



Florian Frers (Autor)
Equine Metabolic Syndrome
Glucose and lipid metabolism in metabolically and
endocrinologically diseased horses

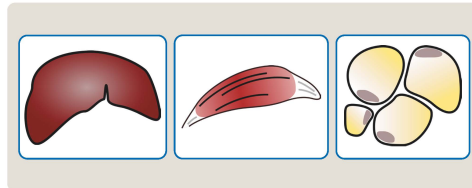
Wissenschaftliche Reihe
der Klinik für Pferde

Herausgegeben von
Karsten Feige, Harald Sieme, Florian Geburek,
Sabine Kästner, Bernhard Ohnesorge



Florian Frers

Equine Metabolic Syndrome
Glucose and lipid metabolism in metabolically and
endocrinologically diseased horses



STIFTUNG TIERÄRZTLICHE HOCHSCHULE HANNOVER

59

 Cuvillier Verlag Göttingen
Internationaler wissenschaftlicher Fachverlag

<https://cuvillier.de/de/shop/publications/8831>

Copyright:
Cuvillier Verlag, Inhaberin Annette Jentsch-Cuvillier, Nonnenstieg 8, 37075 Göttingen,
Germany
Telefon: +49 (0)551 54724-0, E-Mail: info@cuvillier.de, Website: <https://cuvillier.de>

TABLE OF CONTENTS

1 INTRODUCTION	1
1.1 Insulin dysregulation and insulin resistance	1
1.2 Equine Metabolic Syndrome	3
1.3 Differential diagnosis: pituitary <i>pars intermedia</i> dysfunction.....	5
1.4 Endocrinopathic laminitis	6
1.5 Diagnosis of insulin dysregulation	8
1.5.1 Measurement of equine insulin.....	8
1.5.2 Basal testing protocols	9
1.5.3 Intravenous testing protocols for assessment of insulin resistance	9
1.5.4 Oral testing protocols.....	10
1.6 (Patho-) physiological actions of insulin	11
1.6.1 Key components of the insulin signaling cascade	12
1.6.2 Equine-related aspects of insulin signaling.....	15
2 HYPOTHESES, OBJECTIVES AND AIMS.....	17
3 MANUSCRIPT I.....	21
4 MANUSCRIPT II.....	49
5 GENERAL DISCUSSION	66
5.1 The role of peripheral insulin sensitivity in equine insulin dysregulation.....	66
5.2 Potential impairments of whole-body protein synthesis.....	71
5.3 The potential role of inflammation in the pathogenesis of ID.....	72
5.4 Future perspectives.....	73
6 SUMMARY AND CONCLUSION	75
7 REFERENCES	77
8 ACKNOWLEDGEMENTS.....	90