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The impact of a story on learning ketone body metabolism

The screenshot shows a web browser displaying a ResearchGate article. The browser's address bar shows the URL: https://www.researchgate.net/publication/369824235_The_impact_of_a_story_on_learning_ketone_body_metabolism. The page features a green header with the ResearchGate logo and a search bar. The article title is "The impact of a story on learning ketone body metabolism", dated April 2023, with authors Genesio Romero-Zandano, Fernando Unzueta-Rivera, and José Rafael de Almeida. A prominent red button labeled "Request Full-text PDF" is visible. The abstract text discusses biochemistry education, metabolic pathway learning, and the use of a story to enhance understanding of ketone body metabolism. A blue sidebar on the right promotes ResearchGate's research database with statistics: 20+ million members, 150+ million publication pages, and 2.3+ billion citations. The Windows taskbar at the bottom shows the system clock as 03:49 p.m. on 02/05/2023.

Article
The impact of a story on learning ketone body metabolism
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Abstract
Biochemistry is a core subject in the cross-disciplinary training of Biotechnology engineering courses. Metabolic pathway learning was traditionally regarded as tedious laboratory experience and tedious lecture, which could a large number of reactions at a molecular level, their enzymes and regulators. The current success of Covid-19 outbreak have motivated the development of complementary tools that expand the horizon of metabolism learning and to measure students' perception. Specifically, a peer-reviewed text describing the ketone body metabolism was used during the semester as a didactic strategy to learn the biochemical pathway. A questionnaire evaluated the students' understanding and acceptance of the methodology ($n = 83$). Our findings showed that a high proportion of students (88.1%) were able to recall the story in the same situation in the classroom (openness and memory). On the other hand, they were satisfied and suggested that such methodology is effective and fun. In summary, most of the survey responses related to acceptance of story-based strategy ranged from 72% to 97%. Collectively, these results indicated that the story is appropriate to describe pathways, learning is simplified for drawing material, learning and engagement of students. The narrative represents a bridge to connect the teaching of metabolic reactions involved in the synthesis and degradation of 3-hydroxybutyrate (3-OH-B), acetoacetyl, and acetate with previously learned knowledge, questions, and its synthesis. In conclusion, this tool was used to describe ketone body-related pathways and making metabolism learning more interesting and easier.

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