

CURRICULUM VITAE

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PROFESSIONAL AND RESEARCH EXPERIENCE

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| 2006.11-present | FACULTY RESEARCH ASSOCIATE | Dept. of Molecular Microbiology and Immunology, BLOOMBERG SCHOOL OF PUBLIC HEALTH, JOHNS HOPKINS UNIVERSITY, BALTIMORE, MD |
| 2003.10–2006. 11 | POSTDOC. FELLOW | Dept. of Molecular Microbiology and Immunology, BLOOMBERG SCHOOL OF PUBLIC HEALTH, JOHNS HOPKINS UNIVERSITY, BALTIMORE, MD. Supervised by Dr. George Dimopoulos. |
| 1999.9 – 2003.10 | POSTDOC. RESEARCH ASSOCIATE | Dept. of Agronomy, UNIVERSITY OF WISCONSIN-MADISON, MADISON, WI. . Supervised by Dr. Eric Triplett. |
| 1994.9 – 1999.4 | Ph.D. STUDENT | Key Laboratory of Photosynthesis and Environmental Molecular Physiology, INSTITUTE OF BOTANY, CHINESE ACADEMY OF SCIENCES, Beijing, CHINA. Mentored by Dr. Jiudi Li. |
| 1998.3 – 1998.4 | VISITING SCIENTIST | NATIONAL INSTITUTE OF GENETICS (NIG), JAPAN. Supervised by Dr. Yoshito Sadaie. |
| 1995.9 – 1996.6 | VISITING SCIENTIST | Centre of Microbial and Plant Genetics (F.A. Janssens Laboratory of Genetics), KATHOLIEKE UNIVERSITY OF LEUVEN, BELGIUM. Supervised by Dr. Jos Vanderleyden. |
| 1992.9 – 1994.9 | RESEARCH ASSISTANT | INSTITUTE OF BOTANY, CHINESE ACADEMY OF SCIENCES, Beijing, CHINA. Supervised by Dr. Jiudi Li. |

EDUCATION

Ph.D. – Plant Sciences – 1999 – INSTITUTE OF BOTANY, CHINESE ACADEMY OF SCIENCES

B.S. – Biology – Specialist in Plant physiology & Plant Biochemistry – 1992 – PEKING UNIVERSITY – China

HONORS

- Ph.D. dissertation Prize, Chinese Academy of Sciences, 1999
- Chancellor's fellowship of Institute of Botany, Chinese Academy of Science, 1999

MEMBERSHIP

- American Society of Tropical Medicine and Hygiene (ASTMH)
- American Society for Microbiology (ASM)
- American Phytopathological Society (APS)

EDITORIAL RESPONSIBILITIES

REVIEWED PAPER FOR: Applied and Environmental Microbiology, BMC Genomics, BMC Evolution Biology, Insect Molecular Biology, Plant and Soil

ORAL PRESENTATIONS

- In the the American Society of Tropical Medicine and Hygiene 55th Annual Meeting. Washington, DC, U.S.A., Nov. 12-16, 2006.
- In the American Society of Tropical Medicine and Hygiene 54th Annual Meeting. Washington, DC, U.S.A., Dec. 11-15, 2005.
- Johns Hopkins School of Public Health, Molecular Microbiology and Immunology Dept., Research Forums, 2004, 2005, 2006, 2007, and 2008.
- “Parasitology Journal Club” Seminar series held by Dept. of Molecular Microbiology and Immunology, Johns Hopkins Univ, in Jan. 2004.
- Invited speaker of joint US-Japan Symbiotic Nitrogen Fixation meeting held in St. Paul, Minnesota on 8-12 August 2001.
- Seminar series of “Biological Nitrogen Fixation” from Dept. of Biochemistry, UW-Madison, in Nov. 1999, Dec. 2000, Nov. 2001, and Nov. 2002.

TEACHING AND MANAGEMENT EXPERIENCES

- Teaching assistant to varies of lecture courses and teaching labs.
- Supervisions and Hands on trainings to undergraduate and graduate students in the current lab from the Johns Hopkins School of Public Health, previous labs from the University of Wisconsin-Madison and the Institute of Botany, Chinese Academy of Sciences. About 12 of the graduate students I have trained achieved their doctoral degrees or are on the track.

PUBLICATIONS

1. **Dong, Y.** and G. Dimopoulos (2008) *Anopheles* fibrinogen domain immune lectins provide expanded pattern recognition capacity against bacteria and malaria parasites. (*submitted to J. Biol. Chem.*)
2. **Dong, Y.** and G. Dimopoulos (2008) The hyper-variable pattern recognition receptor, *AgDscam*, in the anti-*Plasmodium* defense. (*in preparation*)

3. **Dong, Y.**, L.A. Baton, F. Manfredini, and G. Dimopoulos (2008) Functional genomics analysis of the implication of mosquito midgut natural flora in the defense against malaria parasites. (*in preparation*)
4. Manfredini F., **Y. Dong**, and G. Dimopoulos (2008) Kinetics of microbial flora in the larval and adult mosquitoes and the implication in anti-*Plasmodium* defense. (*in preparation*)
5. Garver L.S., **Y. Dong**, and G. Dimopoulos (2008) Depletion of an immune regulator renders Anophline species resistant to *P. falciparum*. (*submitted to PLoS Biology*)
6. Morton J.C.*, **Y. Dong***, Ramirez J. L., and G. Dimopoulos. (2008) Entomopathogen fungus activates innate immunity and defends against dengue virus in *Aedes aegypti*. (*in preparation*)
7. Das S., **Y. Dong**, L.S. Garver, and G. Dimopoulos (2008) Specificity of the innate immune system: A closer look at the mosquito pattern recognition receptor repertoire. (*in preparation* for book chapter of "Insect Infection and Immunity: evolution, ecology and mechanisms" edited by Stuart Reynolds and Jens Rolff)
8. Warr, E., S. Das, **Y. Dong**, and G. Dimopoulos (2008) The GGBP gene family: Its role in the innate immune system of *Anopheles gambiae* and in anti-*Plasmodium* defense. *Insect Mol. Biol.* **17**: 39-51.
9. Aguilar, R.*, S. Das*, **Y. Dong***, and G. Dimopoulos (2008) Continuous exposure to *Plasmodium* results in decreased susceptibility and transcriptomic divergence of the *Anopheles gambiae* immune system. *BMC Genomics* **8**: 451. (*: contributed equally)
10. Waterhouse, R.M., E.V. Kriventseva, S. Meister, Z. Xi, K.S. Alvarez, L.C. Bartholomay, C. Barillas-Mury, G. Bian, S. Blandin, B.M. Christensen, **Y. Dong**, H. Jiang, M.R. Kanost, A.C. Koutsos, E.A. Levashina, J. Li, P. Ligoxygakis, R.M. Maccallum, G.F. Mayhew, A. Mendes, K. Michel, M.A. Osta, S. Paskewitz, S.W. Shin, D. Vlachou, L. Wang, W. Wei, L. Zheng, Z. Zou, D.W. Severson, A.S. Raikhel, F.C. Kafatos, G. Dimopoulos, E.M. Zdobnov, and G.K. Christophides (2007) Evolutionary dynamics of immune-related genes and pathways in disease-vector mosquitoes. *Science* **316**: 1738-1743.
11. Warr, E., R. Aguilar, **Y. Dong**, V. Mahairaki, and G. Dimopoulos (2007) Spatial and sex-specific dissection of the *Anopheles gambiae* midgut transcriptome. *BMC Genomics* **8**: 37.
12. An, Q., **Y. Dong**, W. Wang, Y. Li, and J. Li (2007) Constitutive expression of the *nifA* gene activates associative nitrogen fixation of *Enterobacter gergoviae* 57-7, an opportunistic endophytic diazotroph. *J. Appl. Microbiol.* **103**: 613-620.
13. **Dong, Y.**, H.E. Taylor, and G. Dimopoulos (2006) AgDscam, a hypervariable immunoglobulin domain-containing receptor of the *Anopheles gambiae* innate immune system. *PLoS Biology* **4**: 1137-1146.
14. **Dong, Y.**, R. Aguilar, Z. Xi, E. Warr, E. Mongin, and G. Dimopoulos (2006) *Anopheles gambiae* immune responses to human and rodent *Plasmodium* parasite species. *PLoS Pathogens* **2**: 513-525.
15. Baton, L.A., **Y. Dong**, J. Li, and G. Dimopoulos (2006) Variation in mosquito immunity to *Plasmodium*. In: *Proceedings of the 11th International Congress of Parasitology, ICOPA XI*, Glasgow, UK. August 6-11, 2006. (review article)
16. Xu, X.*, **Y. Dong***, E.G. Abraham, A. Kocan, P. Srinivasan, A.K. Ghosh, R.E. Sinden, J.M. Ribeiro, M. Jacobs-Lorena, F.C. Kafatos, and G. Dimopoulos (2005) Transcriptome analysis of *Anopheles stephensi-Plasmodium berghei* interactions. *Mol. Biochem. Parasitol.* **142**: 76-87. (*: contributed equally)
17. Aguilar, R., **Y. Dong**, E. Warr, and G. Dimopoulos (2005) *Anopheles* infection responses; laboratory models versus field malaria transmission systems. *Acta Trop.* **95**: 285-291. (review article)
18. Iniguez, A.L., **Y. Dong**, H.D. Carter, B.M. Ahmer, J.M. Stone, and E.W. Triplett (2005) Regulation of enteric endophytic bacterial colonization by plant defenses. *Mol. Plant-Microbe Interact.* **18**: 169-178.
19. Iniguez, A.L., **Y. Dong**, and E.W. Triplett (2004) Nitrogen fixation in wheat provided by *Klebsiella pneumoniae* 342. *Mol. Plant-Microbe Interact.* **17**: 1078-1085.

20. **Dong, Y.**, A.L. Iniguez, and E.W. Triplett (2003) Quantitative assessments of the host range and strain specificity of endophytic colonization by *Klebsiella pneumoniae* 342. *Plant & Soil* **257**: 49-59.
21. **Dong, Y.**, A.L. Iniguez, B.M. Ahmer, and E.W. Triplett (2003) Kinetics and strain specificity of rhizosphere and endophytic colonization by enteric bacteria on seedlings of *Medicago sativa* and *Medicago truncatula*. *Appl. Environ. Microbiol.* **69**: 1783-90.
22. **Dong, Y.**, M.K. Chelius, S. Brisse, N. Kozyrovska, R. Podschun, and E.W. Triplett (2003) Comparisons between two *Klebsiella*: the plant endophyte *K. pneumoniae* 342 and a clinical isolate, *K. pneumoniae* MGH78578. *Symbiosis* **35**: 247-259.
23. Scupham, A.J., **Y. Dong**, and E.W. Triplett (2002) Role of *tfxE*, but not *tfxG*, in trifoliotoxin resistance. *Appl. Environ. Microbiol.* **68**: 4334-4340.
24. Riggs, P.J., R.L. Moritz, M.K. Chelius, **Y. Dong**, A.L. Iniguez, S.M. Kaeppler, M.D. Casler, and E.W. Triplett (2002) Isolation and characterization of diazotrophic endophytes from grasses and their effects on plant growth. In: *Nitrogen Fixation: Global Perspectives, Proceedings of the 13th International Congress on Nitrogen Fixation*, T.R. Finan, M.R. O'Brian, D.B. Layzell, J.K. Vessey, W.E. Newton, eds. pp. 263-267.
25. **Dong, Y.**, J.D. Glasner, F.R. Blattner, and E.W. Triplett (2001) Genomic interspecies microarray hybridization: rapid discovery of three thousand genes in the maize endophyte, *Klebsiella pneumoniae* 342, by microarray hybridization with *Escherichia coli* K-12 open reading frames. *Appl. Environ. Microbiol.* **67**: 1911-1921.
26. An, Q.L., X.J. Yang, **Y. Dong**, L.J. Feng, B.J. Kuang, and J.D. Li (2001) Using confocal laser scanning microscope to visualize the infection of rice roots by GFP-labeled *Klebsiella oxytoca* SA2, an endophytic diazotroph. *Acta Botanica Sinica* **43**: 558-564.
27. Wang, W., **Y. Dong**, Q.L. An, X.L. Liu, and J.D. Li (2000) The construction of *nifH-gfp* expression vector and its expression in *Enterobacter gergoviae* 57-7. *Acta Botanica Sinica* **42**: 173-178.
28. **Dong, Y.**, J.D. Li, and C.C. Chu (2000) Molecular research progress of ammonium transporter. *Chin. Bulletin of Botany* **17**: 39-45. (review article)
29. **Dong, Y.**, Q.L. An, J.D. Li, and C.C. Chu (2000) Use of GFP and antibiotic resistance as selective markers to monitor colonization of associated nitrogen-fixing bacteria in maize rhizosphere. *Chin. J. Appl. Environ. Biol.* **6**: 61-65.
30. Li, J.D., Y.X. Li, **Y. Dong**, Q.L. An, J.W. Wang, Y. Zhang, and B.J. Kuang (1999) Research on associating nitrogen fixing engineered bacteria of maize. *Chinese Bulletin of High-Tech.* **9**: 47-50.
31. Huang, G.C., **Y. Dong**, and J.S. Sun (1999) Introduction of exogenous DNA into cotton via the pollen-tube pathway with GFP as a reporter. *Chinese Science Bulletin* **44**: 698-700.
32. **Dong, Y.**, J.D. Li, and C.C. Chu (1999) Construction a new bacterial cloning vector using a mutant green fluorescent protein as an indicator. *Acta Botanica Sinica* **41**: 487-489.
33. Huang, G.C., S.W. Zhu, **Y. Dong**, and J.S. Sun (1998) Green fluorescent protein and its application in plant research. *Chin. Bulletin of Botany* **15**: 24-30. (review article)
34. Li, Y.X., **Y. Dong**, and J.D. Li (1996) Isolation and characterization of NH₄⁺- excreting mutants of *Enterobacter gergoviae* 57-7. *Acta Botanica Sinica* **38**: 563-567.
35. Li, J.D., J.W. Wang, Y.X. Li, **Y. Dong**, and H.F. Jin (1994) Characterization of nitrogen fixation in maize root associated with *Klebsiella planticola* 19-1. *Acta Botanica Sinica* **36**: 265-270.

CONFERENCES (ABSTRACTS)

1. **Dong, Y.**, and G. Dimopoulos. The significance of a mosquito hyper-variable pattern recognition receptor in defense against malaria parasites. In Abstracts of the American Society of Tropical Medicine and Hygiene 56th Annual Meeting. Philadelphia, Pennsylvania USA, Nov. 4-8, 2007.

2. **Dong, Y.**, and G. Dimopoulos. Pattern recognition diversity in the *Anopheles gambiae* innate immune system. AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE 75 (5): 291-292 1013 Suppl. S, NOV 2006. American Society of Tropical Medicine and Hygiene 55th Annual Meeting, Atlanta, Georgia, U.S.A.
3. Baton, L.A., **Y. Dong**, and G. Dimopoulos. Strain and species-specific comparison of the immune responses of different members of the *Anopheles gambiae* complex to *Plasmodium falciparum* infection. AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE 75 (5): 311-311 1077 Suppl. S, NOV 2006. American Society of Tropical Medicine and Hygiene 55th Annual Meeting, Atlanta, Georgia, U.S.A.
4. **Dong, Y.**, and G. Dimopoulos. The implication of down syndrome cell adhesion molecule, Dscam, in the mosquito innate immunity. AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE 73 (6): 48-48 142 Suppl. S, Dec 2005. American Society of Tropical Medicine and Hygiene 54th Annual Meeting, Washington DC, U.S.A.
5. **Dong, Y.**, and G. Dimopoulos. *Anopheles* fibrinogen immune lectins: a large conserved gene family fighting against *Plasmodium*. AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE 73 (6): 295-295 897 Suppl. S, Dec 2005. American Society of Tropical Medicine and Hygiene 54th Annual Meeting, Washington DC, U.S.A.
6. Garver, L.S., **Y. Dong**, and G. Dimopoulos. The immunoglobulin superfamily of *Anopheles gambiae*: insights into novel proteins important for immunity. AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE 73 (6): 47-48 140 Suppl. S, Dec 2005. American Society of Tropical Medicine and Hygiene 54th Annual Meeting, Washington DC, U.S.A.
7. Warr, E., **Y. Dong**, R. Aguilar, and G. Dimopoulos. Spatial analysis of the *Anopheles gambiae* midgut transcriptome. AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE 73 (6): 302-303 922 Suppl. S, Dec 2005. American Society of Tropical Medicine and Hygiene 54th Annual Meeting, Washington DC, U.S.A.
8. Domenech-Sanchez A., **Y. Dong**, E.W. Triplett, S. Alberti, L. Martinez-Martinez, V.J. Benedi. Evaluation of differential gene expression in antimicrobial susceptible and resistant clinical isolates of *Klebsiella pneumoniae* by DNA microarray analysis. In Abstracts of the 14th European Congress of Clinical Microbiology and Infectious Diseases. Prague, Czech Republic, May 1-4, 2004.
9. Iniguez, A.L., **Y. Dong**, Ahmer, B.M.M., and E.W. Triplett. A model for the regulation of bacterial endophytic colonization of plants. In Abstracts of the 11th International Congress on Molecular Plant-Microbe Interactions. St. Petersburg, Russian, July 18-27, 2003.
10. Iniguez, A.L., **Y. Dong**, E.A. Robleto, and E.W. Triplett. Strategies for the development of inoculants for increased yield of legumes and grasses as well as plant disease control. In Abstracts of The Inoculant Forum 2003. Saskatoon, Canada, March 17-18, 2003.
11. Iniguez, A.L., **Y. Dong**, and E.W. Triplett. Kinetics, host range, strain specificity, and regulation of endophytic colonization by diazotrophic bacteria. In Abstracts of the 9th International symposium on nitrogen fixation with Non-Legumes. Leuven, Belgium, Sept. 1-5, 2002.
12. Iniguez, A.L., **Y. Dong**, and E.W. Triplett. In Abstracts of the 18th North American conference on symbiotic nitrogen fixation. Columbia, Missouri, June 3-8, 2002.
13. **Dong, Y.**, and E.W. Triplett (2001) Whole genome microarray hybridization used to validate a PCR-based genomic subtraction protocol. In: Nitrogen Fixation: Global Perspectives, Proceedings of the 13th International Congress on Nitrogen Fixation, T.R. Finan, M.R. O'Brien, D.B. Layzell, J.K. Vessey, W.E. Newton, eds. pp. 378.

14. Riggs, P.J., R. Mortiz, **Y. Dong**, M.K. Chelius, and E.W. Triplett (2001) Evidence to illustrate the beneficial yield response of spring wheat and rice to inoculation with nitrogen-fixing bacterial endophytes, In: Nitrogen Fixation: Global Perspectives, Proceedings of the 13th International Congress on Nitrogen Fixation, T.R. Finan, M.R. OíBrian, D.B. Layzell, J.K. Vessey, W.E. Newton, eds. pp. 484.
15. Henn, J.A., **Y. Dong**, S.M. Kaeppler, and E.W. Triplett. Gene discovery in the endomycorrhizal fungus, *Glomus etunicatum*, by genomic interspecies hybridization with microarrays containing all open reading frames from yeast. In Abstracts of the 10th International Congress on Molecular Plant-Microbe Interactions. Poster No. 249. Madison, Wisconsin, USA, July 10-14, 2001.
16. **Dong, Y.**, J.D. Glasner, F.R. Blattner, and E.W. Triplett. Rapid discovery of over three thousand genes in the maize endophyte, *Klebsiella pneumoniae* 342, by microarray hybridization with *E. coli* open reading frames. In Abstracts of the Agricultural Microbes Genome 2 Conference. Poster No. 30. San Diego, CA, U.S.A, Jan. 17-19, 2001.
17. **Dong, Y.**, J.D. Glasner, F.R. Blattner, and E.W. Triplett. Rapid discovery of over 3000 genes in the maize endophyte *Klebsiella pneumoniae* 342 by microarray hybridization with *E. coli* open reading frames. In Abstracts of the 8th International symposium on nitrogen fixation with non legumes. No. p1-5, pp. 113. Sydney, Australia, Dec. 3-7, 2000.
18. **Dong, Y.**, T.C. Herlache, and E.W. Triplett. Whole genome comparison between *E. coli* K12 and diazotrophic endophyte of maize, *Klebsiella pneumoniae*342. In Abstracts of the 17th North American conference on symbiotic nitrogen fixation. No.G3, pp. 47. Quebec, Canada, July 23-28, 2000.
19. **Dong, Y.**, and J.D. Li. Acquired of the ammonium excretion mutants and its promising applications to the agriculture. In Abstracts of the 2nd General Meeting of the Chinese Society for Biological Engineering, pp. 149, Zhangjiajie, China, Sept. 1-5, 1997.
20. Li, J.D., H.F. Jin, J.W. Wang, **Y. Dong**, and Y.X. Li (1995) Characterization of nitrogen fixation in maize root associated *Klebsiella planticola* 19-1. In: Nitrogen Fixation Fundamentals and Application, Proceedings of the 10th International Congress on Nitrogen Fixation, I.A. Tikhonovich, N.A. Provorov, V.I. Romanov, W.E. Newton, eds. pp. 256.
21. Li, J.D., Y.X. Li, **Y. Dong**, J.W. Wang, and Q.L. An (1995) NH₄⁺-excreting *Enterobacter gergoviae* 57-7 mutants and its nitrogen supply to maize host. In: Nitrogen Fixation Fundamentals and Application, Proceedings of the 10th International Congress on Nitrogen Fixation, I.A. Tikhonovich, N.A. Provorov, V.I. Romanov, W.E. Newton, eds. pp. 67.