THE USAGE OF MICROFLUOROSCOPY IN IN VIVO AND IN VITRO EXPERIMENTS Scheer, P.1,2, Hložková, J.1,2, Suchý, P.2, Mikulík, R.1,3, Sepši, M.3 1 FNUSA-ICRC, Brno, Czech Republic; 2 FaF MUNI, Brno, Czech Republic; 3 LF MUNI, Brno, Czech Republic

In vivo experimental practice seeks to use identical or analogous imaging methods as in clinical practice in the "translation of knowledge". Therefore, we have high-resolution ultrasounds for small rodents, micro-CT, MRI for small rodents as analogues to ultrasound tomographs, CT and MRI for humans. Sometimes the nature of the experiment requires a sciascopy inspection of the procedure or process being performed. In clinical practice, a C-arm is useful for this purpose. The fluoroscope is its analogue available today. According to our information, the only commercially available device is a system from Glenbrook Technologies. The system is modular and can be customized. The advantage of the system is the low radiation rate (less than 350 μ Sv/h) associated with zero administration in relation to SUJB. Furthermore, the system has a high resolution stated in pairs of lines (LP) of 20 LP/mm compared to standard C-arms, where the best one has a resolution of max 6 LP/mm, most 2-3 LP/mm. Unlike clinical C-arms, the system does not allow the X-ray and detector to rotate, but this problem can be solved by rotating the animal under the X-ray in the tube. The use of the device is identical to that of classical sciascopy – angiography (selective and non-selective), catheterization, monitoring of swallowing and its disorders, orthopaedic applications, and our established monitoring of thrombolysis in radiolabelled fibrin clots both in vitro and in vivo.

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