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|  | .NET Bio Getting Started  Version 1.0 - June 2011 |

Abstract

The .NET Bio Framework is an open source, reusable, .NET Framework library and application programming interfacea (API) for bioinformataics research.

This document describes how to get started with the Framework.

For updates to this document and the rest of the Framework documentation, see   
<http://bio.codeplex.com/>.

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# Getting Started with .NET Bio Framework

.NET Bio Framework is available under an open source license. Executables, source code, demo applications, and documentation are freely downloadable.

To get started with the Framework, download the three main Framework projects and documentation from the CodePlex site.

### The Framework

The Framework is a language-neutral bioinformatics toolkit, built as an extension to the Microsoft® .NET Framework. The Framework includes parsers for common bioinformatics file formats, algorithms for manipulating DNA, RNA, and protein sequences, plus a set of connectors to biological Web services such as NCBI BLAST.

The download page for the Framework is <http://bio.codeplex.com/>

### .NET Bio Sequence Assembler

The .NET Bio Sequence Assembler is a proof-of-concept application that demonstrates the use of the .NET Bio Framework, .NET Framework, and Windows® Presentation Foundationfor bioinformatics research. The .NET Bio Sequence Assembler uses rich user interface (UI) elements to enable the visualization and manipulation of genomic data.

The download page for the .NET Bio Sequence Assembler is on the **Downloads** tab at <http://bio.codeplex.com/>

The download page for the .NET Bio Sequence Assembler documentation is on the **Documentation** tab at <http://bio.codeplex.com/>

### .NET Bio Extension for Excel

The .NET Bio Extension is an add-in for Microsoft Office Excel 2007 and Excel 2010 that provides a simple and flexible way to work with genomic sequences, metadata, and interval data in an Excel document. The .NET Bio Biology Extension add-in implements several features of the .NET Bio Framework: a set of parsers for common genome file formats; a set of sequencing algorithms for assembly of a consensus DNA strand; and a set of connectors to several Basic Local Alignment Search Tool (BLAST) Web services for genome identification.

The download page for the .NET Bio Extension is on the **Downloads** tab at <http://bio.codeplex.com/>

The download page for the .NET Bio Extension documentation is on the **Documentation** tab at <http://bio.codeplex.com/>

# Programming with the Framework

The Framework is extensible by design. If you need functions that are not in the basic library, you will find them easy to implement in a way that works with the existing functions. We encourage developers who extend the Framework to contribute their code back to the project as open source so that the community as a whole can benefit from their work.

For information on how to get the Framework source code, open a project, and build the code, see these documents:

* .NET Bio Programming Guide: on the **Documentation** tab at [http://bio.codeplex.com/](http://biodex.codeplex.com/)

For more information about the Framework, start with these documents:

* .NET Bio Overview: on the **Documentation** tab at <http://bio.codeplex.com/>

If you are interested in contributing code to the .NET Bio Framework projects, see these documents:

* .NET Bio Code Contribution Guide: on the **Documentation** tab at <http://bio.codeplex.com/>
* .NET Bio C# Coding Standardss: on the **Documentation** tab at <http://bio.codeplex.com/>
* .NET Bio Commenting Conventions: on the **Documentation** tab at <http://bio.codeplex.com/>

# Get to know .NET Bio resources

The .NET Bio Framework historically came out of the Microsoft Biology Foundation (MBF) and Microsoft Biology Tools (MBT).

* Main website: .NET Bio on Codeplex, <http://bio.codeplex.com/> where you can download stable drops of the Framework and sample tools’ source code, documentation, and discussion forum.
* Microsoft Biology Foundation <http://research.microsoft.com/bio/mbf.aspx> where you can download and install MBF binaries.
* Microsoft Biology Tools <http://research.microsoft.com/bio/mbt.aspx> where you can download and install tools like the Sequence Assembler and the Bioinformatics Add-In for Excel.
* MBF/.NET Bio Training <http://research.microsoft.com/en-US/projects/bio/training.aspx> where you can download our training materials that include hands-on labs that will help you get started coding with the Frmaework.