Analytical Lab Directory for Beekeepers

www.ProjectApism.org

Project Apis m. (PAm) was established by beekeepers and orchardists in December, 2006, to direct research to improve the health of honeybee colonies while enhancing crop production. Research funding is often coordinated with other organizations and may involve transferring technologies from other disciplines, such as human health, into honeybee applications.

This Analytical Services Laboratory Directory was made possible through a California Department of Food and Agriculture Specialty Crop Block Grant awarded to PAm in 2007. The purpose of this publication is to ensure healthy bees for pollination services by listing resources that provide objective evaluations for honeybee health assessment. PAm has provided funding assistance to several of the labs in order to provide betters services and reduced fees for beekeepers.

We hope that you find this guide a valuable resource. You will find many other resources on

our website at www.ProjectApism.org. Questions can be directed to projectapis@gmail.com.

PAm is the largest non-profit funding organization in the United States, infusing over $1 million into honeybee research. PAm has funded over 30 projects involving research institutions in 10 states.

As a 501(c)(5) non-profit, we appreciate your support. Contributions can be mailed to: Project Apis m., P.O. Box 3157, Chico, CA 95927 or securely made online at www.ProjectApism.org. Thank you.

Published by Project Apis m.

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Acadia University

Location: Wolfville, Nova Scotia, B4P 2R6, Canada
Contact: Dave Shutler
Email: dave.shutler@acadiau.ca
Phone: (902) 585-1354

Types of Analyses:

Varroa mites, tracheal mites, Nosema apis, N. ceranae

Accepting samples: Contact lab

Geographical limitations on samples: Contact lab

Comment on fees: Contact lab

Comment on sampling, storage & shipping: Contact lab

Bee Alert Technology, Inc.

Location: Missoula, MT
Contact: Jerry Bromenshenk
Email: beeresearch@aol.com
Website: http://beealert.blackfoot.net
Phone: (406) 541-3160

Types of Analyses:

Pest Surveys: Varroa mites, tracheal mites, Nosema apis and Nosema ceranae.

Broad spectrum analysis for disease pathogens.

Broad spectrum pesticide analysis and pesticide specific analysis (individual chemicals or groups of chemicals), including interpretation of results and consultation.

Contract research: On-site sampling, monitoring, and assessment of bee diseases and pesticide related problems; applied research with respect to bee diseases, pathogens, diets and pesticides.

Accepting samples: Yes

Geographical limitations on samples: None

Comment on fees: Contact lab

Comment on sampling, storage & shipping:
Contact lab

BVS, Inc.

Location: Missoula, MT
Contact: Dave Wick
Email: mrwick@bvs-inc.us
Website: www.bvs-inc.us
Phone: (406) 369-4214

Types of analyses:
Viruses - Monitoring of bee viral loads over time as an indication of improving or declining bee health.
Nosema – providing spore counts with virus screening.
Please add frame counts, treatments given and any other relevant information that will add to your report.

Accepting samples: Yes

Geographical limitations on samples: None

Comments on fees: $50/sample – Virus screening
$10/sample – Nosema spore count

Comment on sampling, storage and shipping: 2nd day shipping or USPS flat rate shipping. Send samples in baggies – bees only, no additives. Notify lab that samples are being shipped to accommodate any special timing issues. Contact lab prior to shipping and ship to:

BVS, Inc.
5501 Hwy 93 N., Suite 6
Florence, MT 59833

California State University, Channel Islands

Location: Camarillo, CA
Contact: Ruben Alarcon
Email: ruben.alarcon@csuci.edu
Website: http://faculty.csuci.edu/ruben.alarcon/
Phone: (805) 437-8895

Types of analyses:

Able to assist Ventura County, CA beekeepers with monitoring of Varroa mites and testing for tracheal mites and Nosema.

Accepting samples: Contact lab

Geographical limitations on samples: Ventura County

Comment on fees: Contact lab

Comment on sampling, storage & shipping: Contact lab

DFA of California

Location: Fresno, CA
Contact: Thomas Jones
Email: thomasj@agfoodsafety.org
Phone: (559) 233-7249

Types of analyses:

DFA of California specializes in the analysis of dried fruit and nuts. Also includes the analysis of many other fresh and processed fruits and vegetables, spices, juice and juice concentrates. GC/MS residue analyses include some 300 organophosphate/chlorine/nitrogen and sulfur compounds and DFA laboratories also analyze carbamate and EBDC pesticides. Lab uses methodology developed by the USFDA and the State of California certifies our pesticide analyses.

Accepting samples: Contact lab

Geographical limitations on samples: Contact lab

Comment on fees: Contact lab

Comment on sampling, storage and shipping: Contact lab

ID Services, LLC

Location: McFarland, CA
Contact: Alan Butterfield
Email: ids@etcrier.net
Phone: (661) 792-2051

Types of analyses:

Varroa, tracheal mites, and Nosema apis. Tracks data on average weight, length and pH.

Accepting samples: Yes

Geographical limitations on samples: None

Comment on fees: $55/sample

Comment on sampling, storage and shipping:
Sample lot should be no larger than 100 hives. Take 15 bees from every tenth colony. Total sample size of 150 bees. Take live bees from the entrance and top opening to get older bees. Place directly in rubbing alcohol in a

spill proof container marked with sample identification in indelible ink. Mail or deliver FRESH bees to the lab in spill proof containers. Include all contact information. Send payment with sample or invoice will accompany report.

Michigan State University

Location: East Lansing, Michigan
Contact: Zachary Huang
Email: bees@msu.edu
Website: bees.msu.edu
Phone: (517) 353-8136

Types of analyses: Amino acid content of honey bee pollen sources.
Accepting samples: Yes
Geographical limitations on samples: USA

Comment on fees: Contact lab. Project Apis m may provide funding for analyses. Contact projectapis@gmail.com.

Comment on sampling, storage, shipping:

Contact lab for sampling protocol. Minimum .2 gram of pure pollen per plant species is required. Store at room temperature if pollen has completely dried, or at -20C if unsure whether pollen is completely dried. Store in clean, capped small glass or plastic vials. Shipping via Fedex on blue ice (if not dried), or without blue ice (if dried). Send to:

Dr. Zachary Huang
243 Natural Science Bldg
Michigan State University
East Lansing, MI 48824

Prior to shipping, email Dr. Huang to alert him samples are being shipped. Please cc: projectapis@gmail.com.

Montana State University

Location: Bozeman, Montana
Contact: Michelle Flenniken
Email: michelleflenniken@gmail.com
Website: MSU Plant Sciences and Plant Pathology
Phone: See MSU website

Types of analyses:

Honey bee pathogen research (e.g. viruses, Nosema, Crithidia,) and diagnosis using molecular techniques (PCR, quantitative PCR, microarray).

Accepting samples: Contact lab. Currently have many samples but may accept particularly interesting samples (i.e. CCD affected hives, samples collected each week before, during and after almond pollination).

Geographical limitations on samples: None

Comment on fees: None

Comment on sampling, storage and shipping: Will accept live or frozen bees (dry ice shipping preferred).

North Carolina State University

Location: Raleigh, North Carolina
Contact: Dave Tarpy
Email: david_tarpy@ncsu.edu
Website: http://entomology.ncsu.edu/apiculture
Phone: (919) 515-1660

Types of analyses:

Queen measurements. Physical attributes (weight, thorax width, wing length, etc.)
Parasitism (HBTM, Nosema apis and ceranae (spore
counts and genetic analyses) and viruses.
Vitellogenin expression.
Total soluble protein content.
Sperm counts and sperm viability.
Mating number quantification via molecular genotype and paternity analysis.

Accepting samples: For scientific purposes. Contact lab

Geographical limitations on samples: Contact lab

Comment on fees: Contact lab

Comment on sampling, storage and shipping:
Ship live or flash-frozen.

Oregon State University

Location: Corvallis, Oregon
Contact: Ramesh Sagili, PhD
Email: sagilir@hort.oregonstate.edu
Website: http://hort.oregonstate.edu/faculty-staff/sagili
Phone: (541) 737-5440

Types of analyses:
Varroa mites, tracheal mites, Nosema

Nutritional status
Hypopharyngeal gland protein content of nurse bees.

Accepting samples: Yes

Geographical limitations on samples: Presently Oregon beekeeper samples, but with funding may extend to other states.

Comment on fees: None

Comment on sampling, storage & shipping:
Contact lab

Pennsylvania State University

Location: University Park, Pennsylvania 16802
Contact: Maryann Frazier, Dept. of Entomology, 501 ASI
Email: mfrazier@psu.edu
Website: http://ento.psu.edu/pollinator
Phone: (814) 865-4621

Types of analyses:
Pesticides of all hive matrices. These include honey and nectar, pollen (trapped pollen or bee bread), adult bees and wax.

Accepting samples: Yes
Geographical limitations on samples: United States only

Comment on fees: Cost-share program. Beekeeper pays ½ of analytical fee of $268 for full pesticide screen of 171 pesticides or ½ of $134 fee for miticide screening only.

Comment on sampling, storage and shipping: Email lab

**for the data sheet to accompany samples. Honey, nectar,
pollen, wax, bees or brood require 2 oz. samples. Bee
bread samples should be randomly collected from 30 cells.
Collect in clean, crush-proof, leak-proof plastic containers.
Honey and nectar containers also into zip-lock bags.
Label samples with your name, date collected, colony
number, code or batch designation (for honey or trapped
pollen). Keep frozen and ship with freeze pack overnight
or 2nd day air. Do not ship on Friday or prior to a holiday.**

Texas A & M University Palynology Laboratory

Location: College Station, Texas
Contact: Vaughn Bryant
Email: vbryant@neo.tamu.edu http://anthropology.tamu.edu/faculty/directory.php?ID=212
Phone: Office (979) 845-5242 Cell (979) 574-8467

Types of analyses:

Pollen content of honey for the purpose of identifying nectar sources and geographical origin of the sample.

Accepting samples: Yes

Geographical limitations on samples: Contact lab. Have analyzed samples from all over the world.

Comment on fees: Contact lab. $50/sample, large samples may receive discounts. Pricing dependent upon availability of reference materials to conduct analyses.

Comment on sampling, storage and shipping:

25 – 50 grams of honey (unfiltered) per sample. Shipped in any manner that ensures it will not leak or break.

University of California, San Francisco

Location: San Francisco, California
Contact: Tara Christiansen
Email: tara@derisilab.ucfs.edu
Website: http://derisilab.ucsf.edu/
Phone: (415) 514-4497

Types of analyses:

Microarray (Bee Pathogen Chip) and sequencing analysis
for pathogens associated with honey bee samples
including insect viruses, Varroa mites, tracheal mites,
Nosema and Crithidia.

Accepting samples: Contact lab. Currently have many
samples, but may accept particularly interesting samples
(i.e. CCD affected hives).

Geographical limitations on samples: None

Comment on fees: None

Comment on sampling, storage and shipping:
Will accept
live or frozen bees (dry ice shipping is preferred).

USDA – AMS

Location: Gastonia, North Carolina
Contact: Roger Simonds
Email: roger.simonds@ams.usda.gov
Website: www.ams.usda.gov
Phone: (704) 867-3873

Types of analyses:

Pesticides of all hive matrices. These include honey and
nectar, pollen (trapped pollen or bee bread), brood, adult
bees and wax.

Accepting samples: Contact lab

Geographical limitations on samples: Contact lab

Comment on fees:

$290.50 for full pesticide screen of approximately 200 pesticides

$162 fee for miticide screening only

Tailored screens of specifically identified pests (ex. Neonictinoids) per request.

Comment on sampling, storage and shipping: Email for the date sheet to accompany samples and for sampling instructions.

USDA – ARS

Location: Beltsville, Maryland
Contact: Bart Smith
Email: bart.smith@ars.usda.gov
Website: www.ams.usda.gov
Phone: (704) 867-3873

Types of analyses:

Varroa mites, Nosema spore counts, AFB, EFB, and disease ID in comb.

Accepting samples: Yes

Geographical limitations on samples: Nationwide

**Comment of fees: Currently a free service to U.S. beekeepers. Should lab become more fully utilized,
additional funding would be required.**

Comment on sampling, storage and shipping:

**Ship bees in alcohol. Ship comb wrapped in paper, not
plastic.**

Washington State University

Location: Pullman, Washington
Contact: Kirsten Northfield
Email: knorthfield@wsu.edu
Website: http://apis.wsu.edu/
Phone: (509) 335-8598

**Types of analyses:
Varroa mites, tracheal mites, and detection of Nosema spores. Upon detection of spores, PCR may be conducted on occasion per request and approval to do so.**

Accepting samples: Yes

Geographical limitations on samples: Free service for beekeepers and universities. Comments on sampling, storage and shipping: ½ to 1 cup of bees must be submerged in alcohol (70% is fine if shipped immediately after sample was taken) with at least a ½" of alcohol covering the level of bees inside, so that the bees do not absorb it all during shipping. Place in plastic urine sample cup, honey jar or any other liquid tight container and ship in a padded envelope or box filled with packing material. Tag on inside of cup (written in pencil) and also lid labeled with colony #, name and date sampled. Send Honeybee Health Registration form on website with samples to: Bee Diagnostic Service

Dept. of Entomology

Washington State University

166 FSHN

Pullman, WA

99164-6382

NOTES

Lab Directory is available online at www.ProjectApism.org

Revised May 9, 2012