

Despite that ncRNAs are important in environmental response in bacteria and mammals, the role of ncRNA has seldom been characterized in yeast.

Question: Why so seldom characterized? Really “overlooked”?

NcRNAs are sensors of environmental signals by interacting with signal transduction proteins and nuclear receptors[]. It regulates multiple levels of gene expression, including transcription, mRNA stability and translation[].

But in yeast, the study of ncRNA has just started since the widely-expressed antisense RNA were recently discovered[].

It is important to elucidate the function of these “overlooked” ncRNA in yeast and understand how they regulate gene expression in respond to changing environment.

Because stress is a critical and sometimes inevitable case of changed environment to cells, ncRNA may play a role in coping with the adverse environment.

In bacteria, fruit flies and mammals, ncRNA has a regulatory role in stress response. While in yeast, most previous stress studies focused on protein-coding changes.

Thus, to study how ncRNAs respond to stress would be a good starting point to understand the function of ncRNA in yeast.