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Development of a Process Oriented Guided Inquiry Learning (POGIL) Method for the Teaching of Pharmaceutics in a Novel Integrated Pharmacy Curriculum at RCSI

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Rationale

- The School of Pharmacy at RCSI, introduced a novel integrated Pharmacy program (MPharm) in 2015 with integrated teaching of science and practice based material.
- Pharmaceutics, the science of dosage forms, is a specialist core science subject in the curriculum and is generally taught by didactic lectures and labs.
- The aim of this study was to apply the principle of student centred learning (SCL) strategy for the teaching of Pharmaceutics by using POGIL
- A specific and conventional pharmaceutics topic; 'Formulation of tablets containing the proton pump inhibitor, Omeprazole' was selected for development as a POGIL.

Methodology



Section A: Examination of the tablets (10 minutes)

Describe the tablets in the table provided below. You can include a drawing for clarity.

Description	Losame [®] 20mg tablet	Losec Mups [®]
Whole tablet		
Split tablet		
How many different parts (compartments) are there to each tablet? Identify these compartments as matrix/body, granules, coating, pellets etc A diagram might be useful		
Which compartment do you believe contains the drug?		
Compare your observations with the description in the SPC, sections 2 and 3		

Break of 5 minutes to go through answers from section A

SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT
Losamel 20 mg gastro-resistant tablets

2 QUALITATIVE AND QUANTITATIVE COMPOSITION
One gastro-resistant tablet contains 20.0 mg omeprazole.
Excipient(s) with known effect
Each gastro-resistant tablet contains 39.00 mg lactose monohydrate.
For the full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM
Gastro-resistant tablet.
Round, light grey coated tablets.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications
Omeprazole gastro-resistant tablets are indicated for:

Adults

- Treatment of duodenal ulcers.
- Prevention of relapse of duodenal ulcers.
- Treatment of gastric ulcers.
- Prevention of relapse of gastric ulcers.
- In combination with appropriate antibiotics, *Helicobacter pylori* (*H. pylori*) eradication in peptic ulcer disease.
- Treatment of NSAID-associated gastric and duodenal ulcers.
- Prevention of NSAID-associated gastric and duodenal ulcers in patients at risk.
- Treatment of reflux oesophagitis.
- Long-term management of patients with healed reflux oesophagitis.
- Treatment of symptomatic gastro-oesophageal reflux disease.
- Treatment of Zollinger-Ellison syndrome.

Findings

- Instead of a didactic lecture on the manufacture of the tablets, students actively compiled the manufacturing process through exploration of the tablets, PIL and their previous knowledge
- It allowed students to engage in critical thinking, problem solving, information processing and teamwork as it is small group based
- This is an ongoing project which will be further improved and evaluated for its impact on students' learning



