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Visit our website at:
<http://www.jdip.org>

JDIP News is published periodically to enhance intramural communications and ensure that JDIP participants and stakeholders are updated on news of relevance to our community.

Please direct any contributions, suggestions and comments via email to: Steen Erikson at erik0046@umn.edu



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JDIP Year 3 Proposal Status

We have received approval from the USDA for year 3 funding and we expect to start processing the new awards and renewals shortly. This has been a lengthy process and everyone appreciates the patience of all the applicants.

The revised proposals will be reviewed by the External Advisory Board prior to submission to the USDA for final release of the funds. Expect to start seeing contracts at your Sponsored Projects office in the next 30 to 60 days.

MARCH:

In like a Lion



Out like a Lamb



The first day
of Spring is
March 21, 2007!

JDIP: Four More Years!

Great news for the JDIP community! On Thursday, February 22, we received notification from the USDA/CSREES office that JDIP was being renewed with "High Priority." This kind of response would have been impossible without the great effort of each of the investigators in the JDIP community.

One of the requirements of the renewal is that JDIP incorporates a Logic Model into our management plan. The reviewers referred the Executive Committee to a University of Wisconsin Extension program web site that contains extensive information on Logic Models, and will be the launching point for development of JDIP-specific plans.

<http://www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html>

One of the primary goals of these models is to ensure that progress can be captured and measured in a meaningful way. As we develop the framework for our models, each of our investigators will be asked to put their project or core into a similar framework in order to identify milestones and reporting methodology. Using these models, we believe that progress reports and regular status updates will become easier to assemble. This will translate to better measurement of progress against our goals.

If you have previous experience with Logic Models and would like to share your expertise, please contact the Executive Committee. We are always interested in leveraging the knowledge and experience found in the JDIP community.



JDIP 3rd Annual Conference - Travel Award Recipients

Travel awards were presented by Vivek Kapur and Scott Wells. From left to right, Scott Wells, Kumanan Kathaperumal, Chia Wei Wu, Sandra Sommer, Horacio Bach, Vivek Kapur, Ed Kabara, and Kun Taek Park.

Executive Committee

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USDA/NADC

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Yrjo Grohn, Cornell
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Peter Johnson,
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Vivek Kapur (PI),
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Scott Wells, University
of Minnesota

JDIP 3rd Annual Conference A Resounding Success!



The Texas A&M University College of Veterinary Medicine and Biomedical Sciences proved to be a great place for an indoor conference! While the weather wasn't what we had hoped for, the conference was a success. We enjoyed the company of over 70 attendees and the great hospitality of our TAMU colleagues. Special thanks to L. Garry Adams and Allison Ficht for their support throughout the conference.

As always, there was a team of volunteers who worked, mainly behind the scenes, to make everything work. Our thanks to: Lisa Reyes for help with planning and execution; Bill, David Helcel, and Mike McConnel in the computer lab; Cinthia Voelker, Becky Pankratz, Tiffany Fausett, Doris Hunter, and Roberta Pugh for all their logistical help; Ken Turner for doing the heavy lifting; and Larry Wadsworth for the photos!

This year's organizing committee consisted of Sangeeta Khare (Texas A&M University), Ian Gardner (University of California Davis), John Bannantine (USDA/NADC), Vivek Kapur (University of Minnesota), and Steen Erikson (University of Minnesota).

Check the JDIP web site for conference presentations and audio recordings.



JDIP External Advisory Board

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ASSOCIATION)

Updated JDIP Funding Policy for Ad Hoc Proposals

Background. In order to encourage and enable new research, education, and extension opportunities in JD that may present themselves throughout the year and that may require consideration outside of the standard JDIP annual RFA process, we are putting in place a process for ad hoc review of proposals as these opportunities become known.

Application process. Investigators with new ideas or opportunities that are time-sensitive and cannot wait for the annual RFA process are encouraged to contact the JDIP Executive Committee and request an evaluation of a brief (two-page maximum) preliminary proposal outlining the nature of the proposed activities, a justification for the time-sensitive nature of the work, and an approximate budget. This information should be submitted via e-mail to JDIP-EC@jdip.org. The proposal will be shared with the Executive Committee and External Advisory Board members.

Review Process. The Executive Committee will, at its weekly meeting, determine whether the proposal merits expedited consideration and will evaluate the availability of resources to support the request. The Executive Committee may next seek to solicit a more detailed proposal for additional internal and/or external peer-review or make the recommendation to the investigative team and the EAB that the proposal be considered as part of the standard annual RFA process. Based on the results of peer-review, the EC will then make recommendations for emergency support from JDIP to the JDIP External Advisory Board (EAB) for final approval, and details regarding any proposals recommended for support through this mechanism will be announced to the membership.

Funding. We emphasize that this process is not intended to replace the annual peer-reviewed RFA process, but only to supplement it, and is only for cases where a significant and time-sensitive opportunity exists. We expect that virtually all JDIP activities will continue to be reviewed and funded through the annual RFA process, and that no alternate source of funds are being set aside to support these activities. The maximum funding level for this type of award is not expected to exceed \$30,000.



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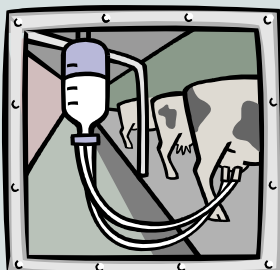
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Mycobacterium avium subsp. paratuberculosis and Crohn's disease

The on-going debate about whether there is a causal relationship between *Mycobacterium avium* subsp. paratuberculosis and Crohn's disease is still unresolved. To add fuel to the discussion, Dr. Andrijana Rajic, a veterinarian at the Laboratory for Foodborne Zoonoses in the Public Health Agency of Canada, Guelph, Ontario, Canada is heading a systematic review of the literature on the subject weighing in on the current evidence for or against a causal relationship. The study is funded by a Health Canada, Chief Scientists Innovative Science Award.

For readers without a background in systematic reviews, The Food Safety Research and Response Network website: (<http://www.fsrrn.net/modules/content/index.php?id=20>) provides a summary of its key components. "Systematic reviews provide a rigorous and replicable method of identifying, evaluating, and summarizing scientific evidence to address healthcare-related issues such as disease treatment, prevention, diagnosis, and risk factor assessment. The steps involved in conducting a systematic review include: (1) development of a focused study question (2) identification of all potentially relevant primary research using a structured search strategy (3) screening of abstracts for relevance to the study question (4) quality assessment of the relevant literature (5) extraction of data from articles of sufficient quality and (6) synthesis of data from those studies using qualitative or quantitative approaches". The method provides a transparent approach to summarizing all available research evidence to address a topic and to identify existing knowledge gaps. This approach is widely used in human medicine to support medical decision-making but only minimally used in veterinary medicine.

Jan Sargeant, a co-author of the project, recently spoke with Ian Gardner and provided the following update on the project. "Our review identified a range of study types addressing aspects of the zoonotic potential for Johne's disease. The majority were case-control studies comparing the prevalence of MAP in Crohn's patients versus controls. We also identified molecular studies comparing specific strains of MAP isolated from cattle and humans, challenge studies where MAP isolated from humans with Crohn's disease were experimentally administered to ruminants, and cross-sectional studies investigating the distribution of Crohn's disease in rural communities. Despite the volume of research conducted to address this issue, the evidence for an association between Johne's disease and Crohn's disease was not strong".

While Jan is not a member of JDIP, she has agreed to keep us informed about the outcome of this work and to notify us when a published manuscript becomes available. Jan's contact information is:

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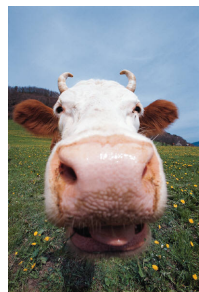
Biological Resources for JDIP Participants

The JDIP biological sample repository has been established to support a broad range of JDIP research activities. Many colleagues have new diagnostic assays in development, each of which may benefit by evaluation with well-characterized samples from naturally and experimentally infected animals. Other scientists may find MAP strains from varied hosts and locations to be helpful in genomic or other research. This extensive shared repository of low passage isolates (diverse strains of the organism isolated using a variety of culture conditions), serum, tissue, feces, and milk has been collected from different species (domestic and non-domestic) in varied phases of MAP infection. Samples in this repository will be available for use by any JDIP research participant.

A comprehensive database has also been developed to manage this national resource. It includes epidemiologic and diagnostic information pertinent to a sample including test results (for the sample and in some cases for correlated samples e.g. milk ELISA and fecal culture results from the same animal producing a serum sample), source herd status, geographic location, genetic elements (for MAP isolates), etc. Samples are continually collected to replenish those used by the JDIP community. Feel free to clean your freezers and contribute samples to the repository!



All JDIP participants will receive a short survey about the repository in the near future: your answers will direct future efforts to collect, catalogue and store samples to support your work. (Since your freezers may contain samples that may further your colleagues' research, please note them in the survey as well).



A web-based catalogue ("The Johne's Sample Shop") will be available this summer to provide easy access to these samples. The URL and instructions for use will appear in the JDIP newsletter and in individual emails.

Prionics Gets Extended Permission for Parachek®

Prionics issued a media release on February 13, 2007 stating that they have received approval for the extended use of its Johne's disease test Parachek®. "With the original test kit for the diagnosis of paratuberculosis, the United States Department of Agriculture (USDA) has for the first time officially validated a product for the testing of bovine milk samples." For more information, visit the Prionics web site: www.prionics.com

Going Public with JDIP

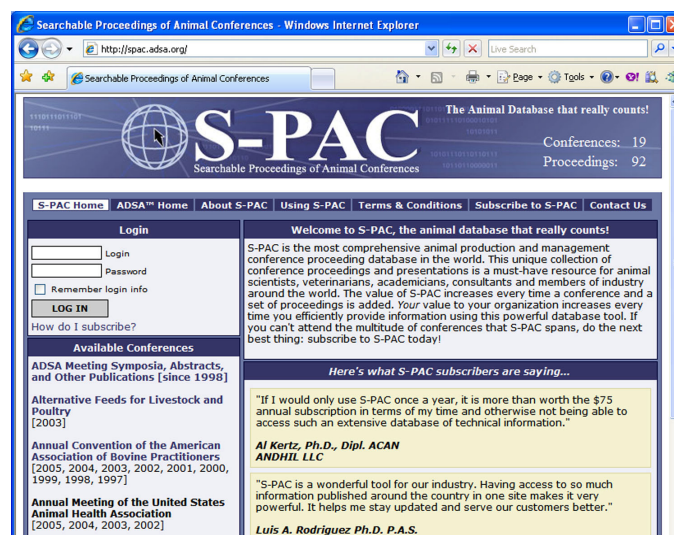
As we move forward, one major objective is to create greater awareness of JDIP and the work that is done through the project, among producers, veterinarians and other scientists. This will facilitate application of the work, help to generate new ideas and build long-term support for the effort. A variety of tools are being used to reach the various audiences.

Producer publications are looking for new information and articles related to Johnes. Dairy Today, Hoard's Dairyman and Midwest Dairy Business as well as the National Institute for Animal Agriculture (NIAA)'s Cattle Health Report and Sheep and Goat Health Report all have articles scheduled that will make information from the recent JDIP Annual Conference available to their readers. A "Press Release" issued following the conference resulted in interviews that were aired on several farm radio networks that together cover most of rural America. These activities mean that almost all dairy producers and many beef producers, as well as the veterinarians that serve them, will have had the opportunity to read or hear about the 3rd Annual JDIP Conference and the work reported.

We next need to build on this. Most of the major producer publications have expressed strong interest in making more information about JDIP and Johnes available. At the Annual Conference each Core and Project were asked to identify three "elevator message" priorities for the coming year. These are the main points that each group sees as the most important things to tell producers about what they are doing. During the coming months, we will work to put these messages into articles for use by our partners in the media. They are also interested in more detailed articles, so we will be looking for potential authors to work on them.

Another means of outreach is through presentations at meetings. While the audience is not as large as that reached by mass media, we can reach organizational leadership who in turn carry the message forward. A presentation is scheduled for the NIAA Annual meeting and other opportunities will be explored during the year.

The web provides a way to reach all of our target audiences. Presentations from the JDIP 3rd Annual Conference will be on the web site by the time you read this. A new method of outreach will be inclusion of this year's proceedings in the Searchable Proceedings of Animal Conferences (S-PAC) database for the first time! S-PAC is operated by the American Dairy Science Association (ADSA), but also works with the American Society of Animal Science (ASAS), the American Association of Bovine Practitioners (AABP) and the U.S. Animal Health Association (USAHA), so it has the potential to reach many in our target audience. In addition, S-PAC has subscribers in 23 nations, so it provides international dissemination of our work. Our inclusion in the S-PAC database also gives all JDIP members the opportunity to subscribe to the database at member rates. Visit <http://spac.adsa.org/> to learn more about S-PAC. If you would like to subscribe to S-PAC, please contact Steen Erikson email: erik0046@umn.edu, phone (612) 624-6681 for details.



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AMSC Committee

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Geart Benedictus

William C. Davis

Geoffrey W. de Lisle

Ian A. Gardner

Frank Griffin

Murray E. Hines II
(chair)

Ramon A. Juste

Vivek Kapur

Ad Koets

Jim McNair

Greg Pruitt

Judith R. Stabel

Raymond W. Sweeney

Adel M. Talaat

Robert H. Whitlock



Going Public with JDIP (continued)

Another way that we are reaching out to the research and extension community, as well as other related professionals, is through presentations and posters at the joint Annual Meeting of the American Dairy Science Association and the American Society of Animal Science. There is increasing interest in the latest information relative to Johne's among dairy and animal scientists, extension and industry leaders. The session provides an opportunity to reach these audiences. The 2006 meeting featured a special half-day presentation section devoted to Johne's papers that had excellent participation by presenters and was well attended. Since a very limited number of Johne's related abstracts were submitted, there will not be a "Johne's Section" at the 2007 meeting that will be held July 8-12 in San Antonio, TX. We will plan for another Johne's section at the 2008 meeting that will be held July 27 to 31 in Indianapolis. Make plans to submit an abstract for this meeting.

If you have additional questions or comments about any of these outreach activities, or if you have ideas of other ways to get our message out, please contact Ken Olson, email: keolson@prodigy.net , phone: (630) 237-4961.

AMSC Manuscript Accepted for Publication

The Animal Model Standardization Committee (AMSC) manuscript, "Experimental Challenge Models for Johne's Disease: A Review and Proposed International Guidelines," has been accepted for publication as a "peer reviewed" review article in *Veterinary Microbiology*!

This article promotes a set of standardized guidelines for Johne's disease (JD) challenge studies in cattle, sheep, goats, deer and mice that should significantly increase our ability to objectively compare results from JD challenge and/or vaccine efficacy studies no matter where they have been performed. In addition, the article provides a relatively complete historical bibliography of JD challenge studies in multiple animal species, reviews parameters essential for JD challenge studies and identifies knowledge gaps that still remain to be elucidated.

Congratulations for a job well-done to the members of the AMSC committee (Murray E. Hines II , Judith R. Stabel, Raymond W. Sweeney, Frank Griffin, Adel M. Talaat, Douwe Bakker, Geart Benedictus, William C. Davis, Geoffrey W. de Lisle, Ian A. Gardner, Ramon A. Juste, Vivek Kapur, Ad Koets, Jim McNair, Greg Pruitt and Robert H. Whitlock).

Dr. Hines will be reviewing the galley proofs shortly and the manuscript will be published in an upcoming issue of *Veterinary Microbiology*. The document will also be available for download on Science Direct as an accepted manuscript shortly. We're hoping that the copyright transfer agreement will allow us to publish the document on the JDIP web site, so watch for it!



"Best Test" for Johne's disease depends on the purpose for testing

JDIP member, Dr. Mike Collins of the University of Wisconsin, recently headed a USDA-APHIS-VS funded study involving 5 Johne's disease experts to determine the best test for detecting a cow infected with *Mycobacterium paratuberculosis*. Other team members were Drs. Frank Garry, Allen Roussel, Scott Wells and Ian Gardner. The motivation for the study was the need to resolve the apparently conflicting recommendations made by veterinarians in the United States about which test to use in situations not covered by official government programs, e.g. the test-negative status program. Findings from the study were published in the December 2006 issue of JAVMA and the manuscript has been generously made available free-of-charge by the journal <http://avmajournals.avma.org/doi/abs/10.2460/javma.229.12.1912>



"Best Test" group (l to r): Drs. Scott Wells, Franklyn Garry, Ian Gardner, Mike Collins, and Allen Roussel

When asked the question "What is the best test for bovine Johne's disease?" Mike Collins responded "It depends on many factors but primarily on the purpose for testing". Certainly, whatever we decide the answer to be today, it will change in the years to come as our best understanding of the disease changes, the strengths and limitations of the new tests are defined, and as the relative costs of each procedure change". The summary recommendations from the study are shown in Table 1 but readers should download the published version to understand the basis for the recommendations and many of the finer points of the study.

Dr. Collins said that the process was fun and challenging as well as successful. The process of arriving at consensus and sending a clear message to end users, veterinary practitioners, could serve as a model for other such issues or questions.

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"Best Test" continued...

Dr. Collins' recipe for success involved the following key ingredients:

- One team leader with an understanding of both the technical issues and the needs of the practitioner as well as a vision as to what the final product should be.
- A hand-picked team selected specifically by the team leader for their competence, credibility, collegiality and communication skills: a "dream team".
- Funding to facilitate face-to-face meetings of the experts and direct payment of the experts for their valuable time (possible for all experts except the PI).
- Strict adherence to deadlines.
- Input from other experts and stakeholders at several steps in the process.
- Publication of the final report in a respected journal and cooperation of the journal to provide free public access.

Dr. Gardner, one of the team members, commented that rapid publication of study findings by JAVMA and willingness of the Editor-in-Chief, Dr. Janis Audin, to make them freely available via their website was especially gratifying. He said that he hoped that the study's recommendations could be adapted by others to tests and testing regimens used in Europe and Australasia and expanded to other ruminant species. "Broadly disseminating the information to other groups interested in testing gives this study added value", he said.

Table 1. Recommended tests for Johne' disease in cattle

Testing Purpose	Dairy		Beef	
	Commercial	Seedstock	Commercial	Seedstock
Herd classification	Environmental culture	Environmental culture	Whole herd testing, targeted testing, or environmental culture	Whole herd testing, targeted testing, or environmental culture
Precise estimation of prevalence	Not recommended	Not recommended	Not recommended	Not recommended
Control in high prevalence herd	ELISA	Individual culture	ELISA	Individual culture
Surveillance	Environmental culture	Not recommended	Confirmatory testing of clinical suspects	Not recommended
Eradication	Pooled or individual culture	Pooled or individual culture	Individual culture	Individual culture
Confirm clinical case – First case – Subsequent cases	Necropsy, individual culture or PCR ELISA, individual culture or PCR	Biopsy, necropsy, individual culture or PCR Biopsy, necropsy, individual culture or PCR	Necropsy, individual culture or PCR ELISA, individual culture or PCR	Biopsy, necropsy, individual culture or PCR Biopsy, necropsy, individual culture or PCR
Biosecurity	Decision analysis	Decision analysis	Decision analysis	Decision analysis



Upcoming Meetings and Conferences

- National Institute for Animal Agriculture - Annual Meeting
The Hyatt Regency Sacramento - Sacramento, California
April 2-5, 2007
http://www.animalagriculture.org/annual_meeting/Annual_Meeting.asp
The National Johne's Work Group will meet in conjunction with this meeting on April 1, 2007. <http://www.johnesdisease.org/default.dwt>
- Joint Meeting of the American Dairy Association (ADSA) and the American Society of Animal Science (ASAS)
Henry B. Gonzalez Convention Center, San Antonio, TX
Sunday, July 8 – Thursday, July 12, 2007
<http://adsa.psa.ampa.asas.org/meetings/2007/index.asp>
- 40th Annual Convention of the American Association of Bovine Practitioners
Vancouver, British Columbia, Canada.
Sept. 20 - 22, 2007
<http://www.aabp.org/meeting/default.asp>
- World Dairy Expo
Alliant Energy Center of Dane County, Madison, WI
October 2-6, 2007
<http://www.world-dairy-expo.com/gen.home.cfm>
- USAHA/AAVLD 111th annual meeting
John Ascuaga's Nugget Casino Resort in Reno, Nevada
October 18 - 24, 2007
<http://www.usaha.org/meetings/>
- 9th Annual ICP Meeting, International Association for Paratuberculosis
Tsukuba International Congress Center, Tsukuba, Japan
Monday October 29 - Friday November 2, 2007
<http://wwwsoc.nii.ac.jp/jsp3/9ICP>
- NMPF/NDB/UDIA Annual Meeting
Lake Buena Vista, FL
November 12-14, 2007
<http://www.nmpf.org>



JD ON THE WEB

Johne's Disease-related Websites

Organization	URL
American Association of Bovine Practitioners	http://www.aabp.org
American Dairy Science Association	http://www.adsa.org
American Society for Microbiology	http://asm.org/
American Veterinary Medical Association	http://avma.org
Conference of Research Workers in Animal Diseases	http://www.cvmb.colostate.edu/microbiology/crwad/index.htm
Infectious Diseases Society of America	http://www.idsociety.org
International Association for Paratuberculosis	http://paratuberculosis.org/
JDIP: Johne's Disease Integrated Program	http://www.jdip.org
JDIP Sample Shop	http://seeker.doit.wisc.edu/jdip/Default.aspx
National Johne's Education Initiative	http://johnesdisease.org/
National Veterinary Services Laboratory	<p>Approved labs for fecal culture: http://www.aphis.usda.gov/vs/nvsl/labcertification/johnesculture.htm</p> <p>Approved labs for serology: http://www.aphis.usda.gov/vs/nvsl/labcertification/johnesserology.htm</p>
United States Animal Health Association	http://www.usaha.org
University of Wisconsin Johne's Information Center	http://www.johnes.org
USDA Johne's disease website	http://www.aphis.usda.gov/vs/nahps/johnes/
USDA-APHIS-VS–National Center for Animal Health Surveillance	http://www.aphis.usda.gov/vs/ceah/ncahs/index.htm

JD IN PRINT

Johne's Disease-related Publications – January - February, 2007

- **Abubakar I, Myhill DJ, Hart AR, Lake IR, Harvey I, Rhodes JM, Robinson R, Lobo AJ, Probert CS, Hunter PR.** A Case-Control Study of Drinking Water and Dairy Products in Crohn's Disease—Further Investigation of the Possible Role of *Mycobacterium avium paratuberculosis*. *Am J Epidemiol.* 2007 Jan 19; PMID: 17237136
- **Bannantine JP, Radosevich TJ, Stabel JR, Berger S, Griffin JF, Paustian ML.** Production and Characterization of Monoclonal Antibodies Against a Major Membrane Protein of *Mycobacterium avium* subsp. *paratuberculosis*. *Clin Vaccine Immunol.* 2007 Jan 31; PMID: 17267586
- **Bernstein CN, Wang MH, Sargent M, Brant SR, Collins MT.** Testing the interaction between NOD-2 status and serological response to *Mycobacterium paratuberculosis* in IBD. *J Clin Microbiol.* 2007 Jan 24; PMID: 17251406
- **Chamberlin W, Ghobrial G, Chehtane M, Naser SA.** Successful Treatment of a Crohn's Disease Patient Infected With Bacteremic *Mycobacterium paratuberculosis*. *Am J Gastroenterol.* 2007 Mar;102(3):689-91. PMID: 17335456
- **Cho D, Shin SJ, Talaat AM, Collins MT.** Cloning, expression, purification and serodiagnostic evaluation of fourteen *Mycobacterium paratuberculosis* proteins. *Protein Expr Purif.* 2007 Jan 9; [Epub ahead of print] PMID: 17296312 [PubMed - as supplied by publisher]
- **Clancy R, Ren Z, Turton J, Pang G, Wettstein A.** Molecular evidence for *Mycobacterium avium* subspecies *paratuberculosis* (MAP) in Crohn's disease correlates with enhanced TNF-alpha secretion. *Dig Liver Dis.* 2007 Feb 20; PMID: 17317344
- **Eamens GJ, Turner MJ, Whittington RJ.** Sampling and repeatability of radiometric faecal culture in bovine Johne's disease. *Vet Microbiol.* 2007 Jan 31;119(2-4):184-93. Epub 2006 Aug 26. PMID: 16996703
- **Greenstein RJ, Su L, Haroutunian V, Shahidi A, Brown ST.** On the Action of Methotrexate and 6-Mercaptopurine on *M. avium* Subspecies *paratuberculosis*. *PLoS ONE.* 2007 Jan 24;2:e161. PMID: 17252054
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