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## **Circulating gut-associated antigens of *Schistosoma mansoni* : biological, immunological, and molecular aspects**

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## **Appendices**



## I. List of abbreviations

1D	one-dimensional
2D	two-dimensional
acq	acquisition
AlgG	aggregated human IgG
AWA	adult worm antigen
AWA-TCA	trichloroacetic acid-soluble fraction of AWA
BSA	bovine serum albumin
C1q	complement factor 1q
CAA	circulating anodic antigen
CCA	circulating cathodic antigen
CID-MS/MS	collision-induced-dissociation tandem mass spectrometry
COSY	scalar-shift correlated spectroscopy
DIBA	dot immunobinding assay
ELISA	enzyme-linked immunosorbent assay
epg	eggs per gram of faeces
ESA	excretion and secretion antigens
FAB	fast atom bombardment
FITC	fluoresceine isothiocyanate
Fuc	L-fucose
g	gram
Gal	D-galactose
GalNAc	N-acetyl-D-galactosamine
GARP	globally optimized alternating-phase rectangular pulses
GLC	gas-liquid chromatography
GlcA	D-glucuronic acid
GlcNAc	N-acetyl-D-glucosamine
h	hour
HMQC	<sup>1</sup> H- <sup>13</sup> C-heteronuclear spectroscopy
HOHAHA	homonuclear Hartmann-Hahn
ID	immunodiffusion
IdoA	L-iduronic acid
IE	immuno-electrophoresis
IFA	immunofluorescence assay
kDa	kilodalton
Le <sup>x</sup>	Lewis x
McAb	monoclonal antibody
MEG	major egg glycoprotein
min	minutes
MS	mass spectrometry
MSA <sub>1,2,3</sub>	major serological antigens 1, 2, and 3
n.O.e.	nuclear Overhauser enhancement
Neu5Ac	N-acetylneuraminic acid, sialic acid
NMR	nuclear magnetic resonance
NOESY	nuclear Overhauser enhancement spectroscopy
ρ	pyranose
PAS	periodic acid-Schiff reaction on carbohydrates
PBS	phosphate-buffered saline
PT	NaCl/P, / 0.3% Tween-20
Rha	D-rhamnose
SDS-PAGE	sodium dodecylsulfate polyacrylamide gel electrophoresis
SEA	soluble egg antigen
TCA	trichloroacetic acid
TMB	3,3',5,5'-tetramethylbenzidine, (Me <sub>2</sub> NH <sub>2</sub> C <sub>6</sub> H <sub>2</sub> -) <sub>2</sub>
v/v	volume/volume
w/v	weight/volume

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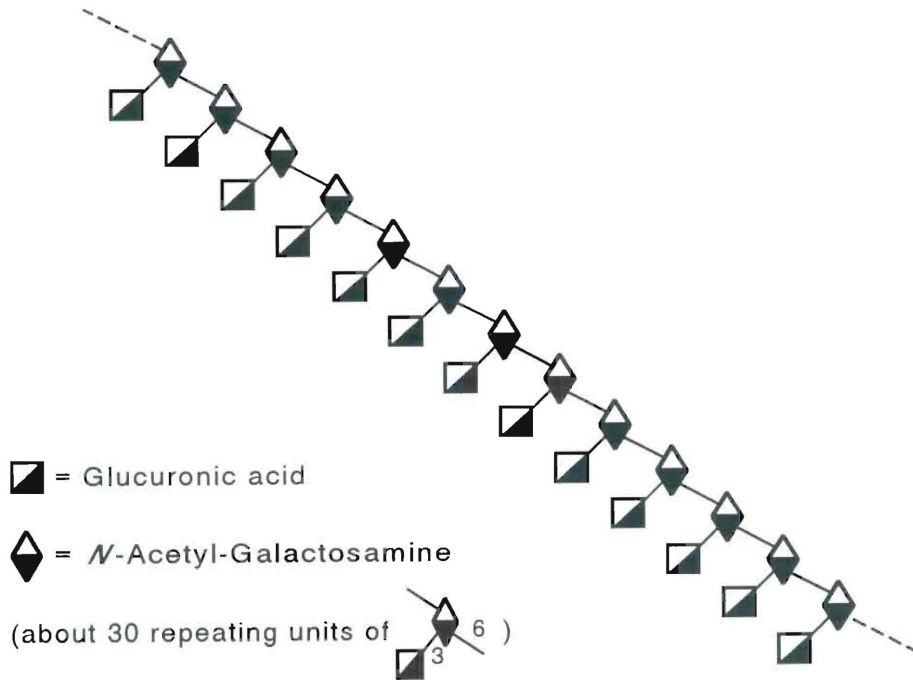
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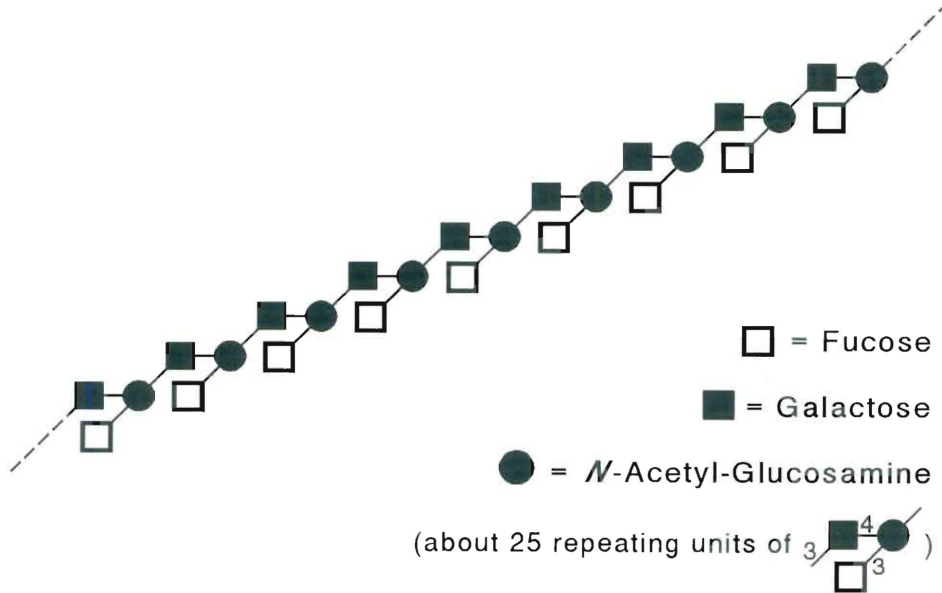
#### IV. Carbohydrate structures found in CAA

polysaccharide

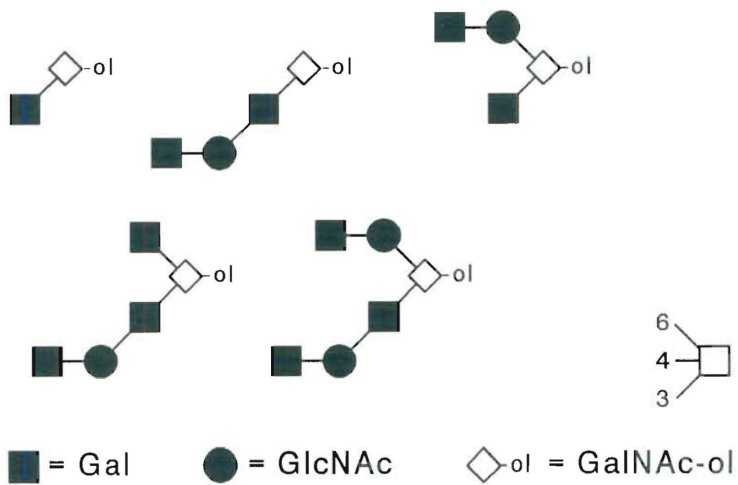


**V. Carbohydrate structures found in CCA**

polysaccharide



oligosaccharides







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## Curriculum vitae

Govert van Dam werd geboren op 12 augustus 1960 te Gouda. Van 1966 tot 1972 doorliep hij de lagere school aan de School met de Bijbel in Langerak. In 1978 behaalde hij het Gymnasium B diploma aan het Christelijk Lyceum–HAVO in Gouda. In datzelfde jaar begon hij met de studie scheikunde aan de Rijksuniversiteit Utrecht, waarvan hij het volgende jaar de propaedeuse haalde, in 1983 het kandidaatsexamen aflegde (cum laude) en in 1987 het doctoraalexamen. In de doctoraalfase werden de keuzevakken Biofysica (prof. Y.K. Levine), Analytische Chemie (tevens afstudeerrichting, prof. C.L. De Ligny), en Immunologie (prof. J.M.N. Willers) gedaan alsook de onderwijsbevoegdheden voor Natuurkunde en Scheikunde verkregen. Tijdens deze periode deed hij van 1979 tot 1980 een propaedeutisch jaar ter voorbereiding op universitaire studie aan de Evangelische Hogeschool te Amersfoort en verrichtte hij van 1985 tot 1986 een stage Immunologie aan Karelsuniversiteit te Praag, Tsjechië (Dr. J. Kocourek, Dr. K. Bezouška). Van 1988 tot 1992 was Govert van Dam verbonden aan het Laboratorium voor Parasitologie in Leiden als Onderzoeker in Opleiding op BION–project "Onderzoek naar darm–gebonden antigenen van *Schistosoma mansoni*: Immunochemische analyse en bestudering van de immunologische respons van de gastheer", onder begeleiding van Prof. Dr. A.M. Deelder en Dr. J.P. Rotmans. Binnen hetzelfde laboratorium werd hij op 1 maart 1993 voor twee jaar als onderzoeker aangesteld in het kader van het STD3 (EG)–project "Epidemiology, serology and chemotherapy of *Schistosoma* in a recently exposed community near Richard Toll, Senegal".



En dan nog iets, een laatste waarschuwing. Er worden veel te veel boeken geschreven en van al dat lezen word je alleen maar moe. Na alles wat hier gezegd is, valt er alleen nog dit te zeggen: heb ontzag voor God en onderhoud zijn geboden; daar komt het voor de mens op aan. Want God zal oordelen over alles wat je doet, zelfs over wat verborgen blijft, of het nu goed is of slecht.

*(Prediker 12 vers 12 – 14)*

My son, there is something else to watch out for. There is no end to the writing of books, and too much study will wear you out. After all this, there is only one thing to say: Fear God, and obey his commands, because this is all that man was created for. God is going to judge everything we do, whether good or bad, even things done in secret.

*(Ecclesiastes 12 verse 12 – 14)*

**Soli Deo Gloria**

