sequencing on the DNBSEQ-G400RS platform.

DECEMBER 2019

[Training Course/](#) Wuhan MGI Tech Co., Ltd, Hubei, China.

MGISP-960 FS WGS Library Preparation & DNBSEQ-G400GS PE100 Sequencing.

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## Working Skills

[Next-generation sequencing/](#) Perform and manage a complete wet-lab workflow.

Plasma extraction • DNA extraction from various types of samples by manual and semi-automated methods • Library preparation for cfDNA and genomic DNA, combine with several specific techniques (unique molecular identifier tagging, rhAmpSeq, DNA nanoball making,...) • Perform sequencing on Illumina and MGI platforms.

[Droplet Digital PCR](#)

Perform a complete workflow and analyze the results using Quantasoft Software.

[Statistics and graphing data](#)

Microsoft Office • GraphPad Prism • R.

[Training and management](#)

Onboarding new lab employees and developing regular lab-wide training processes and policies.

[Undergraduate research basic skills](#)

Basic Microbiology Laboratory Techniques • Molecular cloning • PCR • DNA Electrophoresis • Protein expression • SDS-PAGE • Western blot • Fast protein liquid chromatography • Immobilized metal affinity chromatography • Bradford protein assay.

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## Language Skills

[IELTS Academic/](#) Overall Band Score 7.0, Level C1, Date November 1, 2021.

Listening 7.0 • Reading 7.5 • Writing 6.5 • Speaking 6.0. (TRF: 21VN005273PHAT101A)

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## Hobbies

Beyoncé • Hiking • Trekking • Biking • Dancing • Rollerblading • Marathon • Triathlon • Photography.

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## References

**Dr. Hua Bai/** Associate Professor, Genetics, Development, and Cell Biology Department, Iowa State University.

Supervisor • Email: [hbai@iastate.edu](mailto:hbai@iastate.edu)

**Dr. Ping Kang/** Adjunct Assistant Professor, Genetics, Development, and Cell Biology Department, Iowa State University.

Co-supervisor • Email: [pkang@iastate.edu](mailto:pkang@iastate.edu)

**Dr. Hoa Giang/** Deputy Director, Medical Genetics Institute and Gene Solutions, Vietnam.

Supervisor • Email: [gianghoa@suckhoeditruyen.vn](mailto:gianghoa@suckhoeditruyen.vn) • Telephone: (+84)918933242.

**Dr. Hoai Nghia Nguyen/** Principal Investigator, University of Medicine and Pharmacy, Ho Chi Minh City and Gene Solutions, Vietnam.

Co-mentor • Email: [nhnghia81@gmail.com](mailto:nhnghia81@gmail.com) • Telephone: (+84)932390734.

**Dr. Le Son Tran/** Senior Research Fellow, Medical Genetics, Vietnam.

Supervisor • Email: [leson1808@gmail.com](mailto:leson1808@gmail.com) • Telephone: (+84)705196257.