

FEED INGREDIENTS IN AQUACULTURE

INTRODUCTION	5
About This Booklet.....	5
About Aquaculture Feeds in Europe.....	5
About the ARRAINA Project.....	5
ARRAINA Biomarkers Database.....	7
Tools to Predict Flesh Fatty Acid Profiles.....	9
Biomarkers of Mineral and Vitamin Requirements.....	10
Zinc and Bone Development in Freshwater and Seawater Salmon.....	10
Markers of Vitamin B6 requirements in Freshwater and Seawater Salmon.....	11
Markers of Methionine Metabolism in Rainbow Trout.....	12
Markers of Lipid Metabolism and Growth Performance in European Sea Bass and Gilthead Sea Bream.....	14
Molecular Markers of Lipid Metabolism in European Sea Bass and Gilthead Sea Bream.....	15
Biomarkers of Lipid Metabolism in Gilthead Sea Bream.....	16
Biomarkers of Growth Performance and Specific Nutritional Status.....	17
Markers of Intestinal Function and Architecture in European Sea Bass and Gilthead Sea Bream.....	19
Nutritionally Mediated Effects on the Intestinal Transcriptome.....	20
Determining the Potential Presence and Prevalence of Contaminants in Fish Fillets for Human Consumption.....	21
Concluding Remarks.....	22
ARRAINA References.....	23
Acknowledgements.....	26