American Association For Laboratory Animal Science

Arizona Branch Newsletter

December 1996

With Fond Memories

On September 20, 1996, University Animal Care was saddened by the loss of Louise Brooks. Louise was a valued 20 year veteran of the department. She lost her lifelong fight with numerous medical complications after a five month hospital stay. We can take small comfort that Louise is now resting in peace. We can also take great pride and joy from having known her.

Few people consistently touch the lives of everyone in the workplace, but Louise did. She was always the first to think of others. She was our social director, our celebration organizer, our inspiration and our conscience. She always had kind words to say and a smile to reinforce their meaning. She loved to joke. She had a wide ranging sense of humor and could see the bright side of every situation. This was not to say that Louise was a "Pollyanna." She was very much a realist and could see what was going on around her, but she always kept her focus and input in a positive direction.

Louise know the technical aspects of the work at UAC very well. Even though some of this work was difficult for her, she never complained about the physical aspects of the job. Louise was always there to answer questions. New employees especially could count on Louise for proper guidance toward a better ot more efficient way to do the work. She was a help beyond measure for all of us.

More importantly, Louise was a friend. She know most of us very well. She understood people and was genuinely concerned about each of us as individuals. He caring and empathy were real. We will miss her soft laughter, her smile, her going out of the way to help others, her organization of parties, the extra present she had for everyone at Christmas, her intelligence, her common sense, and her compassion, but most of all, we will miss her presence.

Louise was an active Arizona AALAS member, serving as Vice President in 1990, and Board member from 1992-93. She was honored by AALAS as Technician of the Year in 1989 and as Member of the Year in 1995. She volunteered for numerous committees, and always brought some sort of refreshment to AALAS meetings.

Submitted by Bob Perill

1996-7 Arizona Branch Officers

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Timothy Martin (602) 406-4003

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Michael Rand (520) 626-6705

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Pam Morris (520) 621 1330

Technician Branch Representative
Leigh Kleinert (520) 626-4707

District 8 Trustees

Peg Murphy-Hackley (97) (415) 855-5499
Ron Orta (96) (206) 691-6364
Skeeter Georgeson (800) 345-8074

AZ AALAS Buyer's Guide

Beginning next year, the Branch intends to publish an annual Buyer's Guide, containing the advertisements that provide the funding for the newsletter. We hope to produce a better looking medium for our loyal sponsors, and will do our best to distribute the Buyer's Guide to a wide audience. Vendors interested in placing an ad in the Buyer's Guide should contact Grace Aranda for information. Please provide camera-ready art for this publication, as we want it to look good and serve our vendor pals better.

AZ Branch News

Thirty people met at the Phoenix Zoo last October 19th for and new and different sort of Annual Branch Meeting. We all had a chance to visit some animals, take a tram ride and spend the day relaxing. At noonish we all gathered to have lunch and enjoy the annual raffle with the irrepressible (interminable?) Tim Martin serving as Master of Ceremonies. The folks from Flagstaff carried away the lion's share of the raffle prizes mostly because Ashley Walton (W.L. Gore and Associates) sold tickets to everyone she knew, and maybe because Jeanie Gaymer (Northern Az Univ.) was helping to draw the tickets.

The 1997 AALAS Board was announced, consisting of President-Elect Michael Rand, President Tim Martin, Secretary/Treasurer Grace Aranda, Past President Jane Criswell, Northern Board Member Dennis Dreher, southern Board Member Pam Morris, and Technician Branch Representative Leigh Kleinert.

Twenty-two people attended a general meeting held on November 11, 1996 at the University of Arizona. John Palting, Senior Research Specialist in Veterinary Science gave a presentation concerning Venomous Arthropods. Jane Criswell announced that close to $500 was raised in the Louise Brooks Memorial Raffle benefiting the Arizona Cancer Center's Child-Life Activity Center.

Don't forget - If you are a member of the AZ Branch, and you've passed an AALAS certification exam, send a photocopy of your certificate to Grace Aranda. The Branch will purchase and award you a certification pin.

Write to me (your loyal editor) on e-mail: ddreher@wlgore.com

Newsletter News

There's been an explosion of support for the newsletter! People from all over the state have been submitting articles and newsy notes. That's the kind of response your loyal editor has been seeking. (People *do* read the newsletter!) Get in on the fun and pen your article today. There's lot of folks around who'll be glad to help you if you're scared (lab animal professionals aren't scared of anything!!).

Expect future issues to be a little shorter as far as numbers of pages are concerned, but a little longer as far as articles and interest is concerned. We will be publishing an annual buyer's guide to contain the advertising, making more room for your submitted articles and other items. Send news, send gossip, send anything. We will be happy to publish press releases that might be of interest to our membership, as well.

I got lots of help with this newsletter from Ashley Walton. Her help in rewrites and assembly was invaluable. Now, if we could only find someone who would *crack the whip* on your loyal but over committed editor, we could get a newsletter out on time.

RESEARCH

CANCER

- **More than 1.25 million people in the US are stricken with cancer every year; more than 500,000 die from it.**
- **About one of every eight women will develop breast cancer in her lifetime.**
- **Among children ages 1-14, cancer causes more deaths than any other disease.**
- **Prostate cancer in the U.S. is diagnosed in more than 240,000 men each year.**

Cancer exists in more than 100 forms. It is characterized by uncontrolled growth and spread of abnormal cells. It affects people, animals and plants. In some cancers the cells become solid tumors that may interfere with organ function; in others, such as the leukemias, abnormal cells pour into the blood stream or body fluids, weakening a number of body systems. Parts of the initial tumor can also break off and invade distant areas of the body.

Cancer can be prevented. All cancers caused by use of tobacco (about 170,000 a year) could be prevented. About 90% of all skin cancers (800,000 a year) could be prevented by protection from the sun's rays. Healthful eating habits could reduce the incidence of several types of cancers.

Cancer can be treated — by surgery, radiation, radioactive substances, chemicals, hormones and immunotherapy. Medical research using animal models has contributed in important ways to prevention and treatment techniques.

➤ *How has animal research helped cancer patients?*

More than 30 anti-cancer drugs are used routinely to treat cancer. By law all had to be tested rigorously on animals before approval for human use. Appropriate radiation therapy doses have been carefully calculated with the help of tests on mice and rats. Animal models were essential for developing and perfecting surgical procedures that have greatly benefited human patients. A recent study using rats found a chemical contained in certain green vegetables may protect against cancer.

In the early 1900s, few cancer patients had any hope of long-term survival. Today, four of ten patients who get cancer will be alive five years from now — many of them much longer than that.

➤ *What's ahead for cancer patients?*

Finding the causes of cancer poses major medical challenges. Animal studies currently are casting new light on the causes of breast cancer. Recently, scientists have found a new antitumor agent that promises hope for more effective treatment of lymph cancers (including Hodgkin's disease) and tumors of the skin, lungs, and ovaries. Other researchers are trying to determine why certain types of cancer (including cancer of the breast, colon and prostate) run in families. The genetic link is not yet well understood. Many questions about the growth and behavior of normal and tumor cells can only be answered through studies of animals. Many questions about exposure to industrial and environmental agents of cancer require research on animal colonies in the laboratory. The same is true of the effects of diet and vitamins on cancer.

Cancer is costly —physically, emotionally, economically. The search for good treatments mustcontinue until the disease is conquered.

California Biomedical Research Association

1008 Tenth Street, #328 ❑ Sacramento, California, 95814

(916) **558-1515** ❑ e-mail: shness@ucdavis.edu

TBR CORNER

Well, the Awards Banquet was fun and a nice change. Unfortunately, not many people came. Thank you Tim for all your work and thanks to Grace, Jane and Kathy for all the time they put in for the prizes, etc. Now on to my TBR duties.

National News

There are now more that 7,000 national members!

There is a new AALAS Certification Registry. It begins on January 1, 1997 and is voluntary. Technicians will have a two-year period in which to accumulate the required continuing education units for their level. After doing so, they become "registered," which is indicated by adding the letter "R" in front of their certification (e.g., RALAT, RLAT, RLATG). Anyone obtaining AALAS certification after January 1, 1997, automatically becomes registered. There will be a small fee to stay in the registry every year. Contact AALAS at (901) 754-8620 or me for more information.

AALAS Certification Program Change. As of Dec. 1, 1996, do not send the $25 fee for an application packet to the Professional Examination Service (PES). As of January 1, 1997, do not send any completed applications for AALAS certification exams to PES. Beginning January 1, 1997, new certification applications will be available from and processed by the AALAS National Council.

Local News

I received information about the new "Guide to the Care and Use of Laboratory Animals". To obtain a free copy of the new Guide send a fax to ILAR at (202) 334-1687. If you want more than 1 copy you may purchase them from the publisher by calling 1-800-624-6242.

That's all for now. If you need to contact me for any more information I am at (520) 626-4707 or e-mail lbk@gas.uug.arizona.edu.

Recent Publication from AZ AALAS members

1. Jacoby RO, Ball-Goodrich LJ, Besselsen DG, McKisic MD, Riley LK and Smith AL. Rodent parvovirus infections. Lab An Sci 1996; 46(4)370-380.

2. Kleinert LB, Hoying JB, Williams SK. The neointima formed in endothelial cell sodded ePTFE vascular grafts results from both cellular-hyperplasia and extracellular-hypertrophy. Cell Transplantation 1996; 5(4)475-482.

3. Besselsen DG, Pintel DJ, Purdy GA, Besch-Williford CL, Franklin CL, Hook RR Jr, Riley LK. Molecular characterization of newly recognized rodent parvoviruses. J General Virology 1996; 77(pt.5)899-911

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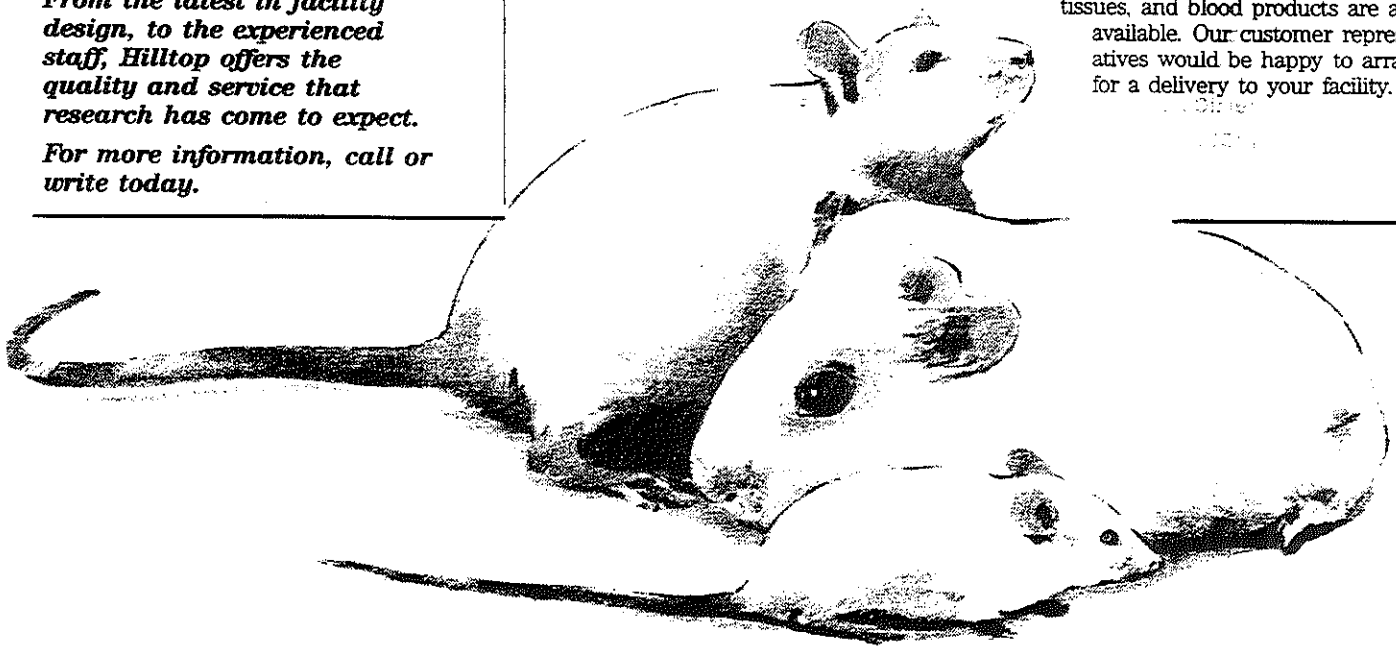

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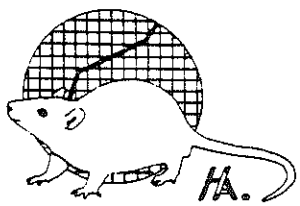

Member Profile Member Profile Member Profile

Leigh Kleinert

Department of Surgery
University of Arizona

Member since: 1990

Married with 2 children ages 5 & 9

Moved to Tucson in 1990 with Drs. Stu Williams and Bruce Jarrell to head their Vascular Graft Laboratories.

Animal Experience: Received degree as Veterinary Technician from Harcum College, which was associated with Univ. of Penn Veterinary School. I worked in a small animal practice in Michigan for 2 years, then moved back to Philadelphia and worked as a surgery tech for 9 years at the Vet School. I left the Vet school to help manage a Humane Society in the inner city. After 2 years of watching people abuse their pets and not getting paid much I went into research. I first worked with a Cardio-thoracic group on dogs. After 1 year our lab closed because the PI retired. I then started working with Stu Williams on vascular grafts, or fake blood vessels. The rest is history and after 8 years I am still working on vascular grafts as well as other biomaterials and the effects they have when implanted into the body. I have participated in clinical trials as well as run all our animal trials. Our models include dogs, rats, mice, pigs and rabbits.

Hobbies and interests: I am a working mom. My hobbies are cleaning the house, cooking meals, wash, etc. My interests include watching my daughter ride and show her pony (we named the pony "Our New Couch"), trying to train our new dog, trying to also train my 5 year old son (who I wish I could also use a choke collar on).

Fact vs Myth

(reprinted from American Medical Assoc.)

MYTH: **Alternative research methods can replace the use of animals in medical research.**
vs.
FACT: There are no real alternatives to animal research, only *adjunct methodologies*. In the course of medical investigation, researchers have developed many valuable non-animal research models. They are useful in some types of research, and can often supplement work with live animals. Adjunct methods such as cell and tissue culture, for example, help identify the potential toxicity or medical benefits of chemical compounds in the early stages of investigation. But compounds must also be tested on living systems -- made up of interrelated organs and organ systems -- before they can be tried in human beings. These adjunct methodologies cannot reproduce the intact biological systems provided by animal models, and their isolated results may bear little relation to the integrated results of intact living systems.

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Animal Model of the Month

Animal Model of the Month
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Swine in the Laboratory

The anatomy and physiology of swine are similar to that of man, therefore, pigs are often used as medical models in research. They have been used to study cardiovascular diseases, transplants, etc., as well as nutrition, dermal research, diabetes, ulcers, and mechanisms of immunity, to name a few.

Domestic and miniature swine are both used in the aforementioned research because the general biological characteristics of each are essentially the same. The one major difference between the two is the mature adult weight. Domestic swine have a rapid growth rate and can reach up to 100 Kg. By six months of age with a final destination weight of 250-300 Kg. Or more. These two facts often make domestic swine impractical research models in chronic studies and some research facilities. For these reasons, miniature swine may be amore ideal candidate for chronic studies and certain research facilities. Depending on the strain, the adult weight of miniature swine ranges from 70-90 Kg. This allows more animals to be housed in a smaller area, and makes for a slightly more manageable animal.

Swine require anywhere from 6 to 60 square feet of floor space per animal depending on weights and numbers. The specific space requirements can be found in the Guide for Care and Use of Laboratory Animals. Pigs can be housed in many different ways. If they are housed on concrete floors, they should have ample bedding t9o reduce the risk of hoof and joint problems. These areas can be maintained either by shoveling out and or hosing down. To further ensure pig safety, any concrete areas pigs will be exposed to should have a non-slip finish. They may also be housed on raised flooring such as concrete, plastic, or metal slats or rubberized grids. These areas may be easily hosed out if they are above a pit or in close proximity to a drain. When hosing out any area with pigs in it, be sure the animals are kept dry. They are sensitive to temperature and humidity and become easily chilled. Also, swine holding areas should be cleaned twice daily to ensure sanitary conditions as they may produce from 0.5 to 2.5 Kg of feces per day. Their water should be checked and cleaned frequently as well because they will dehydrate easily and usually won't drink from a soiled container. Along those lines, pigs have a strong rooting instinct and will easily tip water or feed holders if not positioned firmly.

Besides being adept rooters, pigs are also curious, intelligent and highly social animals. Because of these traits, it is best to house pigs together if at all possible. Oftentimes, aggressiveness or shows of dominance will be displayed until the dominant pig is chosen, and then the animals should settle down and interact just fine. If pigs must be housed separately, it is best to have them in close visual and olfactory proximity to minimize anxiety and stress. To relieve boredom of singly or group housed pigs, toys, such as balls, lengths of secured chain or cloth, and reinforced rubber hose can be provided. The use of these environmental enhancements has been shown to reduce stress, anxiety and aggressiveness in swine. Keep in mind that any items provided need to be sanitized frequently and monitored for dangerous wear.

Pigs are a valuable research tool; if they are managed and cared for properly, can make excellent research subjects.

Submitted by Ashley Walton

Sources:

AALAS Training Manual Series (LAT), Vol 2, 1990
Minimizing Stress in Pig Handling, author, Temple Grandin
Guide to the Care and Use of Experimental Animals, Canadian Council on Animal Care
Laboratory Methodology and Management of Swine in Biomedical Research,
Linda Panepinto

Animal Model of the Month

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Technician Tips

Pills for Pigs

submitted by Kathy Stolberg, AHT, LATg, SRS

Our facility at the University of Arizona is not set up to housea large number of pigs individually. Most of our pigs arrive with numbered ear tags and are housed in groups according to weight, sex, species, NIH space requirements, vendors and Investigators.

Some studies using pigs require that they be medicated individually.With two to five pigs per room, this is not an easy task to accomplish. I have developed a method that simplifies this task.
The tools required for this processes involve a long spoon, a can opener and a can of cat food.

When the pigs arrive, they are placed in their assigned rooms with food and water immediately available to them. I go in each room and place some cat food on the floor and leave. The pigs will usually sniff at the cat food and some will eat it. I will do this two times a day for the first two days to give the pigs times to adjust to me and to acquire a taste for the catfood. On the third day, I will crouch down to place myself on the same level as the pigs so I do not to scare them. Then I place some cat food on the spoon and offer it to the pigs. Usually one or two pigs will come up to the spoon and try to eat the food. After doing this two times daily for a day or two the pigs become comfortable with me and start to enjoy their cat food treat.

Once all the pigs are eating cat food off the spoon, you can place a varitey of oral medications in the food and medicate each pig individually. Numbered ear tags help you to keep track of the pigs being medicated as you pill them and help you to maintain individual medical records

Thoughts on Pigs from the American Medical Association

Pigs, or swine, are increasingly appreciated as excellent models for medical research. Among their advantages as research models are their short reproductive cycle, ease of breeding, large litter size, diversity of gene pool and early maturity. In addition, pigs and humans are similar in many aspects of both infant and adult anatomy, physiology, biochemistry, pathology and pharmacology. Because there is no placental transfer of antibodies to the developing pig fetus, newborn piglets lack maternal antibodies, making them good for studies of the mechanisms of immunity.

The hairless, abdominal skin of the pig has an almost human texture, permeability and thickness, affording researchers an excellent model for dermal research. Pigs were used, for example, to develop and test the patches which travelers wear on the skin to prevent motion sickness. Many treatments and drugs for skin diseases, including therapy for severe burns, have been developed in pigs. Research into how wounds heal has also benefited from the contributions of swine, making them invaluable tools for researchers in plastic and reconstructive surgery, as well as other areas.

Swine have been used extensively in nutrition studies. Because they can suffer from gastric ulcers, they are widely used in ulcer research.

Pigs are also useful to medical researchers studying cardiovascular problems. In general, the cardiovascular and integumentary systems of miniature swine are more biologically similar to humans than those of any other animal. This similarity is most marked in the anatomy and physiology of the heart, and pigs have been useful in models of cardiac surgery, including heart transplantation and pacemaker studies. Their role in the testing of cardiovascular drug treatments is well documented, and they can be good models for studies of stress and its relation to such disorders as hypertension. Pigs have shed light on the relationship between exercise and coronary physiology and health.

As early as 1775, pigs were shown to develop *atherosclerosis* as a natural part of aging. Normal healthy swine are known to develop spontaneous atherosclerotic plaque similar to that seen in humans. This disorder develops more rapidly in pigs than in humans and can be increased with feed containing high levels of fat and cholesterol. This makes them a model of choice for studying the role of diet in development of atherosclerosis. It is studies like these that have taught Americans of all ages to reconsider their dietary habits in order to prevent heart disease.

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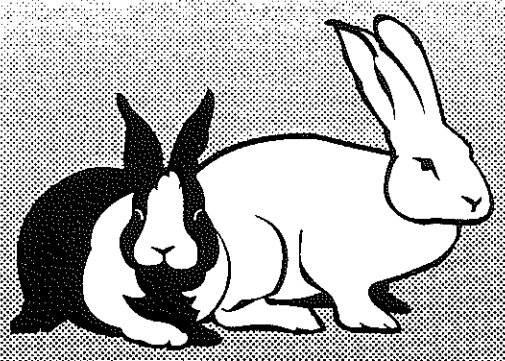

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submitted by Stacy A LeBanc, Chair

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"Building the Foundatic for the 21st Century

The AALAS Foundation provides grants to help fund educational opportunities to veterinary students, veterinary techs and animal care techs. We also fund grants to help develop educational materials. Currently, we must rely on annual donations. If we have a lean year, it means we can't give as many grants as we'd like. We have a policy of reinvesting 100 of our yearly donations, but the rest goes to grants. Normally, we give about $30-35,000 in grants each year. When donations are down, we aren't able to give as much. The MICE team is trying to establish an endowment, a permanent pot of money that will yield interest to fund a minimum amount of grants each year. With such a funding base plus regular annual giving, we will be able to expand our giving. The current primary mission is to educate the lab animal community. With the MICE team, we will be able to expand on that mission to include more public education as well.

The MICE team kickoff occurred at the opening session of the AALAS meeting in Minneapolis with our first official member, 1996 President, Hugh Haroff. Assisted by Marilyn Haroff, he presented a $250 check to Mikey Mouse, the MICE team mascot, and was awarded his lapel pin. To become a member of the MICE team takes a minimum pledge of $50 per year for 4 years. Once we receive your first installment (or the full $200 if you prefer) we will send your MICE team lapel pin. You can then wear your MICE team lapel pin proudly as a sign to your colleagues that you are helping to build the foundation for the 21st Century. An added bonus of being a MICE team member is the special recognition we're planning for you at the Gala 2000 Celebration at the 2000 Annual Meeting in San Diego.

Help us reach our goal of 2000 MICE Team Members.

Knudsen Joins Simonsen Labs

Dr. Dave Knudsen has joined Simonsen Laboratories as their attending Veterinarian. Previously, Dave managed the Comparative Pathology Laboratory at UC Davis and both vivaria and diagnostic efforts for Bay area biotechnology companies. Dave received his DVM from Colorado State University and completed and completed residency training in both Veterinary Pathology and laboratory Animal Medicine at University of Missouri. He is an ACLAM Diplomate and an member of the Society of Toxicologic Pathology.

Dave replaces Dr. James D. Russell who has happily retired in good health to a new home in the Sierra foothills. Dave will be responsible for Simonsen's Diagnostic Service and animal health programs. He will also be available for consultation with Simonsen customers regarding questions about their rodent research. Simonsen welcomes Dave and we look forward to his contributions.

SE Announces New Concept Stainless Steel Animal Room Piping

SE Lab Group, of Napa, California announces their exciting new stainless steel automatic watering room piping. The new style is joined with anaerobic retaining compound, instead of being welded or having lumpy mechanical fittings. The result is an eye-pleasing, user friendly, very economic piping system. Contact SE at (513)451-0530 or FAX (513) 921-1003 for details.

Jodi Dunning joins Elm Hill

Elm Hill Breeding Labs is proud to announce the addition of Jodi Dunning to our staff. Jodi has been with us since April in her capacity as Manager of the Breeding Program here at Elm Hill.

Jodi has an extensive background in Animal Husbandry. She graduated from the University of Massachusetts at Amherst in 1993, with a B.S. in Animal Science. Her courses included Anatomy, Physiology, Animal Nutrition, Pathology, Animal Reproduction, Statistics, and Biology.

Prior to coming to Elm Hill, Jodi worked at Tufts University Human Nutrition Research Center, where she was involved with the care, feeding, and breeding of laboratory animals. She also assisted in laboratory studies and diet preparation.

Her previous work experience has been at the University of Massachusetts Dairy Facility where she assisted in the delivery of calves and the treatment of sick animals. She also worked at the Massachusetts Audubon Society helping to educate children about wild and domestic animals.

He summers were spent working with animals. Some of these jobs included the milking and care of the prized dairy herd at Great Brook Farm in Carlisle, MA, as well as being responsible for the general care of the riding horses at the Flying Change Stables in Chelmsford, MA.

Jodi has done volunteer work at the Franklin Park Zoo where she cared for large exotic animals such as camels, zebras, wildebeests, etc. She has worked at the Middlesex County 4H Fair with the rabbit and cavy division, and she spent the summer of '94 banding gulls on Long Island, NY. She is a member of the Massachusetts Audubon Society, the New England Aquarium, the American Quarter Horse Assoc. and the Essex County Rabbit and Cavy Breeders Assoc.

Elm Hill Laboratories is pleased to welcome Jodi to our "family". She brings with her an excellent background in animal care, and has already proven to be a valuable asset.

New Line of Heavy Duty Plastic Rodent Cages

Alternative Design Manufacturing is producing a new line of heavy duty plastic rodent cages. These cages are designed with reinforced corners and thicker walls to provide longer life. Alternative Design is currently providing a standard mouse cage in Polycarbonate and Ultem, and both a 6" and 8" deep rat cage. In addition to Plastic Caging, they also provide wire bar tops and shelf racks with automatic watering. You can contact Alternative Design Manufacturing for more information by calling (800)320-2459.

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