



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

<b>UPTEC X 01 014</b>	<b>Date of issue 2001-02</b>	
Author	<b>Katarina Linde</b>	
Title (English)	<b>A comparison of homo- versus heterodimeric PDGF receptor signaling</b>	
Title (Swedish)		
Abstract	Platelet derived growth factor (PDGF) and its receptors are involved in signal transduction and over expression of PDGF and both receptors has been shown in several tumors. PDGF consists of disulphide bonded A- and B-chains (forming the three isoforms AA, AB and BB) that induce the formation of $\alpha\alpha$ -, $\alpha\beta$ - and $\beta\beta$ -receptor dimers. The aim of my project has been to compare the signaling between the homodimeric and heterodimeric PDGF receptors by use of DNA microarray technique. Foreskin fibroblasts have been used as a model system. Cells were either stimulated with the different isoforms of PDGF (to activate the different receptor combinations) or left untreated (controls). RNA was extracted from the cells and hybridized to the arrays. The results obtained are preliminary but show that there are some differences in homo- and heterodimeric PDGF receptor signaling.	
Keywords	Platelet derived growth factor, PDGF, microarray, gene array, heterodimer	
Supervisors	<b>Anders Kallin and Lars Rönstrand Ludwig Institute for Cancer Research, Uppsala</b>	
Examiner	<b>Carl-Henrik Heldin Ludwig Institute for Cancer Research, Uppsala</b>	
Project name	Sponsors	
Language	Security	
<b>ISSN 1401-2138</b>	Classification	
Supplementary bibliographical information	Pages <b>31</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