

# *Biomphalaria glabrata* GENOME INITIATIVE



## Genome size of *Biomphalaria glabrata*

There are two estimates for the haploid genome size or C-value of *Biomphalaria glabrata*

- 1) Based on **sequence data collected**, WUGI (2011) has updated the estimate to **1.1 Gbases**
- 2) Based on **Feulgen-staining** (2003) the DNA content of nuclei of *Biomphalaria glabrata* hemocytes is estimated at **0.95pg** ( $\pm 0.01$  SE) or **931 Mbases**.

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### Literature reference

Gregory, T.R. (2003). Genome size estimates for two important freshwater molluscs, the zebra mussel (*Dreissena polymorpha*) and the schistosomiasis vector snail (*Biomphalaria glabrata*). *Genome* **46**: 841-844. PMID: 14608401 DOI:10.1139/g03-069

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This value is based on analysis of hemocyte samples from three different strains (M-line, 13-16R1 and BS90) of *Biomphalaria glabrata*. Integrated optical density (IOD) measurements were taken from 25 Feulgen-stained nuclei of hemocytes of individual snails (n = 14, total of 350 nuclei), and compared against >100 chicken erythrocyte nuclei (1C = 1.25pg), using an image analysis system. There was no difference in IODs between the washed and unwashed hemocyte samples, and variation among individuals, including among strains was minimal.

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Feulgen-staining and measurement of the C-value were kindly performed (March 2002) at the University of Guelph by **T. Ryan Gregory**.

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Hemocyte samples were prepared using *Biomphalaria glabrata* strains available at the University of New Mexico by **Coen M. Adema**.

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