

4th International Workshop on the Molecular Pathogenesis of Marek's Disease Virus (MDV)

August 5 – 8, 2006,
Clayton Hall Conference Center,
University of Delaware

Meeting Schedule

Saturday, Aug. 5, 2006

2:00 – 6:00 PM: *Arrival, Check-in and Registration of Participants*

7:00 - 10:00 PM: *Welcome Reception: Clayton Hall*

Sunday, Aug. 6, 2006

7:00 AM *Registration open, Continental Buffet*

8:00 AM **Opening of Meeting and Introductory Remarks**
Robin W. Morgan

8:15 – 10:15 **SCIENTIFIC SESSION 1:**
Molecular Pathogenesis

Abstract
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8:15 – 9:15 **Keynote Address** (*Introduced by Robin Morgan*)
Infection and Spread of PRV in Neurons
Lynn W. Enquist, Princeton University

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9:15 – 10:15 Research Reports: 15 min each
(Session Chairs: Irit Davidson and Klaus Osterrieder)

Characterization of MDV LORF4 and R-LORF10 in MDV-infected cells and chickens

Taejoong Kim, Henry Hunt and Hans Cheng

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The role of oncogenic Marek's disease virus pp38 splice variants in the up-regulation of cellular metabolic activity

Michael Piepenbrink, Xinhui Li, Priscilla H. O'Connell, and Karel A. Schat

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vIL-8 is a potent chemotactic and survival factor for the natural target cells of MDV

Oren Gilad, Lindsey Demetral, Simon Cherry, Yoshihiro Izumiya, Chie Izumiya, Ricardo Hurtado, Jonathan Choi, Jeremy Kamil, Mark S. Parcells and Hsing-Jien Kung

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Putative roles for the mutations in Meq and glycoprotein L in the evolution of MDV virulence

Mark S. Parcells, Elizabeth Santin, Vaithilingaraja Arumugaswami, Pankaj M. Kumar, Phaedra Hontz, and Robert L. Dienglewicz

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10:15 – 10:30

Break

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10:30 – 12:00	SCIENTIFIC SESSION 2: Genomic and Proteomic Analysis of MDV Infection (Session Chairs: Shane Burgess and Masahiro Niikura)	
10:30 – 11:00	<i>Molecular characterization of MD tumors with respect to clonality, loss of heterozygosity and MDV integration</i> <u>Hans H. Cheng</u> , Henry D. Hunt, and Mary Delaney	6
11:00 – 11:45	<u>Research Reports: 15 min each</u>	
	<i>Polymorphisms in the long repeat regions of oncogenic and attenuated pathotypes of Marek's disease virus 1</i> <u>Stephen J. Spatz</u> and Robert F. Silva	7
	<i>Global gene expression profiling during cytolytic infection of Marek's disease virus: array analysis of host-pathogen interactions</i> <u>Mohammed Heidari</u> , Marianne Heubner, Huanmin Zhang, Robert F. Silva, Stephen J. Spatz, and Dmitry Kireev	8
	<i>Analysis of tumor suppressor gene p53 in a chicken lymphoblastoid cell line derived from Marek's disease tumor by 2-dimensional electrophoresis</i> <u>Michihiro Takagi</u> , Midori Hironaka, Tsukasa Okada, Misao Onuma and Kazuhiko Ohashi	9
12:00 – 1:30	<i>Lunch</i>	
1:30 – 3:15	SCIENTIFIC SESSION 3: MDV and Cellular Small RNAs	
1:30 – 2:30	Invited Presentation (Introduced by Joan Burnside) <i>Elucidating the small RNA component of the transcriptome</i> <u>Pamela J. Green</u> , Delaware Biotechnology Institute	10
2:30 – 3:15	<u>Research Reports: 15 min each</u> (Session Chairs: Hsing-Jien Kung and Venugopal Nair)	
	<i>Marek's disease virus encodes microRNAs flanking the meq oncogene</i> <u>Robin W. Morgan</u> , Erin Bernberg, Amy Anderson, Cheng Lu, Blake Meyers, Pam Green, Neeta Jain, Grace Isaacs and Joan Burnside	11
	<i>Identification of microRNAs of Marek's disease virus</i> <u>Yongxiu Yao</u> , Charles Lawrie and Venugopal Nair	12

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<i>Small RNA cloning and expression in uninfected and MDV-infected chick embryo fibroblasts</i> <u>Erin Bernberg</u> , Joan Burnside, Amy Anderson, Cheng Lu, Neeta Jain, Blake Meyers, Pam Green and Robin W. Morgan	13
3:15 – 3:30 <i>Break</i>	
3:30 – 5:00 SCIENTIFIC SESSION 4: Factors Affecting MDV Pathogenesis (Session Chairs: John Dunn and Mark Parcells)	
3:30 – 4:00 <i>Evaluation of Marek's Disease Vaccine Failures; Role of Vaccine Type or Source, Methods of Administration and Field Challenge</i> <u>John K. Rosenberger</u>	14
4:00 – 4:45 <u>Research Reports: 15 min each</u>	
<i>Multiple virus infection of chickens with Marek's disease and chicken infectious anemia: mutual influence on their horizontal spread</i> <u>Irit Davidson</u> , N. Artzi and I. Skoda	15
<i>Pathogenesis of MDV in the eye: neoplasia or autoimmunity?</i> <u>Isabel M. Gimeno</u> , Robert F. Silva	16
<i>Molecular characterization of a Marek's disease virus recombinant field strain with an insert of reticuloendotheliosis virus LTR</i> <u>Zhizhong Cui</u> , G. Zhuang, and Z. Zhang	17
5:00 - 7:00 <i>Dinner on Your Own at a Local Establishment</i>	
<i>Café Gelato, Deer Park Tavern, Grotto Pizza, Iron Hill Brewery, Klondike Kates, The Crab Trap, etc. within easy walking distance</i>	
7:00 – 9:00 Poster and Discussion Session <i>Clayton Hall (refreshments provided)</i>	
Poster Abstracts	48 - 53

Monday, Aug. 7, 2006

7:00 AM	<i>Registration open, Continental Buffet</i>	
8:00 –10:30	SCIENTIFIC SESSION 5: <i>Viral snRNPs and the Molecular Biology of Meq</i> (Session Chairs: Henry Hunt and Venugopal Nair)	Abstract <u>Page</u>
8:00 – 9:00	Invited Presentation (<i>Introduced by Robin Morgan</i>) <i>Viral snRNPs: probing nuclear events in gene expression</i> <u>Joan Steitz</u> , Yale University	18
9:00 – 9:30	<i>Transcriptional regulation of oncogenic herpesvirus: the many faces of Meq</i> <u>Hsing-Jien Kung</u>	19
9:30 –10:30	<u>Research Reports: 15 min each</u> <i>Mutations in the dimerization domain of Marek's disease virus encoded Meq protein results in loss of T-cell transformation</i> <u>Paulette Suchodolski</u> , Blanca Lupiani, and Sanjay Reddy	20
	<i>Meq isoform and MDV pathotype</i> <u>Pankaj M. Kumar</u> , Phaedra Hontz, and Mark S. Parcels	21
	<i>Analysis of transcriptional activities by the Meq proteins with highly virulence Marek's disease virus strains</i> <u>Shiro Murata</u> , Tsukasa Okada, Rika Kano, Yuko Hayashi, Satoru Konnai, Misao Onuma, and Kazuhiko Ohashi	22
	<i>Characterization of the Meq variants termed L-Meq and S-Meq derived from Marek's disease lymphoblastoid cell lines</i> <u>Tsukasa Okada</u> , Michihiro Takagi, Shiro Murata, Rika Kanol, Yuko Hayashi, Satoru Konnai, Misao Onuma, and Kazuhiko Ohashi	23
10:30 – 10:45	<i>Break</i>	
10:45 –12:00	SCIENTIFIC SESSION 6: <i>Functional Analysis of Other MDV Genes</i> (Session Chairs: Hans Cheng and Vladimir Zelnik)	
10:45 –11:15	<i>Marek's disease pathogenesis: Further insights into the functions of viral genes</i> <u>Venugopal Nair</u>	24
11:15 –12:15	<u>Research Reports: 15 min each</u> <i>Comparison of the requirement of glycoprotein genes of herpesvirus of turkeys and Marek's disease viruses</i> <u>Lawrence Petherbridge</u> , Yuguang Zhao, Lorraine Smith, Susan Baigent and Venugopal Nair	25

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<p><i>Intercellular trafficking of tegument protein VP22 of CVI988 vaccine strain of Marek's disease virus</i> <u>Ai-jian Qin</u>, Hong-jun Chen, Wen-jie Jin, Hong-xia Shao and Cui-ping Song</p>	26	
<p><i>Investigation on the deubiquitinating enzyme activity of Marek's disease virus UL36 homolog</i> <u>Yuguang Zhao</u>, Lorraine Smith, Lawrence Petherbridge, Susan Baigent and Venugopal Nair</p>	27	
<p><i>The role of UL13 in generating cell-free MDV</i> <u>Robert F. Silva</u>, Lucy F. Lee, Mohammed Heidari, Isabel Gimeno, Stephen Spatz, and J. Zelepsky</p>	28	
12:15 – 1:30	<i>Lunch</i>	
1:30 – 3:15	<p>SCIENTIFIC SESSION 7: Herpesvirus-host Cell Interactions (Session Chairs: Erin Bernberg and Ton Schat)</p>	
1:30 – 2:30	<p>Invited Presentation (<i>Introduced by Hsing-Jien Kung</i>) <i>Insights into the Function of the Essential EBV Nuclear Antigen EBNA3C.</i> <u>Erle Robertson</u>, University of Pennsylvania</p>	29
2:30 – 3:45	<p><u>Research Reports: 15 min each</u></p> <p><i>Modeling the functional genome of neoplastic transformation in Marek's disease</i> <u>Shane C. Burgess</u>, J. J. Buza, and L A. Shack</p>	30
	<p><i>The ups and downs of MHC class I expression and Marek's disease</i> <u>Henry D. Hunt</u></p>	31
	<p><i>Examination of cytokine gene expression in vaccine-induced protection against Marek's disease</i> <u>Mohamed Gaizal Abdul-Careem</u>, B. D. Hunter, H. R. Haghighi, P. Parvizi, N. Thantrige, S. Sharif</p>	32
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3:45 – 4:00

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3:45 – 5:00

**SCIENTIFIC SESSION 8:
Manipulation of the MDV Genome**

(Session Chairs: Sanjay Reddy and Stephen Spatz)

3:45 – 4:15

Six years of infectious virus clones – Have we come any nearer to solving the mysteries of Marek's disease?

Klaus Osterrieder

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4:15 – 5:00

Research Reports: 15 min each

Oncogenicity of a very virulent Marek's disease virus cloned as bacterial artificial chromosomes

Lorraine P. Smith, Susan J. Baigent, Lawrence J. Petherbridge, Venugopal K. Nair

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Infectious bacterial artificial chromosome clones of Marek's disease virus possessing the complete viral genome derived from MD5 cosmid clones

Masahiro Niikura, Jerry Dodgson, Robert F. Silva, and Hans H. Cheng

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Purification of MDV-chicken protein complexes using molecularly cloned and tagged MDV-BACs

Kyle S. MacLea, and Hans H. Cheng

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6:15

Leave for Banquet

7:00 – 11:00 PM

Banquet at Longwood Gardens

Cocktails, Banquet and Tour of Gardens

Tuesday, August 8, 2006

7:00 AM	<i>Registration open, Continental Buffet</i>	
8:30 – 9:30	SCIENTIFIC SESSION 9: Diagnosis and Pathotyping of MDV Field Strains (Session Chairs: Isabel Gimeno and Carl Schmidt)	Abstract Page
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	<i>Methods to distinguish selected serotype 1 MDV in dual-infected chickens</i> <u>John R. Dunn</u> , Shari B. Gross, Richard L. Witter, Robert F. Silva, and Lucy F. Lee	39
	<i>Application of the “best-fit” pathotyping assay for evaluation of Russian isolates of Marek’s disease virus</i> <u>Ekaterina Dudnikova</u> , Svetlana Norkina, Anatoly Vlasov, Anna Slobodchuk, Lucy F. Lee, and Richard L. Witter	40
	<i>Isolation and identification of a field isolate of Marek’s disease virus with acute oncogenicity</i> <u>Ping Wei</u> , Tian-rong Zuo, Zi-yi Zhao, Xin-xian Wei, Ya Li	41
	<i>Development of ELISA assay method for measurement of antibodies to Marek’s disease virus in chicken serum</i> <u>Vladimir Zelnik</u> , Genadij Dzhulardov, Andrea Eschbach, and Dierk E. Rebeski	42
9:30 – 9:45	<i>Break</i>	
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9:45 – 10:15	<i>Current status of recombinant Marek’s disease vaccines for control of future outbreaks</i> <u>Lucy F. Lee</u> , Robert F. Silva, and Sanjay M. Reddy	43
	<i>Research Reports: 15 min each</i>	
10:15-11:15	<i>The MDV shedder challenge model in the US</i> <u>Mark S. Parcels</u> , Pankaj M. Kumar, Phaedra Hontz, Erin Bernberg, Amy S. Anderson, Grace Isaacs, Robin W. Morgan, Sandra S. Cloud, and John K. Rosenberger	44
	<i>Evaluation of the MDV shedder challenge model using Hungarian very virulent Marek’s disease virus</i> <u>Csába N. Dren</u> , Csába Számadó, and Zoltan Kmojathy	45
	<i>Status of Marek’s disease in Nepal</i> <u>Adarsha Pradhan</u> , Upendra Man Sing, and Madhav Acharya	46

Construction and characterization of a novel avian herpesvirus chimera

Stephanie Cook, Joan Schrader, and Gary Petersen

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11:15 – 12:00: **Meeting wrap-up and directed discussion**
Evolving Control Methods for an Evolving Pathogen
Panel of Industry Representatives and Academic Researchers

12:00 noon: **Meeting Closing**

12:00 – 1:00 *Lunch*

1:00 – 3:00 *Guided tours of Delaware Biotechnology Institute and Allen Laboratory*

Removal of Posters

Wednesday, August 9, 2006

Departure of remaining attendees

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<i>Integration of Marek's disease virus into the chicken genome</i> <u>Drechsler, Y., Suchodolski, P., Raudsepp, T. B., Lupiani, B. , Chowdhary, B.P. , Lee, L., and <u>Reddy, S. M.</u></u>	52
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