**Journal of Baltic Science Education**

**ISSN:** 1648-3898


**Original article**

**Development of an Online Three-Tier Diagnostic Test to Assess Pre-University Students’ Understanding of Cellular Respiration**

This research reports the development of an online three-tier diagnostic instrument for pre-university students related to cellular respiration. To date, only a few studies have been conducted to identify students’ alternative conception in the topic of cellular respiration. One of the contributing factors is due to lack of instrument developed to measure these alternative conceptions. Three-tier tests are used as assessment tools for lecturers to determine students’ alternative conceptions related to cellular respiration and their knowledge and understanding about the concepts.