Feed Newsletter
July, 2009

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Land O'Lakes Purina Feed is pleased to announce the Mazuri® Exotic Animal Feed Nutrition Research Grant, to support research in the area of exotic animal nutrition. Proposals may be submitted for up to $10,000. One or more grants may be awarded, but the combined total will not exceed $10,000 (to be determined by the awards committee). Funding will be considered for basic or applied research projects in the area of exotic animal nutrition. Research proposals will be evaluated by a panel of three committee members, comprised of at least one representative from academia and one representative from the zoo community. Grants will be ranked and awarded based on the quality of the proposal (50% of total ranking), importance of the research (25% of total ranking) and likelihood that the research will be accomplished and disseminated (25% of total ranking). No committee members, nor their institutions, may be considered for funding from this Grant during the funding year. A list of the winners of the grants will be provided to any entrant upon written request.

A short (no more than 5 pages, not including references) proposal should be submitted, including all information described below. Note that incomplete proposals will not be evaluated.

To Apply: Submit proposals by email to liz.koutsos@Mazuri.com.

Proposals are Due by September 14, 2009. Grant awardee will be announced no later than November 1, 2009.

Required Items:

- **Title**
- **Principle Investigators, Co-Investigators and Collaborators**
  Please describe the responsibilities of each investigator towards the proposed research.
- **General abstract**
  A brief (250 words or less) overview of the project, its relevance, and future applications written to a lay audience.
- **Purpose Statement & Background information**
  Detailed overview of proposal, relevance to exotic animal nutrition, and necessary background information.
- **Materials and Methods**
  Hypothesis, experimental design, method of analysis, expected results and potential pitfalls should all be addressed.
- **Timeline of activities**
  Briefly describe timeline for major activities, including dissemination.
- **Dissemination**
  Please provide information on the routes of dissemination of data collected in this project.
- **Budget and Justification**
  Provide rationale for each budgetary item. Provide information regarding additional support if the proposal is also supported by other funding sources.
Recent publications of interest for feeding exotic animals in captivity

Biochemical and physiological observations in meerkats (Suricata suricatta) at two zoos during a dietary transition to a diet designed for insectivores.

Zoo Biology. 2009. 27;1-12.

Overview
Meerkats at 2 institutions in California were transitioned to a diet designed for insectivores (Mazuri Insectivore Diet, 5MK8). All animals transitioned well, using a semi-moist mixture to begin the transition (1-2 parts water : 1 part Insectivore diet). All blood chemistry parameters were maintained within expected ranges. At one institution, animals had restricted dietary access, in an effort to reduce body weight. Weight loss was achieved at ~ 86 kcal G/meerkat*day (78 kcal ME/meerkat*day).

Serum concentrations comparisons of amino acids, fatty acids, lipoproteins, vitamins A and E, and minerals between zoo and free-ranging giraffes (Giraffa campelopardalis).


Overview
The serum nutrient profiles in free-ranging and zoo giraffe were assessed to examine differences between populations that may have implications for zoo feeding programs. Differences between populations were numerous. Amino acid profiles differed, likely due to the increased activity of free-ranging animals compared to zoo counterparts. Additionally, omega-3 fatty acid concentrations of free-ranging animals were much greater than zoo animals, which had higher concentrations of omega-6 fatty acids. Omega-3 fatty acid supplementation may be warranted in zoo giraffe.

A complex enrichment diet improves growth and health in the endangered Wyoming toad (Bufo baxteri).

Li, H., Vaughan, M.J., Browne, R.K.

Overview
Wyoming Toads were fed crickets enriched with a gut loading diet and dusting powder, or dusting powders alone. Toads fed crickets that were enriched with dusting powders alone ingested fewer crickets, than those enriched with the gut loading diet as well. Dusted crickets retained less than 50% of their dusting powders after 2.5 minutes. These data support the use of gut loading diets for insect-eating animals.
5D2Q Mazuri® Shark Ray Meal is now available.
Mazuri® Shark Ray Meal has the same complete nutrition as Mazuri® Shark Ray Gel (5C8X), but without the gelling agents, so the product will not set up into a firm gel. This diet provide an excellent option for tube-feeding animals.

5MK8 Mazuri® Insectivore Diet contains carotenoids and mixed tocopherols.
Mazuri® Insectivore Diet is now enriched with carotenoids (~8 ppm canthaxanthin, 40 ppm lutein) to provide antioxidants for all animals, and pigments for birds eating this diet. Additionally, we have transitioned to mixed tocopherols as an antioxidant in the diet.

Mazuri® Alpaca Diets do not contain DDGS.
Distillers Dried Grains and Solubles (DDGS) are a major by-product of the production of ethanol from corn. DDGS are often a very economical ingredient and are often used for production agriculture animals. However, we no longer use DDGS in our alpaca diets due to the potential for the presence of substances harmful to alpacas.

Timothy-based rabbit diet is coming soon.
We have gotten numerous requests for a timothy-based rabbit diet, and have worked to develop and test a timothy-based rabbit diet. Our results have been promising – the diet is very palatable and supports rabbits of all life stages. We will be offering this diet in the near future- stay tuned!

Mazuri® Browser Diets (5653, 5654) are back by popular demand.
Your feedback was heard, and we have re-introduced the Mazuri® Browser Diet series! The Browser Diet series offers an intermediate starch level for captively held herbivores. Please work with your Regional Mazuri® Manager to determine the best diets for your herbivore collection.

Sinking diets for birds have improved water stability.
5Z50 Flamingo Complete Bits & 5MI3 Sinking Waterfowl Diet
We have improved water stability on these diets to ensure that your animals have ample time to consume the diets without losses due to hydration of the diet.

Mazuri® Rodent Diet 5663 is now a vegetable-based formula.
We have removed all animal products from Mazuri® Rodent Pellets to provide a complete diet for your rodents using all vegetable-based ingredients. We added flaxseed to maintain omega-3 fatty acid nutrition in the diet.

Mazuri® Zulife Softbill Diet 5MI2 now contains real fruit.
We have added real fruit (pineapple, plum and apple) to Mazuri® Softbill Diet. This diet still has low iron, and we test each batch of diet and report the results to our customers.
Our website is getting updated every day, so please check it out. Some new items...

- **New Shopping Cart Features**
  We’ve launched a new Mazuri® Shopping Cart that will simplify online ordering.

- **Feed Composition Tables (under Technical Papers Link)**
  These links contain useful information to learn more about the nutrients provided from your supplemental feeding items. Tables include compositional information for hays, fruits, vegetables, nuts, seeds, legumes, prepared foods, animal products, fish, shellfish and insects.

- **Tablet Guidelines for Marine Mammals & Carnivores (under Marine Mammal and Feline Links)**
Alpaca Events
• Sept 4-6 – Michigan Lamafest. East Lansing, MI; www.lamafest.com

Bird Events
• Aug 5-8 – American Federation of Aviculture Convention. Houston, TX; www.afabirds.org
• Aug 8-15 – Association of Avian Veterinarians Conference. Milwaukee, WI; www.aav.org

Companion Animal Events
• Nov 1-5 – American Rabbit Breeders Association National Convention. San Diego, CA; www.arba.net

Koi Events
• July 25-26 – Northwest Koi & Goldfish Club Annual Show. Portland, OR; www.pnkca.com
• Aug 15-16 – Rocky Mountain Koi Club Show. Aurora, OR; www.rmkc.net/show.html
• Oct 2-4 – Koi America 2009. Westminster, MD; www.makc.com

Reptile & Amphibian Events
• Aug 5-8 – Turtle Survival Alliance Annual Conference. St. Louis, MO; www.turtlesurvival.org
• Aug 8-15 – Association of Reptile & Amphibian Veterinarians Conference. Milwaukee, WI; www.arav.org/ECOMARAV/timssnet/PDF/aravad_3_5_09.pdf
• Aug 21-23 – National Reptile Breeders Expo. Daytona, FL; www.reptilebreedersexpo.com
• Sept 19-20 – Mid-Atlantic Reptile Show. Timonium, MD; www.reptileinfo.com

Zoo & Aquaria Events
• Aug 8-15 – Association of Exotic Mammal Veterinarians. Milwaukee, WI; www.aemv.org
• Sept 12-17 – Association of Zoos and Aquariums Annual Conference. Portland OR; www.aza.org
• Sept 14-20 – European Association of Zoos and Aquaria Annual Conference. Copenhagen, Denmark; www.eaza.net
• Sept 24-29 – American Association of Zoo Keepers National Conference; www.aazk.org
• Oct 1-6 – Association of Zoo Veterinary Technicians Conference. Jackson, WY; www.azvt.org/conference/conf2009.html
• Oct 14-17 – Zoological Association of America Conference. Wichita, KS; zaa.org

Other Events
• July 12-17 – Animal Science & Dairy Science Joint Annual Meeting. Montreal, Canada; adsa.asas.org/meetings/2009
• July 22-25 – Feline Conservation Federation Convention. Monterey, CA; www.felineconservation.org/organization/upcoming_events.htm
Contacting your Mazuri® representative

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