



الجمهورية الجزائرية الديمقراطية الشعبية

وزارة التعليم العالي والبحث العلمي

People Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research

جامعة محمد الصديق بن يحيى - جيجل

University of Jijel- Mohammed Seddik Benyahia



Faculty of Nature and Life Sciences

Department of Molecular and
Cell Biology

كلية علوم الطبيعة و الحياة

قسم البيولوجيا الجزيئية و الخلوية

Thesis

Presented by Moufida BENSAM

In Fulfillment of the Requirements for the Degree of Doctor of Sciences

In Biology

Speciality: Molecular and Cellular Biology

Title

**Antioxidant and anti-tumoral activities of the ethanolic crude extract
from *Ephedra alata*: expression modulation of several apoptosis-
related genes and galectins 1, 3, 7 and 9**

The defense will take place on 04/10/2025, at 4:00 p.m., at the Central Library (2nd floor) of the University of Jijel

Examiners Committee

Pr SIFOUR Mohammed, Chairman, University of Jijel- Mohammed Seddik Benyahia

Pr RECHRECHE Hocine, Supervisor, University of Jijel- Mohammed Seddik Benyahia

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