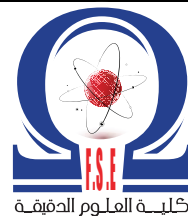




الجمهورية الجزائرية الديمقراطية الشعبية  
وزارة التعليم العالي والبحث العلمي  
جامعة قسنطينة 1 – الإخوة منتوري  
كلية العلوم الدقيقة

PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA  
MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH  
Constantine 1 University – Frères Mentouri  
Faculty of Exact Sciences



## ANNONCE DE SOUTENANCE



Conformément à la décision n° 33/D3C/2026 du 16 Mars 2026 autorisant la soutenance d'une thèse de doctorat, le Vice-doyennat chargé de la post-graduation, de la recherche scientifique et des relations extérieures, a n n o n c e la soutenance publique d'une thèse de doctorat le :

**Dimanche 26 Avril 2026 à 16 H00**

Lieu : Salle de conférences sise au Campus Chaab Erssas.

**Filière** : CHIMIE

**Spécialité** : Chimie Pharmaceutique

**Doctorante** : **CHEBCHOUB Soumya épouse AOUANE**

Sur le thème : « Etude phytochimique et évaluation du potentiel biologique des espèces *Stachys guyoniana* de Noe, *Linum tenue* Desf. et *Linum trigynum* L ».

Devant le jury d'examen :

	Nom et prénoms	Grade	Etablissement d'appartenance
<b>Président</b>	KABOUCHE Ahmed	Professeur	Université Constantine1, Frères Mentouri
<b>Directrice de thèse</b>	KABOUCHE Zahia	Professeure	Université Constantine1, Frères Mentouri
<b>Examineurs</b>	KHALFALLAH Assia	M.C.A	Université Constantine1, Frères Mentouri
	DAROUI -MOKADDEM Habiba	M.C.A	Université Badji Mokhtar Annaba
	ZEGHIB Assia	M.C.A	Université Cheikh Larbi Tebessi – Tébessa -
	LAKHAL Hichem	M.C.A	Université Mohamed Bousiaf M'sila -

# A b s t r a c t

This thesis focused on the phytochemical study and the evaluation of the biological potential of *Stachys guyoniana* de Noé (Lamiaceae), *Linum tenue* Desf., and *Linum trigynum* L. (Linaceae). Five compounds were isolated from *S. guyoniana* and seven from *L. tenue*, including three new flavonoids, using various chromatographic techniques (TLC, VLC, CC, and HPLC).

Their structures were elucidated through spectroscopic analyses, including 1D NMR ( $^1\text{H}$  and  $^{13}\text{C}$ ) and 2D NMR (COSY, HSQC, HMBC, NOESY, and ROESY), high resolution mass spectrometry (HR ESI MS), as well as comparison with literature data. The RP UHPLC ESI QTOF MS analysis of the three species confirmed their richness in flavonoids and phenolic acids.

From a biological point of view, the *in vitro* assays revealed that the studied extracts possess interesting bioactive potential. The antioxidant activity was found to be strong for *S. guyoniana* (EBSG and the isolated compounds), good for *L. tenue* (EBLTe and certain compounds), and more moderate for *L. trigynum* (EBLTr). All three extracts showed significant inhibition of butyrylcholinesterase (BChE), although the isolated compounds were inactive, whereas  $\alpha$  amylase inhibition was notable and comparable to that of acarbose.

The antimicrobial activity was moderate to weak across all extracts. Finally, the larvicidal effect was moderate for EBLTe and EBLTr but absent for EBSG. This work thus highlights the bioactive potential of these species, particularly through their antioxidant and enzymatic inhibition activities, while also emphasizing the originality of some newly isolated compounds.