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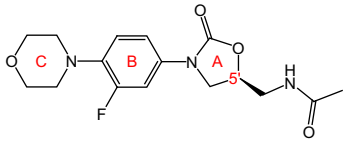
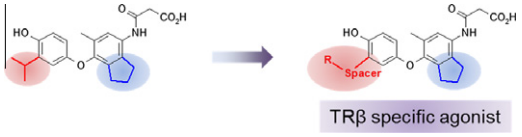
# Bioorganic & Medicinal Chemistry Volume 21, Issue 3, 2013

# Contents

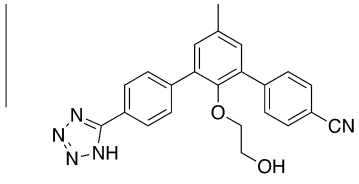




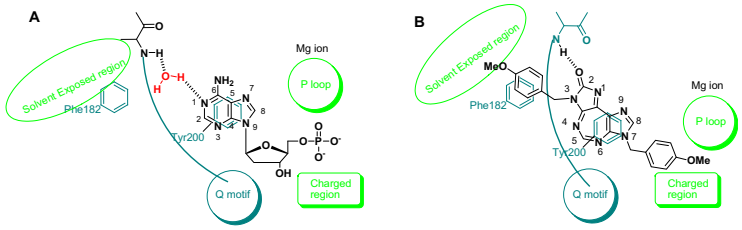




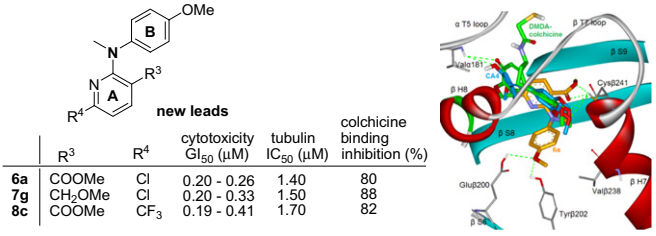




Non-peptide, non-ATP-competitive Plk1 inhibitor




(A) Model for interactions between AMP and DDX3. (B) Proposed model for interactions between **1** and DDX3.

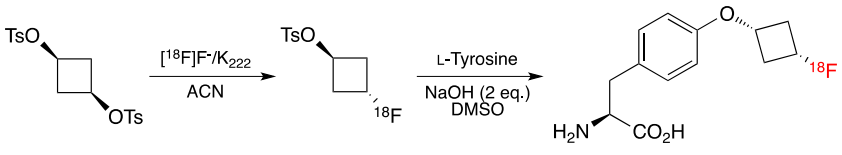





| | $R^3$ | $R^4$ | cytotoxicity $GI_{50}$ (μM) | tubulin $IC_{50}$ (μM) | colchicine binding inhibition (%) |
|---|---|---|---|---|---|
| **6a** | COOMe | Cl | 0.20 - 0.26 | 1.40 | 80 |
| **7g** | $CH_2OMe$ | Cl | 0.20 - 0.33 | 1.50 | 88 |
| **8c** | COOMe | $CF_3$ | 0.19 - 0.41 | 1.70 | 82 |

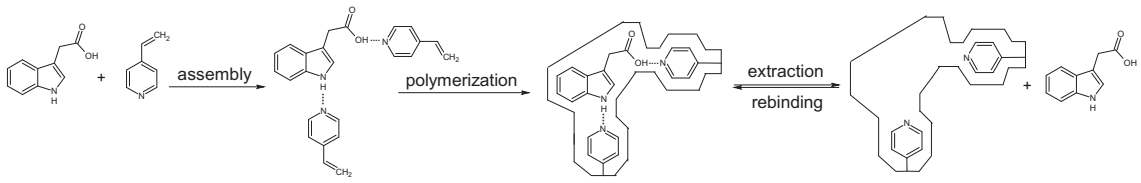


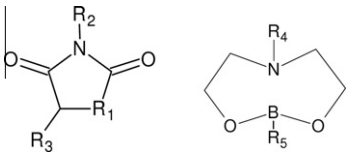




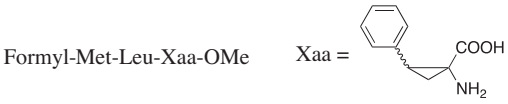

**8** [$^{18}$F]**11** [$^{18}$F]**17**





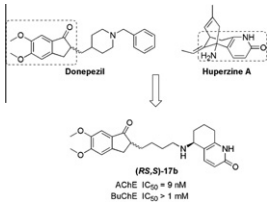






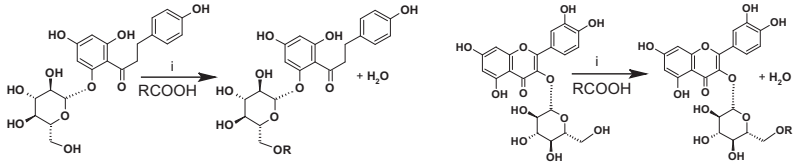

| Peptide | Chemotaxis | $O_2^-$ production | $[Ca^{2+}]_i$ | Priming |
|---|---|---|---|---|
| (+)E analog | + | - | +++ | - |
| (-)E analog | +++ | - | +++ | - |
| (+)Z analog | + | + | +++ | + |
| (-)Z analog | +++ | +++ | +++ | + |



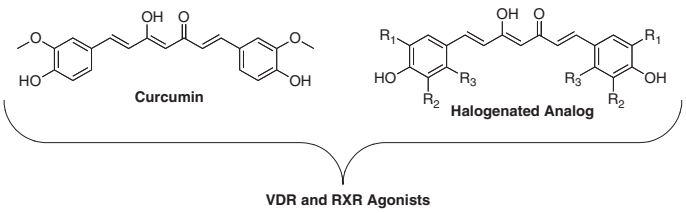



Heterodimers of donepezil and huperzine A fragments tethered with a tetramethylene linker exhibited high potency and selectivity towards acetylcholinesterase inhibition.

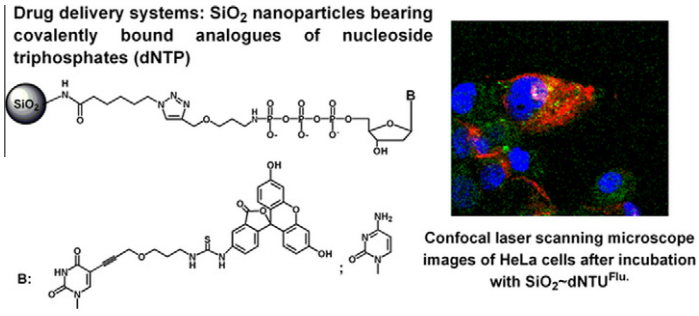




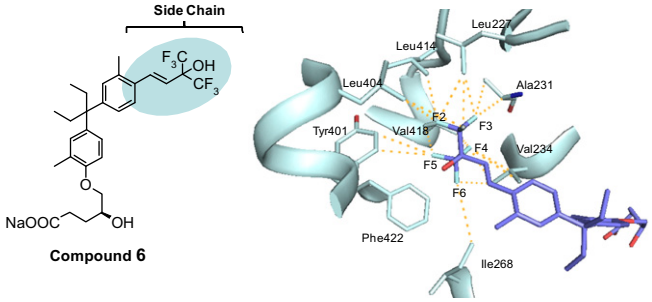

Our present investigation describes the biocatalytic preparation, detailed NMR structural assignment, antioxidant capacity and tyrosinase inhibitory activity of long chain acylated derivatives of phloridzin and isoquercitrin. (**i**) Acetone, 3 Å molecular sieves, Novozyme 435®, 45 °C, Stirring, 24 h; R = Oleic, Stearic, Linoleic, Linolenic, Eicosapentaenoic (EPA), Docosahexaenoic Acids (DHA) or their corresponding esters.



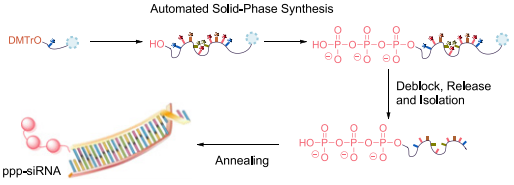


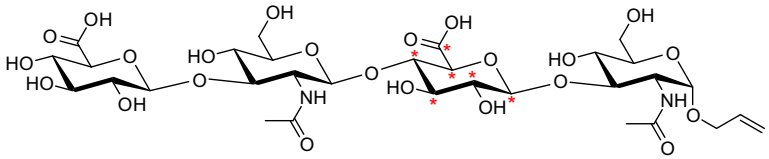




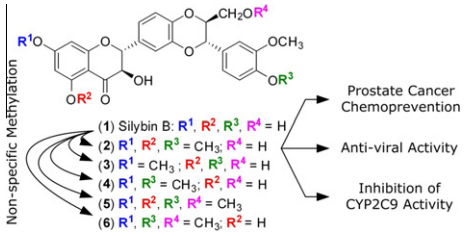




Automated parallel and high-throughput synthesis of 5′-triphosphate oligonucleotides enables the preparation of chemically modified 5′-triphosphate small interfering RNAs designed to address RNA interference gene knockdown and directed immunostimulation.

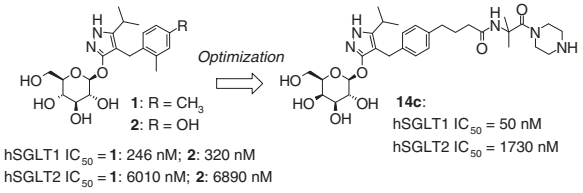


A convergent synthesis of $^{13}$C-labeled and non-labeled Hyaluronic acid tetrasaccharide for biophysical studies and surface modifications is presented.

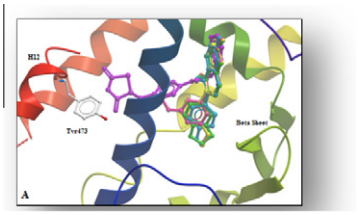


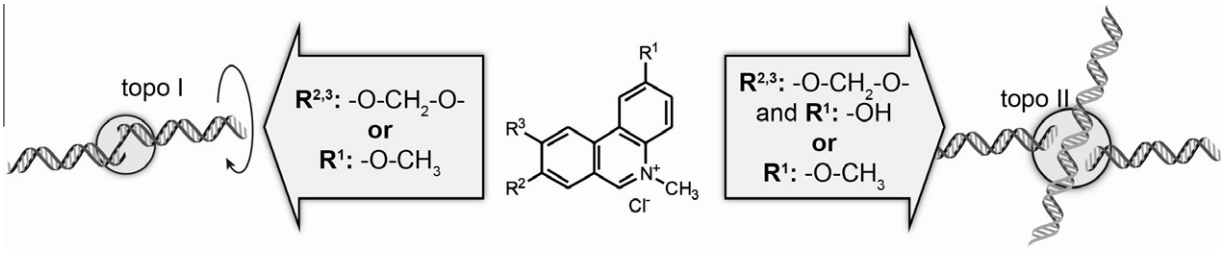




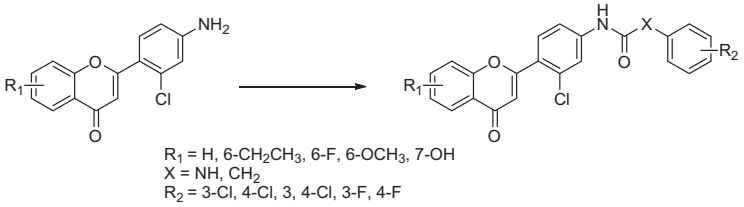










A series of 1-(3-chloro-4-(4-oxo-4*H*-chromen-2-yl)phenyl)-3-phenylurea derivatives were designed, synthesized and explored for their inhibitory activities against kinases and tumor cell lines.

## OTHER CONTENTS



*Corresponding author
Supplementary data available via SciVerse ScienceDirect

## COVER

Botulinum neuortoxins are the most lethal toxins known to man and are considered by the Centers for Disease Control and Prevention (CDC) to be a "Category A" agent placing them as one of the six highest priority bioterrorist agents. There are no approved pharmacological treatments for botulinum neurointoxication. The work detailed combines studies using synthesis, crystallography, modeling, kinetic and cellular research to advance pharmacological intervention against this neurotoxin. [Šilhár, P.; Silvaggi, N.R.; Pellett, S.; Čapková, K.; Johnson, E.A; Allen, K.N; Janda, K.D. *Bioorg. Med. Chem.* DOI: 10.1016/j.bmc.2012.12.001]

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