The University of Arizona

2017 Shrimp Pathology Short Course

Disease Diagnosis and Control in Marine Shrimp Culture

July 17 – July 22, 2017

Sponsored by the Aquaculture Pathology Laboratory, School of Animal and Comparative Biomedical Sciences, University of Arizona, Tucson, AZ 85721, USA.

Registration Information: Registration is limited to 30.

Deposit and Early Registration Deadline: $100.00 (USD) by June 1, 2017.

To Apply: Complete the application form indicating how you will be paying your $100.00 deposit (Bank draft, MasterCard & Visa accepted) and send the form by mail, FAX or email to:

Mailing address:
The University of Arizona
School of Animal and Comparative Biomedical Sciences
Aquaculture Pathology Laboratory
1117 E. Lowell Street, Room 102 Tucson, Arizona 85721, USA
Phone: 520-621-4438; FAX: 520-626-5602
Email: dhuie@email.arizona.edu; adhar@email.arizona.edu

Cost:
$2,000.00 (USD) if the deposit is received on or before June 1, 2017.
$2,500.00 (USD) if the deposit is received on or after June 2, 2017.

Note: The University of Arizona reserves the right to cancel the short-course if participant pre-enrollment is less than 10 by June 15, 2017. Payments will be refunded if the short-course is cancelled. Individual deposits and payments will be refunded if a participant’s cancellation is received on or before June 1, 2017. After June 2, 2017, participant’s payments will not be refunded. No exceptions.

Accommodations:
Both single and double rooms are available at the nearby Tucson Marriott University Park Hotel. Group rate prices have not been determined at this time. Dormitory rooms are available for approximately $45.00 per night for a single room and $76.00 per night ($38.00 per person) for a double room.

International Travelers:
Due to more stringent U.S. entry requirements, allow extra time for visa processing.
Program

Lectures: The following topics will be covered

1. Short-course introduction, purpose, scope and schedule.
2. Major shrimp diseases listed by World Animal Health Organization (OIE)
3. The baculovirus diseases: white spot syndrome virus (WSSV), monodon-type baculovirus (MBV), baculovirus penaei (BP)
4. The parovirus diseases: infectious hypodermal and hematopoietic necrosis virus (IHHNV), hepatopancreatic virus (HPV)
5. RNA viruses infecting penaeid shrimp: Taura syndrome virus (TSV), yellow head virus (YHV), infectious myonecrosis (IMNV), *Penaeus* nodavirus (*Pnv*), white tail disease (WTD)
6. Bacterial diseases: acute hepatopancreatic necrosis disease (AHPND; caused by a unique strain of *Vibrio parahaemolyticus*), necrotizing hepatopancreatitis (NHP-B), *Vibrio harveyi*.
6. Microsporidian diseases: *Enterocytozoon hepatopenaei* (EHP), cotton shrimp disease
7. Methods of disease prevention and/or treatment.
8. Development of biosecurity and quarantine protocols

Labs and Demonstrations: Topics to be covered in the labs include

1. Sample preparations for histology and PCR.
2. PCR/RT-PCR for diagnosis of WSSV, AHPND, EHP, TSV
3. qPCR/qRT-PCR for diagnosis of WSSV, AHPND, TSV
4. Laboratory bioassay: AHPND
5. Review of histopathology of viral and bacterial diseases.

Lectures, Labs and Demonstrations will be presented by Staff from the Aquaculture Pathology Laboratory

Arun K. Dhar, Ph.D.: Associate Professor & Director, Aquaculture Pathology Laboratory, Molecular Virologist
Kathy Tang-Nelson, Ph.D.: Associate Research Professor, Molecular Virologist
Luis F. Aranguren, Ph.D.: Crustacean Pathologist
P. Piamsomboon, D.V.M., Ph.D.: Research Associate, Molecular Biologist, Microbiologist
Siddhartha Kanrar, PhD.: Molecular Biologist and Bioinformatician
Irina Maskaykina, B.S.: Molecular Biologist
M. Schmidt, B.S.: Histotechnologist

Need more information?
Contact Dr. Arun K. Dhar or Ms. Deborah Huie
The University of Arizona
School of Animal and Comparative Biomedical Sciences
Aquaculture Pathology Laboratory
1117 E. Lowell Street, Room 102
Tucson, Arizona 85721 USA
Phone: 520-621-4438; Fax : 520-626-5602
Email: adhar@email.arizona.edu; dhuie@email.arizona.edu
To apply, please fill out the following application form and send the form by e-mail, mail or FAX.

<table>
<thead>
<tr>
<th>The University of Arizona</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 Shrimp Pathology Short Course</td>
</tr>
<tr>
<td>Application Form</td>
</tr>
</tbody>
</table>

Print Full Name:

Title: □ Dr □ Mr □Mrs □Ms

Academic Degrees: □ B.S. □ M.S. □ Ph.D. □ DVM □Other

Field of Study:

Institution/ Company Name:

Address:

<table>
<thead>
<tr>
<th>City</th>
<th>State</th>
<th>Country</th>
<th>Postal Code</th>
</tr>
</thead>
</table>

Telephone number: FAX number:

E-mail address:

Important: Please provide your e-mail address and/or FAX number.

Lodging preference: □ Tucson Marriott University Park Hotel □ Dormitory □ Other

Arrival date: Departure date:

Application deposit of $100.00 (USD) must be received by June 1, 2017 to receive the early registration price on the Shrimp Pathology Short Course fees.

Check enclosed payable to The University of Arizona (US Bank only) □ Yes □ No

Credit Cards accepted at our Finance Office: □ MasterCard □ Visa □ American Express

*** Credit card information must be phoned in to 520-621-2355 or faxed to 520-626-5602***

Fill out application form and send by email, mail or FAX to:

The University of Arizona
School of Animal and Comparative Biomedical Sciences
1117 E. Lowell Street, Rm. 102
Tucson, Arizona 85721, USA

Phone: 520-621-4438; FAX: 520-626-5602
Ms. Deborah Huie (dhue@email.arizona.edu), Dr. Arun Dhar (adhar@email.arizona.edu)