

Major human schistosome species express different glycans with immunological and diagnostic implications.

Laudine M. C. Petralia^{1,2}, Angela van Diepen¹, Tao Zhang³, Anna O. Kildemoes¹, Tom Veldhuizen¹, D. Linh Nguyen¹, Cornelis H. Smit¹, Peter G. Kremsner^{4,5}, Manfred Wuhrer³, Jeremy M. Foster², Cornelis H. Hokke^{1*}

Supplementary material	#
Figure S1. MALDI spectra (replicates, immature & mature eggs).....	.2
Figure S2. GSL glycans - glycan sequencing.....	.6
Figure S3. GSL glycans - MALDI-TOF-MS/MS.....	.11
Figure S4. GSL glycans - PGC-nano-LC-MS/MS.....	.16
Figure S5. N-glycans - structural characterization: glycan sequencing and MALDI-TOF-MS/MS.....	.23
Figure S6. Comparison of <i>S. haematobium</i> and <i>S. mansoni</i> N-glycans.....	.28
Figure S7. O-glycans - structural characterization: MALDI-TOF-MS/MS.....	.30
Figure S8. Microarray validation with mAbs.....	.33
Figure S9. IgM binding to glycan microarray (heatmap/results).....	.36
Figure S10. IgG and IgM binding to crude antigens/N-glycans/O-glycans.....	. 38

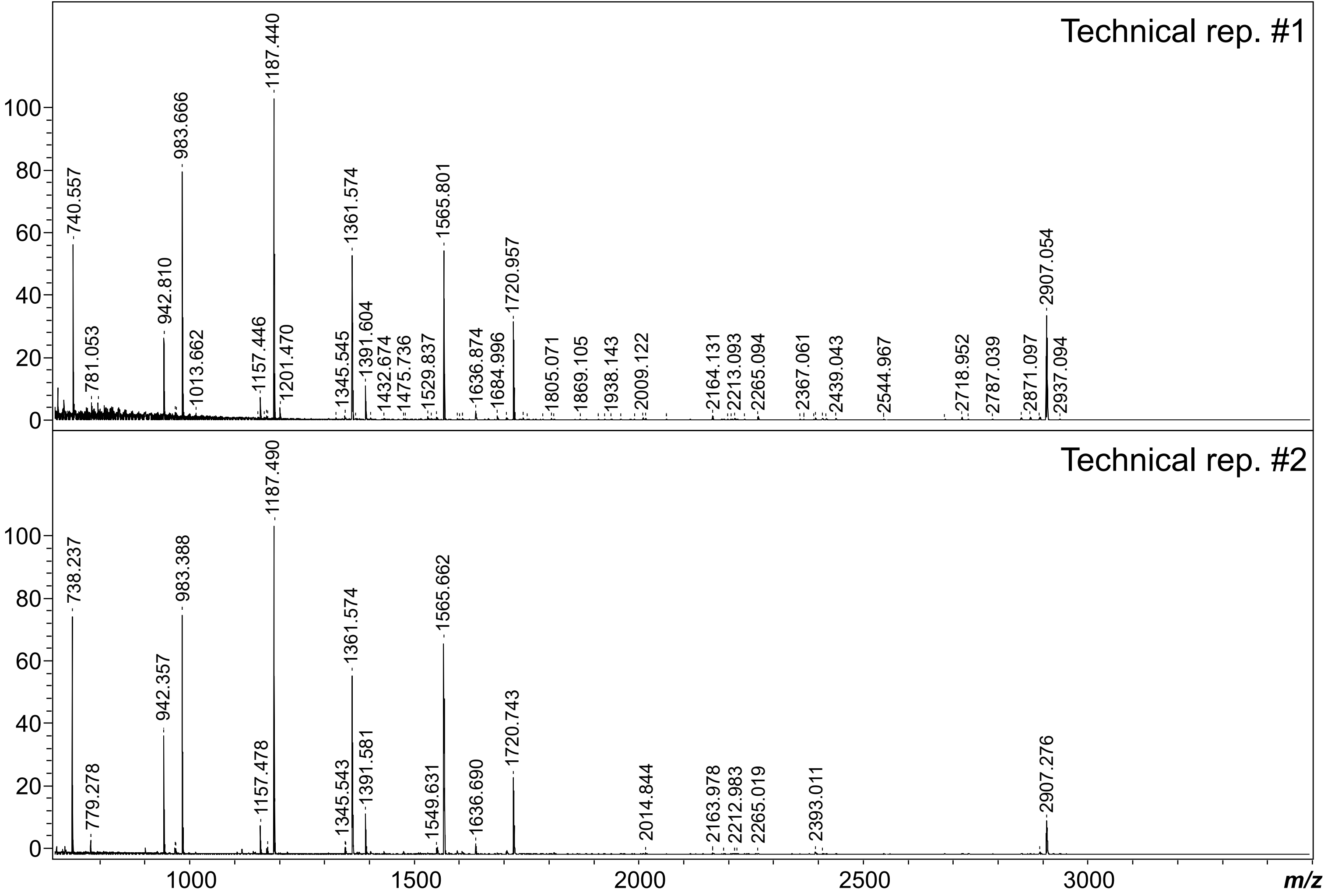
Figure S1 – MALDI-TOF-MS spectra of *S. haematobium* GSL derived, *N*-linked and *O*-linked glycans

S. haematobium (glyco-)lipids were treated with rEGCase II to release GSL glycans (A) while *N*-glycans were released from *S. haematobium* glycoproteins using PNGase F (B). Enzymatically released glycans were labeled with AA and analyzed using MALDI-TOF-MS. GSL glycan and *N*-glycan spectra were acquired in negative-ion reflectron mode. All signals are labeled with monoisotopic masses (m/z , $[M-H]^-$). Signal intensities in % are indicated on the Y-axis. Biological duplicates were generated for GSL and *N*-linked glycans of *S. haematobium* cercariae, adult worms and eggs (A-B).

O-glycans were released from *S. haematobium* glycoproteins by β -elimination and permethylated prior to MALDI-TOF-MS analysis (C). Spectra were recorded in positive-ion reflectron mode and monoisotopic masses of measured signals are indicated ($[M+Na]^+$). Signal intensities in % are indicated on the Y-axis. Technical duplicates were generated.

Glycan class and parasite life-stage from which glycans were extracted are indicated at the top of each panel: cercariae, adult worms or eggs. Known non-glycan signals are labeled with the # symbol. Raw MALDI-TOF-MS data for all spectra can be found in **Table S1**.

(C - 1) *S. haematobium* O-glycans – cercariae



(C - 2) *S. haematobium* O-glycans – eggs

