



**Molecular Biotechnology Programme**  
**Uppsala University School of Engineering**

<b>UPTEC X 02 017</b>	<b>Date of issue 2002-04</b>	
Author <b>Erik Granseth</b>		
Title (English) <b>Predicting nuclear localization signals by using an artificial neural network approach</b>		
Title (Swedish)		
Abstract Nuclear localization is predicted by artificial neural networks, based on the amino acid sequence alone. The network is trained on proteins containing nuclear localization signals. The network had a Mathews' correlation coefficient of 0.46, sensitivity of 0.43 and specificity of 0.69 if incorporated into TargetP and 0.34, 0.45 and 0.49, respectively, alone. The method seems promising and there is plenty of room for improvement, when more is known about nuclear localization.		
Keywords Nuclear localization signals, nuclear localization, artificial neural networks		
Supervisors <b>Gunnar von Heijne</b> <b>Olof Emanuelsson</b> <b>Stockholm Bioinformatics Center</b>		
Examiner <b>Arne Elofsson</b> <b>Stockholm Bioinformatics Center</b>		
Project name	Sponsors	
Language <b>English</b>	Security	
<b>ISSN 1401-2138</b>	Classification	
Supplementary bibliographical information	Pages <b>29</b>	
<b>Biology Education Centre</b> Box 592 S-75124 Uppsala	<b>Biomedical Center</b> Tel +46 (0)18 4710000	<b>Husargatan 3 Uppsala</b> Fax +46 (0)18 555217