

Steroid Chemistry

WuXi AppTec's steroid chemistry team supports you across all stages, from discovery to development and manufacturing.

15+ years' experience **100+** dedicated chemists **10000+** steroid compounds synthesized

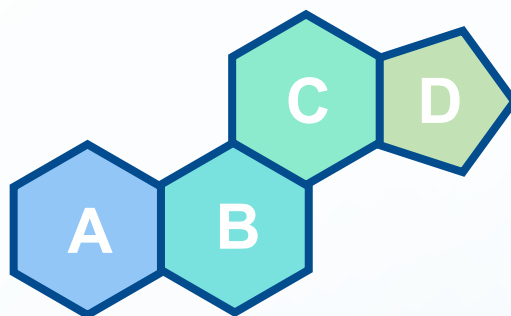
Steroid Chemistry Capabilities

► Hit to Lead

- New structure synthesis
- New chemistry development
- Focused library generation

► Lead Optimization

- Fast production
- Route development
- Isotope labelling
- Absolute structure determination



► Drug Candidate Profiling

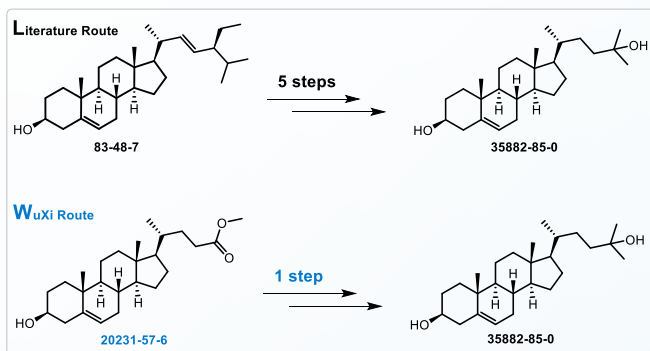
- Large scale synthesis
- Impurity synthesis
- Metabolite synthesis
- Process development

► New Modalities

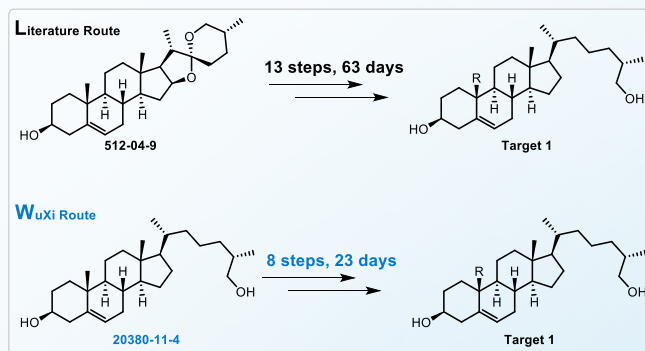
- ADC synthesis
- PROTAC* synthesis
- Pro-drug synthesis
- Nitrogen mustards synthesis

Steroid Chemistry Highlights

- 20+ chiral methods to build chiral center on steroid
- Strong steroid chemistry background enables efficient synthesis & delivery
- mg to kg scale delivery of steroid compounds
- Preparing new modalities and prodrugs with steroid



Steps were reduced by 83%



Timeline was reduced by 63%

* PROTAC is the abbreviation of proteolysis targeting chimera.



Contact us

 <https://rcs.wuxiapptec.com>

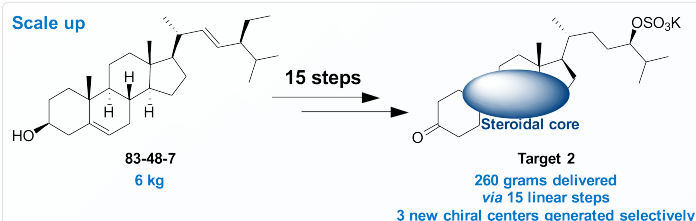


chemistry_service@wuxiapptec.com

Scale up & Process Development

Over 15 years of steroid chemistry experience enables earlier stage process development and quicker scale up.

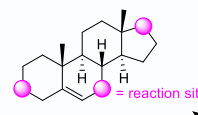
Scale up



Process development

Original route in patent

- 7 total steps
- 24% overall yield
- poor selectivity and cannot be reproduced

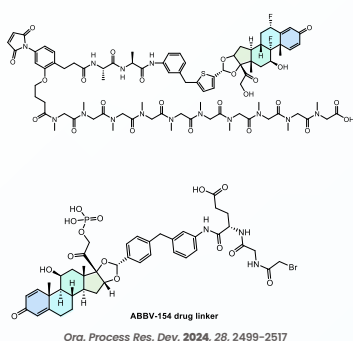


Process route developed by WuXi AppTec

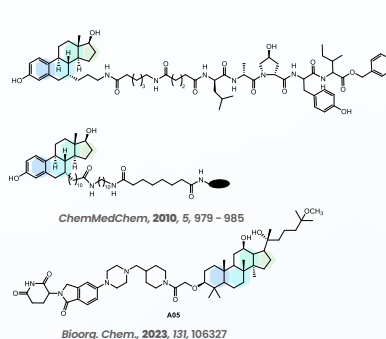
- shortened the route to 3 steps
- increased overall yield to 61%
- reduced cycle time to about 4 days from 14 days for 100 g of product

New Modalities Conjugated with Steroid

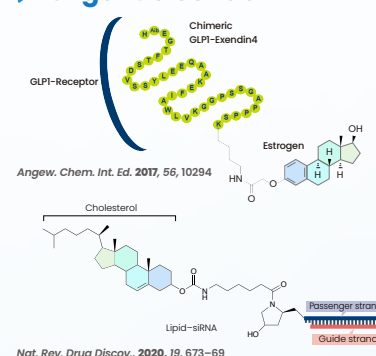
▶ ADC



▶ PROTAC*



▶ Oligonucleotide

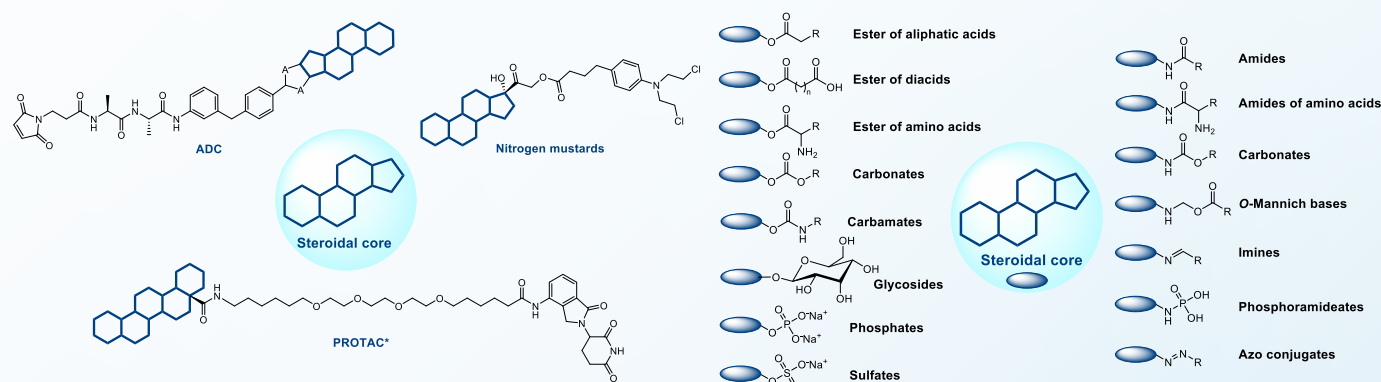


"Steroidal molecules are preferred for their rigidity and good ability to penetrate biological membranes. Slight alteration in the basic ring structure results in the formation of steroidal derivatives with a wide range of therapeutic activities. Steroids are not only active as such, conjugating them with various biologically active moieties results in increased lipophilicity, stability, and target specificity with decreased adverse effects."

A Comprehensive Review on Steroidal Bioconjugates as Promising Leads in Drug Discovery

ACS Bio Med Chem Au 2022, 2, 340–369

• New modalities and prodrugs prepared from steroid compounds.



Platforms Enhancing Steroid Chemistry Capabilities

- Core Analytical Services (CAS)
- Kilo Lab & Process Safety Assessment
- Flow Chemistry
- Electrochemistry
- Reaction Conditions Screening
- Recrystallization Platform
- Photoredox
- WuXi LabNetwork

Disclaimer: This flyer is solely for discussion and informational purposes. It does not constitute an offer to provide the compounds mentioned. Any order placed will be subject to a thorough IP risk assessment. We will only accept orders for synthesis services if it is determined that no third-party intellectual property rights are infringed.