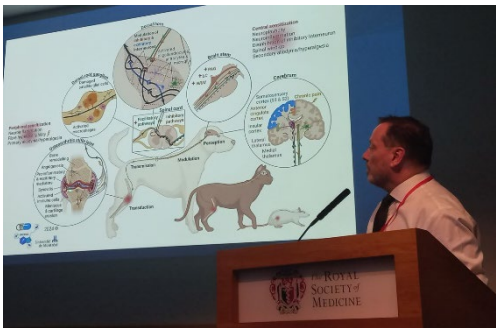
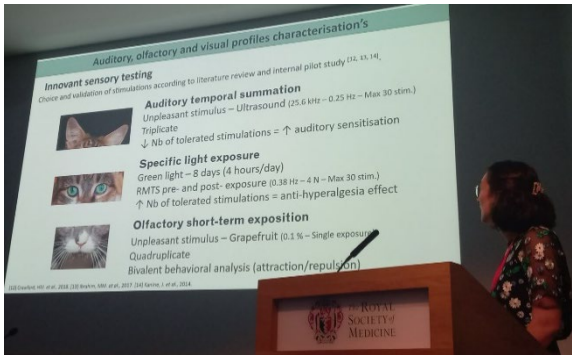
On 21 September, IASP's Non-Human Pain SIG hosted a one-day Symposium about Neuroplasticity and the Memory of Pain in Animals, co-organised by the Non-Human Pain SIG and the Association of Veterinary Anaesthetists and held at the Royal Society of Medicine (RSM), London, UK.

In the historic environment of the RSM, the presentations started with an overview of the central nervous system, and how Dr. Suzan Meijs succeeded in the challenging technique of measurement of cerebral activity in pigs, showing that the different somatosensory cortical laminae are not equally sensitised in a chronic pain model, and that cortical sensitisation was associated with hypersensitivity. Dr. Gareth Hathway described his innovative approach of integrated measurements of dorsal horn neural activity across its different laminae. The work enabled identification of areas of the dorsal horn where sensitisation occurs, and his dataset allowed the audience to appreciate the difference it makes across the lifespan. Specifically, while spinal sensitisation was present in adolescence and early adulthood, it was not found in early, and … later life. Dr. Catherine Williams from Aarhus University presented her group's work on refinement and limitations of local anaesthesia in piglets at the time of castration. While it's recognised that analgesia is needed, this work questions the presumed efficacy and safety of procaine

used during this procedure. Moreover, Dr. Claudia Spadavecchia presented convincing results on the development of sensitisation in calves even with the use of standard pain mitigation treatments (lidocaine, meloxicam, xylazine). She observed nociceptive facilitation (sensitisation characterizing hyperalgesia/allodynia), that could be exacerbated by altered endogenous pain inhibitory controls, with tail docking. Finally, Dr. Eric Troncy presented convincing evidence of peripheral and central sensitisation in osteoarthritic old cats. More interestingly, when the osteoarthritic cats were declawed (in young age!), this was translated in aggravated sensitisation associated with higher level of chronic pain (MI-CAT(V)) and altered biomechanics. The heavier was the declawed and osteoarthritic cat, the bigger was the alteration. The number of declawed paws and the presence of remnant bone influenced too the outcome.



In the afternoon, a collective educational talk of Drs. Troncy, Spadavecchia, and Meijs presented the practical realisation of Quantitative Sensory Testing (QST) in different species, as QSTs allow the characterisation/ quantification of nociceptive facilitation and inhibition. This was followed by a series of scientific presentations by graduate students presenting the application of QST to determine somatosensory sensitisation in osteoarthritis induced experimentally in rats (MI-RAT; Mrs. Marilyn Frezier), or presenting naturally in dogs and predicting their response to treatment (Mrs. Aliénor Delsart) or welfare (Dr. Stéphane Junot), and cats (Mrs. Manuela Lefort-Holguin). In the latters, Mrs. Aliénor Delsart presented evidence about the possible consequence of nociceptive sensitization on sensorial perceptions (olfaction, audition and light view).



The Symposium was attended by more than 100 delegates, who participated enthusiastically by positively questioning and challenging the presentations, helping to build links between neuroscience discoveries and pain quantification and management in animals. The feeling of a highly informative Symposium, opening exciting avenues to improve animal pain perception and animal welfare was shared by many participants.

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