

# CURRICULUM VITAE

Hua Huang M.D., Ph.D.

## I. Personal History

Present Position Rank: Associate Professor

Present Address:

Division of Allergy and Immunology,  
Departments of Medicine and Integrated Immunology,  
National Jewish Health,  
University of Colorado Denver School of Medicine,  
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Faculty websites:

Integrated Immunology  
<http://www.uchsc.edu/immuno/faculty/alpha.htm>

National Jewish Health  
<http://www.nationaljewish.org/about/people-search/detail.aspx?doctorID=171>

Medical Scientist Training Program Faculty  
<http://www.uchsc.edu/sm/mstp/faculty.html>

The Charles C. Gates Regenerative Medicine and Stem Cell Biology Program  
<http://www.uchsc.edu/stemcell/faculty/faculty.htm>

Lab website:  
<http://www.njhealth.org/research/programs-depts/medicine/labs/huang/index.aspx>

## II. Educational History

### Degrees

1979-1984 Sun Yat-Sen Medical School, Guangzhou, P. R. China; M. D.  
1989-1991 University of Wisconsin-Madison, MS in Immunology.  
1991-1993 University of Wisconsin-Madison, Ph.D. in Developmental Biology.

### Postdoctoral training

1993-1995 Leukemia Society Fellow, The Department of Molecular Biology,  
Princeton University.  
1995-1999 Leukemia Society Fellow and postdoctoral fellow, The Laboratory of  
Immunology, NIAID, NIH.

### **III. Professional Position**

- 1983-1984 Internship, The Second Affiliated Hospital of Sun Yat-Sen Medical School, Guangzhou, China
- 1984-1988 Research Associate, Laboratory of Industrial Hygiene, Ministry of Public Health, Beijing, People's Republic of China.
- 1988-1989 Visiting Scholar, Immunology, Radiation Effects Research Foundation, Hiroshima, Japan.
- 1989-1993 Graduate Research Assistant, Department of Zoology, University of Wisconsin.
- 1993-1995 Leukemia Society Fellow, Department of Molecular Biology, Princeton University.
- 1995-1999 Intramural Research Fellow, Laboratory of Immunology, NIH.
- 1999-2005 Assistant Professor (promoted to Associate Professor with tenure), Department of Cell Biology, Loyola University Chicago, Stritch School of Medicine. Faculty member of the Molecular Biology Graduate Program.
- 2005- Visiting Professor, Sichuan University School of Medicine.
- 2005- Associate Professor, Division of Allergy and Immunology, Departments of Medicine and Integrated Immunology, National Jewish Medical and Research Center, University of Colorado Health Science.

### **IV. Honors and Awards**

- 1988-1989 Visiting Scholarship awarded by the Radiation Effects Research Foundation, Japan
- 1998 Certification of Appreciation from the Radiation Effects Research Foundation, Japan
- 1994 Leukemia Society of America Fellowship.
- 2000 NIH K22 Research Career Award
- 2002 The Lydia Schweppe Immunology Career Development Award.
- 2004 Travel Award by the Federation of Clinical Immunology Societies (FOCIS).

### **V. Professional Affiliations**

- 1999-present American Association for the Advancement of Science
- 2000-present American Association of Immunologists
- 1999-2005 Chicago Association of Immunologists

### **VI. Professional Service and Committees**

#### **A. Institutional and Departmental Committees**

1999-2005 Service to Loyola University:  
I have participated in teaching graduate courses organized by the Department of Microbiology and Immunology every year since 2000. I have also actively participated in teaching and training in Molecular Biology Graduate Program. From 2003, I co-directed the Cell Biology Departmental Seminar. In addition to hosting guest speakers, I regularly discussed with student seminar presenters their strengths and the weak areas that need improvement. Committee services include comprehensive exam committee, Ph.D. dissertation committee, and search committee.

2005 Service to National Jewish Medical and Research Center:  
I give a lecture to Allergy and Immunology Fellows and serve on graduate student's thesis committee.

#### B. National Service

- 2001 I served as chair of the workshop entitled "Cytokines and Chemokines" in Autumn Immunology Conference, Chicago, Illinois.
- 2004 Chair of the workshop entitled "T Cell Development" in Autumn Immunology Conference, Chicago, Illinois.

#### **VII. Patents**

N/a

#### **VIII. Review and Referee Activities**

Editorial Board:

2006-present: managing editor, Frontiers in Bioscience

Journal Review:

Reviewer, The Journal of Immunology

Reviewer, Blood

Reviewer, Cellular Immunology

Study Section:

2005 Ad hoc reviewer for Immunity and Host Defense Study Section, NIH

2006 Reviewer for Specialized Clinically-Oriented Ventures in Environmental Research (DISCOVER) Center, NIEHS, NIH

2008 Ad hoc reviewer, U.S.-Israel Binational Science Foundation

2008 Ad hoc reviewer for Hypersensitivity, Autoimmunity & Immune-mediated Diseases Study Section, NIH

2009 Reviewer, ZAI1 PTM-I (M1) 1, special emphasis panel, Immune Defense at the Mucosa, NIAID, NIH

#### **IX. Teaching Activities**

##### A. Courses director

- 2001 Special Topic: Signal Transduction, Course Director.
- 2001 Molecular Biology Journal Club, Co-director, two semesters.
- 2003-2005 Departmental Seminar, Co-Director.

##### B. Graduate and Medical School Lectures

- 2002 Lectures on "B Cell Receptor Signaling" in Molecular Genetics of B Lymphocytes.
- 2003 Lectures on "Helper T Cell Lineage Commitment and Functions" in Cellular Immunology.

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|-----------|---|
| 2004      | Lectures on “B Cell Receptor Signaling” in Molecular Genetic of B Lymphocytes.  |
| 2005-date | Lecture entitled “CD4 <sup>+</sup> T Cell Subsets: Development and Immune Functions” in Denver Allergy Round            |
| 2006-date | Participating in Clinic Fellow’s Journal Club study.  |
| 2007-date | Lecture entitled “Cytokine Receptor Signaling” in IMMU 7604 Special Topics in Signal Transduction in the Immune system. |
| 2008-date | Lecture entitled “Th1/2 Cell Development and Related Diseases” in Immun 7662  |

#### C. Medical Student Preceptor

Faculty member of Medical Scientist Training Program, CU Denver School of Medicine  
 Faculty member of Allergy and Clinic Immunology training program, National Jewish Health and University of Colorado Denver School of Medicine

Trainees:

Nkiruka Erekosima, M.D.

#### D. Graduate Student Thesis Advisor

Faculty member of Immunology, graduate school of CU Denver  
 Faculty member of Regenerative Medicine and Stem Cell Biology Program, CU Denver School of Medicine  
 Faculty member of Sichuan University School of Medicine  
 Faculty member Loyola University Chicago School of Medicine

Trainees:

Yonghua Zhuang 2005-

Graduated:

Zan Huang, Ph.D. 2002-2006  
 Kristy Grabowski Ph.D. 2000-2003

#### Ph.D. Dissertation Committees:

Allison Bamberg Ph.D. candidate, Department of Immunology, 2008-  
 Kavita Tundwal Ph.D. candidate, Department of Immunology, 2007-  
 Jeanette Brown M.D. Ph.D. candidate, Department of Immunology, 2005-2007  
 Ki Jong Rhee Microbiology/Immunology, Loyola Medical School 2002-2004  
 Joseph R. Podojil, Cell Biology, Loyola Medical School 2002-2004  
 Cynthia DeBoy, Cell Biology, Loyola Medical School 2003-2005

#### Comprehensive Examine Committees:

Rick Sullivan, Immunology, University of Colorado Denver 2008  
 Joseph R. Podojil, Cell Biology, Loyola Medical School 2002-2004  
 Cynthia DeBoy, Cell Biology, Loyola Medical School 2003-2005  
 Jiao de Gong, Cell Biology, Loyola Medical School 2003

#### Undergraduate students:

J.D. Williams (Denver University) 2008-

Leah Cho (Denver University) 2005-  
Charles Lo (Cornell University) 1998-1999  
Bernadine Espiritu (Northwestern) 2002  
Rashid Rashid (Loyola Medical School) 2002

E. Postdoctoral Fellows

Current:

Jun Nishida Ph.D. 2005-

Past:

Keitaro Ohmari DVM. Ph.D. 2006-2007

Yuechun Zhu M. D. 2003-2005

Luqui Chen M. D., Ph. D. 2002-2004

Yongkang Zhang M.D., Ph.D. 2000-2001

X. Research Grants, Contracts, and Special Grants

A. Current Research Grant Support

1 RO1 AI059170-01 A2 (Huang) 6/1/2005-5/31/2010 25%  
NIH/NIAID 225,000/year

**Differentiation of Th2 cytokine-producing innate cells**

The major goals of this project are to determine signaling and transcriptional mechanism by which IL-4 and IL-5 drive bone marrow progenitor cells to differentiate into eosinophils that can produce Th2 type of cytokines.

1R01AI068083-01 (Huang) 4/1/2005-3/31/2009 25%  
NIH/NIAID 225,000/year

**Coordinating Adaptive and Innate Immunity**

The major goals of this study are to investigate in vivo relationship between CD4<sup>+</sup> Th2 cells and Th2 cytokine-producing eosinophils.

PP1357 (Huang) 3/1/2007-2/28/2008 4%  
MS 40,000

**Identification of Regulatory Regions of the *IL17* Gene**

Pilot

The goal of this project is to analyze which regions of the *IL17* gene regulate IL-17 expression in Th17 cells.

Overlap: none

1RO1 AI070175-01A2 (Chu, PI) 9/01/08 – 8/31/12 5%  
NIH/NIAID 250,000/Year

**Effects of Allergic Inflammation on TLR2 Signaling and Mycoplasma Infection**

The major goals of this project are to determine the role of allergic inflammation in TLR2 signaling of airway epithelial cells and dendritic cells in response to mycoplasma infection, and to determine the impact of low level of mycoplasma infection on Th2 differentiation of T cells through modulation of dendritic cells.

B. Previous Grant Support

*Extramural funding*

RO1 AI48568-01 (Huang) 2/1/2002-1/31/2005 33%  
NIH/HIAID \$150,00/year

**Role of IFN- $\gamma$  in Th1 Cell Development**

The major goals of this project is to determine the signaling mechanisms by which IFN- $\gamma$  suppress IL-4 signaling in Th1 cells.

K22 AI01663 Career Development Award (Huang), /1/2000-2/28/2002 25%,  
NIAID, NIH 125,000/year

**The Role of Phosphatases in Regulating Basal and Induced IL-4 Receptor Expression In Lymphocytes**

The goal of this study was to investigate the role of SHP-1 in IL-4 receptor expression.

Career Development Award,  
Principal Investigator: Hua Huang  
10% effort, direct cost 50,000 x 3 = 150,000.  
Period: 4/1/2000-3/31/2003.  
Funding Agency: The Schweppe Foundation.

**Mechanism(s) by which T Cell Receptor Signals Down-regulate IL-4-induced STAT6 phosphorylation**

This study was designed to understand how TCR signaling dephosphorates STAT6 phosphorylation

*Institutional funding*

"Molecular Basis of Stable Th1 phenotype"

Principal Investigator: Hua Huang  
25% effort, 40,000  
Banes trust Fund of Loyola University Chicago, Stritch School of Medicine.  
Period: 3/1/2000-2/28/2001.

**X. Bibliography**

A. Papers published in refereed journals

1. Gao, F. M., X. L. Li, **H. Huang**, and Wang W. H. In vitro studies of the cell cycle of mouse myelomonocytic leukemia using a fluorescence activated cell sorter and autoradiography. *Zhonghua Zhong Liu Za Zhi*. 9:10-3 (1987).
2. **Huang, H.**, K. C. Meyer, L. Kubai, and Auerbach, R. An immune model of beryllium-induced pulmonary granuloma in mice. *Lab. Invest.* 67: 138-146 (1992).
3. Kusunoki, Y., **H. Huang**, Y. Fukuda, K. Ozaki, M. Saito, Y. Hirai, and Akiyama, M. A positive correlation between the precursor frequency of cytotoxic lymphocytes to autologous EBV-transformed B cells and antibody titer. *Micro Immunol.* 73: 461-469 (1993).

4. Kusunoki, Y., S. Kyoizumi, Y. Fukuda, H. Huang, M. Saito, Y. Hirai, and Akiyama, M. Immune Responses to Epstein-Barr Virus in Atomic Bomb Survivors: Study of Precursor Frequency of Cytotoxic Lymphocytes and Titer Levels of Anti-Epstein-Barr Virus-Related Antibodies. *Radiation Res.* 138: 127-132 (1994).
5. **Huang, H.**, and Auerbach, R. Identification and characterization of hematopoietic stem cells from the yolk sac of the early mouse embryo. *Pro Natl Acad Sci U.S.A.* 90: 10110-10114 (1993). (Note: this paper was selected as a hot paper at 1992 American Society of Cell Biology annual meeting).
6. **Huang, H.**, L. D. Zettergren, and Auerbach, R. In vitro differentiation of B cells and myeloid cells from the early mouse embryo and its extraembryonic yolk sac. *Exp. Hematol.* 22: 19-25 (1994). (also see commentary of the same issue).
7. **Huang, H.**, J. Hu-Li, H. J. Chen, Z. Ben-Sasson, and Paul, W. E. IL-4 and IL-13 production by TH2 cells is IL-4 independent. *J. Immunol.* 159: 3731-3738 (1997).
8. Ryan, J. J., **H. Huang**, L. J. McReynolds, C. Shelburne, T. F. Huff, and Paul, W. E. Stem cell factor induces STAT-5 DNA binding in IL-3 derived bone marrow mast cells. *Exp. Hematol.* 25: 357-362 (1997).
9. Chen H. J., **H. Huang**, and Paul, W. E. NK1.1<sup>+</sup> CD4<sup>+</sup> T cells lose NK1.1 expression upon in vitro activation. *J. Immunol.* 158: 5112-5119 (1997).
10. Hu-Li, J., **H. Huang**, J. J. Ryan, and Paul, W. E. In differentiated CD4<sup>+</sup> T cells, IL-4 production is cytokine autonomous while IFN- $\gamma$  production is cytokine-dependent. *Proc. Natl. Acad. Sci.* 94: 3189-3194 (1997).
11. **Huang, H.**, and Paul, W. E. Impaired IL-4 signaling in TH1 cells. *J. Exp. Med.* 187: 1305-1313 (1998).
12. Ryan, J. J., L. J. McReynolds, **H. Huang**, K. Nelms, and Paul, W. E. Characterization of a mobile Stat6 activation motif in the human IL-4 receptor. *J. Immunol.* 61: 1811-1821 (1998).
13. **Huang, H.**, C. Panettier, J. Hu-Li, and Paul, W. E. Transient transfection of primary T helper cells by particle-mediated gene transfer. *J. Immunol. Methods* 215: 173-177 (1998).
14. **Huang, H.**, and Paul, W. E. Protein Tyrosine Phosphatase Activity is Required for IL-4 induced-IL-4 Receptor Expression. *J. Immunol.* 164: 1211-1215 (2000).
15. **Huang, H.**,\* Zhu, J. F.\* , L. Guo, T. Stonehouse, C. Watson, J. Hu-Li, and Paul, W. E. Transient Inhibition of IL-4 Signaling by TCR Ligation. *J. Exp. Med.* 192: 1125-1134 (2000). \* These two authors contributed equally to this work.
16. Zhang, Y. K., R. Apilado, J. M. Coleman, S. Z. Ben-Sasson, S. Tsang, J. Hu-Li, W. E. Paul, and **Huang, H.** IFN- $\gamma$  Stabilizes Th1 Cell Phenotype. *J. Exp. Med.* 194: 165-172 (2001).
17. Chen, L. K. Grabowski, J. P. Xin, J. M. Coleman, Z. Huang, Y. C. Zhu, B. Espiritu, W., Xia, S. Alkan, J. Clancy, Jr., and **Huang, H.** IL-4 induces

- differentiation and expansion of Th2 cytokine-producing eosinophils. *J. Immunol.* 172: 2059-2066 (2004).
18. Zhu, Y. C., L. Chen, Z. Huang, S. Alkan, K. D. Bunting, R. R. Wen, D. Wang, and **Huang, H.** IL-5 primes Th2 cytokine-producing capacity in eosinophils through a STAT5-dependent mechanism. *Cutting Edge, J. Immunol.* 173: 2918-2922 (2004).
  19. Huang, Z., J. M. Coleman, Y. Su, M. Mann, J. J. Ryan, L. D. Shultz, and **Huang, H.** SHP-1 regulates STAT6 phosphorylation and IL-4-mediated function in a cell-type specific manner. *Cytokine* 29:118-124 (2005).
  20. Huang, Z., J. P. Xin, J. M. Coleman, and **Huang, H.** IFN- $\gamma$  suppresses phosphorylation of STAT6 by inhibiting its recruitment the IL-4 Receptor in Th1 Cells. *J. Immunol* 174: 1332- 337 (2005).
  21. Junping Xin, Keitaro Ohmori, Jun Nishida, Yuechun Zhu, and **Hua Huang.** The initial response of CD4<sup>+</sup> IL-4-producing cells. *Int. Imm.* 19: 305-310 (2007).
  22. Keitaro Ohmori, Yuchun Luo, Yi Jia, Jun Nishida, Zhengqi Wang, Kevin D. Bunting, Demin Wang, and Hua Huang. IL-3 Induces Basophil Expansion In Vivo by Directing Granulocyte-Monocyte Progenitors to Differentiate into Basophil Lineage-Restricted Progenitors in the Bone Marrow and by Increasing the Number of Basophil/Mast Cell Progenitors in the Spleen. *J Immunol* 182: 2835-2841 (2009).
  23. Zhuang Y, Huang Z, Nishida J, Brown M, Zhang L, Huang H: T-bet is required for maintaining silencing the IL-4-Producing Potential in Th1 Cells. *Immunology.* Published Online: 12 Jan 10.1111/j.1365-2567.2009.03049.x (2009).
  24. Yonghua Zhuang, Zan Huang, Jun Nishida, Lin Zhang, and Hua Huang. Signaling Pathways that Lead to the Silencing of the IL-4-Producing Potential in Th1 Cells. *Journal of Interferon & Cytokine Research*, in press (2009).

#### B. Book and Review

1. R. Auerbach, **H. Huang**, and Lu, L. Hematopoietic stem cell of the murine yolk sac. *Stem Cells* 14: 269-280 (1996).
2. Nelms K, **H. Huang**, J. J. Ryan, A. Keegan, and Paul W. E. Interleukin-4 receptor signaling mechanisms and their biological significance. *Adv Exp Med Biol* 452: 37-43 (1998).

#### C. Other publications

25. Wu, C. Y., Yang B. Y., Zhu, Z. L., and **Huang, H.** Analysis of linkage of antigen-specific Th1/Th2 cytokines at a single cell level. *Chinese Journal of Immunology.* 2: 9-12 (2005). (This is a collaborative work as result of being a visiting professor in Sun Yat-sen University Medical School, which is my alma mater).

#### Invited Presentations

1. Department of Biology, Virginia Common Wealth University, Richmond, VA, 1999.
2. Rush University, 2001.
3. Department of Immunology, Shanghai Institute of Cell Biology and Biochemistry, Chinese Academic of Science 2004.
4. The Blood Research Institute, Medical College of Wisconsin, 2004.
5. 12<sup>th</sup> International Congress of Immunology, Montréal, Canada 2004
6. Department of Immunology, Su Zhou University of Medical School, 2005.
7. Department of Immunology, Sichuan University School of Medicine, 2005.
8. Department of Biotherapy, Sun Yet-set University Cancer Center, 2006.
9. Department of Immunology, Sun Yet-set University, 2007.
10. 13<sup>th</sup> International Congress of Immunology, Rio de Janeiro, Brazil, 2007
11. Department of Pediatric, Indiana University School of Medicine, 2008.

D. Abstracts and papers presented at meetings

Abstracts and papers presented at meetings (Since 1999)

- 1999 **Hua Huang**, Jingfan Zhu, Jane Hu-Li and William E. Paul. TCR-mediated downregulation of STAT6 Phosphorylation in differentiated T helper cells. 28th Autumn Immunology Conference, Chicago. Oral presentation.
- 2000 Jingfan Zhu, Timothy Stonehouse, Jane Hu-Li, **Hua Huang** and William E. Paul. Transient inhibition of STAT6 Phosphorylation by TCR ligation. AAI, Seattle, Washington.
- 2000 John M. Coleman, Eric Misfeldt, William E. Paul, and Leonard D. Schultz and **Hua Huang**. Lack of IL-4 receptor alpha chain expression and IL-4-mediated functions in spleen cells from SHP-1 deficient mice. 29th Autumn Immunology Conference, Chicago, IL. Oral presentation.
- 2001 **Hua Huang**, Ron Apilado, John Coleman, S.Z. Ben-Sasson, Jane Hu-Li, William E. Paul and Yongkang Zhang. IFN- $\gamma$  Stabilizes the Th1 Cell Phenotype. 11th International Congress of Immunology, Stockholm, Sweden. Oral presentation.
- 2002 Kristy Grabowski, John Coleman, Baltazar Espiritu, William E. Paul, William, Xia, John Clancy, Jr. and **Hua Huang**. Accumulation of Robust IL-4 Producers in the Lung and Airway in a Murine Model of Asthma is IL-4 Dependent. America Association of Immunology Annual Meeting, New Orleans.
- 2002 Junping Xin, Yongkang Zhang, and **Hua Huang**. IFN- $\gamma$  inhibits STAT6 phosphorylation in differentiated Th1 Cells. America Association of Immunology Annual Meeting, New Orleans.
- 2002 Luqiu Chen, Kristy Grabowski, Junping Xin, John Coleman, Baltazar Espiritu, William E. Paul, Serhan Alkan, William, Xia, John Clancy, Jr., and **Hua Huang**. IL-4 directs hematopoietic progenitor cells to become non-CD4 IL-4 producers in murine model of asthma. 31th Autumn Immunology Conference, Chicago, IL. Oral presentation.
- 2002 Zan Huang and **Hua Huang**. Cell type specific regulation of IL-4 receptor expression. 31th Autumn Immunology Conference, Chicago, IL. Oral presentation.

- 2002 Junping Xin\*, Yan Su\*, Yongkang Zhang and **Hua Huang**. IFN- $\gamma$  mediates Th1 cell commitment: role of diminished STAT6 Phosphorylation. 31th Autumn Immunology Conference, Chicago, IL. Oral presentation.
- 2003 **Hua Huang**, Luqui Chen, Kristy Grabowski, John Coleman and Jun-ping Xin. Initiation and expansion of Th2 response in allergic airway inflammation, Keystone Symposium.
- 2003 Luqui Chen, Kristy A. Grabowski, Jun-ping Xin, John Coleman, Zan Huang, Baltazar Espiritu, H. Bill Xie, Serhan Alkan, John Clancy, Jr., and **Hua Huang**. Eosinophils function as IL-4-controlled cellular amplifiers for Th2 Cytokine production in the late-phase response of allergic airway inflammation. America Association of Immunology Annual Meeting, Denver, Colorado.
- 2003 Junping Xin, Luqui Chen, and **Hua Huang**. IL-4 is not required to generate antigen-specific Th2 response but is critical to expand Th2 Response in murine model of allergic airway inflammation. America Association of Immunology Annual Meeting, Denver, Colorado.
- 2003 Zan Huang, Junping Xin, and **Hua Huang**. IFN- $\gamma$  suppresses STAT6 phosphorylation in Th1 Cells by inhibiting STAT6 binding to phosphorylated IL-4 receptor. 32th Autumn Immunology Conference, Chicago, IL. Oral presentation.
- 2003 Junping Xin, Yuechun Zhu, Luqui Chen, and **Hua Huang**. Identification and characterization of initial IL-4-producing CD4<sup>+</sup> T Cells directly ex vivo. 32th Autumn Immunology Conference, Chicago, IL. Oral presentation.
- 20004 **Hua Huang**, Zan Huang, Junping Xin, and John Coleman. Interferon- $\gamma$  suppresses STAT6 phosphorylation in Th1 cells by inhibiting the recruitment of STAT6 to the IL-4 receptor. AAI DC.
- 2004 **Huang, H**, YC Zhu, JP. Xin, S. Alkan, and L. Chen. Adaptive Immune Component Coordinates with Innate Immune Components to Generate Type-2 Immunity. 12th International Congress of Immunology and 4th Annual Conference of FOCIS, Montreal, Canada. Oral presentation.
- 2004 Yuechun Zhu, Luqui Chen, Zan Huang, Serhan Alkan, Kevin D. Bunting, Ren Ren Wen, Demin Wang, and **Hua Huang**. IL-5 Primes Th2 Cytokine-Producing Capacity in Eosinophils through a STAT5-Dependent Mechanism. Autumn Immunology Conference, Chicago. Oral presentation.
- 2004 Zan Huang and **Hua Huang**. IFN- $\gamma$  mediates Th1 cell commitment through STAT1. Autumn Immunology Conference, Chicago. Oral presentation.
- 2005 Yuechun Zhu, Wenting Sun, Serhan Alkan, Demin Wang, and **Hua Huang**. STAT5 is required for IL-3 to direct bone marrow progenitor cells to develop into IL-4-producing innate effector cells. Annual meeting of American Associate of Immunologist, San Diego. Oral presentation.
- 2006 HS Jin, J Nishida, S Carney, YC Zhu, W Sun, S Alkan, D Wang and Hua Huang. Differentiation of Th2 cytokine-producing hematopoietic cells. Keystone symposium.

- 2007 Hua Huang, HS Jin, J Nishida, S Carney, YC Zhu, W Sun, S Alkan, and D Wang. Molecular control that regulates IL-4 expression in eosinophils and monocytes. Cold Spring Harbor.
- 2007 Yonghua Zhuang, Zan Huang, Jun Nishida, Jennifer Masuda, Laurent Gapin, Melissa Brown, Lin Zhang, Hua Huang. Role of IFN- $\gamma$  and IL-12 in Silencing the IL-4-Producing Potential in Th1 Cells. AAI Miami.
- 2007 H Huang, Y. Zhuang, J. Nishida, M. Brown, L. Zhang IFN-gamma directly silences the IL-4-producing potential in TH1 cells. 13<sup>th</sup> International Congress of Immunology, Rio de Janeiro, Brazil, 2007. Oral presentation.

E. Manuscript submitted for publication and available for evaluation