

# RIBOFLAVIN: A REVITALIZED VITAMIN

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## INTRODUCTION

- 💡 Riboflavin is a water-soluble vitamin that belongs to the vitamin B2 complex. It is found abundantly in various foods and has a yellow color while being fluorescent.
- 💡 It is considered a promising natural photosensitizer for photodynamic therapy and is being studied for its ability to selectively target cancer cells.
- 💡 Photodynamic therapy is a modern and non-invasive treatment with minimal side effects that has shown to be effective for various types of cancer.

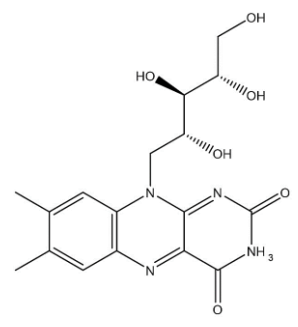


Figure 1. The chemical structure of riboflavin.

# 1

## OBJECTIVES

# 2

## METHODOLOGY

# 3

## RESULTS

Develop and evaluate a pharmaceutical formulation for photodynamic therapy, using extracts enriched in riboflavin obtained from various Cucurbitaceae leaves (such as pumpkins, zucchinis, watermelons, cucumbers, etc).

Different extraction methods will be used, including emerging techniques in addition to official methods. The extract's chemical characterization will be performed using chromatographic methods.

- I. Obtain an extract rich in riboflavin or purified riboflavin.
- II. Validate the potential of riboflavin as a photosensitizer.
- III. Demonstrate the absence of toxic effects on non-tumor cells.
- IV. Prepare a formulation containing extracts enriched in riboflavin or purified riboflavin.
- V. Validate the effect and stability of the developed formulation.

## CONCLUSION

Since this vitamin has promising qualities as a photosensitizer, the utilization of cucurbit leaves as a source of riboflavin is an undiscovered area of research with significant promise to provide new possibilities for the treatment of cancer through photodynamic therapy.

**References:**  
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