

Library News – February 2010

Iowa State University

Compiled by Andrea Dinkelman

Librarian for the Departments of Animal Science; Ecology, Evolution, & Organismal Biology; Genetics, Development & Cell Biology; and the College of Veterinary Medicine

Email: adinkelm@iastate.edu

Hello everyone!

I hope everyone's semester is off to a good start. I have some exciting news regarding the availability of some new online resources. One of goals of the library's journal cancellation review project was to reallocate funds to purchase new journals and/or other electronic resources that are on the library's "wish list."

Keep reading for more details! ~Andrea

New Journal Available – Journal of Visualized Experiments

The **Journal of Visualized Experiments (JoVE)** is now available online. You'll find a listing in the library catalog under Journal of Visualized Experiments or JoVE. It is listed in the e-journals list with the full title. This is a peer reviewed, PubMed indexed journal devoted to the **publication of biological research in a video format**. It has been published since 2006. Topics covered include: neuroscience, developmental biology, cellular biology, microbiology, plant biology, immunology, and basic protocols.

Please note: The journal is only accessible on campus. The publisher does not allow off-campus access.

A quick PubMed search found 3 articles authored by ISU faculty members:

1. J Vis Exp. 2008 Sep 3;(19). pii: 888.

Protocols for Oral Infection of Lepidopteran Larvae with Baculovirus. Sparks W, Li H, Bonning B. Department of Entomology, Iowa State University, wosparks@iastate.edu.

Baculoviruses are widely used both as protein expression vectors and as insect pest control agents. This video shows how lepidopteran larvae can be infected with polyhedra by droplet feeding and diet plug-based bioassays. This accompanying Springer Protocols section provides an overview of the baculovirus lifecycle and use of baculoviruses as insecticidal agents, including discussion of the pros and cons for use of baculoviruses as insecticides, and progress made in genetic enhancement of baculoviruses for improved insecticidal efficacy.

PMID: 19066541 [PubMed - as supplied by publisher]

2. J Vis Exp. 2008 Aug 23;(18). pii: 889.

Protocols for microapplicator-assisted infection of lepidopteran larvae with baculovirus. Li H, Sparks W, Bonning B.

Department of Entomology, Iowa State University, USA. hrli@iastate.edu

Baculoviruses are widely used both as protein expression vectors and as insect pest control agents. . This video shows how lepidopteran larvae can be infected with microapplicator techniques in the gut with baculovirus polyhedra and in the hemolymph with budded virus. This accompanying Springer Protocols section provides an overview of the baculovirus lifecycle and use of baculoviruses as insecticidal agents. Formulation and application of baculoviruses for pest control purposes are described elsewhere.

PMID: 19066502 [PubMed - indexed for MEDLINE]

3. 1. J Vis Exp. 2010 Feb 9;(36). pii: 1748.

Preparation of Drosophila polytene chromosome squashes for antibody labeling. Cai W, Jin Y, Girton J, Johansen J, Johansen KM.

Drosophila has long been a favorite model system for studying the relationship between chromatin structure and gene regulation due to the cytological advantages provided by the giant salivary gland polytene chromosomes of third instar larvae. In this tissue the chromosomes undergo many rounds of replication in the absence of cell division giving rise to approximately 1000 copies. The DNA remains aligned after each replicative cycle resulting in greatly enlarged chromosomes that provide a unique opportunity to correlate chromatin morphology with the localization of specific proteins. Consequently, there has been a high level of interest in defining the epigenetic modifications present at different genes and at different stages of the transcription process. An important tool for such studies is the labeling of polytene chromosomes with antibodies to the enzyme, transcription factor, or histone modification of interest. This video protocol illustrates the squash technique used in the Johansen laboratory to prepare Drosophila polytene chromosomes for antibody labeling.

PMID: 20145604 [PubMed - in process]

SpringerProtocols Available

About SpringerProtocols

“SpringerProtocols is **the largest subscription-based electronic database of reproducible laboratory protocols in the Life and Biomedical Sciences**. Compiling protocols from Humana’s successful book series *Methods in Molecular Biology*, *Methods in Molecular Medicine*, *Methods in Biotechnology*, *Methods in Pharmacology and Toxicology*, and *Neuromethods*, as well as from a vast number of Laboratory Handbooks, such as *The Biomethods Handbook*, *The Proteomics Handbook*, and the *Springer Laboratory Manuals*, SpringerProtocols offers researchers access to nearly thirty years worth of time

tested, easily reproducible, step-by-step protocols for immediate use in their lab.”

Subject areas include: Biochemistry, Bioinformatics, Biotechnology, Cancer Research, Cell Biology, Genetics/Genomics, Imaging/Radiology, Immunology, Infectious Diseases, Microbiology, Molecular Medicine, Neuroscience, Pharmacology/Toxicology, Plant Sciences, and Protein Science.

You may access SpringerProtocols by two different methods. The library [catalog record](#) has two links. The first link directs you to the SpringerProtocols [website](#). The second link directs you to the SpringerLink [website](#). This website serves as a gateway to all types of Springer publications (e.g. books, book series, journals, protocols).

Elsevier Book Series Now Online

The library subscribes to a number of book series published by Elsevier. The subscription has been converted to online-only, so the library will no longer receive the print volumes. Elsevier plans to stop publishing the print volumes within the next one to three years. The following book series are available online and available in the ScienceDirect platform; they are listed in the library catalog and in the e-journals list:

Agricultural & Biological Sciences

- Advances in agronomy
- Advances in botanical research
- Advances in ecological research
- Advances in food and nutrition research
- Advances in insect physiology
- Advances in marine biology
- Fish physiology

Microbiology & Immunology

- Advances in applied microbiology
- Advances in immunology
- Advances in microbial physiology
- Advances in parasitology
- Advances in virus research
- Methods in microbiology
- Perspectives in medical virology

Biology, Genetics & Molecular Biology

- Advances in cancer research
- Advances in cell aging and gerontology
- Advances in clinical chemistry
- Advances in developmental biology
- Advances in genetics
- Advances in molecular and cell biology

Advances in organ biology
Advances in protein chemistry and structural biology
Biotechnology annual review
Current topics in developmental biology
Current topics in membranes
The Enzymes
International review of cell and molecular biology
Laboratory techniques in biochemistry and molecular biology
Methods in cell biology
New comprehensive biochemistry
Progress in nucleic acid research and molecular biology
Vitamins and hormones

Pharmacology, Toxicology and Pharmaceutical Science

Advances in pharmacology

Neuroscience

International review of neurobiology
Progress in brain research
