Prof. dr hab. Antoni Więdłocha – informacja biograficzna

Name: Antoni Wiedlocha born: 12 June 1959, Opole, Poland
Home address: Oppsaltoppen 16C, N-0687 Oslo, Norway
Work address: Centre for Cancer Biomedicine, Department of Biochemistry, Institute for Cancer Research, The Norwegian Radiumhospital, Oslo University Hospital, Montebello, N-0379 Oslo, Norway.

EDUCATION:

M. Sc., 1983	Biology, University of Wroclaw, Wroclaw, Poland.
November 1986	UICC – Yamagiva-Yoshida Fellowship, Institute for Cancer Research, Department of Biochemistry, Oslo, Norway.
January–April 1988	Norwegian and Polish Government Fellowship, Institute for Cancer Research, Department of Biochemistry, Oslo, Norway.
Ph.D., 1989	Tumor immunotherapy, Ludwik Hirszfeld Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Wroclaw, Poland. **Thesis entitle:** *The use of anti-L1210V leukemic monoclonal antibody and its ricin A-chain immunotoxin in experimental immunotherapy*.
Habilitation, 1997	Mechanisms of fibroblast growth factor signaling, Ludwik Hirszfeld Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Wroclaw, Poland. **Thesis entitle:** *Diphtheria toxin as a molecular tool in the study of acidic growth factor intracrine signaling.*

Courses:

Spring 1995	Growth factors and Oncogenes, EMBL/EMBO, Heidelberg, Germany
2006–2007	Harvard Business School Publishing, research leadership course (*Forskerledelse*) at Institute for Cancer Research, The Norwegian Radium Hospital, Oslo, Norway.

POSITIONS HELD:

1984–1990	**Ph.D. student/assistant** at Department of Tumor Immunology, Ludwik Hirszfeld Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Wroclaw, Poland.
1991–1994	**Postdoctoral fellow** of Norwegian Cancer Society, Department of Biochemistry, Institute of Cancer Research, Oslo, Norway.
1995–1998	**Research fellow** at Department of Biochemistry, Institute for Cancer Research, The Norwegian Radium Hospital, Oslo, Norway.
Since 1998	**Senior scientist** (*professor competance*) at Department of Biochemistry, Institute for Cancer Research, The Norwegian Radium Hospital, Oslo, Norway.
2004–2009	**Project leader** at Department of Biochemistry, Institute for Cancer Research, The Norwegian Radium Hospital, Centre for Cancer Biomedicine, Oslo, Norway.

Current position: **Group leader** at Department of Biochemistry, Institute for Cancer Research, The Norwegian Radium Hospital, Centre for Cancer Biomedicine, University of Oslo, Oslo, Norway.

SCIENTIFIC ACTIVITY:

Publication and meetings:

- Published 68 original articles in peer-review international journals
- Published 14 reviews
- Invited speaker at 14 international conferences and 4 courses
- Invited speaker at 2 Gordon Research Conference (2000 and 2008)

Scientific experience:

- Tumor immunobiology
- Experimental anti-cancer therapy
- Molecular and cell biology
- Biochemistry

Current scientific interest:

- Molecular determinants of malignant phenotype
- Network of cell signaling
- Endocytosis and intracellular sorting
- Nuclear transport – nuclear signaling
- Targeted anti-cancer therapy

TEACHING AND SUPERVISION:

Supervision: supervisor of M.Sc. (4), Ph.D. degrees (2), co-supervisor Ph.D. degrees (4) and postdocs (4) .

Teaching experience: Since 1996 teaching at course MBV4240 – Biochemical mechanism in intracellular transport, at University of Oslo.

AWARDS AND HONORS:

1988 – Award of Polish Biochemical Society
1989 – Award of President of Polish Academy of Sciences
2002 – Dr. Ragnar Mørks Legat Price

LIST OF PUBLICATION 2004-2015

Original papers

1. Zakrzewska, M., Krowarsch, D., **Wiedlocha, A**., and Otlewski,J. (2004). Design of fully active FGF-1 variants with increased stability. ***Protein Eng. Des.*** Sel *17*, 603–611.
2. Malecki, J., Wesche, J., Skjerpen, C.S., **Wiedlocha, A**., and Olsnes, S. (2004). Translocation of FGF-1 and FGF-2 across vesicular membranes occurs during G1-phase by a common mechanism. ***Mol. Biol. Cell*** *15*, 801–814.
3. Zakrzewska, M., Krowarsch, D., **Wiedlocha, A.**, Olsnes, S., and Otlewski, J. (2005). Highly stable mutants of human fibroblast growth factor-1 exhibit prolonged biological action. ***J. Mol. Biol.*** *352*, 860–875.
4. **Wiedlocha, A**., Nilsen, T., Wesche, J., Sorensen, V., Malecki, J., Marcinkowska, E., and Olsnes, S. (2005). Phosphorylation-regulated nucleocytoplasmic trafficking of internalized fibroblast growth factor-1. ***Mol. Biol. Cell*** *16*, 794–810.
5. Wesche, J., Malecki, J., **Wiedlocha, A**., Ehsani, M., Marcinkowska, E., Nilsen, T., and Olsnes, S. (2005). Two nuclear localization signals required for transport from the cytosol to the nucleus of externally added FGF-1 translocated into cells. ***Biochemistry,*** *44*, 6071–6080.
6. Sorensen, V., **Wiedlocha, A**., Haugsten, E.M., Khnykin, D., Wesche, J., and Olsnes, S. (2006). Different abilities of the four FGFRs to mediate FGF-1 translocation are linked to differences in the receptor C-terminal tail. ***J. Cell Sci.*** *119*, 4332–4341.
7. Wesche, J., Malecki, J., **Wiedlocha, A**., Skjerpen, C.S., Claus, P., and Olsnes, S. (2006). FGF-1 and FGF-2 require the cytosolic chaperone Hsp90 for translocation into the cytosol and the cell nucleus. ***J. Biol. Chem***. *281*, 11405–11412.
8. Marcinkowska, E., Superat, K., and **Wiedlocha, A**. (2006). FGF-1 as a possible carrier for targeted drug delivery. ***Oncol. Res***. *16*, 27–34.
9. Zakrzewska, M., Krowarsch, D., **Wiedlocha, A**., Olsnes, S., and Otlewski, J. (2006). Structural requirements of FGF-1 for receptor binding and translocation into cells. ***Biochemistry*** *45*, 15338–15348.
10. Nilsen, T., Rosendal, K.R., Sorensen, V., Wesche, J., Olsnes, S., and **Wiedlocha, A**. (2007). A nuclear export sequence located on a beta-strand in fibroblast growth factor-1. ***J. Biol. Chem.*** *282*, 26245–26256.
11. Zhen, Y., Sorensen, V., Jin, Y., Suo, Z., and **Wiedlocha, A**. (2007). Indirubin-3'-monoxime inhibits autophosphorylation of FGFR1 and stimulates ERK1/2 activity via p38 MAPK. ***Oncogene*** *26*, 6372–6385.
12. Sorensen, V., Zhen, Y., Zakrzewska, M., Haugsten, E.M., Walchli, S., Nilsen, T., Olsnes, S., and **Wiedlocha, A**. (2008). Phosphorylation of fibroblast growth factor (FGF) receptor 1 at Ser777 by p38 mitogen-activated protein kinase regulates translocation of exogenous FGF1 to the cytosol and nucleus. ***Mol. Cell. Biol.*** *28*, 4129–4141.
13. Zakrzewska, M., **Wiedlocha, A**., Szlachcic, A., Krowasrsch, D., Otlewski, J. and Olsnes, S. (2009). Increased protein stability of FGF1 mutants can compensate for lower heparin-binding. ***J. Biol. Chem****., 284*, 25388–25403.
14. Zakrzewska, M., Zhen, Y., **Wiedlocha, A.**, Olsnes, S. and Wesche, J. (2009). FGF1 can carry heterologous polypeptides into cytosol and the nucleus of mammalian cells. ***Biochemistry,*** *48*, 7209–7218.

15. Zakrzewska, M., Sørensen, V., Jin, Y., **Wiedlocha, A.** and Olsnes, S. (2011). Translocation of exogenous FGF1 into cytosol and nucleus is a periodic event independent of receptor kinase activity. ***Exp. Cell Res.***, *317*, 1005–1015.
16. Jin, Y., Zhen, Y., Haugsten, E.M. and **Wiedlocha, A.** (2011). The driver of malignancy KG-1a cells, *FGFR1OP2-FGFR1*, encodes an HSP90 addicted oncoprotein. ***Cell. Sig***., *23*, 1758–1766.
17. Zhen Y., Sørensen V., Skjerpen C.S., Haugsten E.M., Jin Y., Walchli S., Olsnes S. and **Wiedlocha A.** (2012). Nuclear import of exogenous FGF1 requires the ER-protein LRRC59 and the importins Kpna1 and Kpnb2. ***Traffic,*** *13*, 650–664.
18. Szlechcic, A., Pala, K., Zakrzewska, M., Jakimowicz P., **Wiedlocha A**., Otlewski J. (2012). FGF1-gold nanoparticle conjugates targeting FGFR efficiently decrease cellviability upon NIR irradiation. ***Inter. J. Nanomed***., *7*, 5915–5927.
19. Zakrzewska, M., Haugsten, E.M., Nadratowska-Wesolowska, B., Oppelt, A., Hausott, B., Jin, Y., Otlewski,J ., Wesche, J., **Wiedlocha, A**. (2013). ERK-mediated phosphorylation of fibroblast growth factor receptor on Ser777 inhibits signaling. ***Science Sig***., *6*, 1–15.
20. Nadratowska-Wesolowska, B., Haugsten, E.M., Zakrzewska, M., Jakimowicz, P., Zhen, Y., Pajdzik, D., Wesche, J., **Wiedlocha, A**. (2014). RSK2 regulates endocytosis of FGF receptor1 by phosphorylation on serine 789. ***Oncogene,*** *40*, 4823–4836.
21. Sletten T., Kostas M., Bober J., Sorensen V., Olsnes J., Otlewski J., Zakrzewska M., **Wiedlocha, A**. (2014). Nucleolin regulates phosphorylation and nuclear export of fibroblast growth factor 1 (FGF1). ***PLOS ONE***, *9*, e90687
22. Buchtova, M., Chaloupkova, R., Zakrzewska, M., Vesela, I., Cela, P., Barathova, J., Gudernova, I., Zajickova, R., Trantirek, L., Martin, J., Kostas, M., Otlewski, J., Damborsky, J., Kozubik, A., **Wiedlocha, A.**, Krejci, P. (2015). Instability restricts signaling of multiple fibroblast growth factors. ***Cell Mol Life Sci.,*** Feb 18.

Review papers:

1. **Wiedlocha, A.** and Sørensen, V. (2004). Signaling, internalization, and intracellular activity of fibroblast growth factor. ***Curr. Top. Microbiol. Immunol***., *286*, 45–79.
2. Sorensen, V., Nilsen, T., and **Wiedlocha, A**., (2006). Functional diversity of FGF-2 isoforms by intracellular sorting. ***BioEssays,*** *28*, 504–514.
3. Zakrzewska, M., Marcinkowska, E., and **Wiedlocha, A**. (2008). FGF-1: from biology through engineering to potential medical applications. ***Crit Rev. Clin. Lab Sci.,*** *45*, 91–135.
4. Haugsten, E., **Wiedlocha, A**., Olsnes, S., and Wesche, J. (2010). The role of fibroblast growth factor receptors (FGFR) in carcinogenesis. ***Mol. Canc. Res.,*** *8*, 1439–1452.