

- 1.- One-Step Synthesis for the Preparation of Quinoline Alkaloid Analogues
Alexandros L. Zografos Christos A. Mitsos Olga Igglessi-Markopoulou
Org. Lett. 1999, 1, 12, 1953–1955
<https://doi.org/10.1021/ol9911021>

- 2.- Total Synthesis of Brevianamide S
Adam R. LockyerHelen E. JonesNicholas J. GreenRobert C. GodfreyVera P. DemertzidouGary S. NicholAndrew L. Lawrence*
Org. Lett. 2025, 27, 14, 3715–3719
<https://doi.org/10.1021/acs.orglett.5c00860>

- 3.- Total Synthesis of Melonine
Yoe Matsuyuki, Nariyoshi Umekubo, Satoshi Yokoshima
Org. Lett. 2025, 27, 9, 2065–2068
<https://doi.org/10.1021/acs.orglett.4c04851>

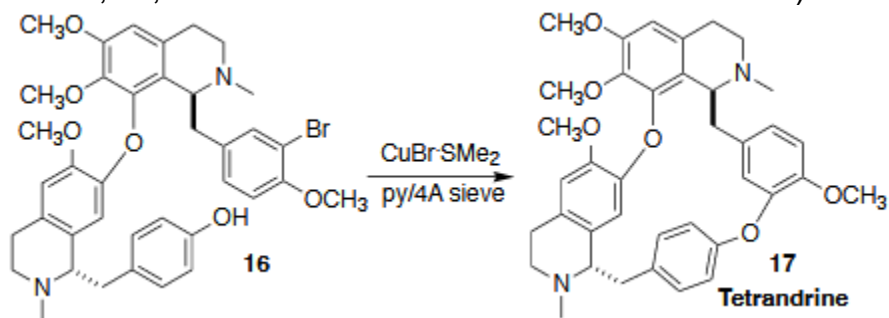
- 4.- Synthesis, structure and stereochemistry of quinoline alkaloids from *Choisya ternata*
Derek R. Boyd, Narain D. Sharma, Pui L. Loke John F. Malone M W. Colin McRoberts and John T. G. Hamilton.
Org. Biomol. Chem., 2007,5, 2983-2991

- 5.- A review on quinolines: New green synthetic methods and bioactive potential,
Laura M. Ferreira, Pilar García-García, Pablo A. García, María Ángeles Castro,
European Journal of Pharmaceutical Sciences, 2025, Volume 209, 107097,
ISSN 0928-0987,
<https://doi.org/10.1016/j.ejps.2025.107097>.

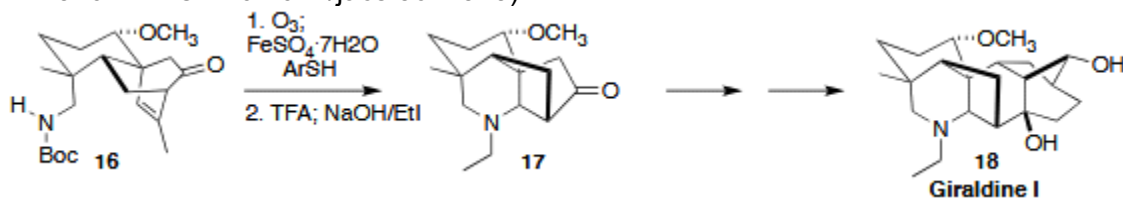
- 6.- First syntheses of two quinoline alkaloids from the medicinal herb *Ruta Chalepensis* via cyclization of an o-iodoaniline with an acetylenic sulfone†
Thomas G. Back and Jeremy E. Wulff
Chem. Commun., 2002, 1710-1711

- 7.- Isolation, biological activity, and synthesis of isoquinoline alkaloids†
Xiaorong Yang ab, Xiaolou Miao ab, Lixia Dai ac, Xiao Guo d, Janar Jenis e,
Jiyu Zhang ab and Xiaofei Shang
DOI: 10.1039/D4NP00023D (Review Article) Nat. Prod. Rep., 2024, 41, 1652-1722

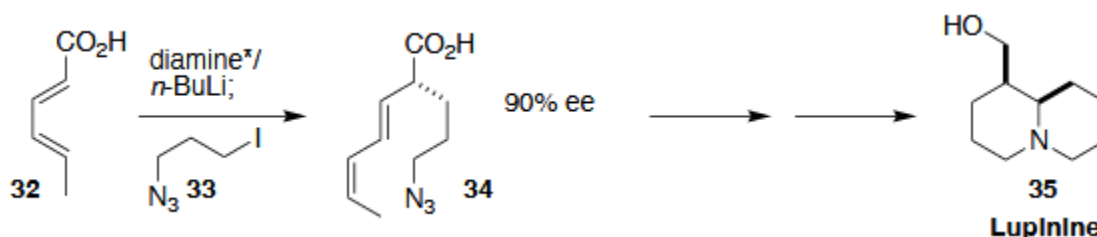
- 8.- Green and traditional one-pot synthesis techniques for bioactive quinoline derivatives: A review,
Manav C. Parmar, Bonny Y. Patel,
Tetrahedron Green Chem, **2025**, Volume 5, 100062,
ISSN 2773-2231,
<https://doi.org/10.1016/j.tgchem.2025.100062>.
- 9.- Cuny, G. D. Synthesis of (±)-aporphine utilizing PictetSpengler and Intramolecular Phenol ortho-Arylation Reactions. *Tetrahedron Lett.* 2004, 45, 5167–5170.
- 10.- Zhang, F.; Simpkins, N. S.; Blake, A. J. New Approaches for the Synthesis of Erythrinan Alkaloids. *Org. Biomol. Chem.* 2009, 7, 1963– 1979.
- 11.- Paladino, M.; Zaifman, J.; Ciufolini, M. A. Total Synthesis of (+)-3-Demethoxyerythratidinone and (+)-Erysotramidine via the Oxidative Amidation of a Phenol. *Org. Lett.* 2015, 17, 3422–3425.
- 12.- Honda, T.; Shigehisa, H. Novel and Efficient Synthetic Path to Proaporphine Alkaloids: Total Synthesis of (±)-Stepharine and (±)-Pronuciferine. *Org. Lett.* 2006, 8, 657–659.
- 13.- Tetrandrine (**17**), isolated from the south Asian liana *Stephania tetrandra*, shows activity against the ebola virus. Xiaoguang Lei of Peking University prepared **17** by the Cu-mediated cyclization of the phenol **16** (*Angew. Chem. Int. Ed.* **2025**, 64, e202414340. DOI: 10.1002/anie.202414340).



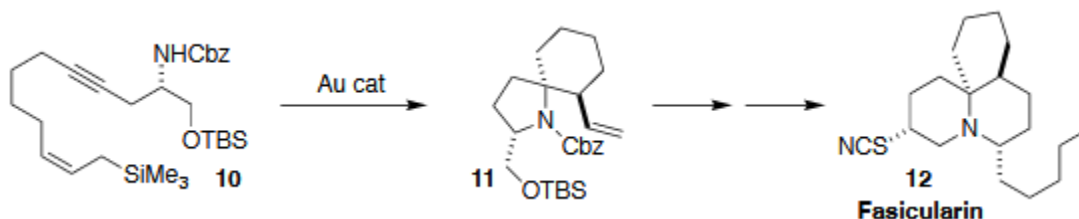
- 14.- Giralidine I (**18**) was isolated from the larkspur *Delphinium giraldii* of Central China. Xiao-Yu Liu and Yong Qin of Sichuan University effected oxidative deacetylation of the alkene **16** to give an aldehyde that participated in an intramolecular Mannich cyclization, leading after *N*-ethylation to the ketone **17** (*J. Am. Chem. Soc.* **2025**, 147, 37012. DOI: 10.1021/jacs.5c14513).



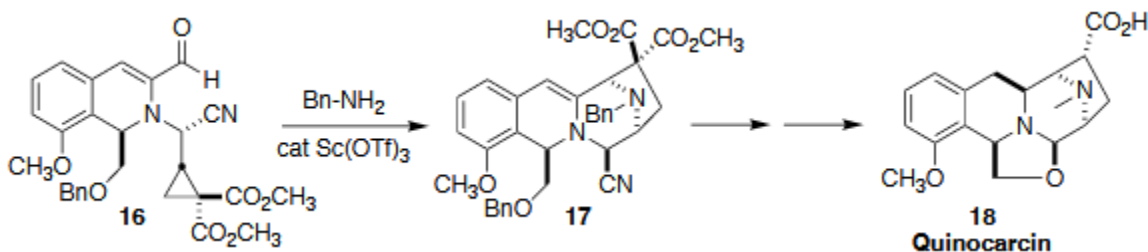
15.- Lupinine (**35**), a hepatotoxin prevalent in the seeds of leguminous herbs of the genus *Lupinus*, is an acetylcholine esterase inhibitor. Houhua Li of Peking University set the absolute configuration of **35** by the enantioselective alkylation of sorbic acid (**32**) with the azido iodide **33**, leading to the acid **34** (Angew. Chem. Int. Ed. 2024, 63, e202400478. DOI: 10.1002/anie.202400478).



16.- Fascicularin (**12**), isolated from the marine invertebrate *Nephteis fascicularis*, causes strand cleavage of DNA selectively at guanine residues. Haruhiko Fuwa of Chuo University established a route to **12** based on the diastereoselective gold-catalyzed cyclization of the enyne **10** to the pyrrolidine **11** (*J. Org. Chem.* 2024, 89, 11693. DOI: 10.1021/acs.joc.4c01447).



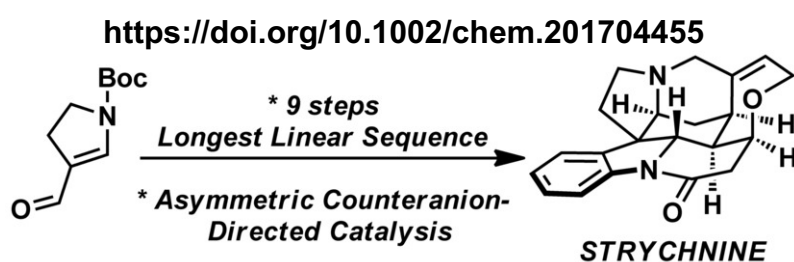
17.- Quinocarcin (**18**) was isolated from culture broths of *Streptomyces melunovinuaceus*. Its more stable citrate salt shows potent anti-tumor activity. Zhongwen Wang of Nankai University established a route to **18** based on the opening of the activated cyclopropane **16** with benzylamine, leading to **17** (*Org. Lett.* 2024, 26, 7100, DOI: 10.1021/acs.orglett.4c02267; *Org. Biomol. Chem.* 2024, 22, 8724, DOI: 10.1039/D4OB01363H).



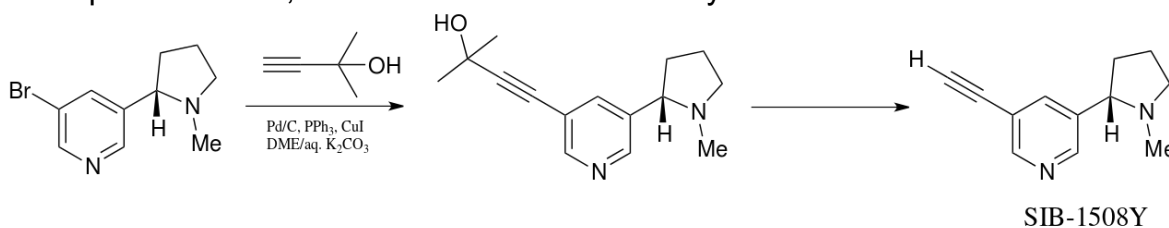
18.- Total Synthesis of Strychnine

Geun Seok Lee, Gil Namkoong, Jisook Park, David Y.-K. Chen
Chemistry – A European Journal, 2017, **Volume23**, **Issue64**, 16189-16193

Abstract The total synthesis of the flagship Strychnos indole alkaloid, strychnine, has been accomplished. The developed synthetic sequence features a novel vinylogous 1,4-addition, a challenging iodonium salt mediated silyl enol ether arylation, a palladium-catalyzed Heck reaction, and a streamlined late-stage conversion to strychnine. Furthermore, an application of asymmetric counterion-directed catalysis (ACDC) in the context of target-oriented organic synthesis has been rendered access to an optically active material. The synthetic sequence described herein represents the most concise entry to optically active strychnine to date.



19.- Una de estas aplicaciones farmacéuticas es la síntesis de SIB-1508Y, que se conoce más comúnmente como Altinicline. Altinicline es un agonista del receptor de acetilcolina nicotínico que ha demostrado potencial en el tratamiento de la enfermedad de Parkinson, la enfermedad de Alzheimer, el síndrome de Tourette, la esquizofrenia y el trastorno por déficit de atención con hiperactividad (TDAH). A partir de 2008, Altinicline se sometió a ensayos clínicos de fase II.



- King, A. O.; Yasuda, N. *Top. Organomet. Chem.*, Topics in Organometallic Chemistry, **2004**, 6: 205–245, doi:10.1007/b94551, ISBN 978-3-540-01603-8
- Bleicher, L.S.; Cosford, N.D.P.; Herbaut, A.; McCallum, J. S.; McDonald, I. A. *Journal of Organic Chemistry*, **1998**, 63 (4): 1109–1118, doi:10.1021/jo971572d
- Wang, David X.; Booth, Heather; Lerner-Marmarosh, Nicole; Osdene, Thomas S.; Abood, Leo G. *Drug Development Research*. **1998**, 45 (1): 10–16. doi:10.1002/(SICI)1098-2299(199809)45:1<10::AID-DDR2>3.0.CO;2-G.
- Parkinson Study, Group, *Neurology*, **2006**, 66 (3): 408–410. doi:10.1212/01.wnl.0000196466.99381.5c. PMID 16476941.