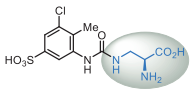
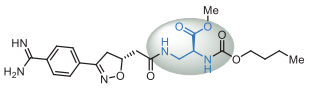
# Metabolic Soft Spot

## Introduction

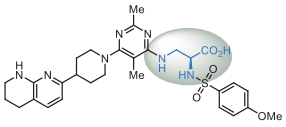
The concept of “soft” drugs involves the controlled degradation of substances to treat acute conditions that require a rapid onset and temporary action.[1] Recently, researchers at Bayer AG developed a dual factor IIa/Xa inhibitor featuring an ester bond as a soft spot for the clearance of the substance from plasma through ester bond hydrolysis. These esters, based on the molecular structure of diaminopropionic acid, demonstrated a half-life of 0.2-0.3 hours *in vivo*, supporting the advancement of the optimized molecule (BAY 3389934) to clinical trials.[2] Explore our collection of diaminopropionic acid derivatives to construct your molecules!



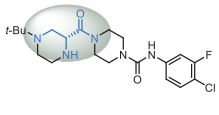
**Upacicalcet**
treatment of secondary hyperparathyroidism
approved in 2021 in Japan
*Sanwa Kagaku Kenkyusho*



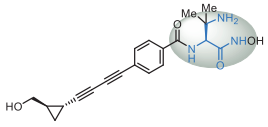
**Roxifiban**
treatment of coronary arterial disease
Phase 2 trials
*Du Pont & Merck*



**GLPG-0187**
treatment of solid tumors
Phase 1 trials
*Bausch & Lomb*



**AZD-2423**
treatment of chronic obstructive pulmonary disease
Phase 2 trials
*AstraZeneca*



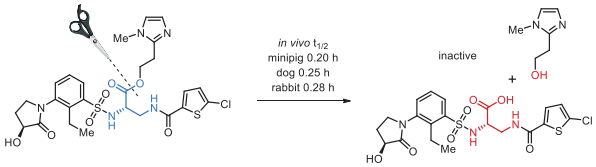
**ACHN-975**
antibiotic
Phase 1 trials
*Achaogen*

## Case study

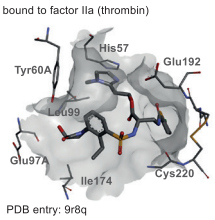
**BAY 3389934**
dual thrombin factor Xa inhibitor
*Bayer AG*

Phase 1 trials initiated

factor IIa $IC_{50}$ 4.9 nM
factor Xa $IC_{50}$ 0.66 nM




*J. Med. Chem.* **2025**, *68*, 12587

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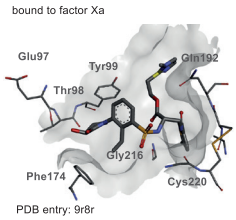


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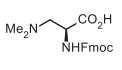
## We offer: over 100 compounds based on diaminopropionic acid skeleton from stock on 5-10 gram scale.



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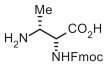

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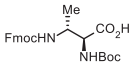

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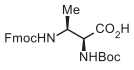

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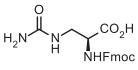

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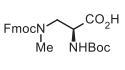

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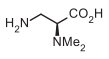

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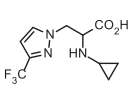

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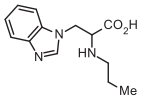

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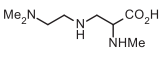

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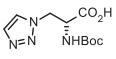

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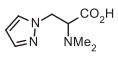

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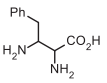

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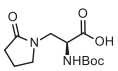

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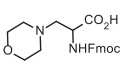

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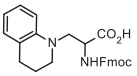

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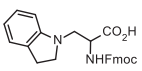

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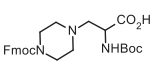

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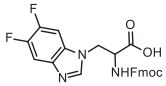

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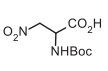

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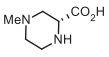

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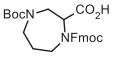

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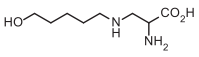

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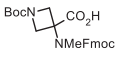

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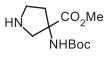

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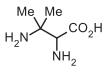

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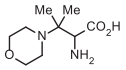

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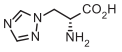

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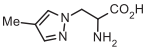

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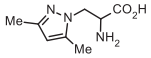

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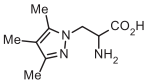

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## References


1. P. Buchwald. *Expert Opin. Drug Metab. Toxicol.* **2020**, *16*, 645.
2. H. Beck et al. *J. Med. Chem.* **2025**, *68*, 12687.


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