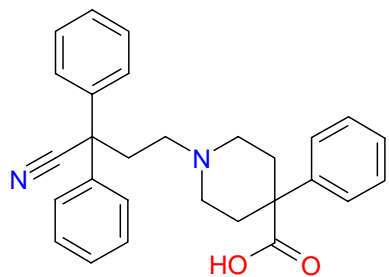


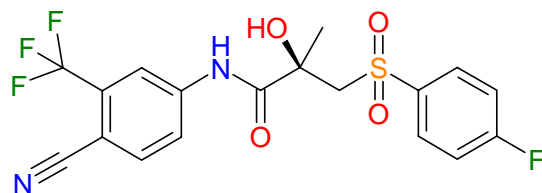
PRODUCT FOCUS ENAMINE Amino Nitriles

In previous issues of *Enamine Product Focus*, we have emphasized an importance of bifunctional building blocks for efficient drug discovery. This time we want to draw your attention to *Amino Nitriles*. Enamine offers two subsets of building blocks with the corresponding substitution profile. Aliphatic and most of the aromatic **amino nitriles** are aimed to be used as classical orthogonally bifunctional building blocks, whereas **enamino nitriles** and their heterocyclic analogues were designed for the synthesis of heterocycles.

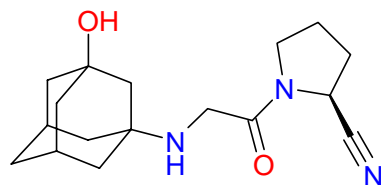
Several examples of successful utilization of Amino Nitriles for drug discovery are illustrated below: opioid Difenoxin (Motofen[®]), oral non-steroidal anti-androgen Bicalutamide (Casodex[®]) and anti-hyperglycemic agent Vildagliptin (Galvus[®]).



Difenoxin, 1960



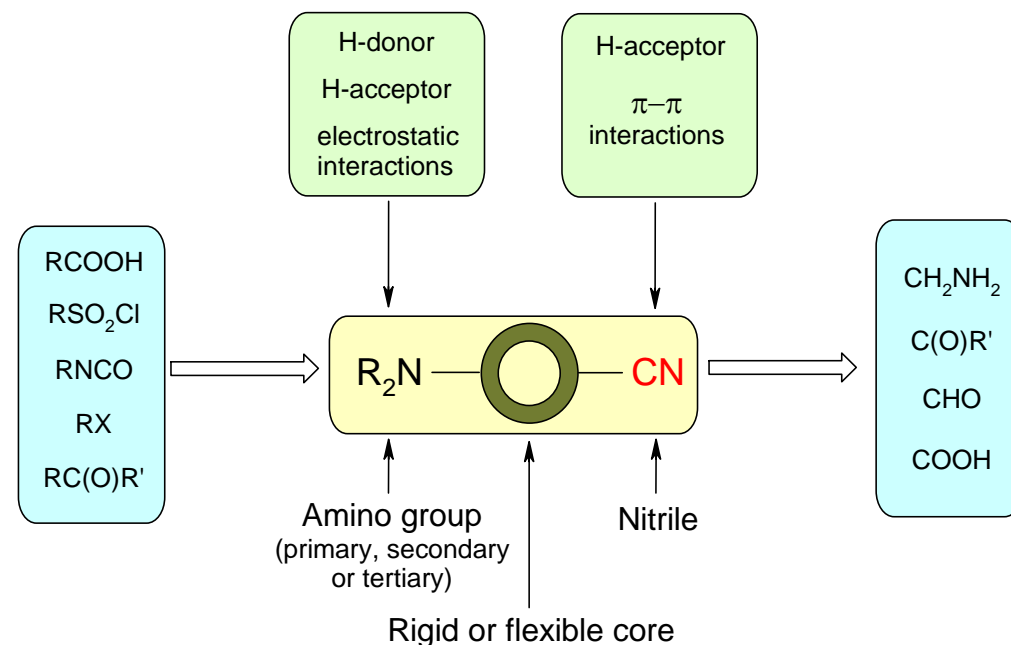
Bicalutamide, 1995



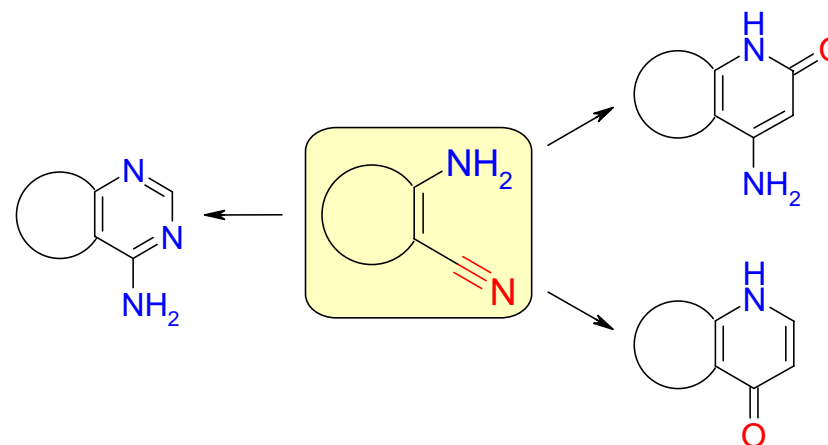
Vildagliptin, 2007

Procedures developed for the synthesis of *Amino Nitriles* allow production of highly diverse sets of these building blocks on 1–10 g scale; we can also synthesize novel compounds based on a requested structure within 4–8 weeks. Scale-up to 1 kg can be performed upon request. Moreover, we have broad in-house experience of further modification of *Amino Nitriles*, in particular, using heterocyclization reactions.

Features of common amino nitriles

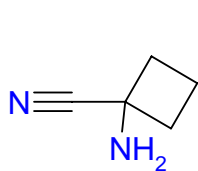


Enamino nitriles and their derivatives

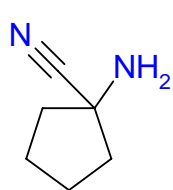


Some examples of *Amino Nitriles* are shown below. The complete Enamine Amino Nitriles set can be downloaded at www.enamine.net.

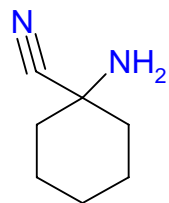
Aliphatic Amino Nitriles



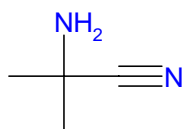
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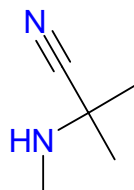
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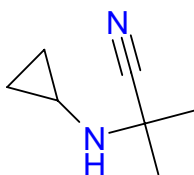
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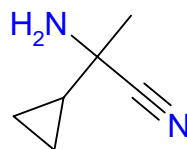
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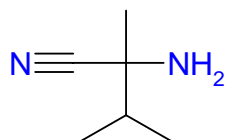
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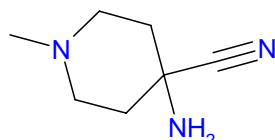
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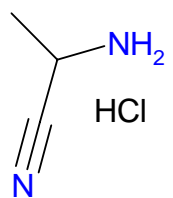
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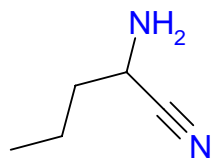
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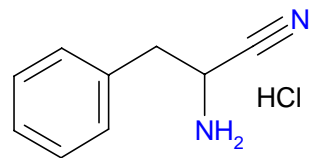
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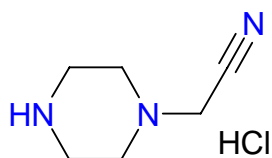
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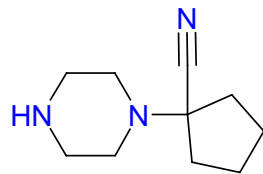
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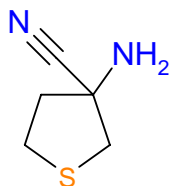
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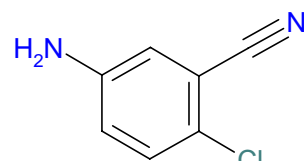


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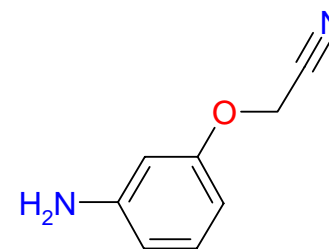


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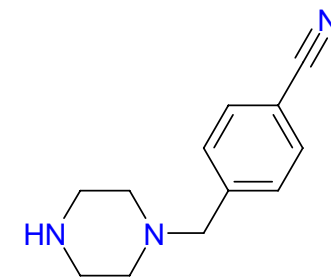
Aromatic Amino Nitriles



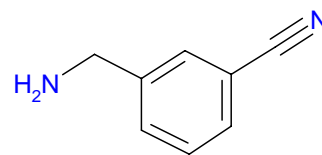
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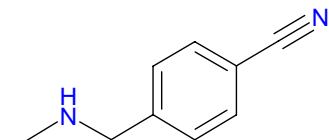
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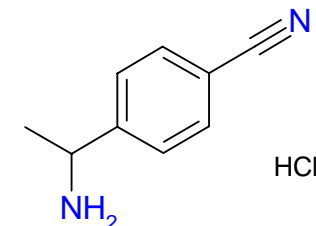
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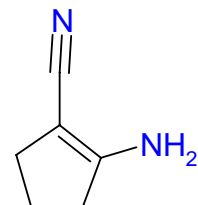
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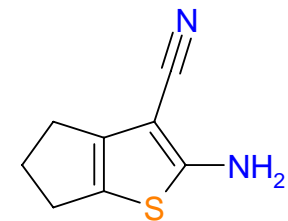
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HCl

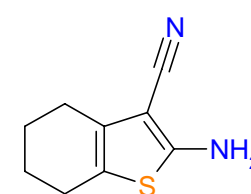
Enamino Nitriles and their heterocyclic analogues



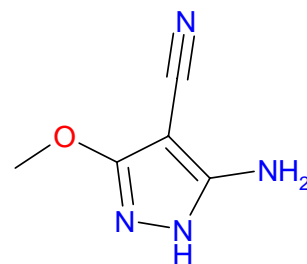
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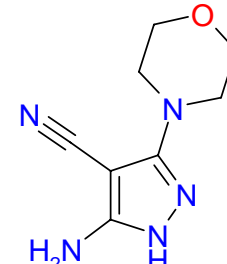
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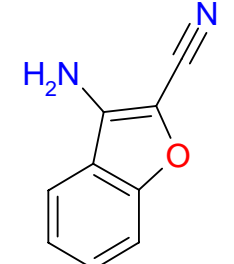
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