



**The University of Arizona**

## **2012 Shrimp Pathology Short Course**

### **Disease Diagnosis and Control in Marine Shrimp Culture**

**June 18–29, 2012**

Sponsored by the Aquaculture Pathology Laboratory, Department of Veterinary Science and Microbiology, University of Arizona, Tucson, AZ 85721 USA.

**Registration Information:** Registration is limited to 30.

**Deposit and Early Registration Deadline:** \$100.00 (USD) by April 1, 2012.

**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  
Department of Veterinary Science & Microbiology  
Aquaculture Pathology Laboratory  
1117 E. Lowell Street, Room 102  
Tucson, Arizona 85721 USA  
Phone: 520-621-4438  
FAX: 520-621-4899  
Email: [ritar@email.arizona.edu](mailto:ritar@email.arizona.edu) or [dvl@email.arizona.edu](mailto:dvl@email.arizona.edu)

**Cost:**

\$1,500.00 (USD) if the deposit is received on or before April 1, 2012.  
\$2,000.00 (USD) if the deposit is received on or after April 2, 2012.

**Note:** The University of Arizona reserves the right to cancel the course if participant pre-enrollment is less than 10 by May 15, 2012. All deposits will be refunded if the course is cancelled. Deposit will be refunded if participant's cancellation is received on or before May 15, 2012. After May 15, 2012, participant's deposit will not be refunded. No exceptions.

**Accommodations:**

Both single and double rooms are available at the nearby Sheraton Four Points Hotel at \$65.00 (plus applicable taxes) per night for a single or double room. Dormitory rooms are available for approximately \$28.00 per night for a single room and approximately \$48.00 per night (\$24.00 per person) for a double room. The 2012 dormitory rates have not been confirmed at this time.

**International Travelers:**

Due to more stringent U.S. entry requirements, **allow a minimum of 4-6 months for visa processing.**

## Program

**Lectures:** At least two lectures are scheduled each day. The following topics will be covered:

1. Course introduction, purpose, scope and schedule.
2. Introduction to gross anatomy and normal histology.
3. White Spot Disease (WSSV).
4. The baculovirus and baculo-like virus disease including MBV, BP and BMN.
5. Infectious hypodermal and hematopoietic necrosis virus, hepatopancreatic virus and other parvovirus caused diseases.
6. Taura syndrome, Infectious myonecrosis, Yellowhead and other RNA virus caused diseases.
7. Bacterial, rickettsial and fungal diseases.
8. Surface fouling diseases.
9. Nutritional diseases.
10. Toxic and environmental disease syndromes.
11. Diseases of unknown or uncertain etiologies.
12. Parasitic diseases.
13. Methods of disease prevention and/or treatment.
14. New diagnostic procedures.

**Labs and Demonstrations:** Two lab sessions per day. Topics to be covered in the labs include:

1. Fixation procedures for routine histology.
2. Standard histological techniques.
3. Normal histology and post-mortem change of principal organs and tissues.
4. Wet mount diagnostic procedures.
5. PCR/RT-PCR and gene probes for diagnosis of viral diseases.
6. Antibody-based methods for diagnosis of viral and/or bacterial diseases.
7. Isolation, culture, identification and antibiotic sensitivity of bacterial isolates.
8. Histopathology of viral, bacterial, rickettsial, fouling, parasitic, toxic and nutritional diseases.

### University Graduate Course Credit:

Three graduate credits are available for VSC565 (US residents only) through The University of Arizona Summer Session. For more information concerning University graduate studies, application forms, enrollment fees and late fee deadlines, contact Rita Redman or Dr. Donald Lightner at The University of Arizona: office phone - (520) 621-4438; or e-mail: [ritar@email.arizona.edu](mailto:ritar@email.arizona.edu) or [dvl@email.arizona.edu](mailto:dvl@email.arizona.edu).

### Lectures, Labs and Demonstrations:

By Staff from the Department of Veterinary Science and Microbiology  
D.V. Lightner, Ph.D.: Professor, Specialist in diseases of cultured shrimp  
C.R. Pantoja, Ph.D.: Associate Research Professor, Shrimp Pathologist  
K.Tang-Nelson, Ph.D.: Associate Research Professor, Molecular Virologist  
L.L. Mohny, M.S.: Microbiologist  
L.M. Nunan, M.L.A.: Molecular Biologist  
S.A. Navarro, B.S.: PCR techniques, Microbiologist  
R.M. Redman, H.T.: Histotechnologist

### Need more information?

Contact Rita Redman or Dr. Donald Lightner:  
The University of Arizona  
Department of Veterinary Science & Microbiology  
Aquaculture Pathology Laboratory  
1117 E. Lowell Street, Room 102  
Tucson, Arizona 85721 USA  
Phone: 520-621-4438; FAX: 520-621-4899  
Email: [ritar@email.arizona.edu](mailto:ritar@email.arizona.edu) or [dvl@email.arizona.edu](mailto:dvl@email.arizona.edu)

To apply, please fill out the following application form and send the form by mail, FAX or e-mail.

**The University of Arizona  
2012 Shrimp Pathology Short Course  
Application Form**

Full Name:  Dr  Mr  Mrs  Ms

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

Field of Study:

Institution/ Company Name:

Address:

City

State

Country

Postal Code

Telephone number:

FAX number:

E-mail address:

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

Lodging preference:  Sheraton Four Points  Dormitory  Other

Arrival date:

Departure date:

Will you be taking course VSC565 for graduate credit (USA residents only)?  Yes  No

**Application deposit of \$100.00 (USD) must be received by April 1, 2012 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:  MasterCard  Visa

Card number

Security code

Expiration date

Signature:

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

The University of Arizona

Department of Veterinary Science & Microbiology

1117 E. Lowell Street, Rm. 102

Tucson, Arizona 85721, USA

FAX: 520-621-4899

Rita Redman or Dr. Donald Lightner - email: [ritar@email.arizona.edu](mailto:ritar@email.arizona.edu) / [dvl@email.arizona.edu](mailto:dvl@email.arizona.edu)