AM854\_6DE 1 MLHRWLALCFLASFAVTGCGLFSKEKVGMDIVGVPFSAGRVEKVYFDFNKYEIKGSGKKV
AM854\_Dawn 1 MLHRWLALCFLASFAVTGCGLFSKEKVGMDIVGVPFSAGRVEKVYFDFNKYEIKGSGKKV
AM854\_C51 1 MLHRWLALCFLASFAVTGCGLFSKEKVGMDIVGVPFSAGRVEKVYFDFNKYEIKGSGKKV
Am854\_C52 1 MLHRWLALCFLASFAVTGCGLFSKEKVGMDIVGVPFSAGRVEKVYFDFNKYEIKGSGKKV
AM854\_EMΦ 1 MLHRWLALCFLASFAVTGCGLFSKEKVGMDIVGVPFSAGRVEKVYFDFNKYEIKGSGKKV
AM854\_N3574 1 MLHRWLALCFLASFAVTGCGLFSKEKVGMDIVGVPFSAGRVEKVYFDFNKYEIKGSGKKV
AM854\_N4506 1 MLHRWLALCFLASFAVTGCGLFSKEKVGMDIVGVPFSAGRVEKVYFDFNKYEIKGSGKKV
AM854\_PR 1 MLHRWLALCFLASFAVTGCGLFSKEKVGMDIVGVPFSAGRVEKVYFDFNKYEIKGSGKKV
AM854\_VA 1 MLHRWLALCFLASFAVTGCGLFSKEKVGMDIVGVPFSAGRVEKVYFDFNKYEIKGSGKKV
AM854\_StM 1 MLHRWLALCFLASFAVTGCGLFSKEKVGMDIVGVPFSAGRVEKVYFDFNKYEIKGSGKKV
AMF\_640 1 MLHRWLALCFLASFAVTGCGLFSKEKVGMDIVGVPFSAGRVEKVYFDFNKYEIKGSGKKV
ACIS\_00486 1 MLHRWLALCLLASLAVTGCELFNKEKVNIDIGGVPLSAGRVEKVYFDFNKYEIKGSGKKV

AM854\_6DE 61 LLGLVERMKADKRSTLLIIGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ
AM854\_Dawn 61 LLGLVERMKADKRSTLLIIGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ
AM854\_C51 61 LLGLVERMKADKRSTLLIIGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ
Am854\_C52 61 LLGLVERMKADKRSTLLIIGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ
AM854\_EMΦ 61 LLGLVERMKADKRSTLLIIGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ
AM854\_N3574 61 LLGLVERMKADKRSTLLIIGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ
AM854\_N4506 61 LLGLVERMKADKRSTLLIIGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ
AM854\_PR 61 LLGLVERMKADKRSTLLIIGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ
AM854\_VA 61 LLGLVERMKADKRSTLLIIGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ
AM854\_StM 61 LLGLVERMKADKRSTLLIIGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ
AMF\_640 61 LLGLVERMKADKRSTLLIIGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ
ACIS\_00486 61 LLGLVERMKADKMSTLLIVGHTDSRGTEEYNLALGERRANAVKEFILGCDRSLSPRISTQ

AM854\_6DE 121 SRGKAEPEVLVYSSDFKEAEKAHAQNRRVVLIVECQHSVSPKKKMAIKWPFSFGRSAAKQ
AM854\_Dawn 121 SRGKAEPEVLVYSSDFKEAEKAHAQNRRVVLIVECQHSVSPKKKMAIKWPFSFGRSAAKQ
AM854\_C51 121 SRGKAEPEVLVYSSDFKEAEKAHAQNRRVVLIVECQHSVSPKKKMAIKWPFSFGRSAAKQ
Am854\_C52 121 SRGKAEPEVLVYSSDFKEAEKAHAQNRRVVLIVECQHSVSPKKKMAIKWPFSFGRSAAKQ
AM854\_EMΦ 121 SRGKAEPEVLVYSSDFKEAEKAHAQNRRVVLIVECQHSVSPKKKMAIKWPFSFGRSAAKQ
AM854\_N3574 121 SRGKAEPEVLVYSSDFKEAEKAHAQNRRVVLIVECQHSVSPKKKMAIKWPFSFGRSAAKQ
AM854\_N4506 121 SRGKAEPEVLVYSSDFKEAEKAHAQNRRVVLIVECQHSVSPKKKMAIKWPFSFGRSAAKQ
AM854\_PR 121 SRGKAEPEVLVYSSDFKEAEKAHAQNRRVVLIVECQHSVSPKKKMAIKWPFSFGRSAAKQ
AM854\_VA 121 SRGKAEPEVLVYSSDFKEAEKAHAQNRRVVLIVECQHSVSPKKKMAIKWPFSFGRSAAKQ
AM854\_StM 121 SRGKAEPEVLVYSSDFKEAEKAHAQNRRVVLIVECQHSVSPKKKMAIKWPFSFGRSAAKQ
AMF\_640 121 SRGKAEPEVLVYSSDFKEAEKAHAQNRRVVLIVECQHSVSPKKKMAIKWPFSFGRSAAKQ
ACIS\_00486 121 SRGKAEPEILVYSSDFKEAEKAHAQNRRVVLIMECQHAASPKKARVSRWPFSFGRSSATQ

AM854\_6DE 181 DDVGSSEVSDENPVDDSSEGIASEEAAPEEGVVSEEAAEEAPEVAQDSSAGVVAPE
AM854\_Dawn 181 DDVGSSEVSDENPVDDSSEGIASEEAAPEEGVVSEEAAEEAPEVAQDSSAGVVAPE
AM854\_C51 181 DDVGSSEVSDENPVDDSSEGIASEEAAPEEGVVSEEAAEEAPEVAQDSSAGVVAPE
Am854\_C52 181 DDVGSSEVSDENPVDDSSEGIASEEAAPEEGVVSEEAAEEAPEVAQDSSAGVVAPE
AM854\_EMΦ 181 DDVGSSEVSDENPVDDSSEGIASEEAAPEEGVVSEEAAEEAPEVAQDSPAGVVAPE
AM854\_N3574 181 DDVGSSEVSDENPVDDSSEGIASEEAAPEEGVVSEEAAEEAPEVAQDSSAGVVAPE
AM854\_N4506 181 DDVGSSEVSDENPVDDSSEGIASEEAAPEEGVVSEEAAEEAPEVAQDSSAGVVAPE
AM854\_PR 181 DDVGSSEVSDENPVDDSSEGIASEEAAPEEGVVSEEAAEEAPEVAQDSSAGVVAPE
AM854\_VA 181 DDVGSSEVSDENPVDDSSEGIASEEAAPEEGVVSEEAAEEAPEVAQDSSAGVVAPE
AM854\_StM 181 DDVGSSEVSDENPVDDSSEGIASEEAAPEEGVVSEEAAEEAPEVAQDSSAGVVAPE
AMF\_640 181 DDVGSSEVSDENPVDDSSEGIASEEAAPEEGVVSEEAAEEAPEVAQDSSAGVVAPE
ACIS\_00486 181 QDNGGGTVAAGSPGED----------APAEVVEPEETQE--------------AGE

Fig. S3. Amino acid alignment of AM854 for all *A. marginale* strains and isolates and *A. marginale* ss. *centrale*. AMF\_640 is the Florida strain homolog of AM854. ACIS\_00486 is the *A. marginale* ss. *centrale* ortholog of AM854.