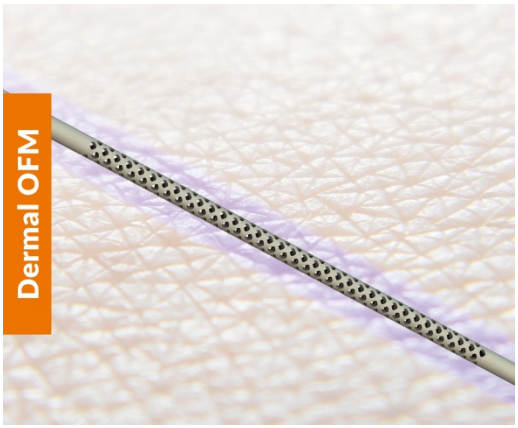

a/d OFM platform has been extensively employed in clinical setting to advance drug development and understanding the general physiology and pathophysiology. The technique and principles can easily be back-translated to preclinical studies

To access an extended list of publications and presentations from the research group at Joannneum Research-Health, who pioneered the OFM technology, please click here

Selected Preclinical Publications on a/d OFM

1. Open Flow Microperfusion: An Alternative Method to Microdialysis? Pieber et al., *Chapter 15 In:* M. Müller (ed.), *Microdialysis in Drug Development, AAPS Advances in the Pharmaceutical Sciences Series*. (click for reprint)

2. AAPS Poster: Evaluation of the Psoriasis-like Inflammation in the Imiquimod Rat Model using Dermal Open Flow Microperfusion. Bodenlenz et al., *AAPS Annual Meeting and Exposition, Denver, 2016*. (click for reprint)

   AAPS Poster: Continuous Sampling of Immune Cells in the Skin by Dermal Open Flow Microperfusion, Bodenlenz et al., 2016. *AAPS Annual Meeting and Exposition, Denver, 2016*. (click for reprint)

3. Rapid online-SPE-MS/MS method for ketoprofen determination in dermal interstitial fluid samples from rats obtained by microdialysis or open-flow microperfusion. Pickl et al., *J Chromatogr B Analyt Technol Biomed Life Sci. 2007 May 1;850(1-2):432-9.* (click for reprint)

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Selected Clinical Publications on a/d OFM

1. Quantification of acyclovir in dermal interstitial fluid and human serum by ultra-high-performance liquid-high-resolution tandem mass spectrometry for topical bioequivalence evaluation. Schimek et al, *Biomed Chromatogr. 2018 Jan 19 (Epub ahead of print).* (click for reprint)

2. Quantification of Basal Insulin Peglispro and Human Insulin in Adipose Tissue Interstitial Fluid by Open-Flow Microperfusion. Tiffner et al., *Diabetes Technol Ther. 2017 May;19(5):305-314.* (click for reprint)

3. Microdialysis of Large Molecules. Jadhav et al., *J Pharm Sci. 2016 Nov;105(11):3233-3242.*(click for reprint)

4. Open Flow Microperfusion as a Dermal Pharmacokinetic Approach to Evaluate Topical Bioequivalence. Bodenlenz et al., *Clin Pharmacokinet. 2017 Jan;56(1):91-98.* (click for reprint)

5. Kinetics of Clobetasol-17-Propionate in Psoriatic Lesional and Non-Lesional Skin Assessed by Dermal Open Flow Microperfusion with Time and Space Resolution. Bodenlenz et al., *Pharm Res. 2016 Sep;33(9):2229-38.* (click for reprint)

6. Secukinumab distributes into dermal interstitial fluid of psoriasis patients as demonstrated by openflow microperfusion. Dragatin et al., *Exp Dermatol. 2016 Feb;25(2):157-9.* (click for reprint)

7. Bioavailability of insulin detemir and human insulin at the level of peripheral interstitial fluid in humans, assessed by open-flow microperfusion. Bodenlenz et al., *Diabetes Obes Metab. 2015 Dec;17(12):1166-72.* (click for reprint)

8. Estimation of human leptin concentration in the subcutaneous adipose and skeletal muscle tissues. Sendlhofer et al., *Eur J Clin Invest. 2015 May;45(5):445-51.* (click for reprint)

9. Open flow microperfusion: pharmacokinetics of human insulin and insulin detemir in the interstitial fluid of subcutaneous adipose tissue. Höfferer et al., *Diabetes Obes Metab. 2015 Feb;17(2):121-7.* (click for reprint)

10. Recirculation--a novel approach to quantify interstitial analytes in living tissue by combining a sensor with open-flow microperfusion. Schaupp et al, *Anal Bioanal Chem. 2014 Jan;406(2):549-54.* (click for reprint)

11. Clinical applicability of dOFM devices for dermal sampling. Bodenlenz et al., *Skin Res Technol. 2013 Nov;19(4):474-83.* (click for reprint)

12. Dermal PK/PD of a lipophilic topical drug in psoriatic patients by continuous intradermal membrane-free sampling. Bodenlenz et al., *Eur J Pharm Biopharm. 2012 Aug;81(3):635-41.*

13. Comparison of open-flow microperfusion and microdialysis methodologies when sampling topically applied fentanyl and benzoic acid in human dermis ex vivo. Holmgaard et al., *Pharm Res. 2012 Jul;29(7):1808-20.* (click for reprint)

14. Interleukin-6 produced in subcutaneous adipose tissue is linked to blood pressure control in septic patients. Ikeoka et al., *Cytokine. 2010 Jun;50(3):284-91*. (click for reprint)

15. Advances in adipose tissue metabolism. Lafontan M. *Int J Obes (Lond). 2008 Dec;32 Suppl 7:S39-51.* (click for reprint)

16. Physiological hyperinsulinemia has no detectable effect on access of macromolecules to insulin-sensitive tissues in healthy humans. Weinhandl et al*., Diabetes. 2007 Sep;56(9):2213-7.* (click for reprint)

17. Subcutaneous adipose tissue exerts proinflammatory cytokines after minimal trauma in humans. Pachler et al., *Am J Physiol Endocrinol Metab. 2007 Sep;293(3):E690-6.* (click for reprint)

18. Measurement of interstitial insulin in human adipose and muscle tissue under moderate hyperinsulinemia by means of direct interstitial access. Bodenlenz et al., *Am J Physiol Endocrinol Metab. 2005 Aug;289(2):E296-300.* (click for reprint)

19. Interstitial glucose kinetics in subjects with type 1 diabetes under physiologic conditions. Wilinska et al., *Metabolism. 2004 Nov;53(11):1484-91.* (click for reprint)

20. Assessment of transcapillary glucose exchange in human skeletal muscle and adipose tissue. Regittnig et al., *Am J Physiol Endocrinol Metab. 2003 Aug;285(2):E241-51.* (click for reprint)

21. Measurement of interstitial albumin in human skeletal muscle and adipose tissue by open-flowmicroperfusion. Ellmerer et al., *Am J Physiol Endocrinol Metab. 2000 Feb;278(2):E352-6.* (click for reprint)

22. Direct access to interstitial fluid in adipose tissue in humans by use of open-flow microperfusion. Schaupp et al., *Am J Physiol. 1999 Feb;276(2 Pt 1):E401-8.* (click for reprint)

23. Lactate metabolism of subcutaneous adipose tissue studied by open flow microperfusion. Ellmerer et al., *J Clin Endocrinol Metab. 1998 Dec;83(12):4394-401.* (click for reprint)

24. Continuous measurement of subcutaneous lactate concentration during exercise by combining open-flow microperfusion and thin-film lactate sensors. Ellmerer et al., *Biosens Bioelectron. 1998 Oct 15;13(9):1007-13.* (click for reprint)

25. Open-flow microperfusion of subcutaneous adipose tissue for on-line continuous ex vivo measurement of glucose concentration. Trajanoski et al., *Diabetes Care. 1997 Jul;20(7):1114-21.* (click for reprint)