

# Introduction to BioFPGA

- ***Field Programmable Gate Arrays = FPGA's***
- ***Reconfigurable Hardware***
- ***Can be Hundreds of times faster***
- ***Less power consumption, less heat, less space***
- ***BUT- Traditionally hard to program***
- ***Not for all algorithms!***

# BioFPGA- Why Now?

- *Hardware is improving- CRAY, SGI, Nallatech*
- *Software is improving- Mitrion, ImpulseC*
- *Less efficient, but much easier to port*
- *Several projects in the works*

# FPGA projects

- *Smith/Waterman*
- *HMMpfam*
- *BLAST*
- *DeNovo Mass spec*
- *Docking*
- *Microarray analysis*
- *Etc...*

# BioFPGA plans

- *Modeled after BioPerl et al*
- *Consolidate code*
- *Standardize platforms*
- *Share experiences*
- *Construct framework*
- *Standardize I/O*
- *BioFPGA.org*

Martin Gollery  
mgollery@unr.edu