Topoisomerase

Topoisomerases are enzymes that regulate the overwinding or underwinding of DNA. The winding problem of DNA arises due to the intertwined nature of its double-helical structure. Topoisomerases are isomerase enzymes that act on the topology of DNA. Type I topoisomerase cuts one strand of a DNA double helix, relaxation occurs, and then the cut strand is reannealed. Type I topoisomerases are subdivided into two subclasses: type IA topoisomerases, which share many structural and mechanistic features with the type II topoisomerases, and type IB topoisomerases, which utilize a controlled rotary mechanism. Type II topoisomerase cuts both strands of one DNA double helix, pass another unbroken DNA helix through it, and then reanneal the cut strands. This class is also split into two subclasses: type IIA and type IIB topoisomerases, which possess similar structure and mechanisms.
### Topoisomerase Inhibitors & Modulators

| **9-Aminocamptothecin**  
(9-Amino-20(S)-camptothecin) | **Cat. No.: HY-100309** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> 9-Aminocamptothecin is a topoisomerase I inhibitor with potent anticancer activity.</td>
<td></td>
</tr>
</tbody>
</table>
| **Purity:** 98.89%  
**Clinical Data:** Phase 2  
**Size:** 10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 25 mg |

| **Amonafide**  
(AS1413) | **Cat. No.: HY-10982** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Amonafide is a topoisomerase II inhibitor and DNA intercalator that induces apoptotic signaling by blocking the binding of Topo II to DNA.</td>
<td></td>
</tr>
</tbody>
</table>
| **Purity:** 99.85%  
**Clinical Data:** Phase 3  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg |

| **Amrubicin**  
(AMR) | **Cat. No.: HY-80067** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Amrubicin is a DNA topoisomerase II inhibitor, used for the research of cancer.</td>
<td></td>
</tr>
</tbody>
</table>
| **Purity:** 98.0%  
**Clinical Data:** Launched  
**Size:** 1 mg, 5 mg |

| **Amsacrine**  
(AMSA; m-AMSA; CI-880; SN-11841; acridinyl anisidine) | **Cat. No.: HY-13551** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Amsacrine is an inhibitor of topoisomerase II, and acts as an antineoplastic agent which can intercalates into the DNA of tum or cells.</td>
<td></td>
</tr>
</tbody>
</table>
| **Purity:** 99.98%  
**Clinical Data:** Launched  
**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg |

| **Banoxantrone D12**  
(AQ4N D12) | **Cat. No.: HY-13562S** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Banoxantrone D12 (AQ4N D12) is the deuterium labeled banoxantrone. Banoxantrone is a novel bioreductive agent that can be reduced to a stable, DNA-affinic compound AQ4, which is a potent topoisomerase II inhibitor.</td>
<td></td>
</tr>
</tbody>
</table>
| **Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg |

| **Banoxantrone D12 dihydrochloride**  
(AQ4N D12 dihydrochloride) | **Cat. No.: HY-13562A** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Banoxantrone D12 dihydrochloride (AQ4N D12 dihydrochloride) is the deuterium labeled banoxantrone dihydrochloride. Banoxantrone is a novel bioreductive agent that can be reduced to a stable, DNA-affinic compound AQ4, which is a potent topoisomerase II inhibitor.</td>
<td></td>
</tr>
</tbody>
</table>
| **Purity:** 98.02%  
**Clinical Data:** No Development Reported  
**Size:** 10mM x 1mL in DMSO, 1 mg, 5 mg |

| **Belotecan hydrochloride**  
(CKD-602) | **Cat. No.: HY-13566A** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong> Belotecan hydrochloride (CKD-602 hydrochloride), a Topoisomerase I inhibitor, is a synthetic and water-soluble camptothecin derivative.</td>
<td></td>
</tr>
</tbody>
</table>
| **Purity:** 98.27%  
**Clinical Data:** Launched  
**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg |
### Betulinic acid
**Cat. No.: HY-10529**
**Bioactivity:** Betulinic acid is a natural pentacyclic triterpenoid, acts as an eukaryotic topoisomerase I inhibitor, with an IC\textsubscript{50} of 5 μM, and possesses anti-HIV, anti-malarial, anti-inflammatory and anti-tumor properties.
**Purity:** 98.58%
**Clinical Data:** Phase 2
**Size:** 10mM x 1mL in DMSO, 100 mg, 200 mg, 500 mg

### Bisantrene
**Cat. No.: HY-100875**
**Bioactivity:** Bisantrene is a highly effective antitumor drug, targets eukaryotic type II topoisomerases.
**Purity:** 96.35%
**Clinical Data:** No Development Reported
**Size:** 10mM x 1mL in DMSO, 10 mg, 25 mg, 50 mg

### BNP 1350
**Cat. No.: HY-14812**
**Bioactivity:** BNP 1350 is a topoisomerase I inhibitor, with potent anti-cancer activity.
**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 250 mg, 500 mg

### Campathecin
**Cat. No.: HY-16560**
**Bioactivity:** Campathecin is a potent DNA enzyme topoisomerase I inhibitor or, with an IC\textsubscript{50} of 679 nM.
**Purity:** 98.26%
**Clinical Data:** Phase 4
**Size:** 10mM x 1mL in DMSO, 100 mg, 500 mg

### Daun02
**Cat. No.: HY-13061**
**Bioactivity:** Daun02 is converted by β-galactosidase to Daunorubicin, which is a topoisomerase inhibitor.
**Purity:** 98.56%
**Clinical Data:** No Development Reported
**Size:** 2 mg, 5 mg, 10 mg

### Daunorubicin
**Cat. No.: HY-13062A**
**Bioactivity:** Daunorubicin is a topoisomerase II inhibitor.
**Purity:** >98%
**Clinical Data:** Launched
**Size:** 10 mg, 50 mg

### Daunorubicin Hydrochloride
**Cat. No.: HY-13062**
**Bioactivity:** Daunorubicin hydrochloride is a topoisomerase II inhibitor.
**Purity:** 99.64%
**Clinical Data:** Launched
**Size:** 10mM x 1mL in Water, 10 mg, 50 mg, 100 mg, 200 mg, 500 mg

### DOXO-EMCH
**Cat. No.: HY-16261A**
**Bioactivity:** DOXO-EMCH is a 6-maleimidocaproyl hydrazone derivative of Doxorubicin, is an albumin binding prodrug.
**Purity:** >98%
**Clinical Data:** Phase 3
**Size:** 5 mg, 10 mg, 50 mg, 100 mg

### Doxorubicin
**Cat. No.: HY-15142A**
**Bioactivity:** Doxorubicin is a Topoisomerase II (Top2) catalytic inhibitor or, also is a broad spectrum antibiotic used in the treatment of cancers, with IC\textsubscript{50} of 374 nM for Hela cells.
**Purity:** >98%
**Clinical Data:** Launched
**Size:** 50 mg, 100 mg, 200 mg, 500 mg

### Doxorubicin hydrochloride
**Cat. No.: HY-15142**
**Bioactivity:** Doxorubicin hydrochloride is a Topoisomerase II (Top2) catalytic inhibitor, also is a broad spectrum antibiotic used in the treatment of cancers, with IC\textsubscript{50} of 374 nM for Hela cells.
**Purity:** 99.47%
**Clinical Data:** Launched
**Size:** 10mM x 1mL in DMSO, 50 mg, 100 mg, 200 mg, 500 mg, 1 g
**Dxd**  
(Exatecan derivative)  
*Cat. No.: HY-13631D*  

**Bioactivity:** Dxd is a potent **DNA topoisomerase I** inhibitor, with an **IC₅₀** of 0.31 μM, used as a conjugated drug of HER2- targeting ADC (DS-8201a).  

**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg, 10 mg

---

**Edotecarin**  
(J 107088; PF 804950)  
*Cat. No.: HY-13618*  

**Bioactivity:** Edotecarin is a potent inhibitor of **topoisomerase I** that can induce single-strand DNA cleavage, with **IC₅₀** of 50 nM.  

**Purity:** >98%  
**Clinical Data:** Phase 3  
**Size:** 1 mg, 5 mg, 10 mg

---

**Ellipticine**  
*Cat. No.: HY-15753*  

**Bioactivity:** Ellipticine hydrochloride is a potent antineoplastic agent; inhibits **DNA topoisomerase II** activities.  

**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg, 50 mg, 100 mg

---

**Ellipticine hydrochloride**  
*Cat. No.: HY-15753A*  

**Bioactivity:** Ellipticine hydrochloride is a potent antineoplastic agent; inhibits **DNA topoisomerase II** activities.  

**Purity:** 98.06%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

---

**Epirubicin**  
*Cat. No.: HY-13624*  

**Bioactivity:** Epirubicin is a semisynthetic L-arabino derivative of doxorubicin, and an antineoplastic agent by inhibiting **Topoisomerase**.  

**Purity:** >98%  
**Clinical Data:** Launched  
**Size:** 5 mg, 10 mg

---

**Epirubicin hydrochloride**  
(4’-Epidoxorubicin hydrochloride)  
*Cat. No.: HY-13624A*  

**Bioactivity:** Epirubicin (hydrochloride) is a semisynthetic L-arabino derivative of doxorubicin, and an antineoplastic agent by inhibiting **Topoisomerase**.  

**Purity:** 98.15%  
**Clinical Data:** Launched  
**Size:** 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

---

**Etoposide**  
(VP-16; VP-16-213)  
*Cat. No.: HY-13629*  

**Bioactivity:** Etoposide is a **topoisomerase II** inhibitor, inhibiting DNA synthesis.  

**Purity:** 99.84%  
**Clinical Data:** Launched  
**Size:** 10 mM x 1 mL in DMSO, 100 mg, 200 mg, 500 mg

---

**Exatecan**  
(DX-8951)  
*Cat. No.: HY-13631*  

**Bioactivity:** Exatecan is a water soluble **topoisomerase I** inhibitor, with an **IC₅₀** of 2.2 μM (0.975 μg/mL), and can be used in cancer research.  

**Purity:** >98%  
**Clinical Data:** Phase 3  
**Size:** 1 mg, 5 mg, 10 mg

---

**Exatecan Mesylate**  
(DX8951f)  
*Cat. No.: HY-13631A*  

**Bioactivity:** Exatecan Mesylate is a water soluble **topoisomerase I** inhibitor, with an **IC₅₀** of 2.2 μM (0.975 μg/mL), and can be used in cancer research.  

**Purity:** 98.09%  
**Clinical Data:** Phase 3  
**Size:** 10 mM x 1 mL in DMSO, 1 mg, 5 mg, 10 mg

---

**Flumequine**  
*Cat. No.: HY-B0526*  

**Bioactivity:** Flumequine is a quinolone antibiotic, and acts as a **topoisomerase II** inhibitor, with an **IC₅₀** of 15 μM (3.92 μg/mL).  

**Purity:** 99.53%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM x 1 mL in DMSO, 10 mg, 50 mg

---

**Bioactivity:** Dxd is a potent **DNA topoisomerase I** inhibitor, with an **IC₅₀** of 0.31 μM, used as a conjugated drug of HER2- targeting ADC (DS-8201a).  

**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg, 10 mg

---

**Bioactivity:** Edotecarin is a potent inhibitor of **topoisomerase I** that can induce single-strand DNA cleavage, with **IC₅₀** of 50 nM.  

**Purity:** >98%  
**Clinical Data:** Phase 3  
**Size:** 1 mg, 5 mg, 10 mg

---

**Bioactivity:** Ellipticine hydrochloride is a potent antineoplastic agent; inhibits **DNA topoisomerase II** activities.  

**Purity:** >98%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg, 50 mg, 100 mg

---

**Bioactivity:** Ellipticine hydrochloride is a potent antineoplastic agent; inhibits **DNA topoisomerase II** activities.  

**Purity:** 98.06%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

---

**Bioactivity:** Epirubicin is a semisynthetic L-arabino derivative of doxorubicin, and an antineoplastic agent by inhibiting **Topoisomerase**.  

**Purity:** >98%  
**Clinical Data:** Launched  
**Size:** 5 mg, 10 mg

---

**Bioactivity:** Epirubicin (hydrochloride) is a semisynthetic L-arabino derivative of doxorubicin, and an antineoplastic agent by inhibiting **Topoisomerase**.  

**Purity:** 98.15%  
**Clinical Data:** Launched  
**Size:** 10 mM x 1 mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

---

**Bioactivity:** Etoposide is a **topoisomerase II** inhibitor, inhibiting DNA synthesis.  

**Purity:** 99.84%  
**Clinical Data:** Launched  
**Size:** 10 mM x 1 mL in DMSO, 100 mg, 200 mg, 500 mg

---

**Bioactivity:** Exatecan is a water soluble **topoisomerase I** inhibitor, with an **IC₅₀** of 2.2 μM (0.975 μg/mL), and can be used in cancer research.  

**Purity:** >98%  
**Clinical Data:** Phase 3  
**Size:** 1 mg, 5 mg, 10 mg

---

**Bioactivity:** Exatecan Mesylate is a water soluble **topoisomerase I** inhibitor, with an **IC₅₀** of 2.2 μM (0.975 μg/mL), and can be used in cancer research.  

**Purity:** 98.09%  
**Clinical Data:** Phase 3  
**Size:** 10 mM x 1 mL in DMSO, 1 mg, 5 mg, 10 mg

---

**Bioactivity:** Flumequine is a quinolone antibiotic, and acts as a **topoisomerase II** inhibitor, with an **IC₅₀** of 15 μM (3.92 μg/mL).  

**Purity:** 99.53%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM x 1 mL in DMSO, 10 mg, 50 mg
### Genz-644282

**Cat. No.:** HY-16228

**Bioactivity:** Genz-644282 is a non-camptothecin topoisomerase I inhibitor, used for cancer research.

| Purity: | 98.00% |
| Clinical Data: | Phase 1 |
| Size: | 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg |

### Idarubicin hydrochloride

(4-Demethoxydaunorubicin hydrochloride)  
**Cat. No.:** HY-17381

**Bioactivity:** Idarubicin hydrochloride is an anthracycline antibiotic in the treatment of leukaemia and a DNA topoisomerase II inhibitor.

| Purity: | 99.62% |
| Clinical Data: | Launched |
| Size: | 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg |

### INNO-206

(Aldoxorubicin; DOXO-EMCH)  
**Cat. No.:** HY-16261

**Bioactivity:** INNO-206 is a prodrg of the anticancer agent doxorubicin, which is released from albumin under acidic conditions.

| Purity: | 95.0% |
| Clinical Data: | Phase 3 |
| Size: | 5 mg, 10 mg, 50 mg, 100 mg |

### Indotecan

**Cat. No.:** HY-18351

**Bioactivity:** Indotecan (LMP-400) is a potent topoisomerase I (Top1) inhibitor with IC$_{50}$ values of 300, 1200, 560 nM for P388, HCT116, MCF-7 cell lines, respectively.

| Purity: | >98% |
| Clinical Data: | No Development Reported |
| Size: | 250 mg, 500 mg |

### Intoplicine

**Cat. No.:** HY-101647

**Bioactivity:** Intoplicine is a DNA topoisomerase I and II inhibitor.

| Purity: | >98% |
| Clinical Data: | Phase 1 |
| Size: | 1 mg, 5 mg, 10 mg |

### Irinotecan

((+)-Irinotecan; CPT-11)  
**Cat. No.:** HY-16562

**Bioactivity:** Irinotecan is a water soluble topoisomerase I inhibitor with antitumor activity.

| Purity: | 99.78% |
| Clinical Data: | Launched |
| Size: | 10mM x 1mL in DMSO, 50 mg, 100 mg, 200 mg, 500 mg |

### Irinotecan hydrochloride

(CPT-11 hydrochloride; Camptothecin 11 hydrochloride)  
**Cat. No.:** HY-16562A

**Bioactivity:** Irinotecan hydrochloride is a water soluble topoisomerase I inhibitor with antitumor activity.

| Purity: | 99.75% |
| Clinical Data: | Launched |
| Size: | 10mM x 1mL in DMSO, 50 mg, 100 mg, 200 mg, 500 mg |

### Irinotecan hydrochloride trihydrate

**Cat. No.:** HY-16568

**Bioactivity:** Irinotecan hydrochloride trihydrate is a water soluble topoisomerase I inhibitor with antitumor activity.

| Purity: | 99.59% |
| Clinical Data: | Launched |
| Size: | 10mM x 1mL in DMSO, 50 mg, 100 mg, 200 mg, 500 mg |

### LMP744

(MJ-III65; NSC706744)  
**Cat. No.:** HY-U00248

**Bioactivity:** LMP744 is a Top1 inhibitor.

| Purity: | >98% |
| Clinical Data: | Phase 1 |
| Size: | 1 mg, 5 mg, 10 mg, 20 mg |

### Mitoxantrone

(mitozantrone)  
**Cat. No.:** HY-13502

**Bioactivity:** Mitoxantrone is a topoisomerase II inhibitor; also inhibits protein kinase C (PKC) activity with an IC$_{50}$/IC$_{50}$ of 8.5 μM.

| Purity: | 98.0% |
| Clinical Data: | Launched |
| Size: | 10mM x 1mL in DMSO, 50 mg, 100 mg |
| **Mitoxantrone dihydrochloride**  
 (mitozantrone dihydrochloride) | **Cat. No.: HY-13502A** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Mitoxantrone dihydrochloride is a topoisomerase II inhibit or; also inhibits protein kinase C (PKC) activity with an ( \text{IC}_{50} ) of 8.5 ( \mu \text{M} ).</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>97.02%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Launched</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10mM x 1mL in DMSO, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

| **Namitecan**  
 (ST-1968) | **Cat. No.: HY-14821** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Namitecan is a potent topoisomerase I inhibitor, with anti tumor property.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>1 mg, 5 mg, 10 mg, 20 mg</td>
</tr>
</tbody>
</table>

| **Pirarubicin**  
 (THP) | **Cat. No.: HY-13725** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Pirarubicin is an anthracycline antibiotics, acts as a topoisomerase II inhibitor, and is a widely used for treatment of various cancers, in particular, solid tumors.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.02%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Launched</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

| **Pirarubicin Hydrochloride**  
 (THP Hydrochloride) | **Cat. No.: HY-13725A** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Pirarubicin Hydrochloride is an anthracycline antibiotics, acts as a topoisomerase II inhibitor, and is a widely used for treatment of various cancers, in particular, solid tumors.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>96.90%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Launched</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

| **Pixantrone**  
 (BBR 2778) | **Cat. No.: HY-13727** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Pixantrone is a topoisomerase II inhibitor and DNA intercalator, with anti-tumor activity.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Launched</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

| **Pixantrone dimaleate**  
 (BBR 2778 dimaleate) | **Cat. No.: HY-13727A** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Pixantrone dimaleate is a topoisomerase II inhibitor and DNA intercalator, with anti-tumor activity.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>95.0%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Launched</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10mM x 1mL in Water, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Podocarpusflavone A</strong></th>
<th><strong>Cat. No.: HY-N2198</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>Podocarpusflavone A is a DNA topoisomerase I inhibitor, have mod rated anti-proliferative activity induce cell apoptosis in MCF-7, is developing anti-tumor drugs target: DNA topoisomerase I In vitro: podocarpusflavone-A show significant inhibitions against DLD, KB, MCF-7, HEP-2 tumor cell lines (ED50 4</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>5 mg, 10 mg</td>
</tr>
</tbody>
</table>

| **SN-38**  
 (NK012) | **Cat. No.: HY-13704** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>SN-38 is an active metabolite of the Topoisomerase I inhibitor Irinotecan.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.46%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Phase 2</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10mM x 1mL in DMSO, 100 mg, 200 mg, 500 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SW044248</strong></th>
<th><strong>Cat. No.: HY-19637</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>SW044248 is a non-canonical topoisomerase I inhibitor, and selectively toxic for certain non-small cell lung cancer (NSCLC) c ell lines.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>99.90%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

| **TAS-103**  
 (BMS-247615) | **Cat. No.: HY-13758** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioactivity:</strong></td>
<td>TAS-103 is a dual inhibitor of DNA topoisomerase I/II, use d for cancer research.</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td><strong>Bioactivity:</strong></td>
<td><strong>Bioactivity:</strong> TAS-103 dihydrochloride is a dual inhibitor of DNA topoisomerase I/II, used for cancer research.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Purity:</strong></td>
<td>98.53%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
</tbody>
</table>

| **Bioactivity:** | Topotocan is a Topoisomerase I inhibitor. The IC_{50} values of Topotecan at 24 h are 2.73±0.25 μM of U251 cells, 2.95±0.23 μM of U87 cells, 5.46±0.41 μM of GSCs-U251 and 5.95±0.24 μM of GSCs-U87. | Topotecan hydrochloride is a Topoisomerase I inhibitor. The IC_{50} values of Topotecan hydrochloride at 24 h are 2.73±0.25 μM of U251 cells, 2.95±0.23 μM of U87 cells, 5.46±0.41 μM of GSCs-U251 and 5.95±0.24 μM of GSCs-U87. |
| **Purity:** | >98% | >98% |
| **Clinical Data:** | Launched | Launched |
| **Size:** | 10 mg, 50 mg | 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg |

<table>
<thead>
<tr>
<th><strong>Bioactivity:</strong></th>
<th>Voreloxin is a first-in-class Topoisomerase II inhibitor that intercalates DNA and induces site-selective DNA DSB, G2 arrest, and apoptosis.</th>
<th>Voreloxin hydrochloride is a first-in-class Topoisomerase II inhibitor that intercalates DNA and induces site-selective DNA DSB, G2 arrest, and apoptosis.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purity:</strong></td>
<td>&gt;98%</td>
<td>&gt;98%</td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>Phase 3</td>
<td>Phase 3</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>5 mg, 10 mg, 50 mg</td>
<td>10mM x 1mL in DMSO, 5 mg, 10 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Bioactivity:</strong></th>
<th>β-Lapachone is a naturally occurring O-naphthoquinone, acts as a Topoisomerase I inhibitor, and induces apoptosis by inhibiting cell cycle progression.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purity:</strong></td>
<td>99.72%</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Data:</strong></td>
<td>No Development Reported</td>
<td></td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg</td>
<td></td>
</tr>
</tbody>
</table>