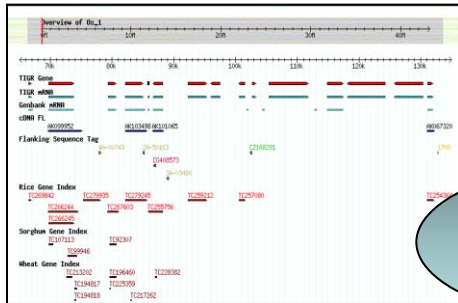
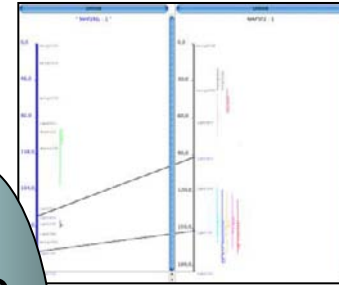
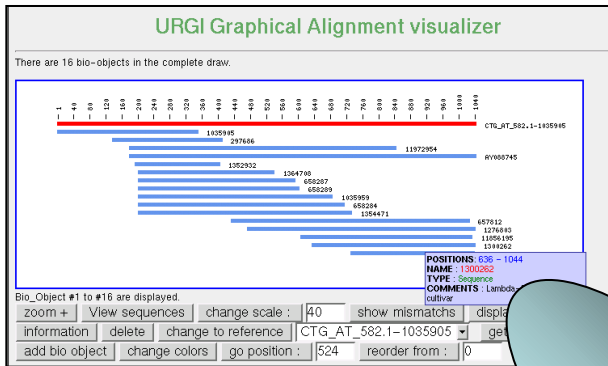


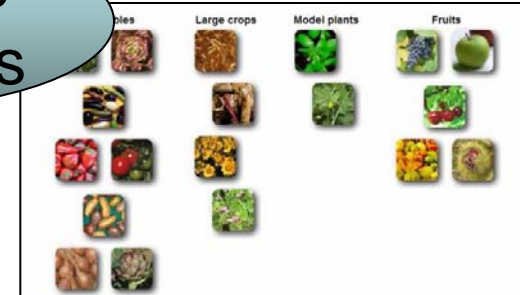
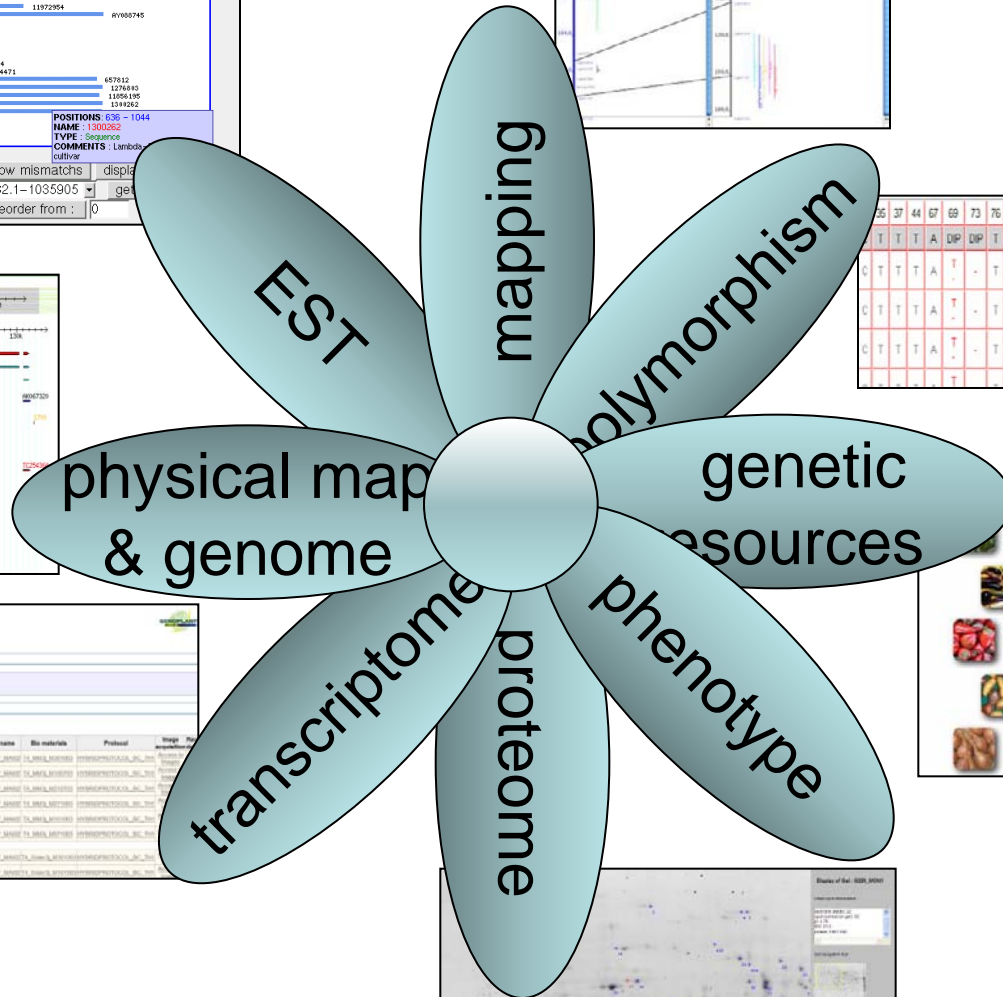
Wheat data on GnplS

the INRA URGI plant information system

Michaël Alaux

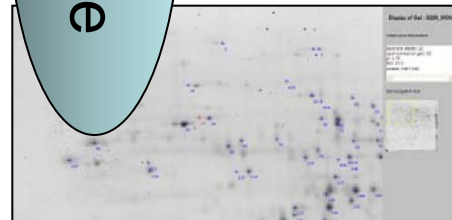


| | | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 25 | 37 | 44 | 67 | 69 | 73 | 76 | 84 | 85 | 110 | 112 | 120 | 121 | 129 | 162 | 190 | 192 | 211 | 223 | 226 | 234 | 235 | 250 | 251 | 297 |
| T | T | T | A | D | D | T | C | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | A | G | T | C | C | T | A | C | C | T | |



Hybridization results

| Result | Hybridization | Description | Experiment | Array name | Design name | Bio materials | Protocol | Image |
|--------|---------------|-------------|-------------------|------------|-------------|---------------|------------|------------|
| 1 | Hybridization | TA_1000000 | STUDY OF BOUTYRIS | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 |
| 2 | Hybridization | TA_1000000 | STUDY OF BOUTYRIS | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 |
| 3 | Hybridization | TA_1000000 | STUDY OF BOUTYRIS | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 |
| 4 | Hybridization | TA_1000000 | STUDY OF BOUTYRIS | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 |
| 5 | Hybridization | TA_1000000 | STUDY OF BOUTYRIS | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 |
| 6 | Hybridization | TA_1000000 | STUDY OF BOUTYRIS | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 |
| 7 | Hybridization | TA_1000000 | STUDY OF BOUTYRIS | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 |
| 8 | Hybridization | TA_1000000 | STUDY OF BOUTYRIS | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 | TA_1000000 |



- ◆ GBrowse interface for Wheat 3B physical map

http://urgi.versailles.inra.fr/gbrowse/cgi-bin/gbrowse/Wheat_FPC/

Wheat 3B FPC physical map v1.1

Showing 2.5 Mbp from Chr3B, positions 117,879,825 to 120,379,824

Instructions

Search using a sequence name, gene name, locus, or other landmark. The wildcard character * is allowed. To center on a location, click the ruler. Use the Scroll/Zoom menu to change magnification and position.
To switch to another organism, use the Data Source menu.

Examples: Chr3B:117879825..120379824, Chr3B_random:21879825..22937982.

[\[Hide banner\]](#) [\[Bookmark this\]](#) [\[Link to Image\]](#) [\[High-res Image\]](#) [\[Help\]](#) [\[Reset\]](#)

Search

Landmark or Region:

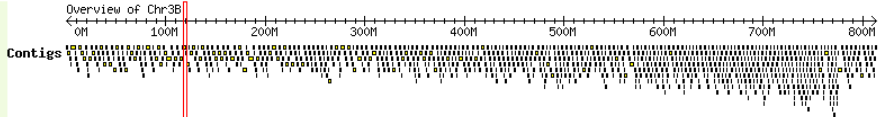
Data Source

Reports & Analysis:

Scroll/Zoom: Flip

Overview

Overview of Chr3B



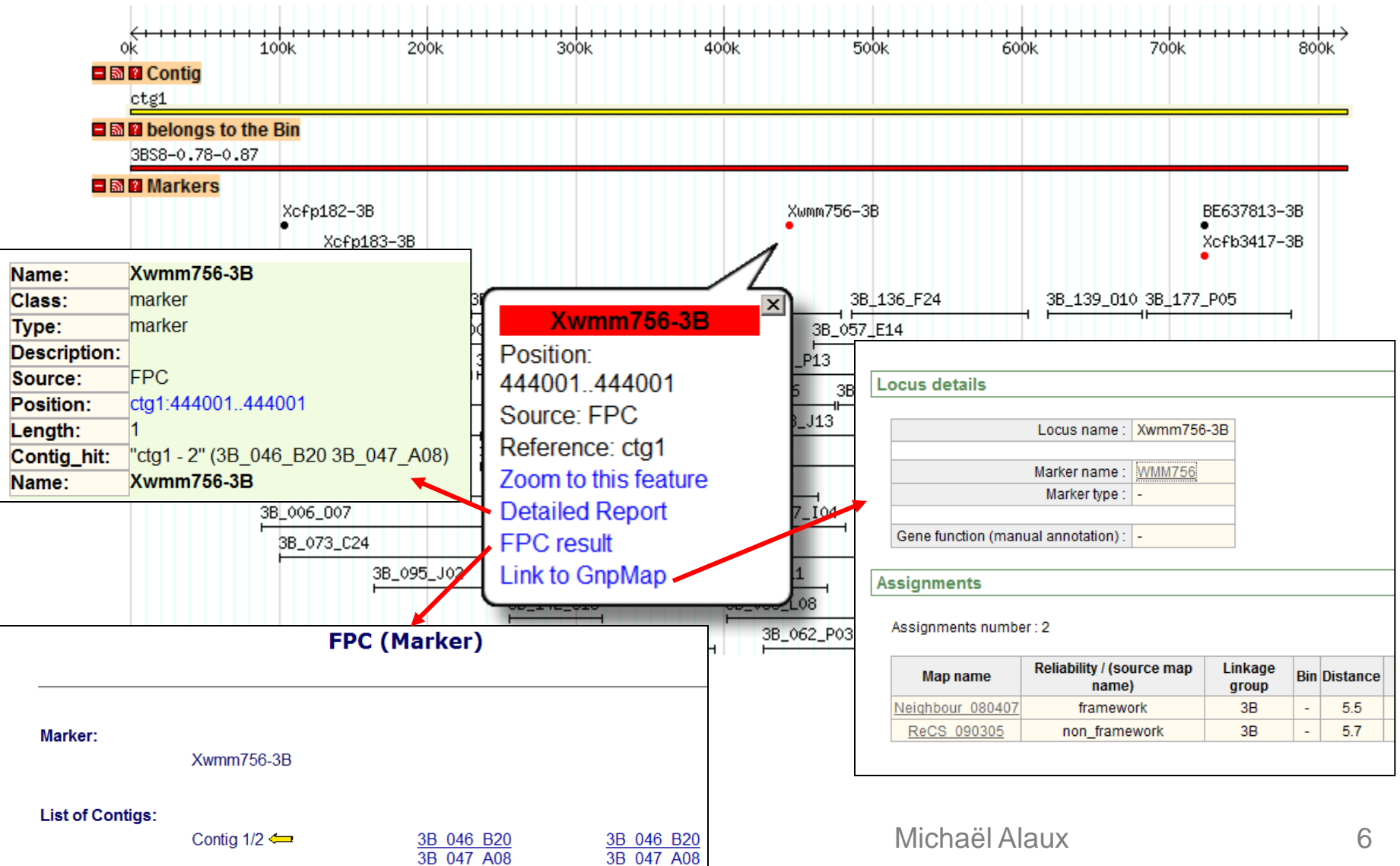
Details



- ◆ New version 2.1 (*in production soon*)
 - Contig centric view
 - GBrowse 1.69
 - Published version of the 3B FPC assembly
 - Deletion bin track
 - All features are now indexed

**Paux *et al.*,
Science (2008)
322:101-104**

➤ Markers in **red** have additional details in GnpMap



The screenshot displays a physical map of wheat with a scale from 0k to 800k. A yellow bar represents contig 'ctg1', and a red bar represents a bin '3BS8-0.78-0.87'. Several markers are plotted, with 'Xwmm756-3B' highlighted in red. A callout box for 'Xwmm756-3B' provides the following details:

- Name:** Xwmm756-3B
- Class:** marker
- Type:** marker
- Description:**
- Source:** FPC
- Position:** ctg1:444001..444001
- Length:** 1
- Contig_hit:** "ctg1 - 2" (3B_046_B20 3B_047_A08)
- Name:** Xwmm756-3B

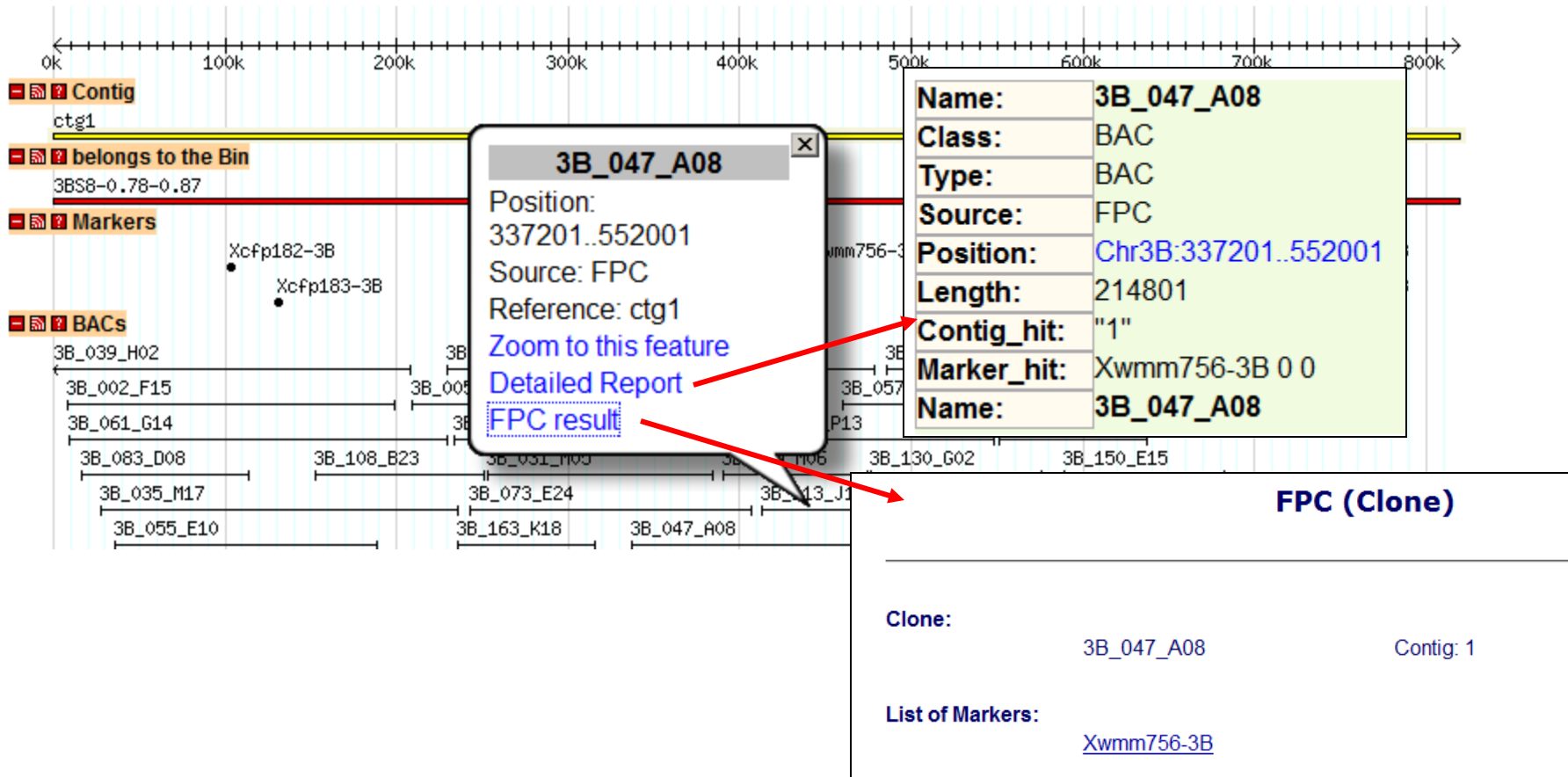
Additional callouts include:

- FPC (Marker):**
 - Marker:** Xwmm756-3B
 - List of Contigs:**
 - Contig 1/2 ← 3B_046_B20 3B_047_A08
 - 3B_046_B20 3B_047_A08
- Locus details:**
 - Locus name: Xwmm756-3B
 - Marker name: WMM756
 - Marker type: -
 - Gene function (manual annotation): -
- Assignments:**

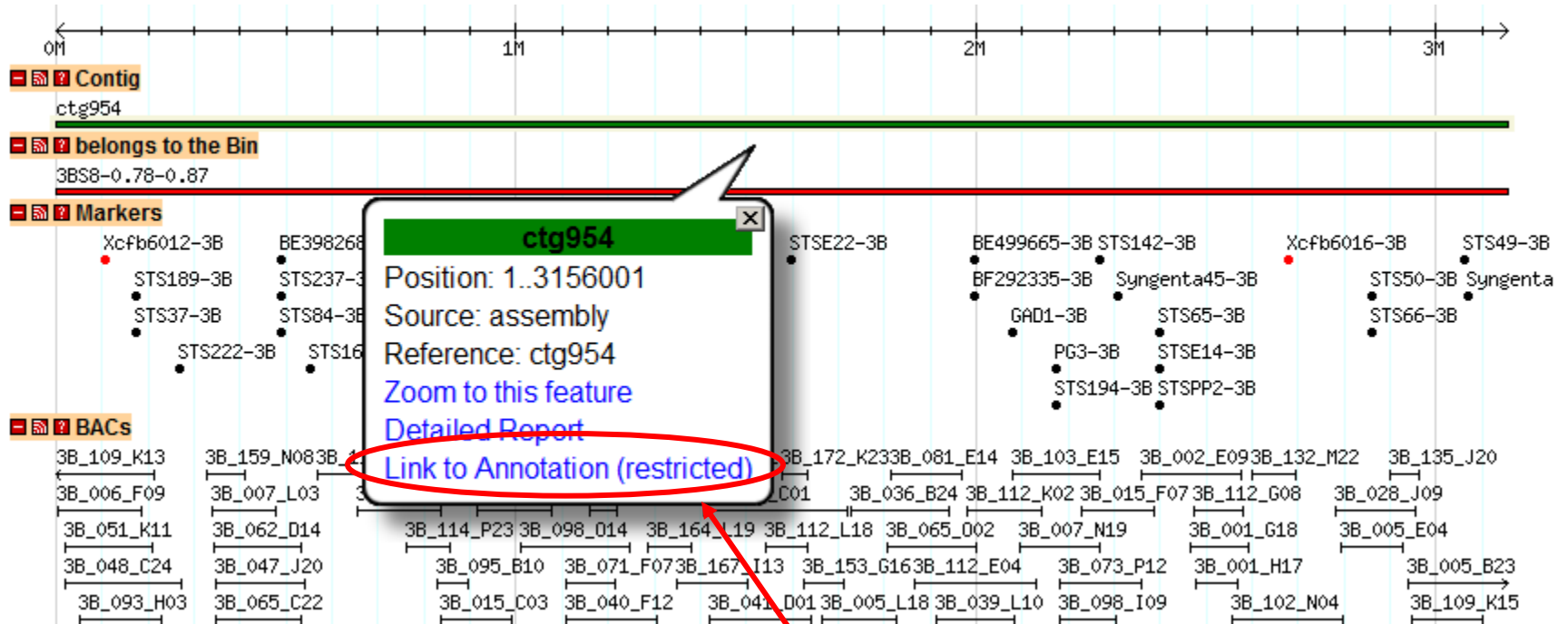
Assignments number : 2

| Map name | Reliability / (source map name) | Linkage group | Bin | Distance |
|----------------------------------|---------------------------------|---------------|-----|----------|
| Neighbour_080407 | framework | 3B | - | 5.5 |
| ReCS_090305 | non_framework | 3B | - | 5.7 |

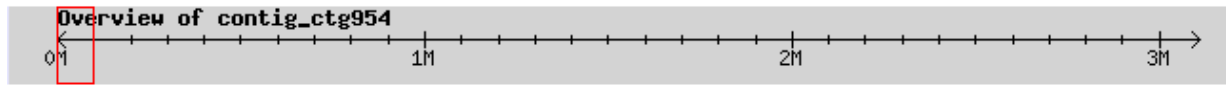
➤ BACs informations



- Contig or BAC in green are annotated



Link to the wheat BAC annotation browser



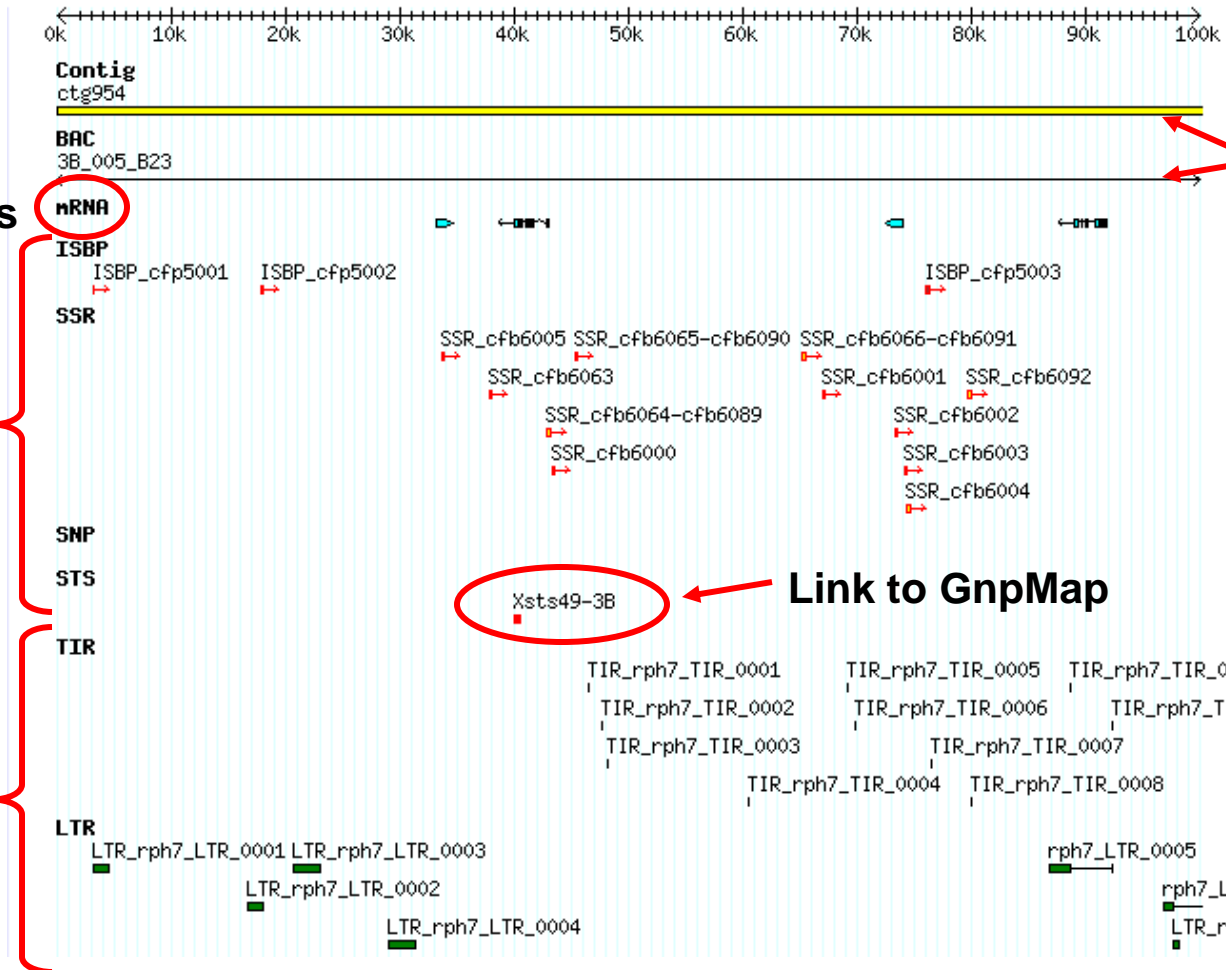
Contig

BACs

Annotations

Markers

Repeats

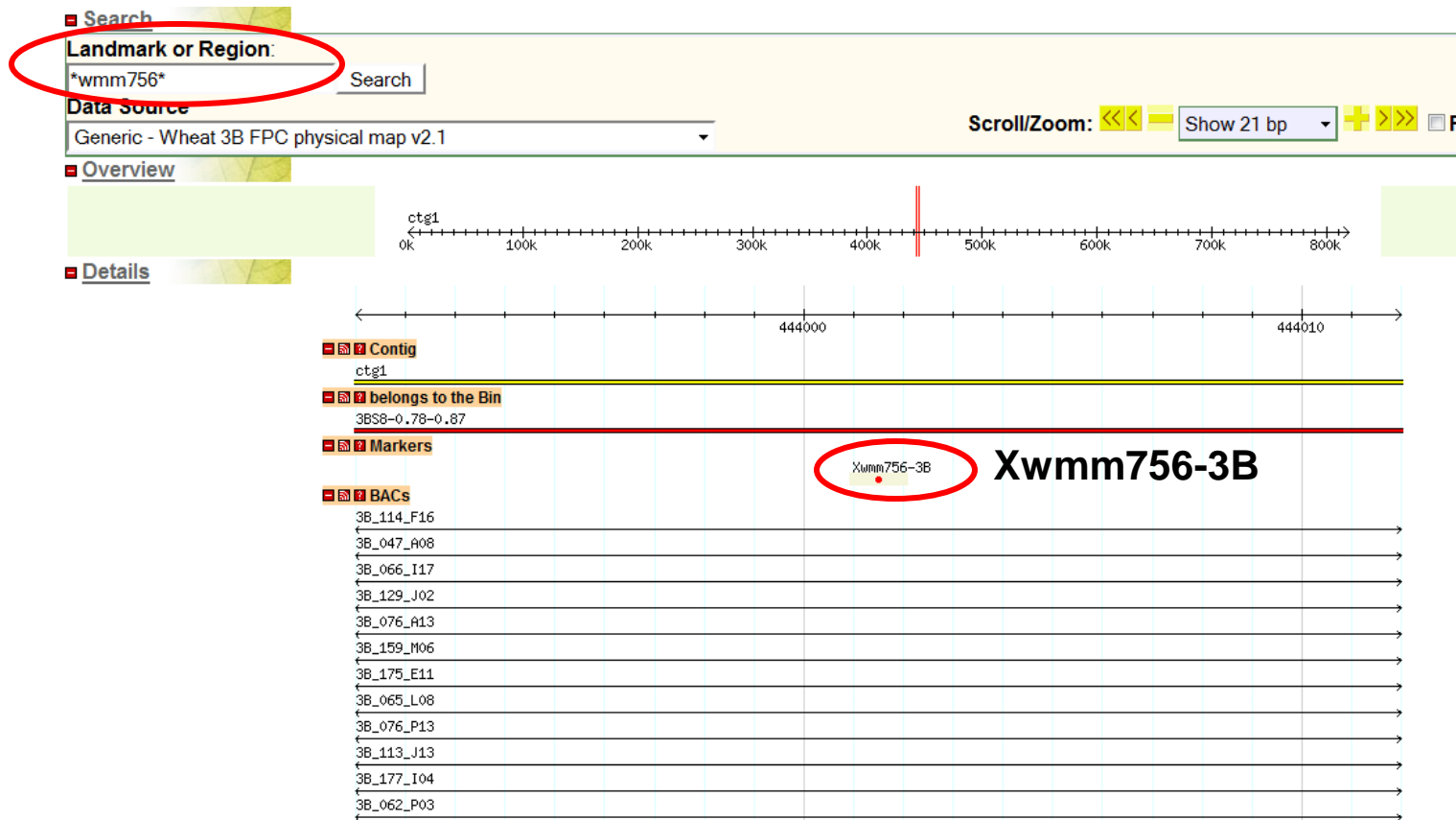


Link to physical map

Link to GnpMap

➤ Searches examples

- a marker with wildcards: *wmm756*



The screenshot shows the GnpGenome search interface. The search bar contains the query '*wmm756*' and is circled in red. The data source is 'Generic - Wheat 3B FPC physical map v2.1'. The search results show a marker 'Xwmm756-3B' circled in red. The marker is located on the contig 'ctg1' at position 444000. The marker is associated with the BAC '3B_076_P13'.

Search

Landmark or Region: *wmm756* Search

Data Source: Generic - Wheat 3B FPC physical map v2.1

Scroll/Zoom: <<< < > >> Show 21 bp + >>> F

Overview

ctg1

0k 100k 200k 300k 400k 500k 600k 700k 800k

Details

← 444000 444010 →

Contig

ctg1

belongs to the Bin

3BS8-0.78-0.87

Markers

Xwmm756-3B

BACs

3B_114_F16

3B_047_A08

3B_066_L17

3B_129_J02

3B_076_A13

3B_159_M06

3B_175_E11

3B_065_L08

3B_076_P13

3B_113_J13

3B_177_I04

3B_062_P03

- a bin: 3BS8-0.78-0.87

Search

Landmark or Region: 3BS8-0.78-0.87

Data Source: Generic - Wheat 3B FPC physical map v2.1

The following 41 regions match your request.

Matches on ctg1

3BS8-0.78-0.87 bin:FPC(3BS8-0.78-0.87) ctg1:1 bp..819.6 kbp (819.6 kbp)

Matches on ctg11

3BS8-0.78-0.87 bin:FPC(3BS8-0.78-0.87) ctg11:1 bp..1.552 Mbp (1.552 Mbp) score=n/a

Matches on ctg150

3BS8-0.78-0.87 bin:FPC(3BS8-0.78-0.87) ctg150:1 bp..928.8 kbp (928.8 kbp) score=n/a

Matches on ctg166

3BS8-0.78-0.87 bin:FPC(3BS8-0.78-0.87) ctg166:1 bp..2.97 Mbp (2.97 Mbp) score=n/a

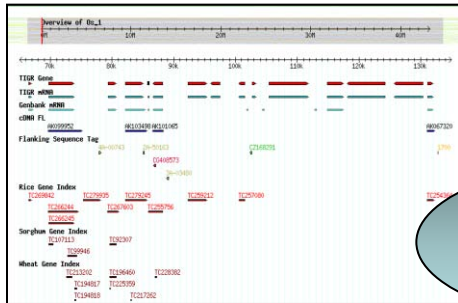
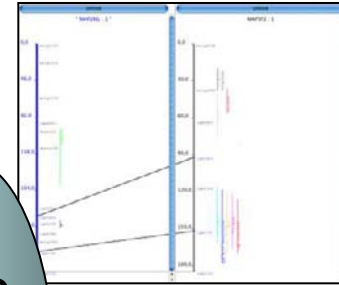
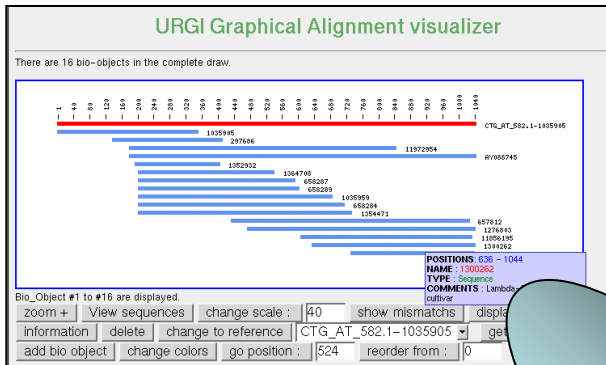
Matches on ctg219

ctg1

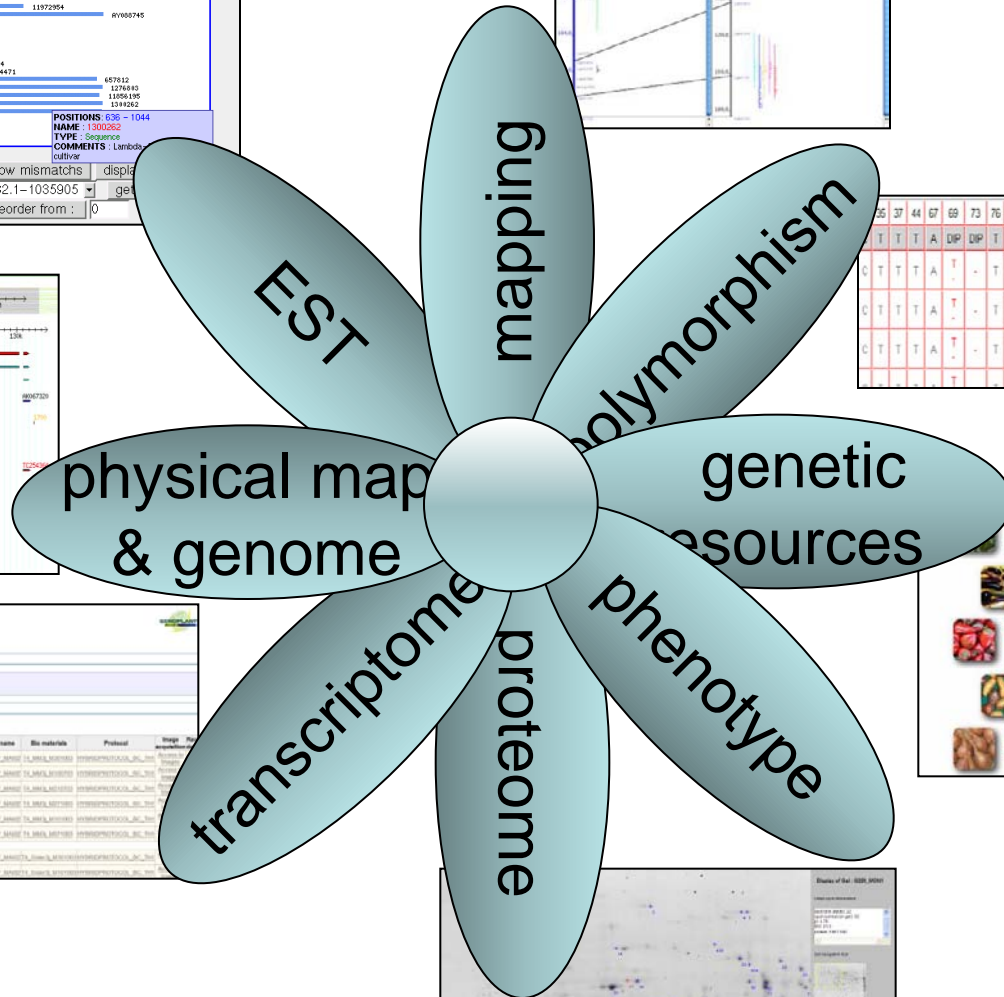
- ◆ Perspectives

- Physical maps of other wheat chromosomes
- Access to the physical map by a deletion bin view
- Next version of the wheat BAC annotation browser directly loaded by **TriAnnot pipeline**



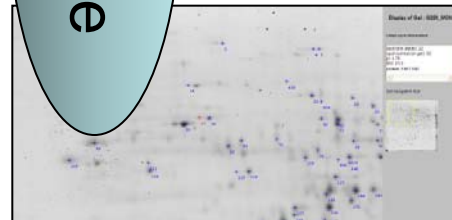
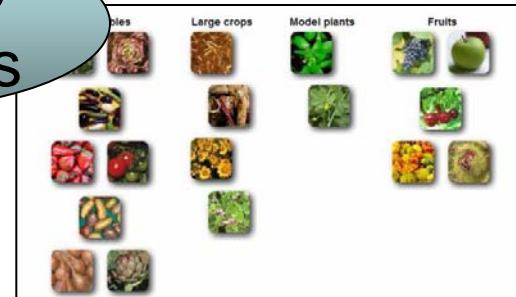


| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| 25 | 37 | 44 | 67 | 69 | 73 | 76 | 84 | 85 | 110 | 112 | 120 | 121 | 129 | 162 | 190 | 192 | 211 | 223 | 226 | 234 | 235 | 250 | 251 | 297 | |
| T | T | T | A | D | D | T | C | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | A | G | T | C | C | T | A | C | C | T | | |
| T | | | | | | | | | | | | | | | | | | | | | | | | | |



Hybridization results

| Result | Hybridization | Description | Experiment | Array name | Design name | Bio materials | Protocol | Image | Pub |
|--------|---------------|-------------|-------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-------|-----|
| 1 | Hybridization | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | | |
| 2 | Hybridization | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | | |
| 3 | Hybridization | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | | |
| 4 | Hybridization | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | | |
| 5 | Hybridization | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | | |
| 6 | Hybridization | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | | |
| 7 | Hybridization | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | | |
| 8 | Hybridization | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | SCIENTIA_SCIENCE_ARRAY_TA_000000 | | |



- ◆ The genetic mapping database

<http://urgi.versailles.inra.fr/GnpMap/>

| Map name | Population | Taxon |
|---------------------------------------|--------------------------------|-----------------------------------|
| ARE_050606 | ARE | Triticum aestivum |
| AXO_050428 | AXO | Triticum aestivum |
| CtCs_040630 | CtCs | Triticum aestivum |
| DEL_050308 | Deletion | Triticum aestivum |
| Ditelo_050308 | NT_DT | Triticum aestivum |
| ITMI_040618 | ITMI | Triticum aestivum |
| Neighbour_080407 | TaVirtualPop03 | Triticum aestivum |
| NulliTetra_050308 | NT_DT | Triticum aestivum |
| RER_040618 | RER | Triticum aestivum |
| RER_050614 | RER | Triticum aestivum |
| RLAc_071219 | RLAc | Triticum aestivum |
| ReCS_090305 | ReCS | Triticum aestivum |
| SOds_071219 | SOds | Triticum aestivum |
| SumStoa_090225 | SumStoa | Triticum aestivum |
| SupBW_071212 | SupBW | Triticum aestivum |
| TXO_050621 | TXO | Triticum aestivum |
| TaVirtualPop01_071219 | TaVirtualPop01 | Triticum aestivum |
| TaVirtualPop02_090219 | TaVirtualPop02 | Triticum aestivum |
| WuMa_071219 | WuMa | Triticum aestivum |

- ✓ **16 wheat genetic maps** with different versions of:
ARE, AXO, CtCs, ITMI, RER, Neighbour, RLAc, ReCS, SOds, SumStoa, SupBW, TXO, TaVirtualPop, WuMa.
- ✓ **3 wheat cytogenetic maps:**
DEL, Ditelo, NulliTetra.
- ✓ more than **10 000 wheat markers**
- ✓ more than **500 wheat QTLs**

Data transfer to public site in progress

Marker results

| Result number | Map name | Locus name | Marker name | Marker type | Marker origin | Goal | Gene function (manual annotation) | Reliability / (source map name) | Linkage group | Bin | Distance |
|---------------|-------------|-------------|-------------|-------------|---------------|---------|-----------------------------------|---------------------------------|---------------|-------------------------|----------|
| 1 | ITMI_040618 | XksuD14-1A | KSUD14 | RFLP | clone | Mapping | UNKNOWN | framework | 1A | XksuD14-1A.1_Xcdo426-1A | 0.0 |
| 2 | ITMI_040618 | Xcdo426-1A | CDO426 | RFLP | clone | Mapping | UNKNOWN | framework | 1A | Xcdo426-1A_XksuE18-1A | 20.7 |
| 3 | ITMI_040618 | XksuE18-1A | KSUE18 | RFLP | clone | Mapping | UNKNOWN | framework | 1A | XksuE18-1A_Xrz244-1A | 31.4 |
| 4 | ITMI_040618 | Xrz244-1A | RZ244 | RFLP | clone | Mapping | UNKNOWN | framework | 1A | Xrz244-1A_Xcdo312-1A | 45.4 |
| 5 | ITMI_040618 | Xcdo312-1A | CDO312 | RFLP | clone | Mapping | UNKNOWN | framework | 1A | Xcdo312-1A_Glu-A1 | 57.6 |
| 6 | ITMI_040618 | Glu-A1 | GLUHMW | 1D | gene | Mapping | UNKNOWN | framework | 1A | Glu-A1_Xmwig733-1A | 65.9 |
| 7 | ITMI_040618 | Xmwig733-1A | MWG733 | RFLP | clone | Mapping | UNKNOWN | framework | 1A | Xmwig733-1A_Xcdo1160-1A | 84.1 |
| 8 | ITMI_040618 | Xcdo1160-1A | CDO1160 | RFLP | clone | Mapping | UNKNOWN | framework | 1A | Xcdo1160-1A_Xmwig632-1A | 134.1 |
| 9 | ITMI_040618 | Xmwig632-1A | MWG632 | RFLP | clone | Mapping | UNKNOWN | framework | 1A | Xmwig632-1A_Xmwig912-1A | 138.4 |
| 10 | ITMI_040618 | Xmwig912-1A | MWG912 | RFLP | clone | Mapping | UNKNOWN | framework | 1A | Xmwig912-1A_Xwg241-1A | 151.4 |

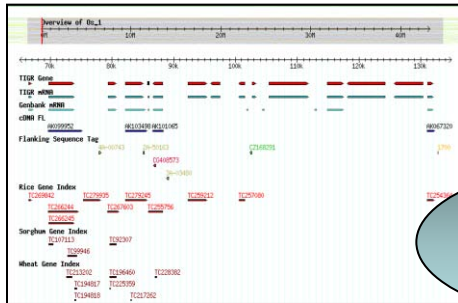
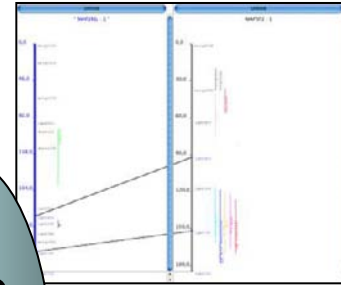
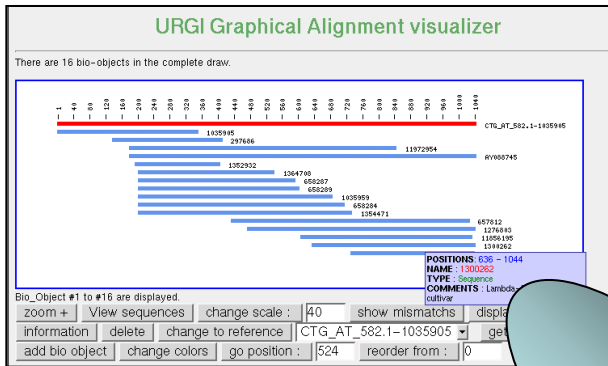
QTL results

QTL name

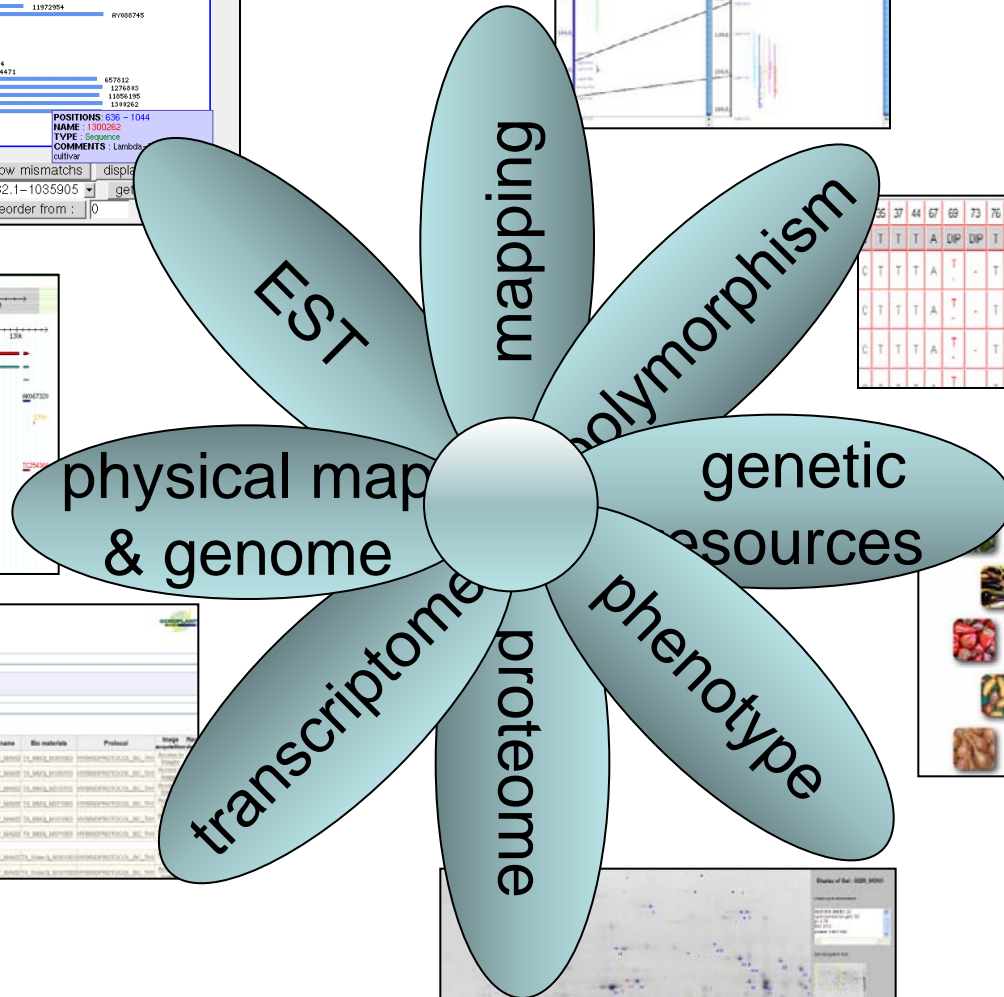
Trait

Localization

| Result number | QTL name | Theme | Trait | Trait description | Map name | Linkage group | LOD | R2 | Distance | from | to | Reliability / (source map name) |
|---------------|-------------------------------|----------------------------|-------|-------------------------------|------------|---------------|------|------|----------|------|------|---------------------------------|
| 1 | QTL_cTRL_ARE-HD_GRRH_04_N-_1B | Seed nitrogen accumulation | TRL | root total length | ARE_050606 | 1B | 2.63 | 10.4 | 0.0 | 0.0 | 12.3 | unprojected |
| 2 | QTL_cRUE_ARE-HD_GRRH_04_N-_1B | Seed nitrogen accumulation | RUE | root radiation use efficiency | ARE_050606 | 1B | 3.77 | 15.7 | 38.0 | 35.7 | 48.7 | unprojected |
| 3 | QTL_tRDM_ARE-HD_GRRH_04_N-_1B | Seed nitrogen accumulation | RDM | root dry matter | ARE_050606 | 1B | 3.08 | 10.3 | 38.0 | 35.7 | 48.7 | unprojected |
| 4 | QTL_GLUL_ARE-HD_MOCC_01_N+_1B | Seed nitrogen accumulation | GLUL | leaf glucose content | ARE_050606 | 1B | 2.63 | 7.7 | 70.0 | 59.0 | 84.0 | unprojected |
| 5 | QTL_FWR_ARE-HD_MOCC_01_N-_3D | Seed nitrogen accumulation | FWR | root fresh weight | ARE_050606 | 3D | 2.82 | 18.3 | 63.0 | 45.0 | 85.0 | unprojected |
| 6 | QTL_SACL_ARE-HD_MOCC_01_N+_4B | Seed nitrogen accumulation | SACL | leaf saccharose content | ARE_050606 | 4B | 2.71 | 9.5 | 20.0 | 0.0 | 34.0 | unprojected |
| 7 | QTL_LRR_ARE-HD_MOCC_01_N+_4B | Seed nitrogen accumulation | LRR | leaf root ratio | ARE_050606 | 4B | 5.54 | 12.5 | 31.0 | 24.0 | 38.0 | unprojected |
| 8 | QTL_FRUL_ARE-HD_MOCC_01_N+_4B | Seed nitrogen | FRUL | leaf fructose | ARE_050606 | 4B | 2.75 | 8.0 | 36.0 | 0.0 | 55.0 | unprojected |

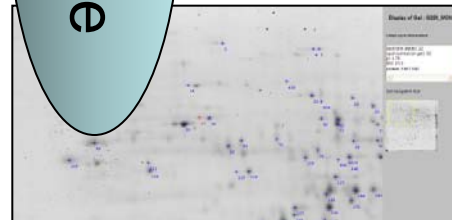
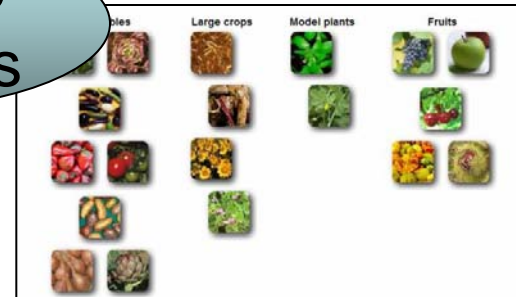


| | | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 25 | 37 | 44 | 67 | 69 | 73 | 76 | 84 | 85 | 110 | 112 | 120 | 121 | 129 | 162 | 190 | 192 | 211 | 223 | 226 | 234 | 235 | 250 | 251 | 297 |
| T | T | T | A | D | D | T | C | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | A | G | T | C | C | T | A | C | C | T | |



Hybridization results

| Result | Hybridization | Description | Experiments | Array name | Design name | Bio materials | Protocol | Image | Pub |
|--------|---------------|-------------|-------------------|------------------------|-------------|------------------------|------------------------|-------|-----|
| 1 | 1000000 | TA_00010000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY | TA_00010000 | SCIENTIA_SCIENCE_ARRAY | SCIENTIA_SCIENCE_ARRAY | | |
| 2 | 1000000 | TA_00010000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY | TA_00010000 | SCIENTIA_SCIENCE_ARRAY | SCIENTIA_SCIENCE_ARRAY | | |
| 3 | 1000000 | TA_00010000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY | TA_00010000 | SCIENTIA_SCIENCE_ARRAY | SCIENTIA_SCIENCE_ARRAY | | |
| 4 | 1000000 | TA_00010000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY | TA_00010000 | SCIENTIA_SCIENCE_ARRAY | SCIENTIA_SCIENCE_ARRAY | | |
| 5 | 1000000 | TA_00010000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY | TA_00010000 | SCIENTIA_SCIENCE_ARRAY | SCIENTIA_SCIENCE_ARRAY | | |
| 6 | 1000000 | TA_00010000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY | TA_00010000 | SCIENTIA_SCIENCE_ARRAY | SCIENTIA_SCIENCE_ARRAY | | |
| 7 | 1000000 | TA_00010000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY | TA_00010000 | SCIENTIA_SCIENCE_ARRAY | SCIENTIA_SCIENCE_ARRAY | | |
| 8 | 1000000 | TA_00010000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENCE_ARRAY | TA_00010000 | SCIENTIA_SCIENCE_ARRAY | SCIENTIA_SCIENCE_ARRAY | | |



- ◆ The polymorphism database


<http://urgi.versailles.inra.fr/GnpSNP>

- SubSNP results

Information

Display results per page
 2091 items found, displaying 1 to 10
 < 1 2 3 4 5 >

Results

 [Help]


| # | SubSNP name | Project | Batch | Line | Ref. sequence | Position on ref. seq. |
|----|-------------------------|---------|---------------|-------------|-----------------|-----------------------|
| 1 | INRA CF ASP PbfA 343 1 | CP1P5 | INRA CF ASP-5 | W7984 | consensus PBF A | 343 |
| 2 | INRA CF ASP PbfA 343 14 | CP1P5 | INRA CF ASP-5 | Renan | consensus PBF A | 343 |
| 3 | INRA CF ASP PbfA 343 16 | CP1P5 | INRA CF ASP-5 | Récital | consensus PBF A | 343 |
| 4 | INRA CF ASP PbfA 343 2 | CP1P5 | INRA CF ASP-5 | Oyata | consensus PBF A | 343 |
| 5 | INRA CF ASP PbfA 343 22 | CP1P5 | INRA CF ASP-5 | Arche | consensus PBF A | 343 |
| 6 | INRA CF ASP PbfA 343 4 | CP1P5 | INRA CF ASP-5 | Seu Seun 27 | consensus PBF A | 343 |
| 7 | INRA CF ASP PbfA 343 9 | CP1P5 | INRA CF ASP-5 | Flint | consensus PBF A | 343 |
| 8 | INRA CF ASP PbfA 964 1 | CP1P5 | INRA CF ASP-5 | W7984 | consensus PBF A | 964 |
| 9 | INRA CF ASP PbfA 964 10 | CP1P5 | INRA CF ASP-5 | Libellula | consensus PBF A | 964 |
| 10 | INRA CF ASP PbfA 964 11 | CP1P5 | INRA CF ASP-5 | Elo | consensus PBF A | 964 |

- Genotype

Information

Display 10 results per page
27 items found, displaying 1 to 10
« < 1 2 3 > »

Results

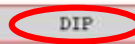
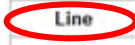
 [help]

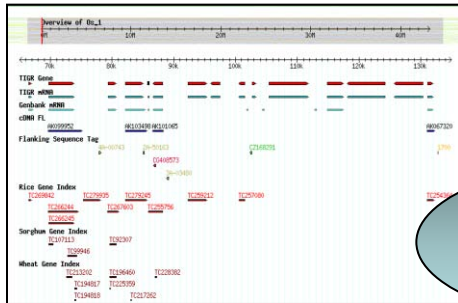
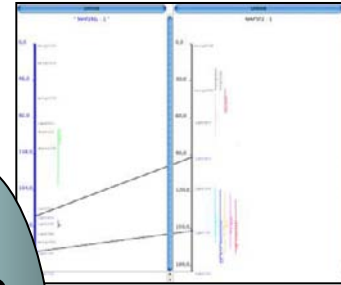
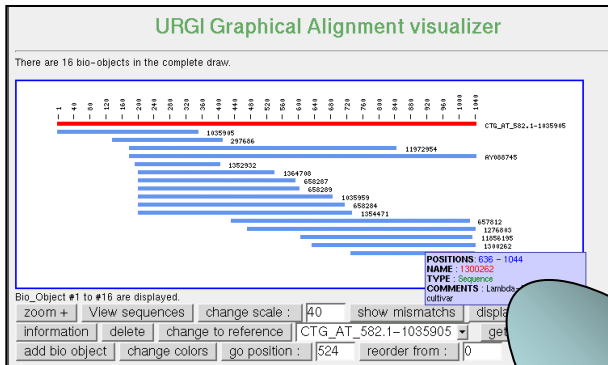
The batch INRA_CF_ASP-9 contains 37 markers.

DIP (deletion/insertion) **SubSNP T/C**

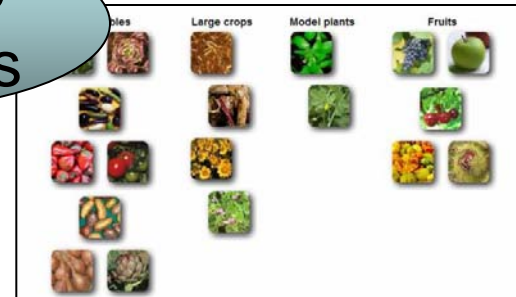
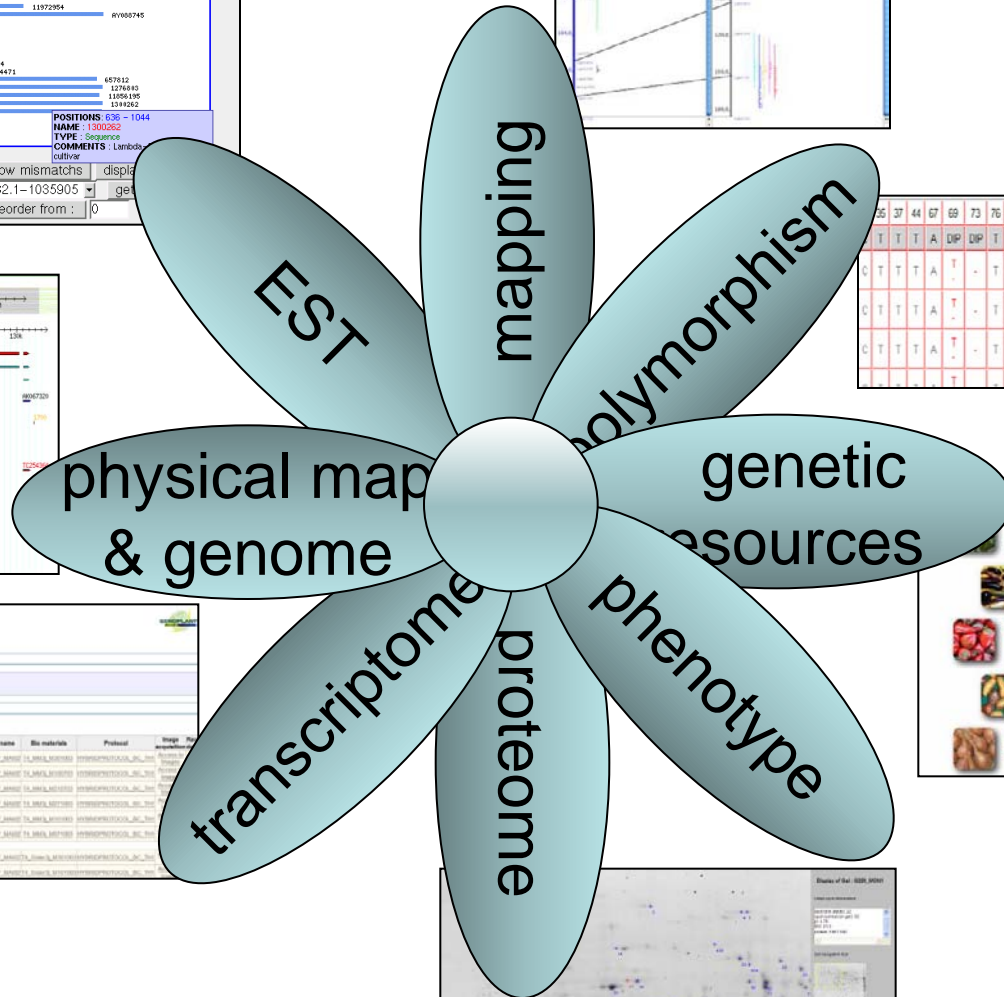
| Positions | | 236 | 333 | 401 | 512 | 538 | 596 | 613 | 616 | 740 | 841 | 849 |
|---------------|-----------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
| Ref. Sequence | consensus_glu_B1.1 | DIP | R | R | Y | Y | Y | R | R | Y | R | DIP |
| Line | <u>W7984</u> | CACTACTCGACATGGTTAGAAGTTTGGAGTGCCGCATATTTGCGGAAGCAATGG | G | A | C | C | T | G | G | T | A | ----- |
| Line | <u>Opa1a</u> | ----- | G | A | C | C | T | G | C | C | G | ----- |
| Line | <u>Chinese Spring</u> | CACTACTCGACATGGTTAGAAGTTTGGAGTGCCGCATATTTGCGGAAGCAATGG | G | A | C | C | T | G | G | T | A | ----- |
| Line | <u>Seu Seun 27</u> | CACTACTCGACATGGTTAGAAGTTTGGAGTGCCGCATATTTGCGGAAGCAATGG | G | A | T | C | T | G | G | T | A | ----- |
| Line | <u>Thatcher</u> | CACTACTCGACATGGTTAGAAGTTTGGAGTGCCGCATATTTGCGGAAGCAATGG | G | A | C | C | T | G | G | T | A | ----- |
| Line | <u>Austro-Bankuti</u> | CACTACTCGACATGGTTAGAAGTTTGGAGTGCCGCATATTTGCGGAAGCAATGG | G | A | C | C | T | G | G | T | A | ----- |
| Line | <u>Glenlea</u> | CACTACTCGACATGGTTAGAAGTTTGGAGTGCCGCATATTTGCGGAAGCAATGG | G | A | C | C | T | G | G | T | A | ----- |
| Line | <u>Bonpain</u> | CACTACTCGACATGGTTAGAAGTTTGGAGTGCCGCATATTTGCGGAAGCAATGG | G | A | C | C | T | G | G | T | A | ----- |
| Line | <u>Flint</u> | CACTACTCGACATGGTTAGAAGTTTGGAGTGCCGCATATTTGCGGAAGCAATGG | G | A | C | C | T | G | G | C | G | CGGAAGCCG |
| Line | <u>Libellula</u> | CACTACTCGACATGGTTAGAAGTTTGGAGTGCCGCATATTTGCGGAAGCAATGG | G | A | C | C | T | G | G | C | n/a | n/a |

Line



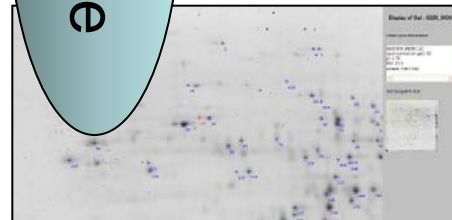


| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| 25 | 37 | 44 | 67 | 69 | 73 | 76 | 84 | 85 | 110 | 112 | 120 | 121 | 129 | 162 | 190 | 192 | 211 | 223 | 226 | 234 | 235 | 250 | 251 | 297 | |
| T | T | T | A | D | D | T | C | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | C | G | T | C | C | T | A | C | C | T | | |
| C | T | T | A | T | T | C | T | T | G | G | T | C | G | A | G | T | C | C | T | A | C | C | T | | |
| T | | | | | | | | | | | | | | | | | | | | | | | | | |



Hybridization results

| Result | Hybridization | Description | Experiment | Array name | Design name | Bio materials | Protocol | Image |
|--------|---------------|-------------|-------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------|
| 1 | 1000000 | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | |
| 2 | 1000000 | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | |
| 3 | 1000000 | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | |
| 4 | 1000000 | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | |
| 5 | 1000000 | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | |
| 6 | 1000000 | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | |
| 7 | 1000000 | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | |
| 8 | 1000000 | TA_000000 | STUDY OF BOUTYRIS | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | SCIENTIA_SCIENARRAY_ARRAY_TA_000000 | |



- ◆ The genetic collection database
<http://urgi.versailles.inra.fr/siregal>



Accessions

Results

The query has been restricted on: CEREALS [?](#) [Help]

Display results per page
 1721 items found, displaying 1 to 20
 <<< < 1 2 3 4 5 6 7 8 9 10 >>>

Accession name

Taxon = Triticum aestivum

| # | Accession number | Accession name | Taxon | Biological status | Country |
|----|------------------|----------------------|----------------------------|----------------------------|---------|
| 1 | 27 | (210-13*AV)37 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 2 | 7902 | (210-14*AV)14 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 3 | 7903 | (210-14*AV)16 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 4 | 8693 | (3-7*PE63)22 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 5 | 8485 | (68*VM6)43 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 6 | 7 | (95-13*BEZOSTAIA)3-3 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 7 | 8694 | (ASVM4*BCP)4 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 8 | 6013 | (AU*AV)37-4 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 9 | 8695 | (AU*AV)83 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 10 | 6005 | (AV*109)11 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 11 | 8 | (BELLEVUE*PEVELE)1-2 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 12 | 10 | (BEZOSTAIA*PRIEUR)53 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 13 | 8284 | (C*V)5-7 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 14 | 8285 | (C*V)7-7 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 15 | 8379 | (CT*D)86 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 16 | 9008 | (CT*D)86 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 17 | 1686 | (CT*MO)b102 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 18 | 6682 | (L7*61)109 | Triticum aestivum aestivum | Breeding/research material | FRA |
| 19 | 8484 | (MH*L7-61)82 | Triticum aestivum aestivum | Breeding/research material | FRA |



Accession: (210-13*M)1-37

Identification

Identification

| | |
|---------------------|------------------------------------|
| Accession number : | 27 |
| Accession name : | (210-13*M)1-37 |
| Synonyms : | ECPGR: GVS 1181 [] |
| Subspecies : | <u>Triticum aestivum aestivum</u> |
| Pedigree : | Ae. ventricosa 11/COURTOT//MOISSON |
| Biological status : | Breeding/research material |
| Comment : | - |

Origin

Origin

- Geographical origin : France
- Holding institution : Unite Mixte de Recherche Amelioration et Sante des Plantes, INRA

Evaluation data

Phenotypic data

| | | |
|---|--|----------------|
| - | Days to heading (Counted as days from sowing to 50% of panicles fully emerged) | 136 |
| - | Scale of days to heading | 6 |
| - | Wheat awnedness | 3 |
| - | Plant height (cm) | 80 |
| - | Scale of plant height | 4 |
| - | Scale of 1000 kernels weight | 5 |
| - | Susceptibility to <i>Puccinia striiformis</i> f. sp. <i>hordei</i> (Yellow rust) - Year 2000 | 5 |
| - | Susceptibility to <i>Puccinia recondita</i> (Leaf rust) - Year 2000 | 3 |
| - | Growth class | Hiver - Winter |
| - | Chromosome number | 6X |

Distribution

Distributor

| | |
|-------------------|---|
| Presence status : | Maintained |
| Available : | Yes, with restrictions |
| Distributor(s) : | <u>Unite Mixte de Recherche Amelioration et Sante des Plantes, INRA</u> |

Collections

Collection

| | |
|-----------|--|
| Part of : | <u>WHEAT INRA COLLECTION</u> <u>WHEAT NATIONAL COLLECTION</u> |
|-----------|--|

- ◆ New GnpIS Portal with tools to bridge genetic and genomic data
 - **Quick search:** google-like
 - **Advanced search:** biomart

Quick search

You can found the indexed databases list [here](#).

Examples: [VVI*](#), [VVIF52](#), [gene](#), [transposable element](#), [arabidopsis](#)

Search:

Advanced search

[BioMart](#)

<http://urgi.versailles.inra.fr/gnpis/>

- ◆ Search for Xcfp2105-3B marker

Quick search

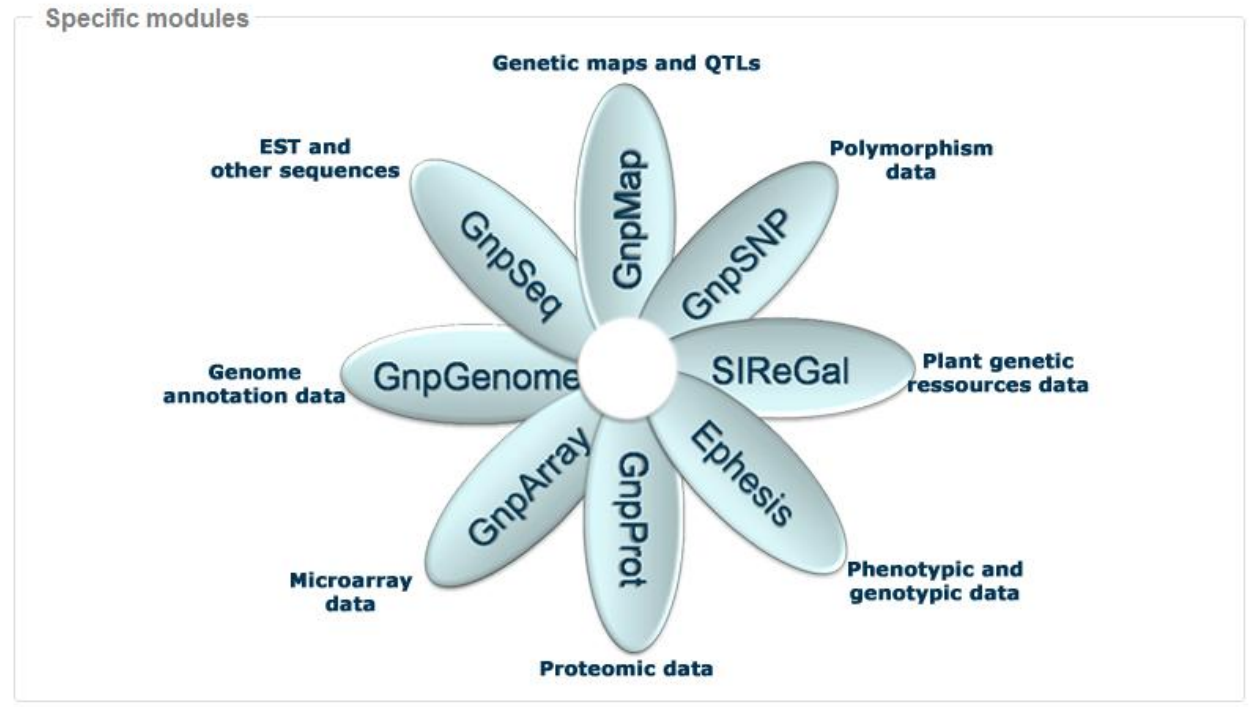
You can find the indexed databases list [here](#).

Examples: [VVI*](#), [VVIF52](#), [gene](#), [transposable_element](#), [arabidopsis](#), [AY109603](#), [Xcfe107-3B](#)

Search: Xcfp2105-3B

Advanced search

[BioMart](#)



Quick search

Results

Display 10 results per page
1 items found, displaying 1 to 1

« « < > » »

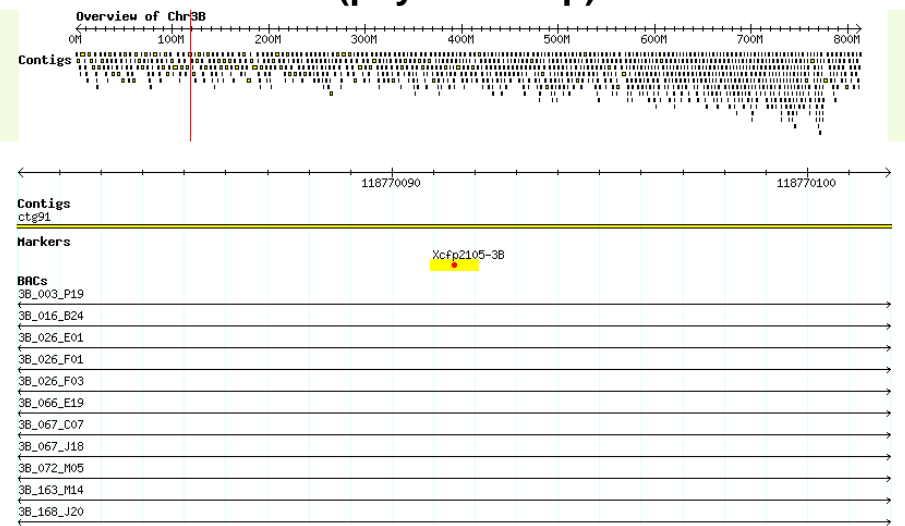
Query parameters: Xcfp2105-3B

Fgroup [genome] (1)
Xcfp2105-3B ★★★★★

Locus [mapping] (1)
Xcfp2105-3B ★★★★★

**GnpGenome
(physical map)**

**GnpMap
(genetic map)**



Locus details

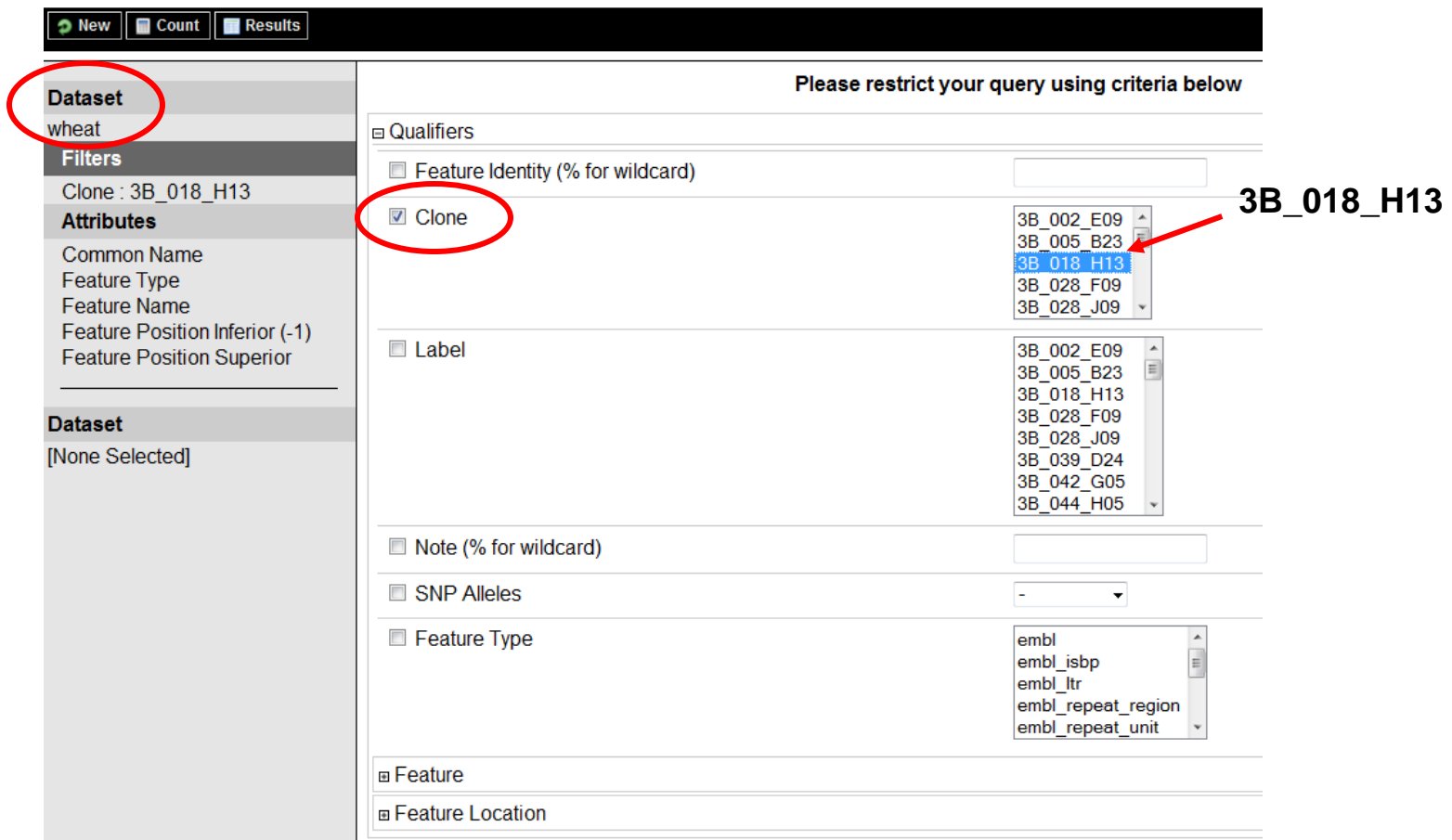
| | |
|-------------------------------------|-------------|
| Locus name : | Xcfp2105-3B |
| Marker name : | CFP2105 |
| Marker type : | - |
| Gene function (manual annotation) : | - |

Assignments

Assignments number : 1

| Map name | Reliability / (source map name) | Linkage group | Bin Distance | t |
|------------------|---------------------------------|---------------|--------------|--------|
| Neighbour_080407 | non_framework | 3B | - | 135.75 |

- ◆ Query on wheat BAC annotation database by clone name: 3B_018_H13



The screenshot shows the Biomart interface for querying the wheat BAC annotation database. The left sidebar shows the 'Dataset' as 'wheat' and the 'Filters' section with 'Clone : 3B_018_H13' selected. The 'Attributes' section lists various features like 'Common Name', 'Feature Type', etc. The main panel shows the query criteria with 'Clone' checked under 'Qualifiers'. The 'Clone' dropdown menu is open, showing a list of clone names, with '3B_018_H13' selected. A red arrow points to this selection with the label '3B_018_H13'. Other filters like 'Label', 'Note', 'SNP Alleles', and 'Feature Type' are also visible but not selected.

◆ Result

Export to multiple formats

Export all results to

File TSV

Unique results only

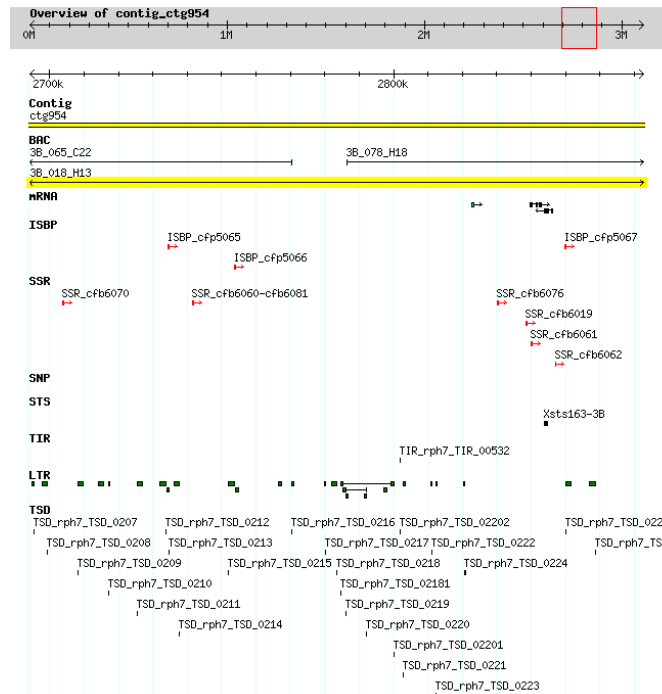
Go

Email notification to

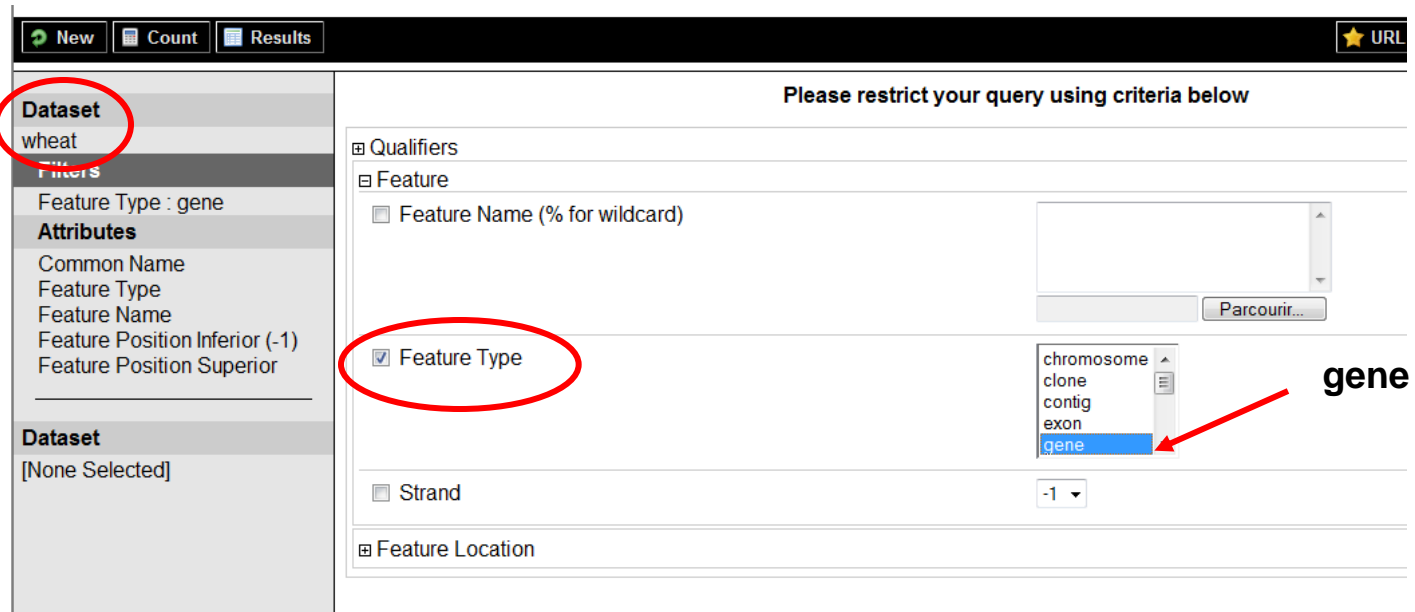
View

10 rows as HTML Unique results

| Common Name | Feature Type | Feature Name | Feature Position Inferior (-1) | Feature Position Superior |
|--------------|--------------|----------------------------|--------------------------------|---------------------------|
| common wheat | clone | 3B_018_H13 | 2694206 | 2872749 |



- ◆ Query on wheat BAC annotation database: search all genes



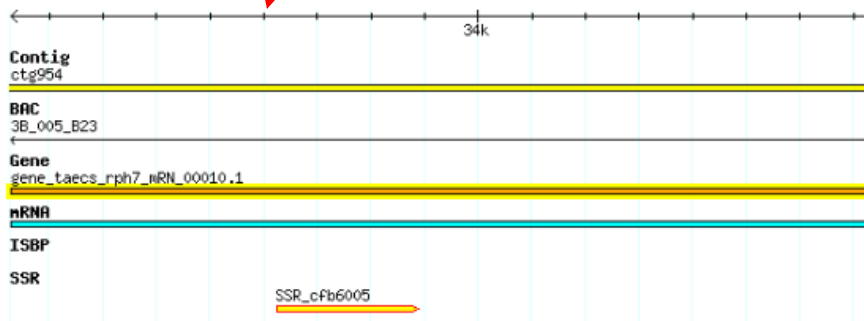
The screenshot shows the Biomart query interface for the wheat BAC annotation database. The interface is divided into several sections:

- Top Bar:** Contains buttons for 'New', 'Count', and 'Results', along with a 'URL' button.
- Left Sidebar:**
 - Dataset:** 'wheat' is selected and circled in red.
 - Filters:** 'Feature Type : gene' is selected.
 - Attributes:** 'Common Name', 'Feature Type', 'Feature Name', 'Feature Position Inferior (-1)', and 'Feature Position Superior' are listed.
 - Dataset:** '[None Selected]' is shown.
- Main Query Area:**
 - Qualifiers:** A section for adding query criteria.
 - Feature:**
 - Feature Name (% for wildcard): Includes a text input field and a 'Parcourir...' button.
 - Feature Type: Circled in red. A dropdown menu is open, showing options: 'chromosome', 'clone', 'contig', 'exon', and 'gene'. The 'gene' option is selected and highlighted in blue, with a red arrow pointing to it from the word 'gene' on the right.
 - Strand: A dropdown menu is set to '-1'.
 - Feature Location:** A section for specifying genomic coordinates.

◆ 10 first results

View rows as Unique results only

| Common Name | Feature Type | Feature Name | Feature Position Inferior (-1) | Feature Position Superior |
|--------------|--------------|---|--------------------------------|---------------------------|
| common wheat | gene | gene taecs_rph7_mRN_00010.1 | 33127 | 34735 |
| common wheat | gene | f1a | 40010 | 43000 |
| common wheat | gene | gene taecs_rph7_mRN_00030.1 | 72434 | 74048 |
| common wheat | gene | gene taecs_rph7_mRN_00040.1 | 89018 | 91796 |
| common wheat | gene | gene taecs_rph7_mRN_00050.1 | 259927 | 260647 |
| common wheat | gene | gene taecs_rph7_mRN_00060.1 | 279294 | 286788 |
| common wheat | gene | gene taecs_rph7_mRN_00070.1 | 329382 | 329691 |
| common wheat | gene | gene taecs_rph7_mRN_00080.1 | 362381 | 366777 |
| common wheat | gene | gene taecs_rph7_mRN_00090.1 | 419544 | 430586 |
| common wheat | gene | gene taecs_rph7_mRN_00100.1 | 504637 | 504951 |



Take-home messages

- ◆ 3B physical map browser with links to genetic mapping, SNP and BAC annotation data

http://urgi.versailles.inra.fr/gbrowse/cgi-bin/gbrowse/Wheat_FPC/

- ◆ Friendly tools to query wheat data in GnpIS with the google-like interface and biomart tool

<http://urgi.versailles.inra.fr/gnpis/>

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