

19th International Natural Killer Cell Workshop

*7th Annual Meeting of the
Society for Natural Immunity*

www.nkmeeting.org

*Caribe Hilton Hotel
San Juan, Puerto Rico*



Organizing Committee

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Brown University, Providence, Rhode Island*

*Lewis L. Lanier, Ph.D. - Program Co-Chair
University of California, San Francisco, CA*

PROGRAM

Sunday, October 6, 2002

8:00-8:30am	Presidential Address	Angela Santoni
8:30-10:00am	Session 1: NK Biology I	Chairpersons: A. Croy & C. Biron
8:30-8:45am	LY49 gene expression in the virgin and pregnant mouse uterus <i>Anne Croy</i>	
8:45-8:55am	Regulation Of Macrophage Inflammatory-1α (MIP-1α) Delivery and NK Cell Accumulation In Liver Through A Pathway Dependent on IFN-α/β. <i>Thais Salazar-Mather</i>	
8:55-9:05am	Activating and Inhibitory Ly49 Receptors Differentially Modulate NK Cell Chemotactic Responses to the Chemokines CXCL10 and CXCL12 <i>Jay Ryan</i>	
9:05-9:15am	Pivotal role of KARAP/DAP12 adaptor molecule in the natural killer cell-mediated resistance to murine cytomegalovirus infection <i>Hanna Sjölin</i>	
9:15-9:25am	Modulation of peripheral and uterine NK cell responses by HLA-G <i>A. Van der Meer</i>	
9:25-9:35am	Polymorphisms of the 2DL4 Receptor Influence Its Expression on NK Cells: Implications For Pregnancy <i>CS Witt</i>	
9:35-9:45am	Recognition of HLA-G by KIR2DL4 is not essential for human reproduction <i>Carlos Vilches</i>	
10:00-10:30am	BREAK	
10:30-12:15pm	Session 2: NK Receptors/Ligands I	Chairpersons: K. Karre & D. Cosman
10:30-10:45am	Intracellular Sequestration of NKG2D Ligands by Human DMV Glycoprotein UL16; An Immune Evasion Mechanism <i>David Cosman</i>	
10:45-11:00am	Spontaneous mutations in the human cytomegalovirus HLA class I homologue UL18 affect the binding to the inhibitory receptor LIR-1/ILT2 <i>Cristina Cerboni</i>	
11:00-11:10am	Solving the crystal structure of Ly49C bound to H-2Kb/OVA <i>Roy Mariuzza</i>	

- 11:10-11:20am **A Widely-Expressed Transcript Encodes a High Affinity Ligand for Mouse NKG2D**
Leon Carayannopoulos
- 11:20-11:30am **NKG2D-dependent lysis of tumor cells of different histotype upon recognition of MICA and ULBP**
Daniela Pende
- 11:30-11:40am **Functional and biochemical analysis of a novel NK receptor family member, Ly49Q**
Noriko Toyama-Sorimachi
- 11:40-11:50am **Regulation of Immune Responses by Novel Paired Activating and Inhibitory Immunoglobulin-Like Receptors, MAIR-I and -II**
Akira Shibuya
- 11:50-12:00pm **Characterization of a Novel Killer Cell Lectin-like Receptor (KLRH1) Expressed by Alloreactive Rat NK Cells**
Christian Naper
- 12:15-1:30pm LUNCH**
- 1:30-3:00pm Session 3: NK Clinical Chairpersons: P. Parham & A. Velardi**
- 1:30-1:45pm **KIR diversity: Signal or Noise?**
Peter Parham
- 1:45-2:05pm **Impact of Donor NK Cell Alloreactivity on Mismatched Hematopoietic Transplantation**
Andrea Velardi
- 2:05-2:15pm **Increased LIR-1 expression on NK cells precedes serum cytomegalovirus detection and diagnosis of CMV disease in lung transplanted recipients.**
Louise Berg
- 2:15-2:25pm **HLA Class I Molecules Inhibit Rolling Adhesion and Cytotoxicity of Activated Human NK Cells Against Porcine Endothelial Cells**
Pietro Forte
- 2:25-2:35pm **Natural Killer Cell Alloreactivity in Mismatched Unrelated Donor Hematopoietic Transplants**
Jeffrey S. Miller
- 2:35-2:45pm **CD8-interaction mutant HLA-Cw3 molecules protect transgenic porcine cells from both natural cytotoxicity and ADCC without stimulating human CD8⁺ CTLs**
Gerald L. Waneck
- 3:00-3:30pm BREAK**
- 3:30-6:00pm NK Workshop I Chairpersons: J. Ortaldo, E. Long & M.Colonna**
- 3:30-3:45pm **Inhibitory NK Receptor Regulation During Inflammation**
John Ortaldo
- 3:45-4:00pm **Regulation of NK Cell Activation**
Eric Long

4:00-4:15pm	Monogamous and Promiscuous Activating NK cell Receptors <i>Marco Colonna</i>
4:15-4:28pm	Analysis of NCR Ligand Expression on Cultured and Transformed Cells <i>Roberto Biassoni</i>
4:28-4:41pm	NK Cell CD94/NKG2A Inhibitory Receptors are Internalized and Recycle Independently of Inhibitory Signaling Processes <i>Francisco Borrego</i>
4:41-4:54pm	CD94 Expression is Controlled by Dual Promoters and Post Transcriptional Regulation <i>John E. Coligan</i>
4:55-5:10pm	BREAK
5:10-5:23pm	KIR Can Inhibit Cytotoxicity in the Absence of ITIMs: Augmentation of Inhibition by Vaccinia Virus Infection <i>Sheryl Kirwan</i>
5:23-5:36pm	Augmentation of NK Cell-Mediated Tumor Killing by Synthetic Blockers of Inhibitory MHC Class I Receptors <i>Kyoko Tajima</i>
5:36-5:49pm	Functional Analysis of <i>KIR</i> Promoters in NK Cells <i>Markus Uhrberg</i>
5:49-6:00pm	Determinants of Major Histocompatibility Complex (Mhc) Class I Allele Specificity for Murine Natural Killer Cell Ly-49 Activating Receptors <i>Brian J. Ma</i>
6:00-7:00pm	Poster Viewing
7:00-8:00pm	Welcome Reception
8:00-9:30pm	Dinner

Monday, October 7

8:00-9:30am **Session 4: NK Differentiation** **Chairpersons: J. DiSanto & D. Raulet**

8:00-8:15am **Novel Role for the Transcription Factor GATA-3 in NK Cell Differentiation**
James DiSanto

8:15-8:30am **Self Tolerance of NK Cells**
David Raulet

8:30-8:45am **Distinctive Stages of NK Cell Maturation and Expansion in Bone Marrow**
Sungjin Kim

8:45-9:00am **The Development of NK Cells *In Vitro* from Fetal Mouse Progenitors**
Colin G. Brooks

9:00-9:15am **Methylation Regulates *KIR* Gene Expression in Developing NK Cells *In Vitro* and in Mature NK Cells *In Vivo***
Charles T. Lutz

9:15-9:30am **Final Steps of NK Cell Maturation from IL-13 to IFN- γ Producing Cells**
Matthew J. Loza

9:30-10:00am **BREAK**

10:00am-11:30am **Session 5: NK Biology II** **Chairpersons: M. Smyth & H. Ljunggren**

10:00-10:15am **NK Cell Activation Receptors that Control Tumor Immunity**
Mark Smyth

10:15-10:28am **NK Cell Elimination of Bone Marrow Derived Dendritic Cells *In Vivo* is Mediated by TRAIL**
Benedict J. Chambers

10:28-10:41am **Interactions Between Functional NK and Immature Dendritic Cells (DC) Generated from Resting Blood CD34(+) Cells in Coculture with Human Spleen-Derived (myo)Fibroblasts**
Danièle Brouty-Boyé

10:41-10:54am **Contribution of Tumor Necrosis Factor-Related Apoptosis-Inducing Ligand (TRAIL) to Interferon γ -Dependent and NK Cell-Mediated Surveillance Against Tumor Development and Metastasis**
Kazuyoshi Takeda

10:54-11:07am **Effects of IFN- α and IFN- γ on IL-13⁺ NK Cell Accumulation**
Matthew J. Loza

11:07-11:20am **Two-signal Requirement for Activation and Effector Function of Natural Killer cells in Tumor Rejection**
Jian-Xin Gao

11:30-12:30pm **LUNCH**

- 12:30-7:00pm** **Poster Viewing and Free Time**
- 7:00-8:30pm** **DINNER**
- 8:30-11:00pm** **NK Workshop II** **Chairpersons: A. Moretta, M. Lopez-Botet & W. Seamen**
- 8:30-8:45pm **Triggering NK Receptors**
Alessandro Moretta
- 8:45-9:00pm **Mutational analysis of Immunoreceptor Tyrosine-based Inhibition Motifs (ITIM) of the ILT2 (CD85j) leukocyte receptor**
Miguel Lopez-Botet
- 9:00-9:15pm **Microbial Ligands for Murine TREM-2**
Michael Daws
- 9:15-9:30pm **Genetic Linkage Analysis of Loci Controlling Numbers of NKT Cells in Nod Mice**
Alan G Baxter
- 9:30-9:45pm **Altered NK Cell Cytotoxic Activity and Differentiation in Myeloid Leukemia**
Anne Caignard
- 9:45-10:00pm **NK Cells and Colorectal Cancer**
PJK Kuppen
- 10:00-10:15pm **Upregulation of Different HLA-G Isoforms in PBMC from HIV-1 Positive Individuals**
José Peña
- 10:15-10:30pm **NKT Cells Promote Antigen-Specific T Cell Responses but are not Essential for Protection Against Liver Stage Malaria in Mice after Vaccination**
Simone Korten
- 10:30-10:45pm **CD1d and Invariant NKT Cells at the Human Maternal-Fetal Interface**
Jack L. Strominger
- 10:45-11:00pm **In Vitro Expansion, Characterization and Transduction of Freshly Isolated NK Cells for Use in Adoptive Immunotherapy**
Raewyn Broady

Tuesday, October 8

8:00-10:00am Session 6: NK Signaling Chairpersons: J. Djeu and P. Liebson

8:00-8:20am **Early Events in NK signaling**
Julie Djeu

8:20-8:40am **Differential Signaling Requirements for Natural Cytotoxicity**
Paul Liebson

8:40-8:55am **Sorting NK Cell Functions According to their Signaling Requirements.**
Francesco Colucci

8:55-9:10am **NK cell inhibitory receptors target Vav1 for dephosphorylation during inhibition of cytotoxicity**
Christopher C. Stebbins

9:10-9:25am **SHP-2 is an important enzyme for transducing inhibitory signals through KIR**
Kerry S. Campbell

9:25-9:40am **CD16 Receptor Recruits And Activates SHIP-1 Inositol Phosphatase That Negatively Modulates ADCC Function.**
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10:00-10:30am BREAK

10:30-12:00pm Session 7: NK/NK-T Regulation Chairpersons: L. Brossay & L. Moretta

10:30-10:50am **HLA-E Specific NK CLT's in Humans**
Lorenzo Moretta

10:50-11:05am **IL-15 Availability conditions peripheral NK-T cell homeostasis**
James Di Santo

11:05-11:20am **Functions of Self Recognition by CD1d-restricted "NKT" cells**
Jenny E. Gumperz

11:20-11:35am **Isotypes of the NKG2 family of NK receptors tightly regulate the function of normal and celiac intestinal $\alpha\beta$ T lymphocytes**
Bana Jabri

11:35-11:50pm **Expression of the inhibitory NK receptors LY49e and CD94/NKG2 on thymic and skin-located TCR $\gamma\delta$ T lymphocytes**
Georges LeClercq

11:50-12:00pm **Characterization of CD1d-independent NKT cells: direct recognition of polysaccharide from bacterial cell wall**
Fumio Takei

12:00-1:30pm LUNCH

1:30-3:00pm	Session 8: NK Receptors/Ligands II	Chairpersons: L. Lanier & E. Vivier
1:30-1:50pm	NK Cell Activating Receptors <i>Eric Vivier</i>	
1:50-2:05pm	NK Cell Receptor in Viral & Cancer Immunity <i>Lewis Lanier</i>	
2:05-2:20pm	KIR transgenic mice exhibit tissue and cell-specific transgene expression <i>Danny Belkin</i>	
2:20-2:35pm	Nonclassical Class I Molecule Q9 and Its Single Chain Derivatives Interact with NK Cells <i>Eugene Chiang</i>	
2:35-2:50pm	Expression and Role of CD94/NKG2 Receptors on CD8⁺ T cells <i>James Forman</i>	
2:50-3:05pm	Target cell recognition by NK cells: the NKG2D receptor-ligand system <i>Andreas Diefenbach</i>	
3:05-3:30pm	BREAK	
3:30-6:00pm	NK Workshop III	Chairpersons: V. Kumar, W. Held & R. Welsh
3:30-3:45pm	Costimulatory Role of 2B4 Receptor on T-cells <i>Vinay Kumar</i>	
3:45-4:00pm	Regulation of clonal LY49A NK Receptor Acquisition by T-cell Factor 1 <i>Werner Held</i>	
4:00-4:10pm	NK Perforin is Required for Innate and Adaptive Immunity Induced by Heat Shock Protein Gp96 <i>Eckhard R. Podack</i>	
4:10-4:20pm	Ly49E Expression Points Towards Overlapping, but Distinct, Natural Killer (NK) Cell Differentiation Kinetics and Potential of Fetal versus Adult Lymphoid Progenitors <i>Frederik Stevenaert</i>	
4:20-4:30pm	Effective Immunotherapy of Bladder Cancer with Mycobacterium Bovis BCG Depends on Activation of NK Cells <i>Sven Brandau</i>	
4:30-4:45pm	BREAK	
4:45-4:55pm	In Vivo Evidence for a Dependence on Interleukin-15 for Natural Killer Cell Survival <i>Megan A. Cooper</i>	
4:55-5:05pm	Molecular Cloning and Characterization of the First Human NK Cells Lineage Marker Also Specific for the Hematopoietic Stem/Progenitor Cells <i>M. Kirszenbaum</i>	

5:05-5:15pm	Antagonistic Effect of NK Cells on Alternatively Activated Monocytes: A Contribution of NK Cells to CTL Generation <i>Anja B. Geldhof</i>	
5:15-5:25pm	Requirements for Induction of Natural Killer Cell Tolerance in Mice with Mixed MHC Phenotypes <i>Petter Höglund</i>	
5:25-5:35pm	Opioid Receptor Antagonism Modulates NK cell Cytotoxicity but not Cellularity During Restraint Stress and Influenza a Viral Infection <i>Raymond J. Tseng</i>	
6:00-7:00pm	Poster Viewing	
7:00-8:00pm	Distinguished Guest Lecture	Thomas Waldmann
8:00pm	Dinner & Closing Reception	