


BIOSKETCH Ulf Pettersson		POSITION Senior professor in medical genetics Uppsala University, Sweden		
INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY	
Uppsala University, Sweden	M.D.	1971	Virology	
Uppsala University, Sweden	Ph.D	1970		
Uppsala University, Sweden	B.M.	1964		

Research description

1. This project focuses in tyrosine phosphorylation in normal cells and cancer cells. Our plan is to identify all proteins in a human cell that are tyrosine phosphorylated and to apply this knowledge to clarify which signalling pathways that are disturbed in a given tumour. The long-term goal is to use the results to predict tumour malignancy.
2. This project aims at identifying biomarkers that can be used to diagnose bladder cancer. Using massspectrometry we have shown that a small number of proteins are present at higher levels in the urine from bladder cancer patients. We are presently examining whether these proteins can be used to identify patients that have or have had a relapse of bladder cancer.
3. The aim of this project is to study how adenovirus alters gene expression during the course of an infection. Using massive parallel DNA sequencing of cDNA we are able to study changes in both coding and non-coding cellular genes

In another sub project we are characterising all protein modifications in the adenovirus particle. For this analysis we employ mass spectrometry.

My research portfolio is very wide. I am, however, approaching the end of my career and am trying to tie up some loose ends.

Key words: tyrosine phosphorylation, bladder cancer, urinary proteome, adenovirus, host cell gene expression, adenoviral proteome.

Selected peer-reviewed publications (total number >300; number of citations >25,000; h-index: 86)

1. Human QKI, a new candidate gene for schizophrenia involved in myelination. Aberg K, Saetre P, Lindholm E, Ekholm B, **Pettersson U**, Adolfsson R, Jazin E. Am J Med Genet B Neuropsychiatr Genet. 2006, 141B(1):84-90.
2. Strategic attack on host cell gene expression during adenovirus infection. Zhao H, Granberg F, Elfineh L, **Pettersson U**, Svensson C. J Virol. 2003, 77(20):11006-15.
3. The genome sequence of Trypanosoma cruzi, etiologic agent of Chagas disease. El-Sayed NM, Myler PJ, Bartholomeu DC, Nilsson D, Aggarwal G, Tran AN, Ghedin E, Worthey EA, Delcher AL, Blandin G, Westenberger SJ, Caler E, Cerqueira GC, Branche C, Haas B, Anupama A, Arner E, Aslund L, Attipoe P, Bontempi E, Bringaud F, Burton P, Cadag E, Campbell DA, Carrington M, Crabtree J, Darban H, da Silveira JF, de Jong P, Edwards K, Englund PT, Fazelina G, Feldblyum T, Ferella M, Frasch AC, Gull K, Horn D, Hou L, Huang Y, Kindlund E, Klingbeil M, Kluge S, Koo H, Lacerda D, Levin MJ, Lorenzi H, Louie T, Machado CR, McCulloch R, McKenna A, Mizuno Y, Mottram JC, Nelson S, Ochaya S, Osoegawa K, Pai G, Parsons M, Pentony M, **Pettersson U**, Pop M, Ramirez JL, Rinta J, Robertson L, Salzberg SL, Sanchez DO, Seyler A, Sharma R, Shetty J, Simpson AJ, Sisk E, Tammi MT, Tarleton R, Teixeira S, Van Aken S, Vogt C, Ward PN, Wickstead B, Wortman J, White O, Fraser CM, Stuart KD, Andersson B. Science. 2005, 309(5733):409-15.

4. Modulation of host cell gene expression during onset of the late phase of an adenovirus infection is focused on growth inhibition and cell architecture. Granberg F, Svensson C, **Pettersson U**, Zhao H. *Virology*. 2005, 343(2):236-45.
5. Adenovirus-induced alterations in host cell gene expression prior to the onset of viral gene expression. Granberg F, Svensson C, **Pettersson U**, Zhao H. *Virology*. 2006, 353(1):1-5.
6. How adenovirus strives to control cellular gene expression. Zhao H, Granberg F, **Pettersson U**. *Virology*. 2007, 363(2):357-75.
7. Immunoaffinity enrichments followed by mass spectrometric detection for studying global protein tyrosine phosphorylation. Bergström Lind S, Molin M, Savitski MM, Emilsson L, Aström J, Hedberg L, Adams C, Nielsen ML, Engström A, Elfineh L, Andersson E, Zubarev RA, **Pettersson U**. *J Proteome Res*. 2008, 7(7):2897-910
8. Activation of the interferon-induced STAT pathway during an adenovirus type 12 infection. Zhao H, Boije H, Granberg F, **Pettersson U**, Svensson C. *Virology*. 2009, 392(2):186-95.
9. Towards a Comprehensive Characterization of the Phosphotyrosine Proteome. Bergström Lind S., Artemenko KA., Elfineh L., Mayrhofer C., Zubarev RA, Bergquist J., **Pettersson U**. *Cellular Signalling*, 2011, 23(8):1387-95.
10. The transcriptome of the adenovirus infected cell. H. Zhao, M. Dahlö, A. Isaksson, A-C Syvänen and **U. Pettersson**. *J. Virology*. 2012, 424(2):115-28.

Grant support

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Positions and Honors

Positions

2009- Senior professor in medical genetics Uppsala University Sweden
 1981-2009 Professor of medical genetics, Dept. of Medical Genetics, Uppsala University
 1973-1981 Dept. of Microbiology, Uppsala University
 1971-1973 Postdoctoral fellow at Cold Spring Harbor, New York, USA
 1968-1971 Dept. of Microbiology, Uppsala University
 1965-1967 Department of Cell Biology, Institute of Medical Microbiology, Uppsala University

Honors/Commissions of trust

2011 Rudbeck Medal, Uppsala University
 2009- Vice President of the Swedish Royal Academy of Sciences
 2009 The Elder Gustaf Adolf Medal, Uppsala University
 2002-2008 Vice Rector, Uppsala University
 1999-2002 Director of the Rudbeck Laboratory
 1997-2003 Member of the Board of Uppsala University
 1998-2001 Chairman of the Department of Genetics and Pathology
 1992-1996 Member of HUGO council
 1981-1996 Chairman of the Dept of Medical Genetics, Uppsala University
 1996 Member of Editorial Academy of the International Journal of Oncology
 1996 Member of the Finnish "Vetenskaps societeten"
 1994 von Humboldt award
 1993- Member of Academia Europea
 1992 Member of the board of the European Society for Human Genetics
 1984-1990 Member of EMBO council
 1989 Lennander lecturer
 1989- Member of HUGO
 1985- Member of Royal Swedish Academy of Science
 1983 Fernström award
 1980 The Svedberg award
 1976- Member of European Molecular Biology Organization (EMBO)