employed in the field of laboratory animal medicine will also be explored. A salary calculator, developed from a multivariate analysis of the data, will be presented for use. The salary calculator and presented data will provide information for hiring and strategic planning for institutions, as well as individuals.

PS18 Advocating for Aquatic Technician/Vivarium Employees to Upper Administration (Salary, Educational Experiences, Conferences, Job Levels, Retention, Work Life Balance, etc.)

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This platform session will review methods and strategies on how to effectively advocate for animal technical staff who work directly with aquatic species (i.e., zebrafish & xenopus). It is no secret that technical staff who work aquatic species face several unique challenges when compared to their counterparts. These positions also typically require very specialized training. Topics such as salary increases, professional development, promotion opportunities, and employee retention will be presented.

PS19 Careers in Laboratory Science: Shareable Videos for the Promotion of Diversity in Laboratory Animal Science

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Developing a diverse and inclusive laboratory animal science community can help with ongoing staffing and support concerns by ensuring a wide potential pool of potential individuals who would be interested in pursuing careers in laboratory animal science. Ensuring that the literature available to help promote career pathways in laboratory animal science is inclusive can help achieve this goal. The AALAS Foundation has created a series of videos that highlight Careers in Laboratory Science with laboratory animal professionals in a variety of career pathways with diverse backgrounds. In this session, the panel will demonstrate how they can be used to promote the diversity of career options in laboratory animal science and medicine. The targeted audience will be anyone who is interested in promoting careers in laboratory animal and science, to audiences of any age.

PS20 Pharmacokinetics and efficacy of extended-release buprenorphine for post-operative pain management in the domestic ferret (*Mustela putorius furo*)

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Buprenorphine hydrochloride (bup-HCl) is a common injectable opioid analgesic. In ferrets, bup-HCl must be administered every 8-12 hours to maintain therapeutic plasma levels. Extended-release analgesics offer multiple advantages, including reducing animal handling and injection frequency, improving compliance, and limiting the possibility of breakthrough pain. Although the efficacy of extended-release buprenorphine formulations has been demonstrated in other species, their use in the domestic ferret has not been investigated. In this study, we evaluated the pharmacokinetics of a compounded polymeric formulation of buprenorphine (bup-ER) with a duration of action between 48-72 hours in multiple common laboratory animal species, and a pharmaceutical-grade, FDA-indexed liposomal suspension (bup-XR) with a duration of action up to 72 hours in mice and rats. Two doses each of bup-ER (0.12 mg/kg and 0.2 mg/kg) and bup-XR (0.2 mg/kg and 0.6 mg/kg) were administered subcutaneously to 12 young adult female ferrets. All doses achieved therapeutic plasma levels in 30 minutes. Results revealed that high-dose bup-XR maintained therapeutic levels for 72 hours, followed by high-dose bup-ER (48 hours), low-dose bup-XR (<24 hours) and low-dose bup-ER (<12 hours). We also compared the analgesic efficacy of a single high-dose bup-XR (0.6 mg/kg SC) to bup-HCl (0.02 mg/kg SC every 10-12 hours for 3 days) by performing clinical assessment after routine ovariohysterectomy. Ferrets receiving bup-HCl had significantly higher respiratory rate and posture scores in the first 24 hours post-operatively than those that received high-dose bup-XR. Ferrets receiving bup-HCl were also more likely to react to surgical incision palpation overall. It is of note that sterile injection-site abscesses developed after administration of high-dose bup-ER (50%, 6/12) and high-dose bup-XR (10%, 2/20). This study demonstrates that a single dose of bup-XR (0.6 mg/kg SC) is a safe and effective analgesic option in ferrets, with a duration of action of up to 72 hours. The administration of bup-XR in pet and laboratory ferrets offers a refinement to analgesia in this species.

PS21 Pharmacokinetics of an Extended-release Buprenorphine in Female Yorkshire Swine (*Sus scrofa domestica*)

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Given their anatomical and physiological similarities to humans, swine are the most widely used large animal translational model in biomedical research. Despite the use of swine as a surgical model, precise dosing regimens for commonly used analgesics such as buprenorphine, are currently lacking in this species. A newly available extended-release formulation of buprenorphine (XRB) is FDA-indexed and approved for use in mice and rats; however, no studies have examined the efficacy and pharmacokinetic parameters of XRB in swine. The goal of this study was to determine the pharmacokinetics of the newly available XRB in swine. We hypothesized that after a single subcutaneous administration of XRB in adult swine, buprenorphine plasma concentrations would be above the therapeutic threshold of 0.1 ng/mL for up-to 96 h. XRB was administered once, subcutaneously to two separate cohorts of adult female