

Transcriptome analysis of *Globodera pallida* from the susceptible host *Solanum tuberosum*
or the resistant plant *Solanum sisymbriifolium*

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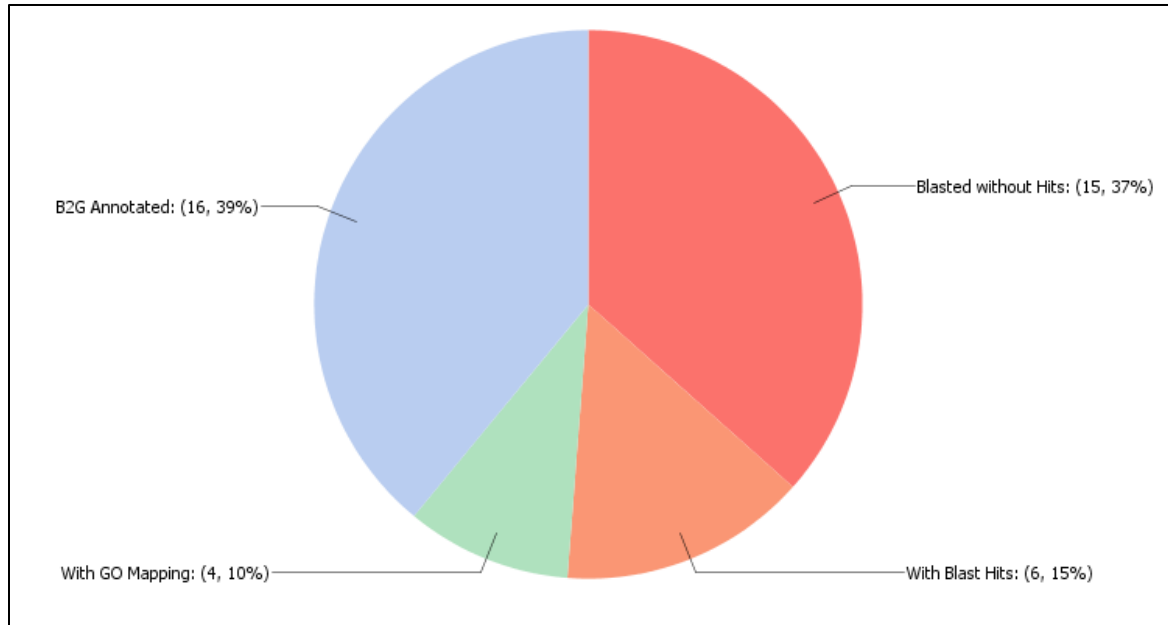


Fig. S1. BLAST statistics of the 41 differentially expressed genes of *Globodera pallida* isolated from *Solanum tuberosum* and *Solanum sisymbriifolium* 24 h post infestation.

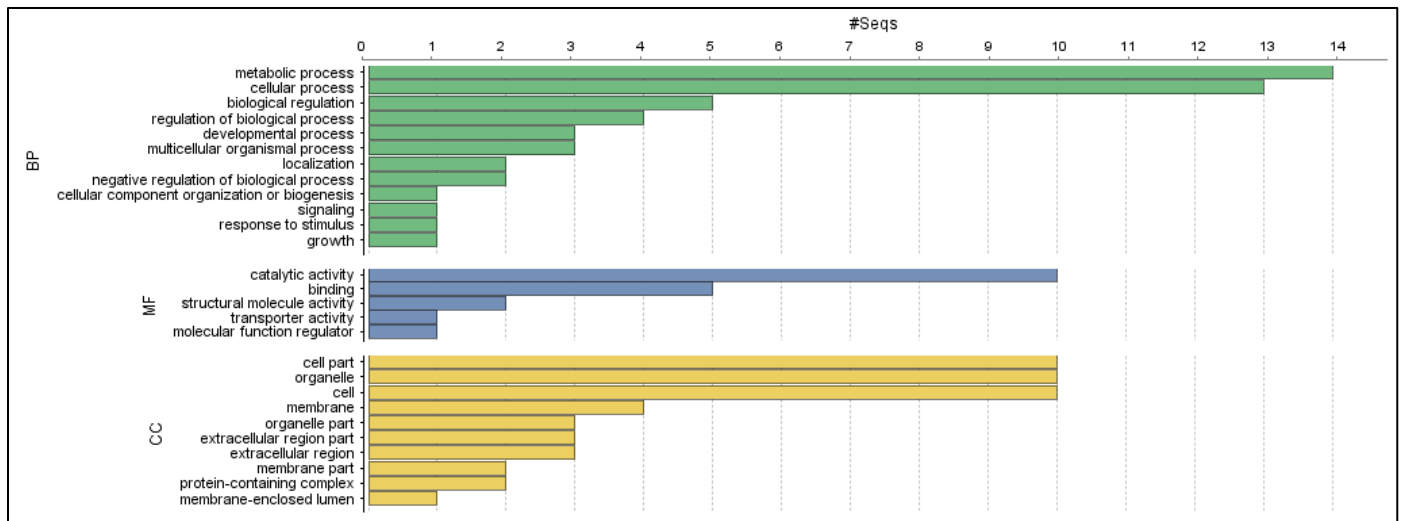


Fig. S2. Distribution of GO annotation terms for biological process (BP), molecular function (MF) and cell compartment (CC) in the differentially expressed genes of *Globodera pallida* isolated from *Solanum tuberosum* and *Solanum sisymbriifolium* 24 h post infestation.

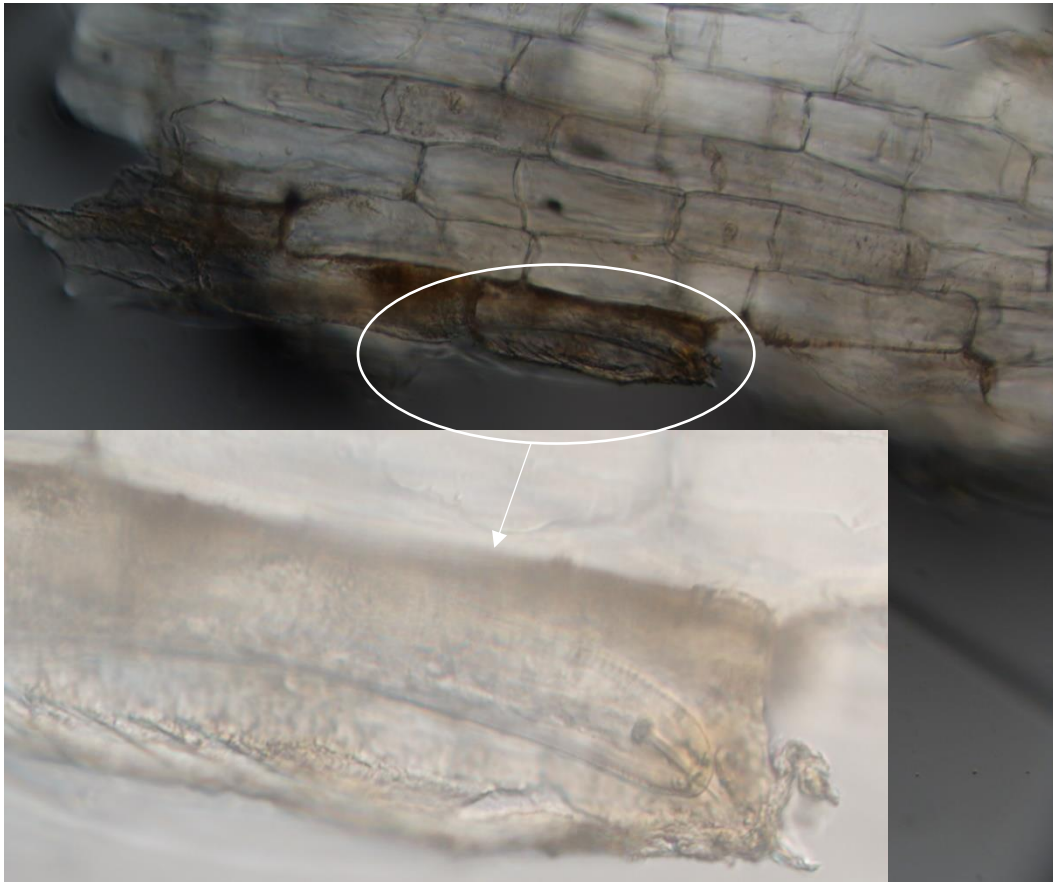


Fig. S3. *Globodera pallida* invading a root cell of *Solanum sisymbriifolium*.

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1      10      20      30      40      50      60      70      80      90      100     110     120     130
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Rbp-4  LFFFIFVHYFRVLPVSSVFLFQLGLFCSCSILEFRTEQEQSKIVGTKHSRLILLKNNSIIFPYFSPFRAPLSNSFLMHQFAEAEFCPSFVPTFYSLVLTAPKNCLVSLVHVLIAKKMYLMVPIFLL
Rbp-1
Consensus  .....

131     140     150     160     170     180     190     200     210     220     230     240     250     260
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Rbp-4  FVFILSPISPAFFFDPSDFPKNSGPIQLNLKIKHQQPMPFKPTSIVALSAFERAFCCSEFAACFFSSPLSLSNNAFSLCNSHFCLNSETTTDWTDFSRKSSSSFFCLCSKSLIYVWTRDMSHEISFC
Rbp-1  FVFILSPISPAFFFDPSDFPKNSGPIQLNLKIKHQQPMPFKPTSIVALSAFERAFCCSEFAACFFSSPLSLSNNAFSLCNSHFCLNSETTTDWTDFSRKSSSSFFCLCSKSLIYVWTRDMSHEISFC
Consensus  .....nrcicfkg!flltadn!$Eidacp

261     270     280     290     300     310     320     330     340     350     360     370     380     390
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Rbp-4  SFNQSIILSLVSMCCCLKASIFCCSFISSIKFLAFDSFMSRLLCCCLFYCSI-FVCRALWIRSFCSNSARSVFTNGHKDFLLENIFTFSSSFVILFHSSICSRILPANSSCSSFTPSILLRF
Rbp-1  KPNKKVYKGSSSSGNAEPNGGLTLQHQNPACDTCCLTSETERRLMIVEYTKADWACDTCCLTL---SETERLMIAEHTKADHGCRSVFAVESIP---NQESGIFYEYVKISAITASVSI
Consensus  kfNqk!lkgSfscnaInagifccnqinpeacdacds!SeseRrcccleYcka,faCraclai....S#saRlnia#gnKaDfgcrn!FafeSip.....nqcSrILpa#skeSaiTa$!lirIaf

391     400     410     420     430     440     450     460     470     480     490     500     510     520
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Rbp-4  AIKSKPALGEVGLIYCHRSNMAIILAKRRNSLDGFIILNYSKIPNFSFNDVLFKIFPVADIDIFWDAGE SIRILCAKPLKEWAGSARIDSEERDSXCFLEFVSAYDFSKNPGPPHQLKFLIIFLYFPP
Rbp-1  EMPLDKFVGYV-KGTYSYDSRGYFAGHEVAGCSHLNKHFPVKVPKFGEGOVVGCNVLEKRQIFYTLNGE-----LLEPAGLPI-DHDAFLPCITVYAPGTKEANFGPEFHPKSAQVIEIKNE
Consensus  aikldka!GeV.KgiycwRrgailaHerancldgnih%K!PnFgendVlqcg!nlear#Ii%tdaGE.....LLEpAGLaI.Dh#ardfpCilt%apatdieanFGPefHqkad!IeIlkne

521     530     540     550     560     570     580     590     600     610     620     630     640     650
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
Rbp-4  FQAPFSNSFLMHQFAEAEFCPSFVPTFYSLVLTGPKCCSVSLRVHLIAKKLYLVNPTFCYICLYFYSISPDDFFDPSAFFKFKFALLTHLINHCNQCFLISLLFCIRRLLLLKSFQCHLYTLQLV
Rbp-1  NL
Consensus  nq.....

651  657
|-----|
Rbp-4  LSQFGNY
Rbp-1
Consensus  .....

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Fig. S4. Protein sequence similarity between Rbp-4 and Rbp-1 (ACJ14490.1 RBP1

[*Globodera pallida*]

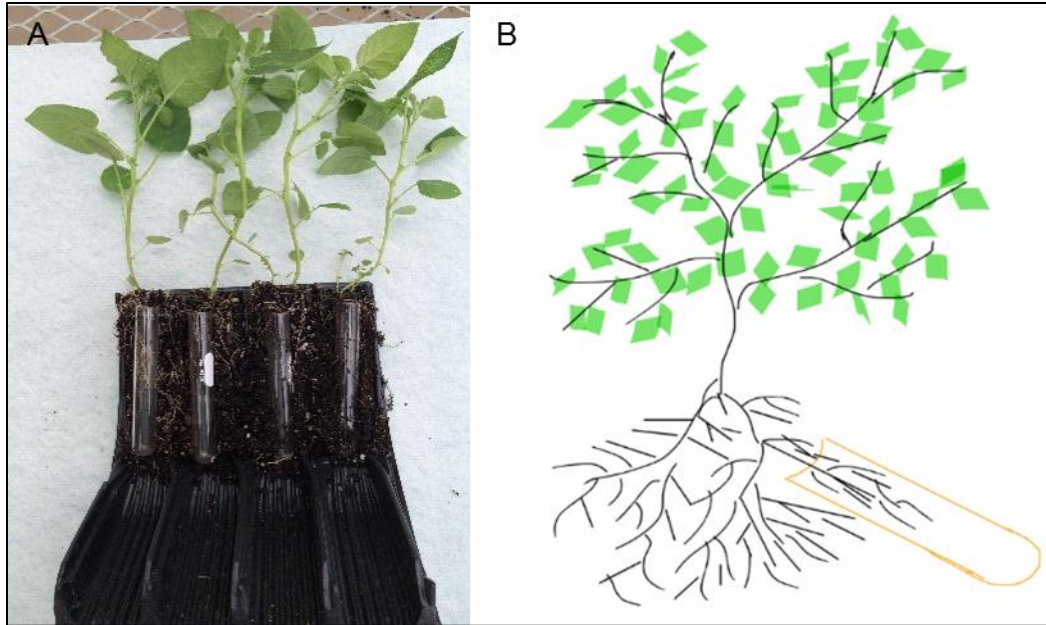


Fig. S5. Single root inoculation technique used for *Globodera pallida* infection. A, *Solanum tuberosum* growing in root trainers, a single root was transferred to the glass tube prior to inoculating with *G. pallida*; B, Prototype of single root inoculation used in the present study.

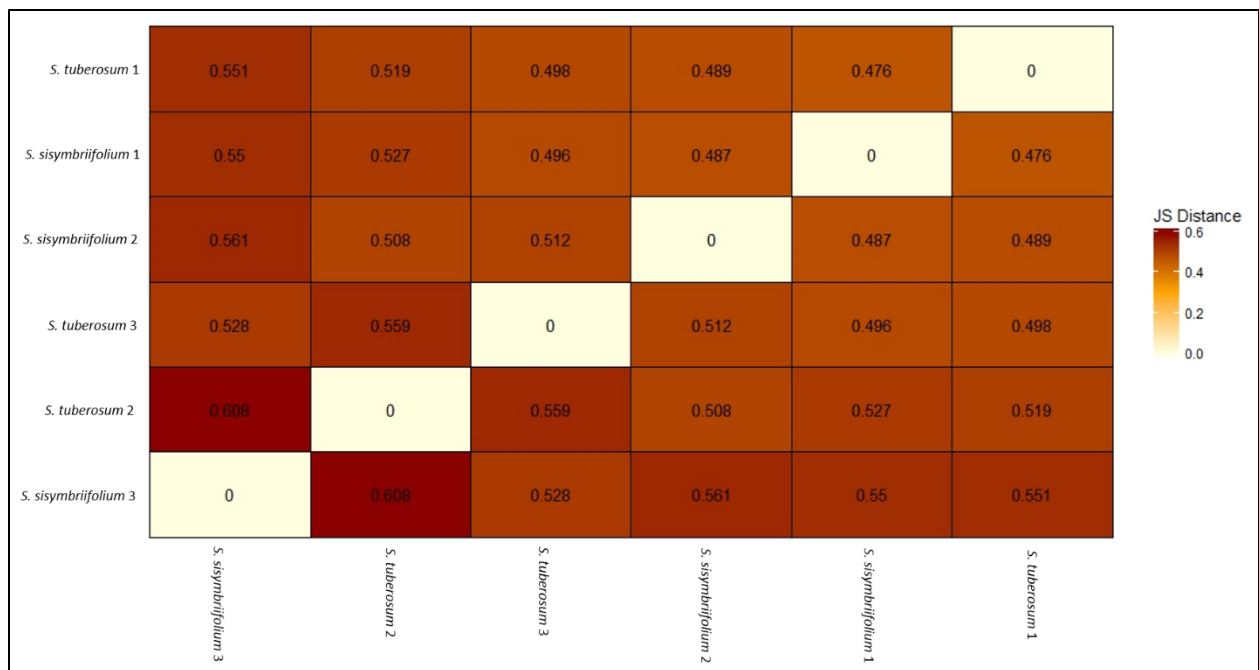


Fig. S6. Distance matrix showing insight into the relationship between the samples from susceptible *Solanum tuberosum* and resistant *Solanum sisymbriifolium* with three biological replicates. The color scale given on the right represents the distance between different samples.