Grace Chen
109 E89th Street, New York, NY 10128
Phone: 917-856-5050, E-mail: gchen36@gmail.com

QUALIFICATION SUMMARY

- Productive independent biological science researcher with publications in respected journals
- Experience in managing research projects and collaborating with scientists from different research fields
- Excellent communication skills and presented results at international conferences

EDUCATION

Ph.D. Department of Immunology, University of Toronto, Toronto, ON, Canada 2002-2008
B.Sc. (Honors), University of Toronto, Toronto, ON, Canada 1998-2002

RESEARCH EXPERIENCE

Postdoctoral Fellow, Albert Einstein College of Medicine, Bronx, NY, USA Nov 2010-present
Department of Cell Biology
Principal Investigator: Paul S. Frenette

- Initiated and accomplished multiple research projects
- Collaborated with physicians in a clinical trial study of sickle cell disease

Projects:

1. **Role of iNKT cells in sickle cell disease**
   Examining the role of iNKT cells in sickle cell disease using humanized sickle cell mouse model (preclinical mouse disease model) and fluorescence and bright-field intravital microscopy.
2. **Contribution of neutrophil extracellular traps to the pathogenesis of sickle cell disease**
   Uncovered a link between neutrophil extracellular traps and sickle cell disease complication acute chest syndrome using humanized sickle cell mouse model and confocal microscopy
3. **Role of β2 integrin on neutrophils in sickle cell disease pathogenesis**
   Examined the effect of β2 integrin deficiency on sickle cell disease vaso-occlusive crisis and on disease progression by characterizing aged β2 integrin-deficient humanized sickle cell mouse model
4. **Role of platelets in sickle cell disease pathogenesis**
   Characterized the role of platelets in sickle cell disease vaso-occlusive crisis using humanized sickle cell mouse model and fluorescence and bright-field intravital microscopic imaging of live animals.
5. **Treatment of sickle cell vaso-occlusive crisis with high dose IVIG: A phase I/II study**
   Collaborated with physicians and analyzed blood samples of patients with sickle cell disease pre- and post-IVIG treatment with flow cytometry.
6. **Project planning**
   Formulated project proposal/timeline and created a budget plan for collaborative projects with pharmaceutical companies (project proposal writing and project budget planning).

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Ph.D. Research, University of Toronto, Toronto, Ontario, Canada 2002-2008
Department of Immunology
Principle Investigator: Robert Rottapel
Dissertation Title: **Functional analysis of adapter protein c-Abl Src Homology 3 domain-binding protein 2**
Uncovered the functional role of adapter protein, 3BP2, in B cells and neutrophils, in transgenic mouse model.

PUBLICATIONS

- Manwani, D., Chen, G., Carullo, V., et al. **Am J Hematol.** (2015), 90(5): 381-385
- Chen, G., Zhang, D., Fuchs, T.A., Manwani, D., Wagner, D.D., Frenette, P.S., **Blood**. (2014), 123(24): 3818-27
- Chen, G., Dimitriou, I., Milne, L., et al. **J Immunol.** (2012), 189(5): 2138-50
- Dimitriou, I., Clemenza, L., Scotter, A.J., Chen, G., Guerra, F.M., Rottapel, R., **Immunol Rev.** (2008), 224: 265-83
- Chen, G., Dimitriou, I., La Rose, J., et al. **Mol Cell Biol.** (2007), 27(8): 3109-22

TECHNICAL SKILLS

Blood leukocyte and Bone marrow cell isolation: from human patient blood samples and from murine blood and bone marrow samples
Surgical skills: preparation of small rodents for intravital microscopy
Intravital microscopy: utilize both bright-field and fluorescence microscope
Cryosectioning and immunolabeling: preparation of frozen tissue sections for confocal imaging
Confocal imaging: whole-mount imaging (lung and liver) and cryostat tissue sections
Flow Cytometry: both rodent and human samples
ELISA: plasma cytokines, brochoalveolar lavage cytokines
In-vitro phagocytosis assay
In-vitro cell culture
Migration assay (in vitro and in vivo)
Western blot

COMMUNICATION EXPERIENCE

Excellent writing skills
Wrote and published three first author primary research papers and one review article in international, peer-reviewed journals.

Excellent communicator

- Conference oral presentation: The American Society of Hematology (ASH) 55th Annual Meeting (Oral session "Hemoglobinopathies, excluding Thalassemia: Insight Into the Pathophysiology of Sickle Cell Disease") (New Orleans, Louisiana) 2013
- Thesis defense: Research presentation (open to the public); Examination (restricted to examination committee) (Toronto Ontario) 2008

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- Conference poster presentation: Cold Spring Harbor Conference titled "Phosphorylation, Signaling and Disease" (Cold Spring Harbor, New York) 2007
- Conference poster presentation: FASEB Summer Research Conference titled "Lymphocytes and Antibodies" (Indian Wells, California) 2006
- Conference poster presentation: Annual Ogryzlo Research Day (Division of Rheumatology, Department of Medicine, University of Toronto) (Toronto, Ontario) 2005
- Conference poster presentation: Keystone Symposia titled "Cellular Senescence and Cell Death/Survival and Death in Immune Tolerance and Homeostasis" (Keystone, Colorado) 2005
- Conference oral presentation: Annual Ogryzlo Research Day (Division of Rheumatology, Department of Medicine, University of Toronto) (Toronto, Ontario) 2004
- Fluent in Mandarin Chinese
- Conversational ability in Japanese

LEADERSHIP/MENTORING EXPERIENCE

Volunteer Mentor (International Student Center) 2009-2010

- Provide referral information about the University of Toronto procedures, support services, resources, and extra-curricular activities on and off-campus
- Communicate with mentees in person on regular basis
- Attend mentor meetings and submit monthly mentor progress reports

AWARD/FUNDING

The American Society of Hematology (ASH) Abstract Achievement Award 2013
David Rae Graduate Student Scholarship 2005-2006
Dick and Peggy Sharp Graduate Student Fellowship in Immunology 2004-2005
Ontario Graduate Scholarship in Science and Technology 2002-2006
University of Toronto Open Fellowship Award (Entrance scholarship) 2002