ADCore Payload Intermediates and GMP Payloads:

Simplify Your Linker-Payload Synthesis

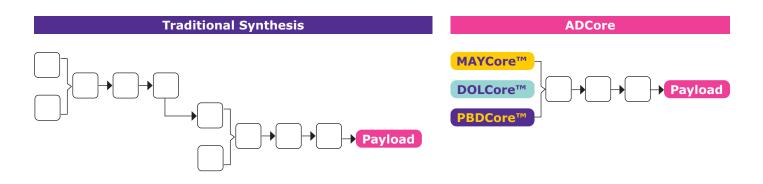
The Life Science business of Merck operates as MilliporeSigma in the U.S. and Canada. **SAFC**®

Pharma & Biopharma Raw Material Solutions

CERC

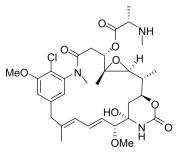
# **Avoid Complex Synthetic Routes**

ADCore products are cGMP quality advanced intermediates that help accelerate drug development efforts by reducing the number of development and manufacturing steps needed to produce Maytansinoid, Dolastatin, or Pyrrolobenzodiazepine (PBD)payloads.



# **MAYCore™ Intermediate**



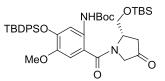


Maytansinoids comprise the second largest ADC payload class in the market. MAYCore™ Intermediate is an advanced intermediate that simplifies maytansine payload synthesis.

- Rapid synthesis of maytansinoid payloads
- 3 g samples available free of charge
- HPLC Purity ≥95%

### **PBDCore™ Intermediate**

#### Develop diverse and highly potent PBDs

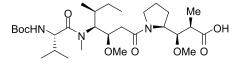


Pyrrolobenzodiazepines (PBDs) are an up-and-coming class of payloads, with the first commercial PBD-based ADC launched in 2021. PBDCore<sup>™</sup> Intermediate contains the active structural components and handles of PBDs, giving our customers the flexibility to make most PBD payloads.

- 10 g samples available free of charge
- HPLC Purity ≥95%

# **DOLCore™ Intermediate**

Synthesize dolastatin payload faster and with less risk



Dolastatins have demonstrated both clinical and commercial success as payloads for ADCs. DOLCore<sup>™</sup> Intermediate is a versatile and advanced intermediate that can simplify the synthesis of dolastatin-10 payloads by reducing the number of synthesis steps from 15–20 to four or fewer.

- Get market exclusivity at least 12-months sooner
- 5 g samples available free of charge
- HPLC Purity ≥98%

### **Added Value:**

- Fully customizable
- Decreased supply chain risks
- Full regulatory support
- No royalties or licensing fees
- Easily paired with Millipore® CTDMO services
- Readily available stock

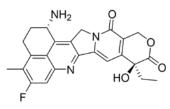
# cGMP Quality Payloads for Your Drug Conjugate Program

# High quality Exatecan, Monomethyl Auristatin E (MMAE) and Mertansine

# Exatecan (Camptothecin payload)

Exatecan mesylate

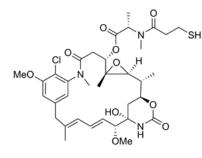
CAS# 171335-80-1



# DM1 (Mertansinoid payload)

Mertansine

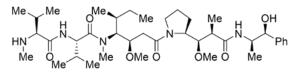
CAS# 139504-50-0



# **MMAE (Auristatin payload)**

#### Monomethyl auristatin E

#### CAS# 474645-27-7



### **GMP payload features:**

- High purity material (> 97% purity)
- Full regulatory support
- No royalties or licensing fees
- Samples available free of charge
- Material supplied out of HPAPI CDMO center of excellence in Madison/Verona, Wi, USA

# Payload and Linker Manufacturing Capabilities

We have more than 30 years of experience working with highly-active and complex molecules. Our Madison, Wisconsin, facility in the United States has a variety of manufacturing spaces and equipment to provide the necessary flexibility for multi-step synthesis of complex and highly potent APIs (HPAPIs) and linker-payloads including the world's largest single-digit nanogram OEL containment facility opened in 2022.

# **Manufacturing Capabilities**

QTY	Equipment	Capacity	Temp Range
7	HPAPI Kilo Labs: Single ng OEL containment	g to kg scale	-75 to +190 °C
6	HPAPI Kilo Labs: Containment down to 30 ng/m <sup>3</sup>	g to kg scale	-75 to +190 °C
4	Potent Kilo Labs: Containment down to 1 µg/m <sup>3</sup>	g to kg scale	-75 to +190 °C
3	HPAPI Pilot Plants: Containment down to 30 ng/m <sup>3</sup>	120-800 L 3-25 kg batch	-20 to +180 °C
2	Potent Production Plants: Containment down to 1 µg/m <sup>3</sup>	2,000-4,000 L 50-400 kg batch	-80 to +180 °C

# **Comprehensive Solutions for Your ADC**

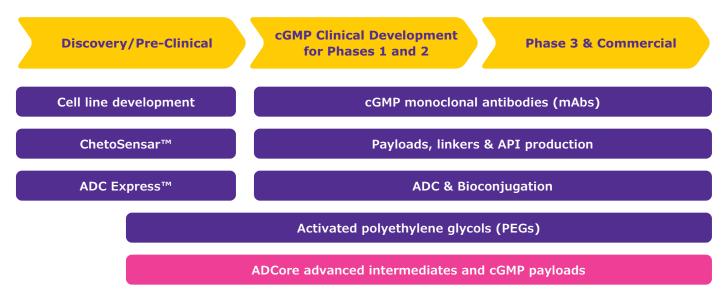
We offer comprehensive supply chain reliability from discovery to commercialization of your ADC.

This includes coordinated and collaborative services for the development, manufacturing, and testing of bulk drug substance and drug product. We offer a full range of services to support your ADC projects:

- mAb, linker, payload, conjugation development, and manufacturing services
- Analytical method development and validation
- Technology transfer and manufacturing
- Stability studies for bulk drug substance and drug product
- Regulatory support

# **ADC Contract Manufacturing Footprint**

Comprehensive ADC Solutions from Discovery to Commercial: Integrated from Gene to Bulk Drug Substance



# **ChetoSensar™ Technology**

A technology that solves many challenges with antibody-drug conjugates

- Increased ADC solubility, particularly for higher DAR ADCs
- Wider therapeutic index and higher drug efficacy
- Improved bioconjugation efficiency

# **ADC Express™ Services**

Pre-clinical conjugation services for the best candidate selection

- Mini-prep scale: 10–20 mg ADC construct ± column purification
- Medium-prep scale: up to 100 mg ADC ± column purification
- Certificate of testing with key quality attributes

# **Monodisperse activated PEGs**

#### ADC linkers with increased hydrophilicity

With decades of PEG synthesis expertise, our technical teams tailor our approach to meet your unique needs including linear to branched and all varieties of functionalization.

### **GMP mAb Supplies**

More than three decades of experience with hundreds of biologics

- GMP Clinical manufacturing from 50 L to 2,000 L scale
- Commercial manufacturing at 200 L and 2,000 L scale
- MAbs, Fabs, bispecific, recombinant proteins, Fc-fusion, and other similar formats

Merck KGaA Frankfurter Strasse 250 64293 Darmstadt, Germany

For additional information, please visit SigmaAldrich.com/services/contract-manufacturing/high-potent-apis

To place an order or receive technical assistance, please visit **SigmaAldrich.com/adc-api-ctdmo-contact** 

© 2024 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved. Merck, the vibrant M, BioReliance, Millipore, Milli-Q, SAFC, Sigma-Aldrich, Supelco, ADC Express, ChetoSensar, DOLCore, PBDCore and MAYCore are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. All other trademarks are the property of their respective owners. Detailed information on trademarks is available via publicly accessible resources.



MK\_BR9078EN Ver. 2.0 53649 02/2024