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Structural characterization of the carbohydrate and protein part of arabinogalactan protein from *Basella alba* stem and antiadhesive activity of polysaccharides from *B. alba* against *Helicobacter pylori*

Hao Thanh Nguyen^{1,2}, Fabian Herrmann², Simone König³, Francisco M. Goycoolea^{4,5}, Andreas Hensel^{2,*}

¹ Faculty of Biotechnology, Vietnam National University of Agriculture, 100000 Hanoi, Vietnam; nguyenthanhhao@vnua.edu.vn

² Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Corrensstraße 48, 48149 Münster, Germany

³ Integrated Functional Genomics and Proteomics, University of Münster.

⁴ School of Food Science and Nutrition, University of Leeds, LS2 9JT, Leeds, United Kingdom; F.M.Goycoolea@leeds.ac.uk

⁵ Institute for Biology and Biotechnology of Plants, University of Münster, Germany

* Correspondence: ahensel@uni-muenster.de; Tel.: ++49 251 8333381

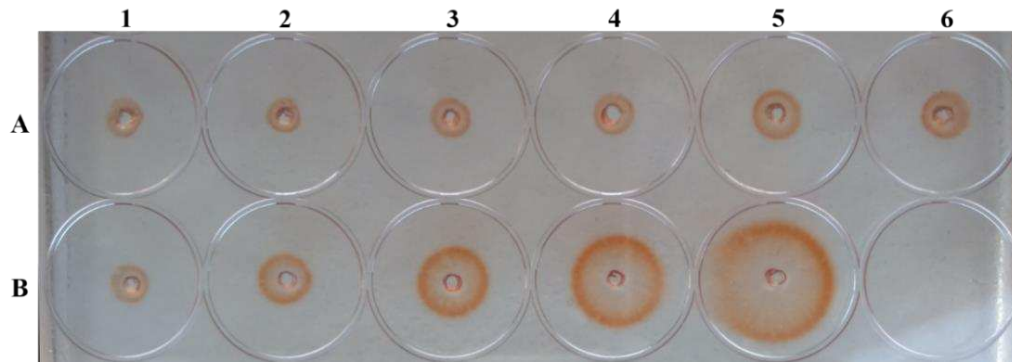


Figure S1. Single radial diffusion test for determination of AGP in BA1 ($A_{1,2} \sim c = 2.5 \text{ mg/mL}$, $A_{3,4} \sim c = 5.0 \text{ mg/mL}$, $A_{5,6} \sim c = 10 \text{ mg/mL}$). A calibration curve was generated using gum arabic as standard (from B_1 to $B_5 \sim c = 0.25, 0.5, 1.25, 2.5$ and 5.0 mg/mL).

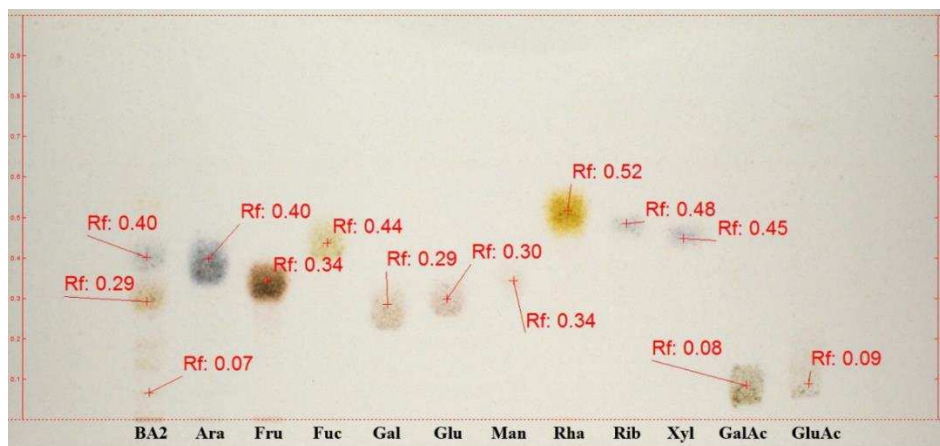


Figure S1: TLC of TFA-hydrolyzed BA2 and reference sugars (Ara: arabinose, Fru: fructose, Fuc: fucose, Gal: galactose, Glu: Glucose, Man: mannose, Rha: rhamnose, Rib: ribose, Xyl: xylose, GalAc: galacturonic acid, GluAc: glucuronic acid)

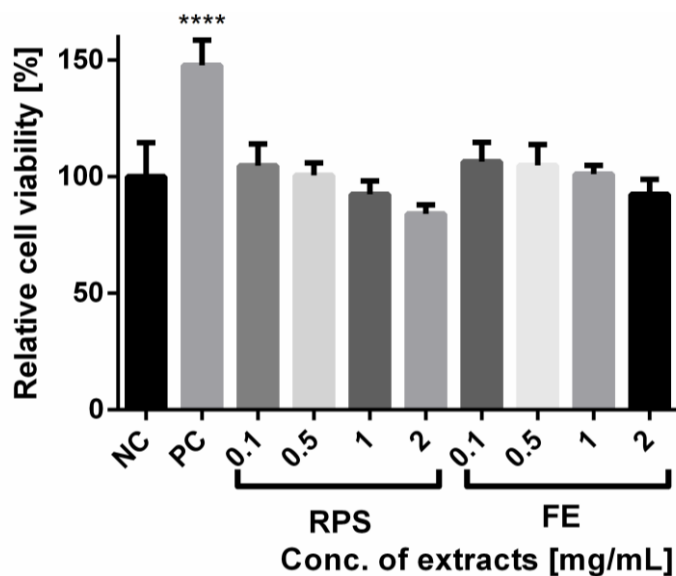


Figure S3: Relative cell viability of AGS cells after incubation with different concentrations of RPS and FE of *Basella alba* for 24 h. Values are mean \pm SD with $n = 8$ replicates from three independent experiments. **** $p < 0.0001$ compared to negative control (NC: cells in FCS free medium = 100 %); positive control (PC): AGS cell culture medium supplemented with 10 % FCS.



Figure S4: Morphology of *Basella alba* whole plant (left), and *Basella alba*'s stem used for the research (right)

Table S1: Pattern search in the SwissProt database using peptide TFQGP-PHGIQVER returns 421 entries for RBL.

Matching Sequence	Start AA	Peptide M+H	MS-Digest Index #	Protein MW (Da)/pI	Accession #	Species	Protein Name
(K)TFQGP-PHGIQVER(D)	156	1465.7546	339694	48890/6.6	O78258	ABIFI	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	156	1465.7546	339695	48936/6.6	O78259	ABIHO	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339696	52724/6.1	P24671	ABIMA	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	156	1465.7546	339697	48961/6.6	O78261	ABIMR	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	156	1465.7546	339698	48906/6.6	O78262	ABISA	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	156	1465.7546	339699	48906/6.6	O78260	ABIVE	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	153	1465.7546	339701	51579/6.2	P28376	ACESA	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339703	53379/6.6	A9LYA9	ACOAM	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339704	53379/6.6	Q3V526	ACOCL	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	153	1465.7546	339706	51586/6.2	P28377	ACTCH	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	154	1465.7546	339707	51650/6.1	O99000	ADEOB	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	154	1465.7546	339710	51740/6.1	P28378	ADOMO	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	108	1465.7546	339711	46902/6.5	P25413	AEGCR	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	108	1465.7546	339712	46959/6.5	P25414	AEGTA	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	154	1465.7546	339713	51652/6.2	Q31827	AESPA	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339714	53349/6.0	A4QJC3	AETCO	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339715	53692/6.0	A4QJK7	AETGR	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339716	52723/5.9	P24680	AFRGR	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339717	52820/6.2	A1EA16	AGRST	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339719	52455/6.2	Q31655	AJUCH	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	157	1465.7546	339720	51890/6.2	Q07281	AKABI	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	154	1465.7546	339721	43968/6.7	P34767	ALIPL	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339723	53086/6.2	P25826	ALLPR	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339724	52587/6.2	Q06021	ALNIN	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339726	52594/6.0	P16306	AMAHP	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339727	52607/6.1	P48682	AMATR	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339730	53192/6.3	P48683	ANACO	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	164	1465.7546	339731	53034/6.1	Q3M674	ANAVT	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339733	52538/5.9	B0YPN8	ANEMR	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	163	1465.7546	339736	52817/6.1	Q31795	ANTFO	Ribulose biphosphate carboxylase large chain
(K)TFQGP-PHGIQVER(D)	154	1465.7546	339737	52184/6.1	P36478	ANTGA	Ribulose biphosphate carboxylase large chain (Fragment)
(K)TFQGP-PHGIQVER(D)	154	1465.7546	339738	51878/6.0	Q31669	ANTHE	Ribulose biphosphate carboxylase large chain (Fragment)

(K)TFQGPPIQVER(D)	154	1465.7546	339739	52160/6.4	Q31672	ANTLU	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	129	1465.7546	339740	49084/6.1	Q05554	ANTMA	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	142	1465.7546	339741	45808/6.5	P43224	ANTRE	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	154	1465.7546	339743	51867/6.4	Q31859	ANTVS	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	153	1465.7546	339744	51588/6.0	P28379	APHSI	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	153	1465.7546	339745	50803/6.2	P28380	APIGR	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	129	1465.7546	339746	48737/6.0	Q05984	APOCA	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	163	1465.7546	339747	52967/6.0	A40K26	ARAH1	Ribulose bisphosphate carboxylase large chain
(K)TFQGPPIQVER(D)	163	1465.7546	339748	52956/5.9	Q03042	ARATH	Ribulose bisphosphate carboxylase large chain
(K)TFQGPPIQVER(D)	154	1465.7546	339753	49845/6.0	P93890	ARIGL	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	154	1465.7546	339755	51629/5.9	P36479	ASACA	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	129	1465.7546	339756	48831/6.1	P36480	ASCEX	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	156	1465.7546	339757	49800/6.6	P92445	ASPEL	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	163	1465.7546	339758	50264/6.6	Q31809	ASPLA	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	163	1465.7546	339759	52925/6.4	Q8RU60	ATRBE	Ribulose bisphosphate carboxylase large chain
(K)TFQGPPIQVER(D)	163	1465.7546	339760	52021/6.3	P19160	ATRPA	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	163	1465.7546	339761	52632/6.2	P20455	ATRRS	Ribulose bisphosphate carboxylase large chain
(K)TFQGPPIQVER(D)	154	1465.7546	339763	51846/6.2	Q9MTE7	AVECA	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	163	1465.7546	339764	52936/5.9	P48684	AVESA	Ribulose bisphosphate carboxylase large chain
(K)TFQGPPIQVER(D)	156	1465.7546	339767	50395/6.5	Q33162	BARJA	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	154	1465.7546	339768	43804/6.4	Q05795	BARLO	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	153	1465.7546	339769	51640/6.0	P28382	BARPR	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	163	1465.7546	339771	53010/6.1	A40KB3	BARVE	Ribulose bisphosphate carboxylase large chain
(K)TFQGPPIQVER(D)	163	1465.7546	339772	53080/6.2	P25828	BASAL	Ribulose bisphosphate carboxylase large chain
(K)TFQGPPIQVER(D)	153	1465.7546	339773	51542/6.2	Q31730	BAURU	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	163	1465.7546	339774	52531/6.1	P48685	BAZTR	Ribulose bisphosphate carboxylase large chain
(K)TFQGPPIQVER(D)	154	1465.7546	339775	51540/6.6	Q99001	BEAGR	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	154	1465.7546	339776	48800/6.5	P28383	BEGMS	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	154	1465.7546	339777	51986/6.0	Q31715	BERBR	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	154	1465.7546	339778	51683/6.2	P36481	BERLA	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	154	1465.7546	339779	51699/6.1	P28384	BETNI	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	163	1465.7546	339780	52601/6.2	Q06022	BETPA	Ribulose bisphosphate carboxylase large chain
(K)TFQGPPIQVER(D)	154	1465.7546	339782	51780/6.0	Q19872	BEXOR	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	129	1465.7546	339784	49062/6.1	Q05985	BOROF	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	163	1465.7546	339787	52733/6.2	B3TN59	BRADI	Ribulose bisphosphate carboxylase large chain
(K)TFQGPPIQVER(D)	163	1465.7546	339789	52957/5.9	P48686	BRAOL	Ribulose bisphosphate carboxylase large chain
(K)TFQGPPIQVER(D)	154	1465.7546	339790	43778/6.4	Q05796	BRASC	Ribulose bisphosphate carboxylase large chain (Fragment)
(K)TFQGPPIQVER(D)	163	1465.7546	339791	52057/6.2	Q31738	BREMA	Ribulose bisphosphate carboxylase large chain (Fragment)