## Generative AI feedback and misconception detection in pharmacology education

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**Introduction** Artificial intelligence (AI) tutors are rapidly entering higher education, yet the literature on AI‑generated formative feedback remains sparse, and— to our knowledge—no published work has examined how AI might identify and address misconceptions that often underlie errors in pharmacology. We therefore draw on an initial empirical study of students’ perception of AI feedback and outline a planned extension aimed at misconception detection.

**Methods** Third‑year medical students completed an online test on foundational pharmacology. A GPT‑4 scoring engine provided numeric scores and narrative feedback. Focus group interviews underwent inductive thematic analysis.

**Results**Three themes that affect student engagement with AI feedback were identified from the focus groups: 1) Trustworthy and accessible information; 2) Timing; the students underlined the need to have time in the schedule to work with the feedback, and; 3) Feedback literacy—students varied in their ability to translate AI advice into concrete study actions.

**Discussion**Our initial study confirms that AI‑generated feedback can be integrated into undergraduate pharmacology education with generally positive reception, but also highlights the need for scaffolding students’ feedback literacy. Building on these findings, we are planning a follow-up study that uses AI analysis of students’ answers to detect typical misconceptions. If successful, this could convert routine quizzes into adaptive learning opportunities and deepen conceptual understanding, while saving educator resources.