Tam H. Nguyen, Ph.D.

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PROFESSIONAL EXPERIENCES

Research Assistant Professor, September 2014 to present, Center for Plant Science Innovation &
Department of Biochemistry, University of Nebraska-Lincoln

- Genetic modify to improve EPA and Astaxanthin for soybean and camelina
- seed storage protein, resilin protein

Research Associate, July 2009 to July 2014, Center for Plant Science Innovation &
Department of Biochemistry, University of Nebraska-Lincoln

- Genetic modify to improve Camelina oil for a high quality biodiesel.
- Cocoa genomics to identify expression elements/genes for other applied plant and synthetic biology applications.
- Camelina Seed Transcriptome: A Tool for Meal and Oil Improvement and Translational Research.
- Suppression Camelina
- Over-expression omega-7 (healthy fatty acids) for soybean and Camelina.
- seed storage protein.
- Improving EPA and Astaxanthin for Camelina and soybean

Research Associate, 2004 to July 2009, Brookhaven National Laboratory (BNL)

- Manipulating properties of plant oils via genetic engineering

- Combination of hairpin and Antisense, a new technology for suppression.
- Increase Palmitic acid as a substitute up to 53%
- Achieving high level of omega-7 fatty acid from 2% in WT to 71% in transgenic *Arabidopsis* seed.

Ph.D. Student 2000 to 2004, International Centre for Genetic Engineering and Biotechnology/ Jawaharlal Nehru University

- **Using bacteriophage T7 RNA polymerase directed tissue** specific over-expression of foreign genes in crop improvement

- Work on rice, tomato and tobacco tissue culture and transformation

Research Scientist, 1993 to 2000, Vietnam Academy of Science and Technology

- ·Using rice, tomato, tobacco tissue culture as material for transformation

EDUCATION

- 2000 – 2004, **ICGEB/JNU, INDIA**

- Degree: Ph.D.

- Major: Plant Molecular Biology/Plant transformation

- Thesis: **Using bacteriophage T7 RNA polymerase directed tissue** specific over-expression of foreign genes in crop improvement

- **1994 – 1997, University of Natural Sciences, Vietnam National University**

- Degree: Master of Science

- Major: Plant Physiology

- **1989 – 1993, University of Natural Sciences, Vietnam National University,**

- Degree: Bachelor of Science

- Major: Biochemistry

BIBLIOGRAPHY

- **Huu Tam Nguyen**, Hyunwoo Park, Karen L. Koster, Rebecca E. Cahoon, Hanh TM Nguyen, John Shanklin, Thomas E. Clemente, and Edgar B. Cahoon. Redirection of Metabolic Flux for High Levels of Omega-7 Monounsaturated Fatty Acid Accumulation in Camelina Seeds (***Plant Biotechnology Journal*** , 04/2014).

- **Huu Tam Nguyen**, Jillian E. Collins-Silva, Ram Podicheti, Jason Macrander, Wenyu Yang, Tara J. Nazarenus, Jeong-Wan Nam, Jan G. Jaworski, Chaofu Lu, Brian E. Scheffler, Keithanne Mockaitis, and Edgar B. Cahoon. Camelina Seed Transcriptome: A Tool for Meal and Oil Improvement and Translational Research . ***Plant Biotechnology Journal*** , 3 APR (2013)

- Huu Tam Nguyen, Girish Mishra, Edward Whittle, Scott A. Bevan, Ann Owens Merlo, Terence A. Walsh and John Shanklin. Metabolic engineering of seeds can achieve levels of Omega-7 fatty acids comparable to the highest levels found in natural plant sources . ***Plant Physiology*** . Published on October 13, 2010, as DOI:10.1104/pp.110.165340

- Huu Tam Nguyen and John Shanklin. Altering *Arabidopsis* Oilseed Composition by a Combined Antisense-Hairpin RNAi Gene Suppression Approach , *Journal of the* ***American Oil Chemists' Society*** , Volume 86, 41-49 (2009)

- Mark S. Pidkowich*, Huu Tam Nguyen*, Ingo Heilmann, Till Ischebeck, and John Shanklin. Modulating seed ?-ketoacyl-ACP synthase (KAS)II level is sufficient to convert a typical temperate crop oil to that of a palm-like tropical oil
.
PNAS
, vol. 104, 4742-4747, 2007. (
**Mark S Pidkowich and Huu Tam Nguyen contributed equally to this work*
)

- **Huu Tam Nguyen**, S. Leelavathi and V. S. Reddy. Bacteriophage T7 RNA polymerase directed inducible and tissue specific overexpression of foreign genes in plants
,
Plant Biotechnology Journal
,
2; 301-310 (2004)
.

PATENTS

- **Bacteriophage T7 RNA polymerase based transcription system for overexpression of foreign proteins in plants". 2003. Indian Patent Application No. 1164/DEL/2003**

- **Combined hairpin-antisense compositions and methodes for modulating expression. Document Type and Number:WIPO Patent Application WO/2008/116094**

- Metabolic engineering approach to accumulating omega-7 fatty acid (16:1delta9 and

18:1delta11) in plant seeds (application submitted 2011)

SCIENTIFIC ACTIVITIES

- 2011 American oil Chemist's Society, Cincinnati, OH. Presentation "Achieving High Levels of Omega-7 Fatty Acids in Transgenic Plants"
- 2011 Gordon Research Conference, Galveston, Texas from Jan 31-Feb 4-2011. Poster "Developing Camelina Seed Accumulation of Omega-7 Fatty Acids for Industrial Feedstocks"

- 2010 Plant Science Retreat, Friday& Saturday, October 23, 2010, Lied Lodge and Conference Center, Nebraska City, NE. Poster " *Biotechnological Development of Camelina as a Biofuel and Biolubricant Crop* "

- National Plant Lipid Cooperative, Gordon Research Conference, Texas, USA, Feb 1-6, 2009. Poster

- National Plant Lipid Cooperative, Fallen Leaf lake, California, USA, June 5-9, 2007. Presentation

- International Symposium on Plant lipid, East Lansing, Michigan, USA, July 16-21, 2006. Presentation

- National Plant Lipid Cooperative, Fallen Leaf lake, California, USA, June 10-14, 2005. Poster

- National Symposium on Plant Biotechnology. Dalat, Vietnam , December 12 - 14, 1995.

Presentation

- The 3 rd Asia Pacific Conference on Agricultural Biotechnology, Prachuabkirikhan , Thailand , Nov. 11 – 16, 1996. Poster

- General Meeting of The International Program on Rice Biotechnology (Rockefeller Foundation), Malacca, Malaysia, Sep. 15 – 19, 1997. Poster

- Plant Biotechnology Workshop, Hanoi, Vietnam, October 15 – 19, 1997. Poster

- First national Meeting of Rice Biotechnology Network, Hue, Vietnam, May 5 - 6, 1998. Presentation

GOAL AND AWARDS

- 4 years international fellowship at ICGEB
- 4 years scholarship at University of Natural Sciences, Vietnam National University
- 2 year scholarship at Institute of Tropical Biology, VAST
- 5 years postdoctoral fellowship at Brookhaven National Laboratory
- 5 years research Associate fellowship at University of Nebraska-Lincoln
- 6 papers and three international patents

COMPUTER SKILLS

- Expert in Microsoft office, Photoshop, and all bioinformatics software like NTI vector, MSD ChemStation and etc.
- Fluent in internet and web design, web administrator.
- Web design

ABILITIES:

- Can carry out in-depth research to bring out new findings
- Enjoy working in a team and have so thus far in line of work. Can get along with people of all types of nature pretty well
- Expert in plant molecular biology and tissue culture all crop plants
- Expert in construction of plasmid and DNA/RNA combinations

RESEARCH AREA OF INTEREST

- Bioenergy

- RNAi

- Tissue culture

- Applied researches

I declare that the above facts given by me are true to the best of my knowledge and belief.

Tam Nguyen

REFERENCES

Dr. John Shanklin,

Senior Biochemist Biochemistry of Lipid Modification Enzymes
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