

**Figure S2. Phylogenetic tree of CBM37 modules from *R. albus* and 'X' modules from *R. bromii*.**

We observed that the *R. bromii* 'X' modules were on a different phylogenetic clade (cyan clade) than the classical CBM37 from *R. albus* (orange and red clades). In the cyan clade, 49 'X' modules were all clustered together, suggesting a potential new function for these modules. Bootstrapping confidence values higher than 0.6 are shown.

