

## S28-2 **Elemental requirements for a small animal imaging**

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In this presentation, I'll present an overview of some elemental techniques for a small animal imaging with high quality and quantity. The imaging researches of small animals require appropriate imaging probes, imaging instruments and analytical methods. Small animal imaging has been extremely expanded by development and improvement of sophisticated imaging instruments since 1990's. Moreover, image fusion techniques are recently applied in this field, which can make us evaluate functional information with its regional anatomy or other functional information. Well designed and synthesized imaging probes are required for imaging studies. Utilization of a same imaging probe for both clinical and animal studies is useful for new drugs development. In the imaging probes for small animal images, there are some points that should be especially noted. Chemical mass should be reduced in order to prevent from induction of pharmacological effect and higher radioactivity concentration is necessary for injection into small animals. Moreover, species difference will provide us different information on drug distribution. It is also very important to apply proper analytical methods in order to understand images precisely.