1 Evaluations of animal experimental tests by using the open-irrigated ELMA-catheter RytmoLas®

1984-99 Central Laser Laboratory and animal experimental facilities GSF Neuherberg, Helmholtz-Centre Munich

H Weber, A Heinze, L Ruprecht, K Coppenrath, E Unsöld 1987 Cardiology Anadal Hospital University Limburg Netherlands. *M Vos, P Brugada, H. Wellens* 1987 German Heart Center Munich, Animal Experimental Institute. *A Murray, A Heinze, H Schad, A Mendler* 1988 LM University Munich Surgical Experimental Laboratory. *NN, A Heinze, D Weber, S Zhuang* 1988 UCLA, CA, USA Experimental Electrophysiology Laboratory. *M Helmy, Mr. Webster, H Weber* 1994 King Faisal Specialist Hospital and Research Centre, Riyadh, Saudi Arabia. *O Galal, A Heinze, Al Watban, H Weber* 1996 Laser and Applied Technologies Center, Duke University Durham, NC, USA. *B Svenson, JJ Gallagher, D Weber* 2005-2006 Animal Experimental Institute of the Semmelweis Univ. of Budapest, Haller Str. *A Roka, B Merkely, I Toth* 2005 EP laboratory UKT, University of Tübingen. *J Schreieck, M Gawaz* 2007 Research EP laboratory Hanson Medical, Mountain view, CA, USA. *H Weber, J Reinhardt* 2010-2011 Heart Science Center Univ. of Oklahoma. Oklahoma City. **(Figure Left)**

2017 Electrophysiology Laboratory Scientific Center Moscow. TC Arturowitsch, M Klotschko, B Barsukov

2016-1018 Center for Preclinical Research TU Munich. M Sagerer-Gerhardt, H Weber, C Baumgartner (Figure Right)



Dr H Weber and Dr H Nakagawa during animal experimental laser test, Heart Science Center, University of Oklahoma © CCEP / LasCor GmbH 2011



Dr Michaela Sagerer- Gerhardt during animal experimental study Center for Preclinical Research, Technical University of Munich © CCEP / LasCor GmbH 2019

Excerpt of abstract:

Open-Irrigated Laser Catheter RytmoLas® Produces Deep Lesions without Thrombus or Steam Pop Ikeda A, Hiroshi N, Weber H, Sagerer-Gerhardt M, Weber D, sharma T, Pitha JV, Lazzara R, Jackman WM *Heart Rhythm 2011, 32nd Annual Sientific Sessions, Vol 8 No 5* Suppliment pS1-S576 PO1-83:

RF ablation is limited by risk of thrombus and steam pop (perforation). Laser energy penetrates deep into tissue. We have tested a new saline irrigated laser catheter to create deep lesions, using a canine thigh muscle preparation. **Conclusions:**

This Laser catheter with open irrigation can create deep (>10mm) lesions without thrombus or steam pop.

In the above mentioned institutions over 1000 cardiovascular laser catheter applications were performed without complications during 126 animal experimental tests in 114 dogs, 7 pigs an 5 rabbits, by using the open-irrigated ELMA-catheter *RytmoLas*[®].