



جامعة السلطان مولاي سليمان
Université Sultan Moulay Slimane

SULTAN MOULAY SLIMANE UNIVERSITY
Faculty Of Sciences And Technics, Béni-Mellal



Efficient synthesis of new pyrazoles derivatives via functionalized aryl-sydnones

Presented by

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Thesis Co-director :	Pr. M. KHOULI	Université Sultan Moulay Slimane, Béni-Mellal, Maroc

Plan of the presentation

INTRODUCTION

EFFICIENT SYNTHESIS OF NEW PYRAZOLES DERIVATIVES VIA FUNCTIONALIZED ARYL-SYDNONES

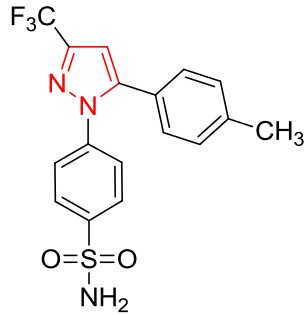
- Synthesis of pyrazoles via cycloaddition 1,3 dipolaire of sydnone
- Synthesis of 1,3,4-trisubstituted pyrazoles derivatives via cross coupling

CONCLUSION AND PERSPECTIVE

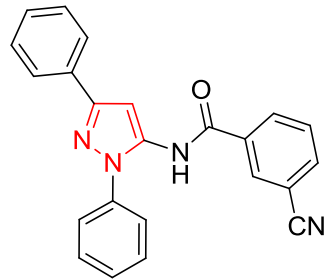
INTRODUCTION

- **The pyrazole derivatives constitute an interesting class of organic compound with diverse chemical applications. Indeed, several classes of drugs carrying the pyrazole fragment have been used in therapeutic chemistry.**

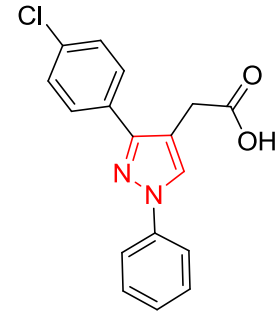
INTRODUCTION



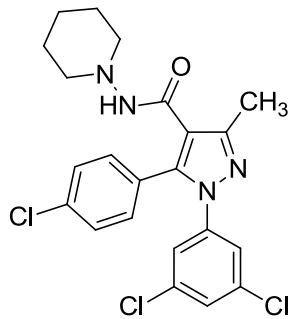
Celecoxib
(anti-inflammatory)



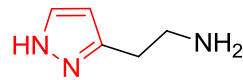
CDDPB
(anti-psychotic)



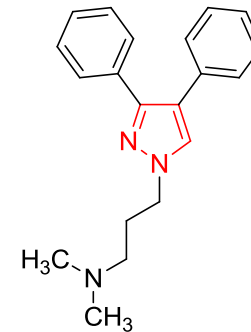
Lonazolac
(anti-inflammatory)



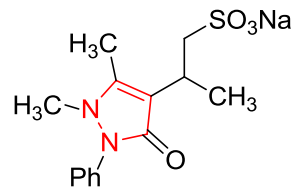
Rimonabant
(anti-obesity)



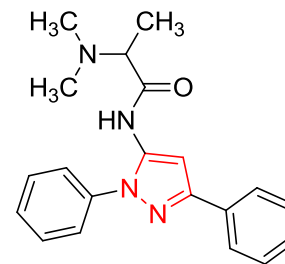
Betazole
(histamine H₂ receptor agonist)



Fezolamine
(anti-depressant)



Métamizole
(analgesic)

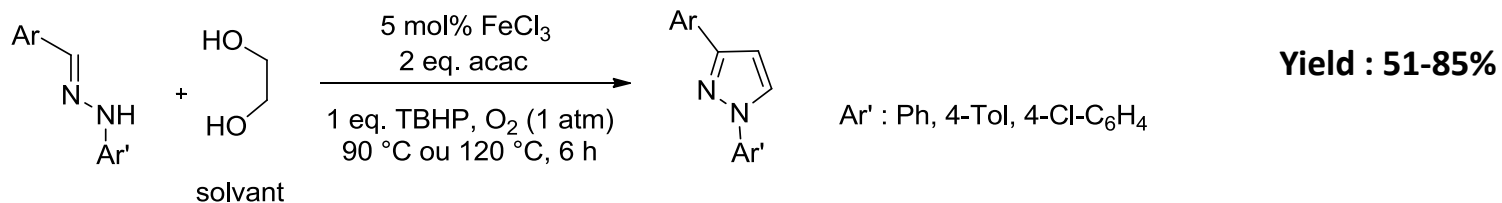


Difénamizole
(analgesic)

INTRODUCTION

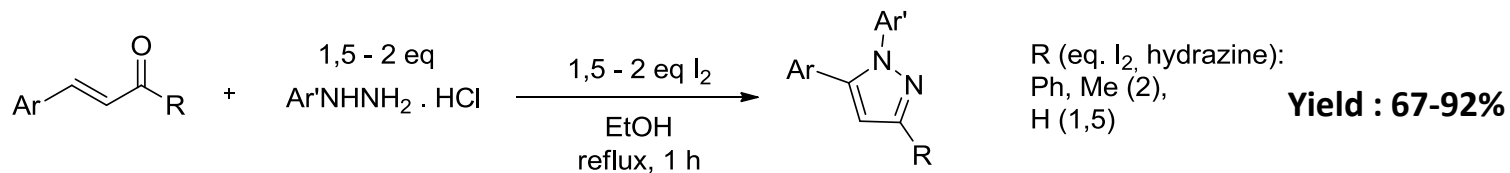
Panda (2012)

N. Panda, A. K. Jena, *J. Org. Chem*, **2012**, 77, 9401-9406,



Chang, Yu (2014)

X. Zhang, J. Kang, P. Niu, J. Wu, W. Yu, J. Chang, *J. Org. Chem*, **2014**, 79, 10170-10178.

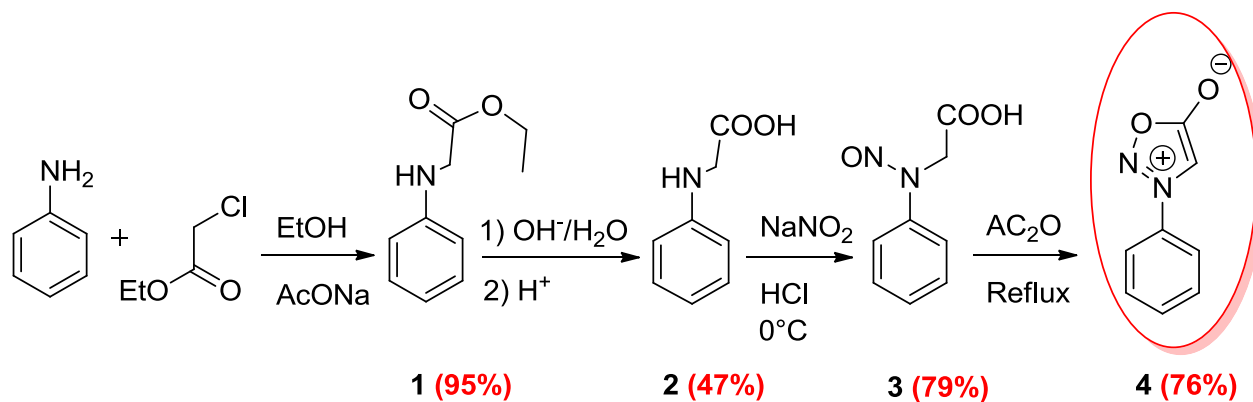


EFFICIENT SYNTHESIS OF NEW PYRAZOLES DERIVATIVES VIA FUNCTIONALIZED ARYL-SYDNONES

- Synthesis of pyrazoles via cycloaddition 1,3 dipolaire of sydnone**
- Synthesis of 1,3,4-trisubstituted pyrazoles derivatives via cross coupling**

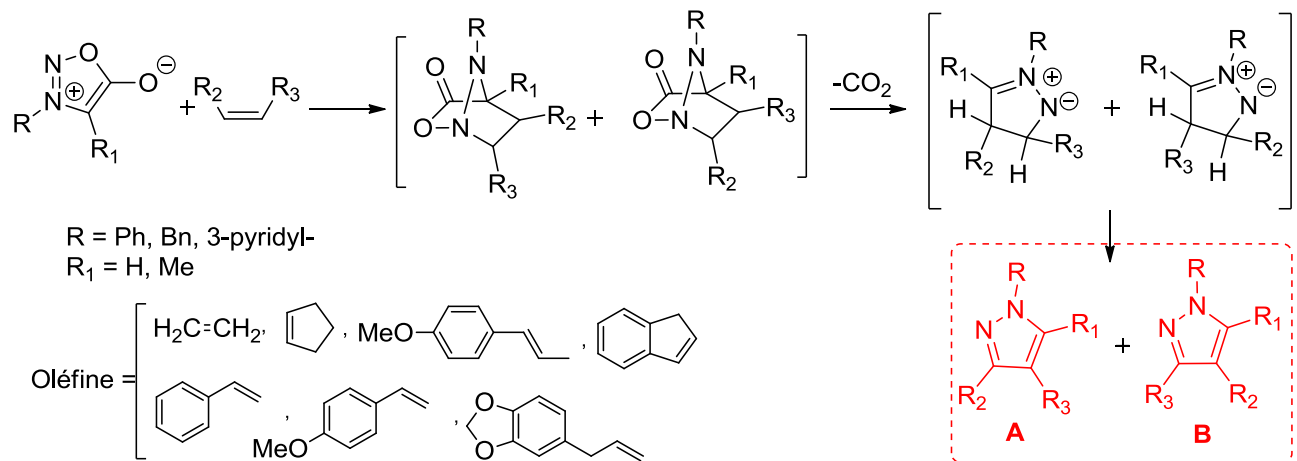
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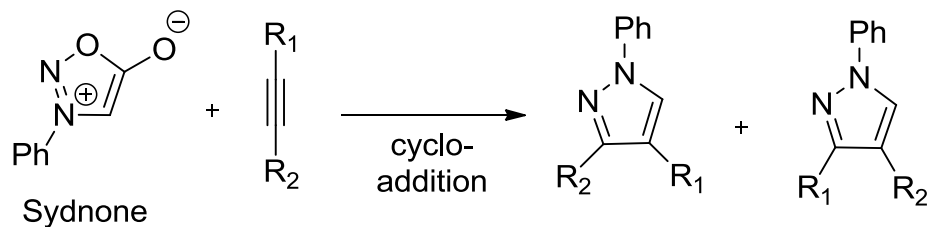
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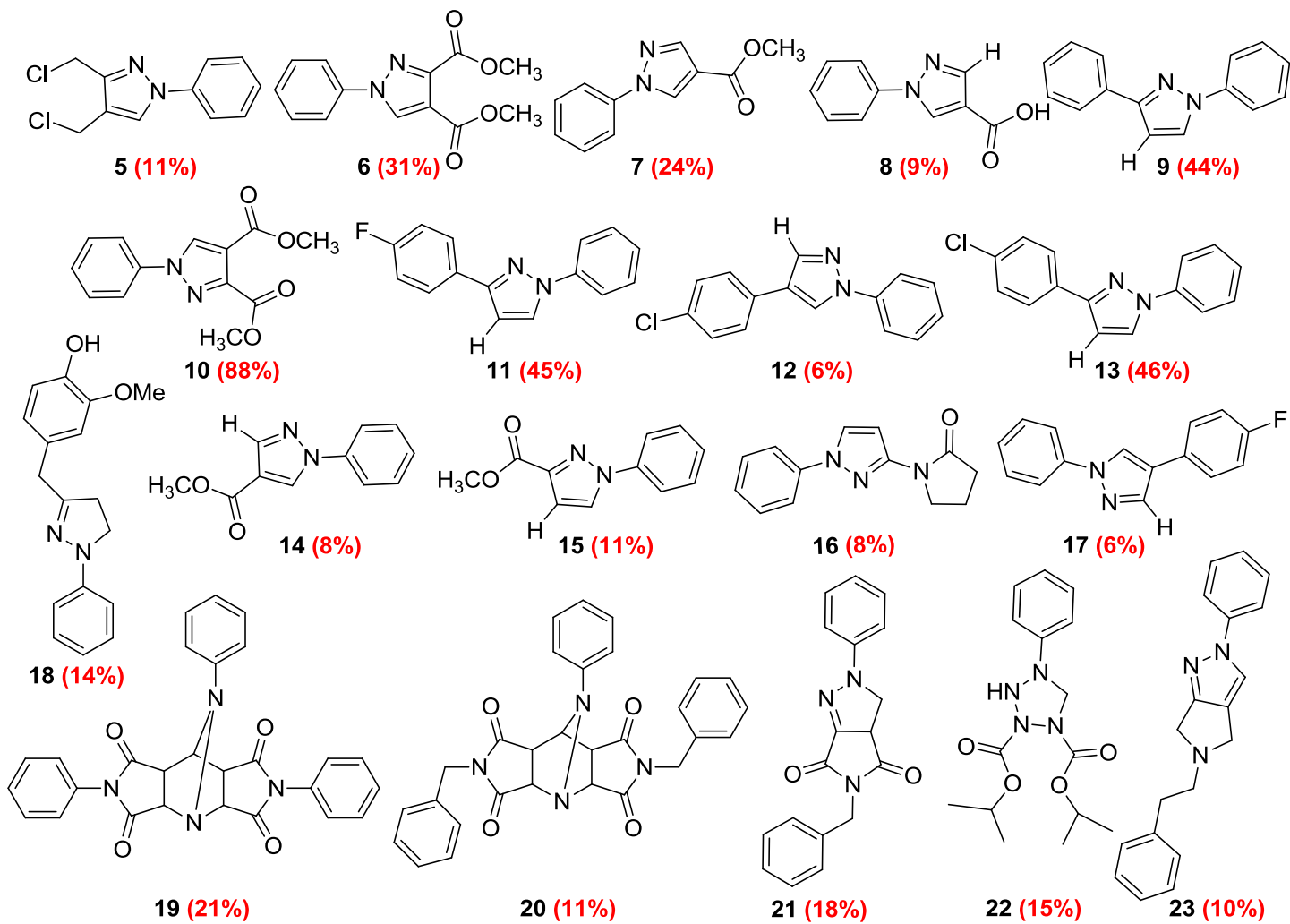


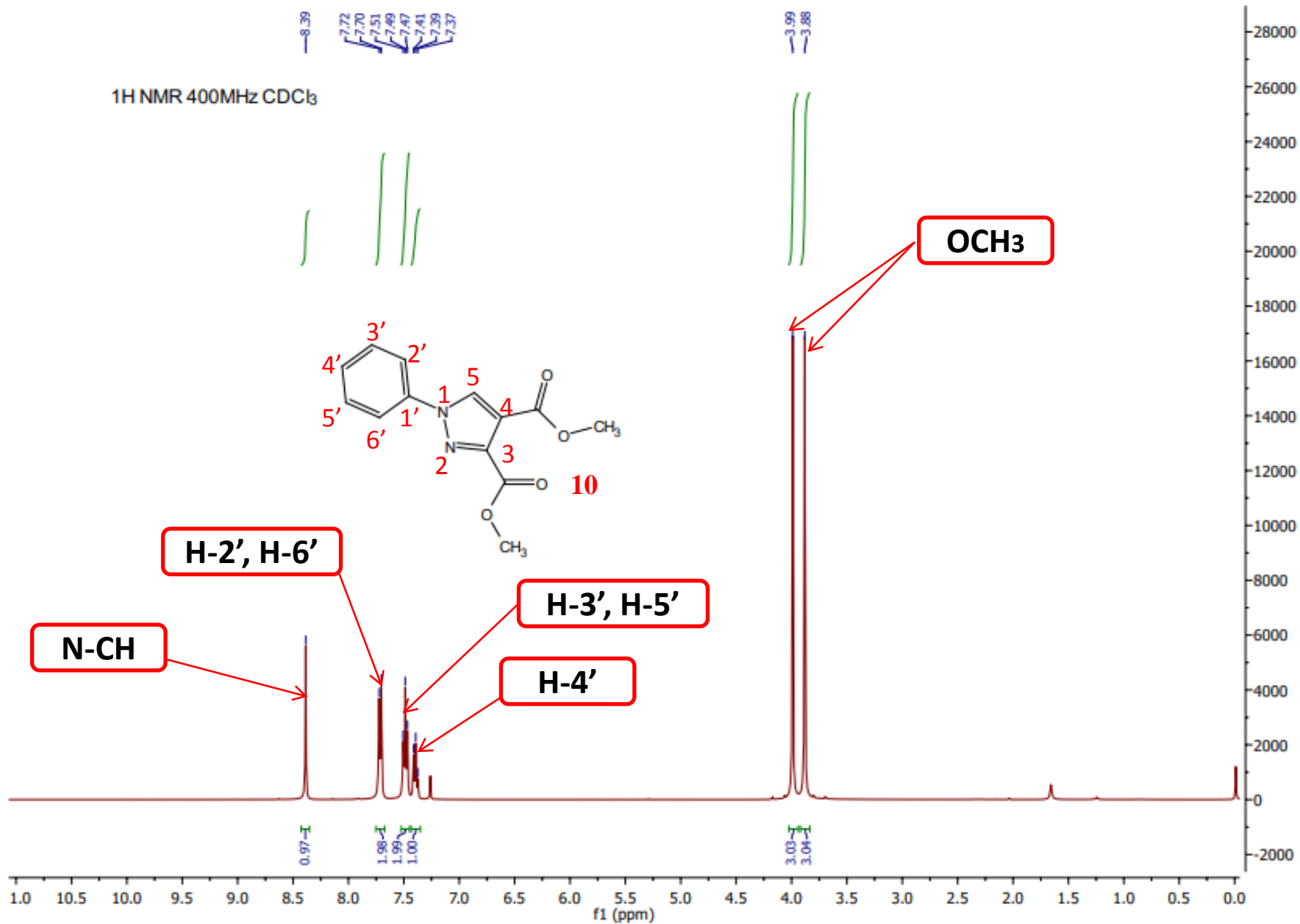
Huisgen, R.; Gotthardt, H.; Grashley, R. *Angew. Chem. Int. Ed. Engl.* **1962**, *1*, 49.

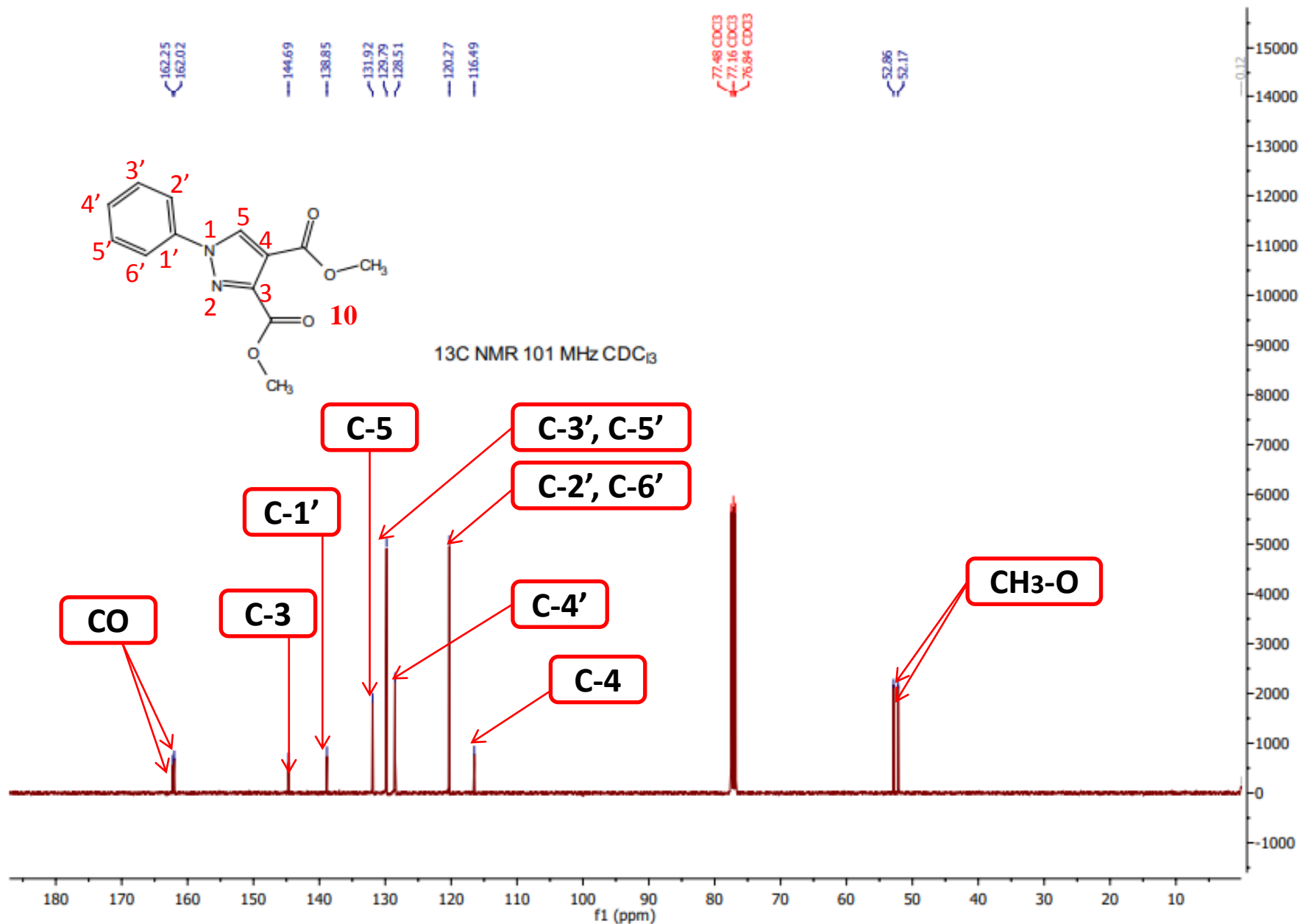
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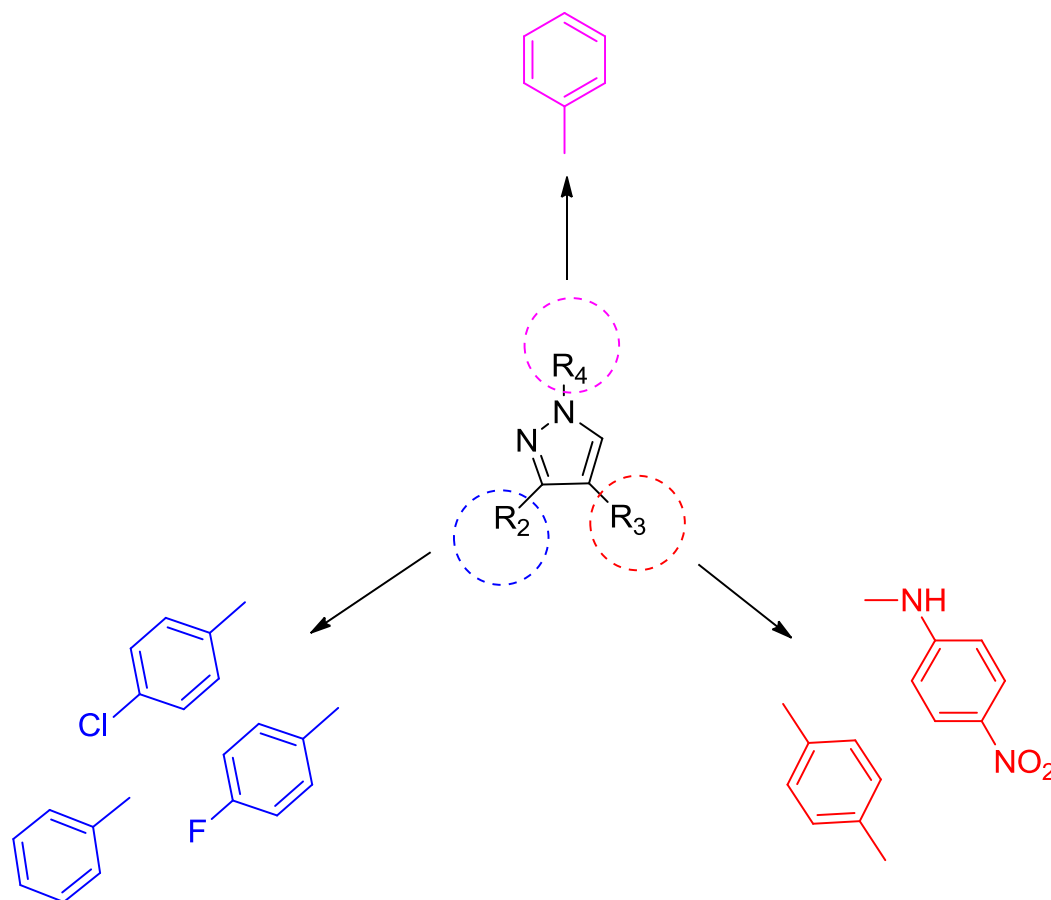
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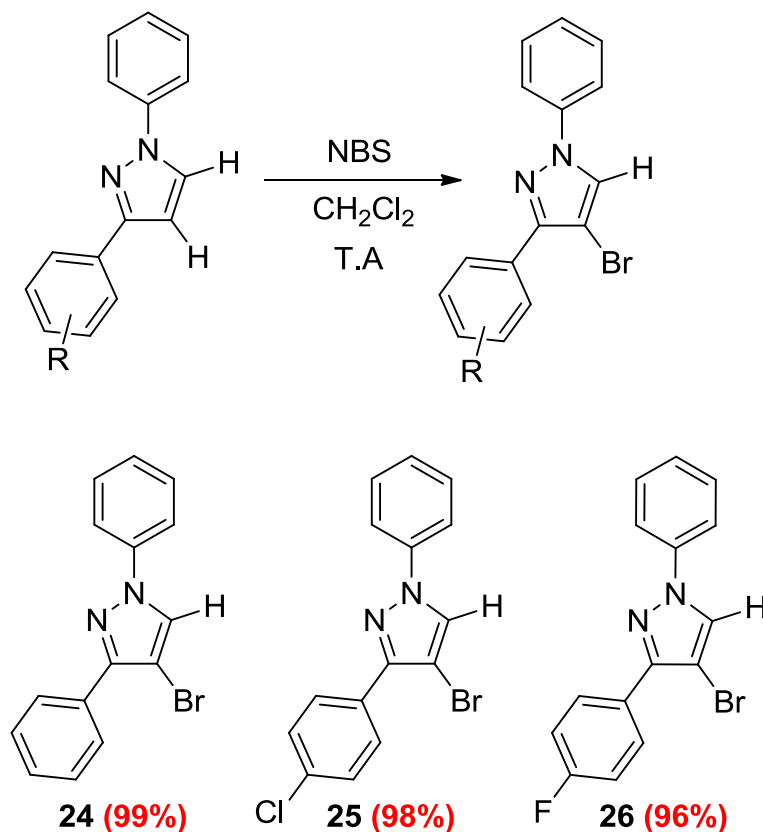
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Objectif



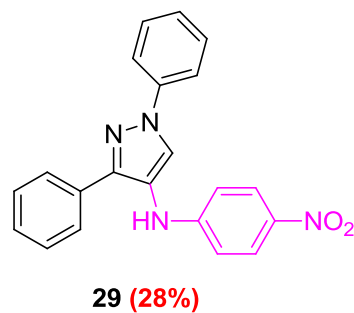
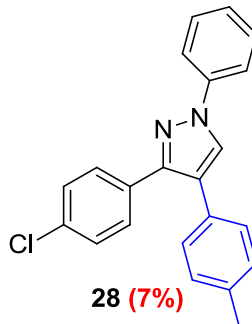
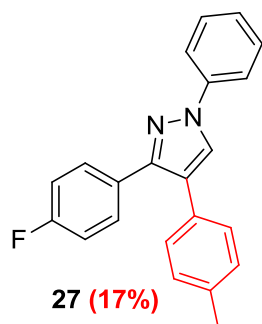
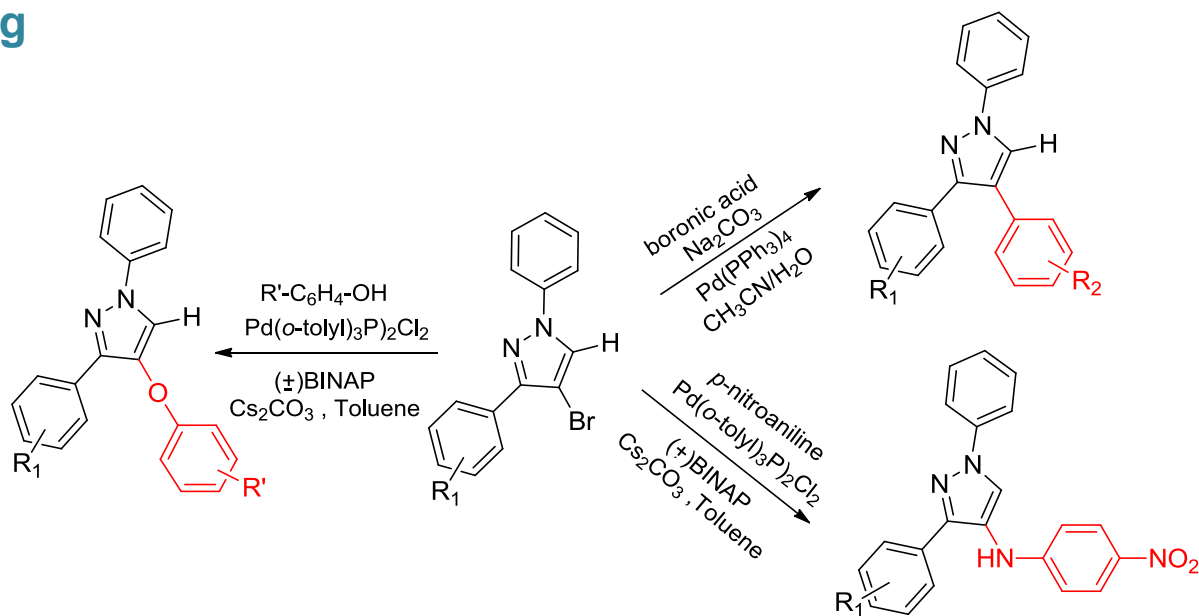
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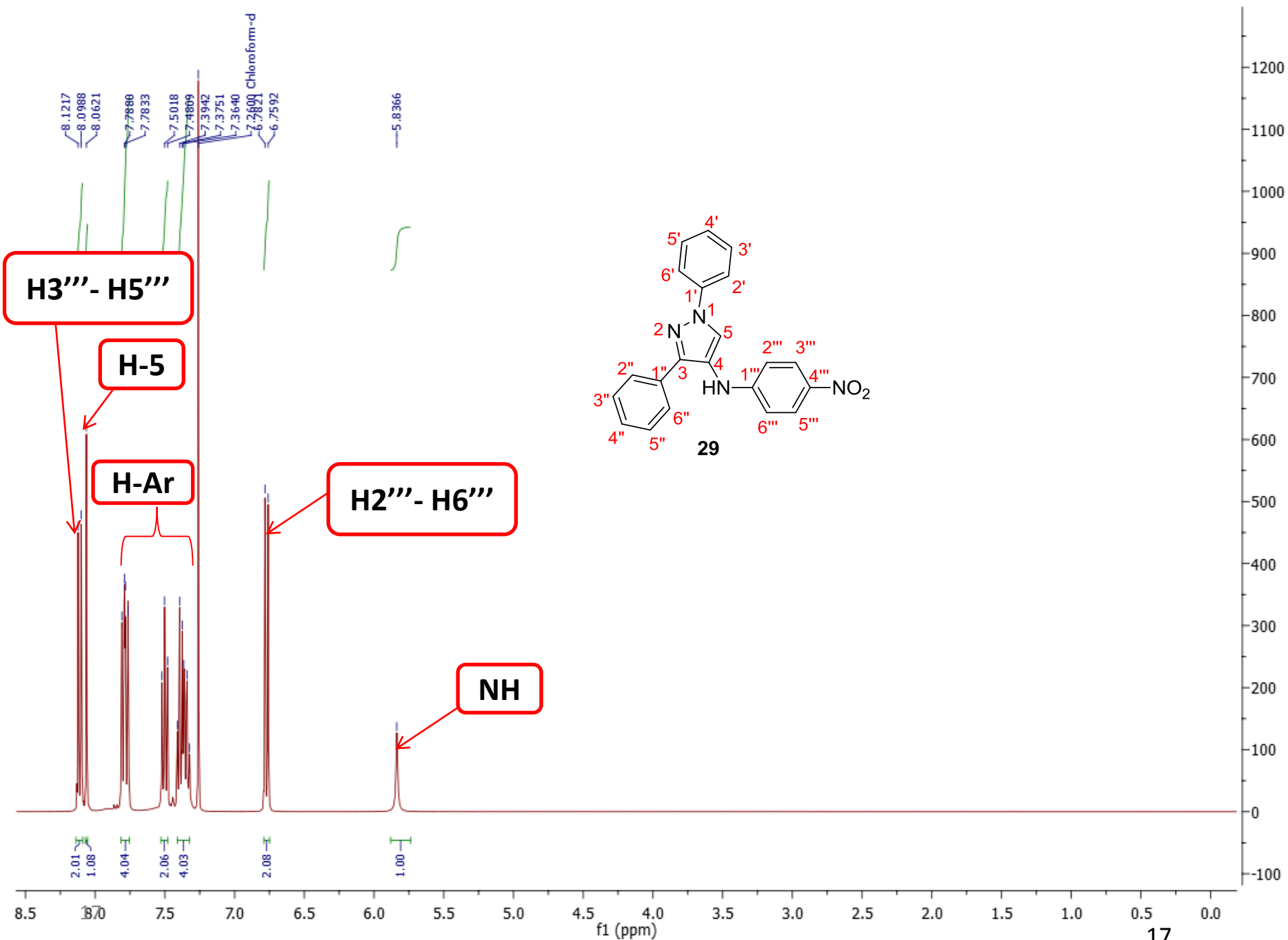
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Synthesis of 1,3,4-trisubstituted pyrazoles derivatives via cross coupling





CONCLUSION AND PERSPECTIVE

- Develop a new method of synthesizing the substituted pyrazole skeleton from sydnone.

Perspective

- Improve the reaction yield
- Investigation of the biological activity of the obtained substances

Thank you for your attention