2013 Schedule for AQUAVET® I

Locations:

Marine and Natural Sciences Building = MNS
Lecture rooms: MNS 200, MNS 210, MNS 212
Lab: MNS 103, MNS 106

Sunday, 26. May 2013

14:00 Orientation
MNS 200 Directors

15:00 RWU Required Safety Lecture
MNS 200 Caitlin Conley

16:00 Historical Aspects of the AQUAVET® Program
MNS 210 Dr. Donald Abt – AQUAVET® Founding Director

18:30 Tides
MNS 210 Dr. Donald Abt

Monday, 27. May 2013

8:00 Ecology, Natural History, Physiology, Anatomy of Marine Invertebrates
MNS 210 Dr. Robert Maze – Marinetics, Inc.

10:00 Water Quality
MNS 210 Dr. Laurie Landeau – Marinetics, Inc.
AQUAVET® Associate Director

13:00 Diseases of Warmwater Aquaculture Fishes – Infectious Diseases
MNS 210 Dr. Sherman Jack – Mississippi State University

15:00 Diseases of Warmwater Aquaculture Fishes – Non-Infectious Diseases
MNS 210 Dr. Sherman Jack

18:30 Culture and Health Concerns of Baitfish and Hybrid Striped Bass
MNS 210 Dr. Sherman Jack

Tuesday, 28. May 2013

8:00 Using Animals in Research
MNS 200 Dr. Amy Hancock–Ronemus – Marine Biological Laboratory
2013 Schedule for AQUAVET® I

9:30  Ecology, Natural History, Physiology, Anatomy of Marine Invertebrates (continued)  
MNS 210  Dr. Robert Maze

13:00  Anatomy, Diseases and Zoonotic Implications of Marine Invertebrates  
MNS 210  Dr. Roxanna Smolowitz – Roger Williams University

18:30  History of Fishes: Taxonomy from an Evolutionary and Ecological MNS Perspective  
MNS 210  Dr. David Taylor – RWU

Wednesday, 29. May 2013

5:20  Rocky Intertidal Invertebrate Collecting  
LOW TIDE 5:36  
leave from MSN 103  (dress appropriately – will be outside and in water)

7:20  Breakfast

8:00  Invertebrates – WET LAB – (need dissection kit, lab coats)  
MNS 103  Drs. Smolowitz and Maze

13:00  Invertebrates – WET LAB – (continued)  
MNS 103  Drs. Smolowitz and Maze

18:00  Invertebrates – WET LAB – (continued)  
MNS 103  Drs. Smolowitz and Maze

Thursday, 30. May 2013

8:00  Fish Anatomy – Structure and Function  
MNS 210  Dr. David Taylor – Roger Williams University

13:00  Fish Anatomy – Structure and Function (continued)  
MNS 210  Dr. David Taylor

15:00  Fish Anatomy – Structure and Function  WET LAB preserved specimens (need lab coats)  
MNS 103  Dr. David Taylor

16:00  Career Building in Veterinary Medicine  
MNS 210  Dr. Ted Mashima – Association of American Veterinary Medical Colleges

18:30  Aquaculture Systems  
MNS 210  David Cerino, Roger Williams University
2013 Schedule for AQUAVET® I

Friday, 31. May 2013

8:00  Water Quality Lab (half of the class)  
MNS 103  Dr. Laurie Landeau

8:00  RWU Shellfish Facility Visit (half of the class)  
Meet MNS 103  Karin Tammi – Roger Williams University

10:00  Both halves switch

13:00  What is Unique about Eye Structure and Sight: From A (Avian) to Z (Zalophus or zebrafish)  
MNS 210  Dr. Carmen Colitz – Aquatic Animal Eye Care, LLC

18:00  AQUAVET® Joint Class Picnic

Saturday, 1. June 2013

8:00  Fish Diagnostics and Techniques  WET LAB  
MNS 103  (need dissection kit, lab coats)  
Dr. Rod Getchell – Cornell University  
AQUAVET® Associate Director

9:00  Fish Anatomy – Structure and Function  WET LAB  
MNS 103  (need dissection kit, lab coats)  
Dr. David Taylor

13:00  Microbiology Lab Set Up (lab coats and dissection kits)  
MNS 106  Dr. Lester Khoo – Mississippi State University  
AQUAVET® Director Emeritus

Sunday, 2. June 2013 – OFF

8:30  leave campus for OPTIONAL Whale Watch – Barnstable, MA
10:30  check in for Whale Watch
11:30  OPTIONAL Whale Watch $35 per person  
Barnstable, MA

Monday, 3. June 2013

6:00  leave RWU for Sandwich, MA  
breakfast on the way

8:00  Sandwich Fish Hatchery visit  
Craig Lodowsky
2013 Schedule for AQUAVET® I

11:00
MNS 210
Selected Bacterial and Viral Pathogens of Fishes (continued)
Dr. Lester Khoo

13:00
MNS 210
Selected Bacterial and Viral Pathogens of Fishes (continued)
Dr. Lester Khoo

15:30
MNS 210
Viral and Parasitic Diseases of Coldwater Fishes
Dr. Mark Fast – Atlantic Veterinary College – PEI

18:30
MNS 210
Fungal Diseases of Coldwater Fishes
Dr. Mark Fast

Tuesday, 4. June 2013

8:00
MNS 103
Selected Bacterial and Viral Pathogens of Fishes
Micro Lab (lab coats and dissection kits)
Dr. Lester Khoo

13:00
MNS 210
Fish Nutrition
Dr. Dale Leavitt – Roger Williams University

15:00
MNS 210
Normal Fish Histology
Dr. Salvatore Frasca – University of Connecticut

18:30
MNS 103
Normal Fish Histology – Microscope Lab
Dr. Salvatore Frasca

20:30
MNS 210
AQUAVET® I T-shirt LOGO contest
Dr. Laurie Landeau

Wednesday, 5. June 2013

8:00
MNS 210
Student Seminars

1. Benjamin Davis – Monitoring Wild Fish Populations Using Environmental DNA
2. Jen Muscarello – Pharmaceutical Implications of Porifera
3. Joe Darrington – Hydroponics and Aquaculture: A Different Take on All in–All out Food Production Practices
4. Marina McCarthy – Zoonoses in Marine Mammals

10:00
MNS 210
Environmental/Nutritional Disease of Coldwater Fishes
Dr. Mark Fast

11:00
MNS 210
Disease Investigations and Case Reports for Coldwater Fishes
Dr. Mark Fast
### 2013 Schedule for AQUAVET® I

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
<th>Speaker/Institution</th>
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</thead>
<tbody>
<tr>
<td>13:00</td>
<td>Pathology and Histopathology of Fish</td>
<td>MNS 210</td>
<td>Dr. Renate Reimschuessel - US FDA</td>
</tr>
<tr>
<td>16:00</td>
<td>Pathology and Histopathology of Fish – Microscope Lab</td>
<td>MNS 103</td>
<td>Dr. Renate Reimschuessel - US FDA</td>
</tr>
<tr>
<td>18:30</td>
<td>Drugs used in Aquaculture – Regulations, labels, FDA, CVM and Medicated Feeds</td>
<td>MNS 210</td>
<td>Dr. Paul Bowser – Cornell University</td>
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<td>AQUAVET® Associate Director Emeritus</td>
</tr>
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**Thursday, 6. June 2013**

8:00  
MNS 210  

**Student Seminars**

5. Melanie van der Loop – Biosecurity and Quarantine Procedures in Aquatic Facilities  
6. Tyler Barrett – Lampreys as Models for Vertebrate Evolution  
7. Shalette Dingle – The Effects of Botulism on Fish and Avian Populations  
8. Karissa Sciacca – Reef Squid  
9. Frances Warburton – Coleoids with an emphasis on learning abilities  
10. Kira Wagner – Effect of Neurotoxins in Marine Mammals  

11:00  
MNS 210  

Corals  
Dr. Ilze Berzins – Aquatic Health Consultant  

13:00  
MNS 210  

Corals (continued)  
Dr. Ilze Berzins  

14:00  
MNS 210  

Aquatic Birds  
Dr. Cindy Driscoll – Maryland Department of Natural Resources  

18:30  
MNS 103  

**Aquatic Birds Anatomy Lab – WEB LAB** – (dissection kits, lab coats)  
Dr. Cindy Driscoll  

**Friday, 7. June 2013**

8:00  
MNS 210  

**Student Seminars**

11. Whitney Greene – Immunology of Marine Mammals  
12. Sharon Liu – Isopods  

9:00  
MNS 210  

Fish Physiology  
Dr. Michael Stoskopf – NC State University
### 2013 Schedule for AQUAVET® I

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<tbody>
<tr>
<td>13:00</td>
<td>Fish Physiology (continued)</td>
<td>MNS 210</td>
<td>Dr. Michael Stoskopf</td>
</tr>
<tr>
<td>18:30</td>
<td>OPEN</td>
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**Saturday, 8. June 2013**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
<th>Speaker/Institution</th>
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</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Shrimp Industry</td>
<td>MNS 210</td>
<td>Dr. Robert Bullis – Florida Keys CC</td>
</tr>
</tbody>
</table>

**Sunday, 9. June 2013**  OPEN

**Monday, 10. June 2013**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
<th>Speaker/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Amphibians!</td>
<td>MNS 210</td>
<td>Dr. Leigh Clayton – National Aquarium, Baltimore</td>
</tr>
<tr>
<td>10:00</td>
<td>Reptile Medicine</td>
<td>MNS 210</td>
<td>Dr. Leigh Clayton</td>
</tr>
<tr>
<td>13:00</td>
<td>Harmful Algal Blooms</td>
<td>MNS 210</td>
<td>Dr. Chris Gobler – Stonybrook Southampton</td>
</tr>
<tr>
<td>14:00</td>
<td>Medical Aspects of HABs – and Aquatic Toxicology</td>
<td>MNS 210</td>
<td>Dr. Lisa Murphy – University of Pennsylvania</td>
</tr>
<tr>
<td>15:00</td>
<td>(Sea)food Safety – Emphasis on Toxins</td>
<td>MNS 210</td>
<td>Dr. Lisa Murphy</td>
</tr>
<tr>
<td>18:30</td>
<td>Other Aspects of Aquatic Toxicology and Selected Cases</td>
<td>MNS 210</td>
<td>Dr. Lisa Murphy</td>
</tr>
</tbody>
</table>

**Tuesday, 11. June 2013**

*Today is overnight trip to Riverhead, NY. Take what you will need with you.*

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<tbody>
<tr>
<td>8:00</td>
<td>Leave RWU for Mystic (after breakfast)</td>
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<tr>
<td>9:30</td>
<td><strong>Mystic Aquarium Tour</strong></td>
<td></td>
<td>Dr. Allison Tuttle et al – Mystic Aquarium and Institute for Exploration</td>
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<tr>
<td>15:00</td>
<td>Leave Mystic for Riverhead</td>
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<tr>
<td>15:30</td>
<td>arrive at New London Ferry Terminal</td>
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# 2013 Schedule for AQUAVET® I

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>16:00</td>
<td>Ferry leaves for Orient Point, NY</td>
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<tr>
<td>17:30</td>
<td>Ferry arrives at Orient Point, drive to Riverhead, NY</td>
<td></td>
</tr>
<tr>
<td>18:30</td>
<td>Coral Biology, Husbandry and Propagation</td>
<td>Joe Yaiullo – Atlantis Marine World</td>
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**Wednesday, 12. June 2013**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:00</td>
<td>Atlantic Marine World Aquarium visit staff</td>
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<tr>
<td>8:30</td>
<td>Riverhead Foundation for Marine Research and Preservation Visit staff</td>
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<tr>
<td>9:00</td>
<td>RFMRP – Clinical Techniques for Marine Mammals and Aquatic Animals –</td>
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<tr>
<td></td>
<td>WET LAB – Bring Old Clothes or Clothing Covers</td>
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<td></td>
<td>Dr. Robert DiGiovanni, Jr.</td>
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<td></td>
<td>Ms. Kimberly Durham</td>
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<td>Dr. Richard Hanusch</td>
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<td>Dr. Robert Pisciotta</td>
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<td></td>
<td>Ms. Julika Wocial</td>
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<tr>
<td>13:00</td>
<td>RFMRP – Clinical Techniques for Marine Mammals and Aquatic Animals –</td>
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<td></td>
<td>(continued)</td>
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<tr>
<td>16:30</td>
<td>Leave Riverhead for Bristol</td>
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<tr>
<td>17:45</td>
<td>arrive at Orient Point, NY</td>
<td></td>
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<tr>
<td>18:00</td>
<td>Ferry leaves for New London, CT</td>
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<tr>
<td>19:30</td>
<td>arrive New London</td>
<td>drive to Bristol, RI (about 1.5 hours)</td>
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**Thursday, 13. June 2013**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:00</td>
<td>Biology, Medicine and Surgery of Sea Turtles</td>
<td>Dr. Charlie Innis – New England Aquarium</td>
</tr>
<tr>
<td>13:00</td>
<td>Sea Turtle Necropsy Lab (lab coats, dissection kit)</td>
<td>Dr. Charlie Innis</td>
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<td></td>
<td>Dr. Julie Cavin – New England Aquarium</td>
</tr>
<tr>
<td>18:30</td>
<td>Economic Considerations in the Development of Aquaculture Operations</td>
<td>Dr. Laurie Landeau</td>
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</tbody>
</table>
2013 Schedule for AQUAVET® I

Friday, 14. June 2013

8:00     Pet Fish Medicine: An Overview
MNS 210  Dr. Helen Roberts

10:00    The Ornamental Fish Industry
MNS 210  Dr. Helen Roberts – Aquatic Veterinary Services of WNY

11:00    Aquatic Life Support Systems for Pet and Display Fishes
MNS 210  Dr. Helen Roberts

13:00    Diagnostic and Treatment Techniques for Pet and Pond Fish
MNS 210  Dr. Helen Roberts

15:00    Clinical Cases: An Interactive Problem Solving Session
MNS 210  Dr. Helen Roberts

18:30    Student Seminars
MNS 210

  13. Dayle McClintock – Orca Feeding Strategies Relating to Social Behavior and Training of Young
  15. Jayson Johnston – Use of Vaccinations in Aquatic Species
  16. Maggie McQuillan – Lionfish Invasion

Saturday, 15. June 2013

8:00     Fish Surgery Lab – HALF of CLASS
MNS 103  (no special equipment needed by students)
         Dr. Helen Roberts
         Dr. Geoffrey Groocock – Cornell University
         Dr. Donald Stremme – University of Pennsylvania
         AQUAVET® Director

10:00    Fish Surgery Lab – Other HALF of CLASS
MNS 103

13:00    Student Seminars
MNS 210

  17. Nora Hickey – Mycobacterial Infections in Zebrafish
  18. Jayme Jeffries – Antimicrobial Agents Isolated from the Microbiomes of Aquatic Animals
  19. Stephanie Principati – Horseshoe Crab Ecology and Significance in the Delaware Bay
  20. Michele Rivard – Bottlenose Dolphins as Sentinels for Human Health and the HERA Project
2013 Schedule for AQUAVET® I

22. Alicia Morse – Integrative Multitrophic Aquaculture Systems
23. Christina Der –
24. Stephanie Zec – Factors that May Make Amphibians the Next Big Extinction – Focusing on Major Diseases and Toxins

Sunday, 16. June 2013  OPEN

Monday, 17. June 2013

8:00  Marine Mammals
MNS 210  Dr. Allison Tuttle et al – Mystic Aquarium
         Dr. Cara Field – Georgia Aquarium
         Dr. Inga Sidor – University of New Hampshire
         Dr. Paul Calle – Global Health Program, Wildlife Conservation Society

13:00  Marine Mammals – continued
MNS 210  Drs. Tuttle, Sidor, Field

18:30  Marine Mammals – continued
MNS 210  Drs. Tuttle, Sidor, Field

Tuesday, 18. June 2013

8:00  Marine Mammals – continued
MNS 210  Drs. Tuttle, Sidor, Field

13:00  Marine Mammals – continued
MNS 210  Drs. Tuttle, Sidor, Field

15:00  Large Display Aquaria
MNS 210  Dr. Brent Whitaker – National Aquarium, Baltimore

18:30  Oyster Culture, Environment, Disease and Nutrition
MNS 210  Dr. Robert Maze

Wednesday, 19. June 2013

6:00  Iv RWU for Woods Hole

7:30  Required OSHA training to be in the necropsy lab
       Carriage House  Dr. Michael Moore – Woods Hole Oceanographic Institute

Catered breakfast during this training
2013 Schedule for AQUAVET® I

8:00  Marine Mammal Necropsy Lab  WET LAB
      WHOI  (need dissection kit – protective clothing will be provided)
      Dr. Michael Moore – Woods Hole Oceanographic Institution (WHOI)
      Drs. Tuttle, Calle, Sidor, Field

13:00  catered lunch
       Carriage House

13:30  Students Present Results of Necropsies for the Group
       Carriage House  Dr. Sidor leading discussion

13:45  Marine Mammal Strandings
       Carriage House  Dr. Moore

15:30  Marine Mammals and Oil Spills
       Carriage House  Dr. Field

16:00  Marine mammal Ethics
       Carriage House  Dr. Calle et al.

17:00  Marine Mammal Case Studies
       Carriage House  Dr. Calle

17:30  Pizza during last talk
       Carriage house

19:45  Drive back to RWU

Thursday, 20. June 2013

8:00  Regulations in Aquaculture
      MNS 210  Dr. Gary Egrie – USDA APHIS Veterinary Services

circa  leave RWU for Boston – New England Aquarium

13:00  Endoscopy and Endosurgery of Turtles
       Dr. Charles Innis – New England Aquarium Dir of Animal Health

13:30  Interesting Case Reports
       Dr. Julie Cavin – New England Aquarium Associate Veterinarian

14:30  New England Aquarium – Behind the Scenes Tours
       Drs. Innis and Cavin and staff

16:00  open time to visit NEAQ on own
       (aquarium closes at 5pm)
2013 Schedule for AQUAVET® I

circa
17:30 Leave Boston for RWU
19:00 OPEN

Friday, 21. June 2013

8:00 Aquatic Immunity
   MNS 210  Dr. Erin Bromage – University of Massachusetts Dartmouth
13:00 Resource Assessment
   MNS 210  Dr. Paul Rago – National Marine Fisheries Service
15:00 Tall Ships (OPTIONAL)
   MNS 210  Dr. Donald Abt
18:30 AQUAVET® I Clambake

Saturday, 22. June 2013

By 12:00 check out – back to reality