Symposium on Pathogens and Host Response
National Institute of Immunology, New Delhi, India
August 10-12, 2016

Pathogenesis of Infectious Diseases, Molecular and Cell Biology of Pathogens, System Biology, Host Response, Epidemiology and Strategies for Intervention

Organizers
Chandrima Shaha,
Pushkar Sharma, Soumen Basak
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Speakers
Kanury Rao
THSTI, India

Sitabhra Sinha
IMSC, India

Amit Sharma
ICGEB, India

Christian Doerig
Monash University, Australia

Srinivas V Kaveri
CNRS, France

Alok Bhattacharya
JNU, India

Satyajit Rath
NII, India

Amitabha Mukhopadhyay
NII, India

Girdhari Lal
NCCS, India

Arun Nagaraj
ILS, India

Chandrima Shaha
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Rajesh Gokhale
IGIB, India

Pascal Rihet
AMU-INSERM, France

François Trottein
Institut Pasteur de Lille, France

Ayub Qadri
NII, India

Asif Mohmmed
ICGEB, India

Arndt G. Benecke
Institut de Biologie Paris Seine, France

Navin Khanna
ICGEB, India

Chief Guests
K VijayRaghavan
Secretary
DBT

Pierre-Andre´Cazenave
UPMC, Institut Pasteur, France

Sylviane Pied
Institut Pasteur de Lille, France

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Keynote Address
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Johns Hopkins University,
USA.

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### Pathogens and Host Response 2016, NII, New Delhi

**10th August NII Auditorium (Day1)**

- **02.00 PM onward**: Registration
- **03.00 PM – 03.15 PM**: Welcome address by Chandrima Shaha  
  Director, NII
- **03:15 PM – 03.45 PM**: Address by K. VijayRaghavan  
  Secretary DBT, Govt. of India
- **03:45 PM – 04.15 PM**: Introductory remarks by Pierre-André Cazenave  
  Professor Emeritus, Institut Pasteur Paris/UPMC, France  
  "A genetic long journey: from Mus musculus sp. Indian central population to Mus musculus subspecies and "Mus laboratoricus": An experimental murine model of asymptomatic malaria"
- **04:15 PM – 05.30 PM**: NII Special Colloquium  
  Plenary talk by George Dimopoulos,  
  Johns Hopkins Bloomberg School of Public Health, USA  
  “Mosquito immunity to human pathogens: opportunities for disease control”
- **05.30 PM – 06.30 PM**: TEA (Buland Darwaza)

### 11th August NII Auditorium (Day2)

**Session -1: Pathogen Biology**

**Session 1A. Chair – Vinay Nandicoori, NII, New Delhi**
- **09.00 AM – 09.30 AM**: Alok Bhattacharya, JNU, New Delhi  
  “Mechanism of phagocytosis in the protozoan parasite Entamoeba histolytica”
- **09:30 AM – 10.00 AM**: Chandrima Shaha, NII, New Delhi  
  “Host Bcl-2 favors Leishmania parasite survival”
- **10.00 AM – 10.30 AM**: TEA-I (Buland Darwaza) and Poster Display

**Session 1B. Chair – Pushkar Sharma, NII, New Delhi**
- **10:30 AM – 11.00 AM**: Arun Nagaraj, ILS, Bhubaneswar  
  “Malaria Transmission Biology - Quest for New Targets and Transmission Intervention Strategies”
11:00 AM – 11.30 PM : Amit Sharma, ICGEB, New Delhi
“Insights into malaria parasite protein translation machinery and implications for drug discovery”

11:30 PM – 12.00 Noon : Christian Doerig, Monash University, Australia
“Functional kinomics of Plasmodium-infected erythrocytes”

**Session -2: Host Response to Infection**

**Session 2A. Chair – Anna George, NII, New Delhi**
12:00 Noon – 12.30 PM : Giridhari Lal, NCCS, Pune
“Transendothelial migration of Th17 cells across the blood-brain barrier during inflammation and autoimmunity”

12:30 PM – 01.00 PM : Satyajit Rath, NII, New Delhi
“A role for T cells in peripheral B lymphocyte maturation”

01.00 PM – 02.30 PM : BREAK

**Session 2B. Chair – Balachandran Ravindran, ILS, Bhubaneswar**
02:30 PM – 03.00 PM : Sylviane Pied, Université de Lille, France
“Uptake of parasite-derived vesicles by astrocytes and microglial phagocytosis of infected erythrocytes may drive neuroinflammation in cerebral malaria”

03:00 PM – 03.30 PM : Shobhona Sharma, TIFR, Mumbai
“Domain structures of Plasmodium circumsporozoite protein (CSP): Facilitation of motility of Dictyostelium through surface expression of CSP”

03:30PM – 04.00 PM : Christian R. Engwerda, QIMR Berghofer Medical Research Institute, Australia
“The impact of immunoregulatory networks on anti-parasitic immunity.”

04.00 PM – 04.30 PM : TEA-II (Buland Darwaza)

**Session 2C. Chair – Soumen Basak, NII, New Delhi**
04.30 PM – 05.00 PM : Ayub Qadri, NII, New Delhi
“Inflammasome activation during infection with pathogenic Salmonella: pyroptosis and more”

05:00 PM – 05.30 PM : François Trottein, Institut Pasteur de Lille, France
“The immunology of influenza and bacterial superinfection: role of invariant NKT cells”

05:30 PM – 06.00 PM : Kenneth Beagley, Queensland University of Technology, Australia
“Chlamydia infection in males: impact on spermatogenesis and male fertility”

**END OF SESSIONS FOR THE DAY**
# 12th August NII Auditorium (Day 3)

## Session -3: Integrative and Systems Biology

### Session 3A. Chair – Sekhar Mande, NCCS, Pune

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>09.00 AM</td>
<td>Kanury Rao, THSTI, Faridabad</td>
<td>“Understanding Adaptation Mechanisms of Mycobacterium tuberculosis in Human Macrophages”</td>
</tr>
<tr>
<td>09:30 AM</td>
<td>Sitabhra Sinha, IMS, Chennai</td>
<td>“Learning and Memory in the Eukaryotic Cell: Emergence of sensitization and adaptation in intra-cellular signaling”</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Pascal Rihet, Aix-Marseille University, France</td>
<td>“Genetic control in malaria and sepsis resistance: from genome-wide linkage and association studies in humans to putative perturbed biological pathways”</td>
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### Session 3B. Chair – Debasisa Mohanty, NII, New Delhi

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<th>Topic</th>
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<tbody>
<tr>
<td>11:00 AM</td>
<td>S. Gourinath, JNU, New Delhi</td>
<td>“Understanding the phagocytic cup formation in Entamoeba histolytica: Structural and functional studies of Myosin IB”</td>
</tr>
<tr>
<td>11.30 AM</td>
<td>Rajesh Gokhale, IGIB, New Delhi</td>
<td>“Should Extrapulmonary Tuberculosis treatment be identical to pulmonary Tuberculosis?”</td>
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## Session 4: Therapeutic Development

### Session 4A. Chair – Pawan Malhotra, ICGEB, New Delhi

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<tbody>
<tr>
<td>12:00 Noon</td>
<td>Asif Mohmmed, ICGEB, New Delhi</td>
<td>“Understanding Biology of Cell Organelles in Malaria Parasite and Development of New Anti-malaria”</td>
</tr>
<tr>
<td>12:30 PM</td>
<td>Srinivasan Kaveri, CNRS, New Delhi</td>
<td>“More than mere neutralization of pathogens”</td>
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### Session 4B. Suman Dhar, JNU, New Delhi

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<tr>
<td>02:30 PM</td>
<td>Amitabha Mukhopadhyay, NII, New Delhi</td>
<td>“Hemoglobin receptor: a novel vaccine candidate against Leishmaniasis”</td>
</tr>
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<td>03:00 PM</td>
<td>Navin Khanna, ICGEB, New Delhi</td>
<td>“A Designer Dengue Vaccine Candidate”</td>
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<tr>
<td>03.30 PM</td>
<td>concluding remarks, vote of thanks, others</td>
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### TEA IV (Buland Darwaza)

### END OF SESSIONS FOR THE DAY

### Departure