

Biomphalaria glabrata GENOME INITIATIVE

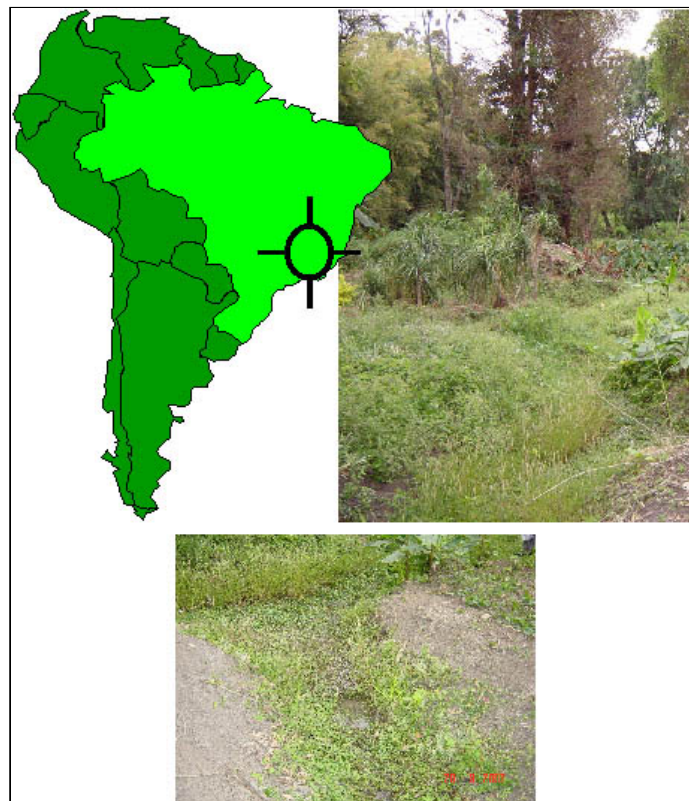


Biomphalaria glabrata field isolate (**BB02**) collected for construction of BAC library

Biomphalaria glabrata snails were collected by **Omar dos Santos Carvalho** in Brazil, South America. This field isolate will be used to generate a strain designated as **BB02 (Biomphalaria from Barreiro caught in 2002)**.

The genomic DNA from this strain will be the template for production of the BAC library.

Type location of the BB02 strain of *Biomphalaria glabrata*



Biomphalaria glabrata snails were collected in the south east of Brazil (**19°S59min/44°W02min**), from a stream into a ranch where flowers are grown, in the metropolitan region of Belo Horizonte, district of Barreiro. The photographs show the collection site and a close-up of the stream.

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This field isolate is used to generate a strain designated as **BB02** (*Biomphalaria* from Barreiro caught in 2002). The F1 of the wild caught snails was tested for susceptibility with 3 different *Schistosoma mansoni* strains (LE, SJ and AL, maintained at the Section of Mollusks Rearing at Centro de Pesquisas René Rachou in Fiocruz, Belo Horizonte Brasil) using a ratio of 10 miracidia/snail. Parasite-susceptible snails from the pre-existing BB01 strain of *Biomphalaria glabrata* (maintained over 10 years in the same lab) was used as an infectivity control.

Outcome of experimental infections, kindly contributed by **Omar dos Santos Carvalho** :

LE strain of *Schistosoma mansoni*

50 *Biomphalaria glabrata* (**BB02**) were exposed individually to 10 miracidia.
2 Snails died and 43 were infected. The percentage of infection was: **89,6%**.

50 *Biomphalaria glabrata* (control BB01) were exposed individually to 10 miracidia.
9 Snails died and 38 were infected. The percentage of infection was: 92,7%.

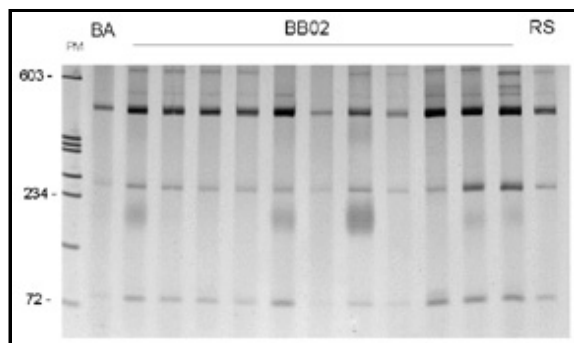
SJ strain of *Schistosoma mansoni* were:

50 *Biomphalaria glabrata* (**BB02**) were exposed individually to 10 miracidia.
6 died and 40 were infected. The percentage of infection was: **90,0%**

The **BB02** strain was also transported (by means of egg masses) to the Department of Biology, University of New Mexico, Albuquerque NM, USA. Molecular markers will be used to place this strain among previously characterized *Biomphalaria glabrata* isolates. Juvenile BB02 snails will be exposed to the NMRI strain of *Schistosoma mansoni*. Other labs may additionally test susceptibility of the BB02 strain to *Schistosoma mansoni* also.

Morphological data and sequence information confirm that the **BB02** isolate is *Biomphalaria glabrata*.

Molecular characterization of BB02 strain as *Biomphalaria glabrata* through PCR-RFLP on polyacrylamide gel, using *DdeI* enzyme and ITS region kindly contributed by **Omar dos Santos Carvalho** :



Legend

- Lane 1 : *Biomphalaria glabrata* from Jacobina (State of Bahia, Brazil).
- Lane 2 -11 : *Biomphalaria glabrata* (BB02).
- Lane 12 : *Biomphalaria glabrata* from Esteio (State of Rio Grande do Sul, Brazil).

Partial sequences of the *16S* rDNA and *NADH dehydrogenase 1* genes from BB02 were characterized and deposited in GenBank under accession numbers AY737280 and AY737281, respectively.
