BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Wessely, Oliver	Associate Professor in Cell Biology & Anatomy and Genetics
eRA COMMONS USER NAME owesse	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Institute for Molecular Pathology (IMP), Vienna,Austria	Diploma	1991-1992	Tumorigenesis/Hematopoiesis
Institute for Molecular Pathology (IMP), Vienna,Austria	Ph.D.	1992-1997	Tumorigenesis/Hematopoiesis
German Cancer Research Center (DKFZ), Heidelberg, Germany		1996	Hematopoiesis
Howard Hughes Medical Institute/ University of California, Los Angeles		1997-2003	Embryonic Development

A. Positions and Honors

Positions and Employment:

1996	Visiting scientist at the German Cancer Research Center (DKFZ), Heidelberg, Germany
1997–2003	Postdoctoral fellow at the University of California Los Angeles (UCLA)
1999-2003	Postdoctoral associate with the Howard Hughes Medical Institute (HHMI) at UCLA
11/2003-6/2009	Assistant Professor in the Departments of Cell Biology & Anatomy and Genetics at the Louisiana State University Health Sciences Center
7/2009-present	Associate Professor in the Departments of Cell Biology & Anatomy and Genetics at the Louisiana State University Health Sciences Center

Honors:

1997	Long-term fellowship of the “Fond zur Förderung wissenschaftlicher Forschung” (FFWF), Austria
1997-1998	Long-term fellowship of the “Human Frontier Science Program Organization” (HFSPO), Strasbourg, France

B. Peer-reviewed Publications (in chronological order)

1. Steinlein P., **Wessely O**., Meyer S., Deiner E.M., Hayman M.J. and Beug H. (1995). Primary, self renewing erythroid progenitors develop through activation of both tyrosine kinase and steroid receptors. Current Biology **5**, 191-204.
2. Beug H., Schroeder C., **Wessely O.**, Meyer S., Ischenko I.D., Deiner E.M. and Hayman M.J. (1995).Tyrosine kinase oncogenes transform erythroid progenitors by functionally replacing endogenous receptor kinase function. Cell Growth Differ **6**, 999-1008
3. Mellitzer G., **Wessely O.**, Decker T., Hayman M.J. and Beug H. (1996). Activation of Stat5b in erythroid progenitors correlates with the ability of ErbB to induce sustained cell proliferation. Proc. Natl. Acad. Sci. U.S.A. **93**, 9600-9605
4. **Wessely O.**, Deiner, E., Beug H. and von Lindern, M. (1997) The glucocorticoid receptor is a key regulator of the decision between self renewal and differentiation in erythroid progenitors. EMBO J. **16**, 267-280
5. **Wessely, O.**, Mellitzer, G., von Lindern, M., Levitzky, A., Gazit, A., Ischenko, I., Hayman, M.J. and Beug, H. (1997). Distinct roles of the receptor tyrosine kinases c-ErbB and c-Kit in regulating the balance between erythroid cell proliferation and differentiation. Cell Growth Differ **8** (5): 481-493
6. Tran Quang C., **Wessely O.**, Pironin M., Beug H., and Ghysdael J. (1997). Cooperation of Spi-1/PU.1 with an activated erythropoietin receptor inhibits apoptosis and Epo-dependent differentiation in primary

erythroblasts and induces their Kit ligand-dependent proliferation. EMBO J., **16** (18): 5639-5653
7. von Lindern M., Boer L., **Wessely O.**, Parker M. and Beug H. (1998) The AF-2 domain of the estrogen receptor is required to inhibit differentiation of avian erythroid progenitor cells. Mol. Endocrinology, **12** (2): 263-277
8. De Robertis E.M., Kim S., Leyns L., Piccolo S., Bachiler D., Agius E., Belo A.J., Yamamoto A., Hainski-Brousseau A., Brizuela B.J., **Wessely O.**, Lu B. and Bouwmeester T. (1997) Paterning by Genes Expressed in Spemann's Organizer. Cold Spring Harbor Symposia on Quantitative Biology, **62**: 169-175
9. **Wessely O.**, Deiner E.M., Lim K.C., Mellitzer G., Steinlein P. and Beug H. (1998) Mammalian GM-CSF receptor expressed in primary avian hematopoietic progenitors: Lineage-specific regulation of proliferation and differentiation. J.Biol.Chem., **141**: 1041-1051
10. Reichardt H.M., Kaestner K.H, Tuckermann J., Kretz O., **Wessely O.**, Bock R., Gass P., Schmid W., Herrlich P., Angel P. and Schuetz G. (1998) DNA Binding of the Glucocorticoid Receptor Is Not Essential for Survival. Cell, **93:** 531-541
11. Reichardt H.M., Kaestner K.H., **Wessely O.**, Gass P., Schmid W., Schuetz G. (1998) Analysis of glucocorticoid signalling by gene targeting. J Steroid Biochem Mol Biol, **65**: 111-115
12. **Wessely O**., Bauer A., Tran Quang C., Deiner E.M., von Lindern M., Mellitzer G., Steinlein P., Ghysdael J.and Beug H. (1999) A novel way to induce erythroid progenitor self renewal: cooperation of c-Kit with the erythropoietin receptor. Biol Chem, **380**: 187-202
13. Bauer A., Tronche F., **Wessely O.**, Kellendonk C., Reichardt H.M, Steinlein P., Schütz G. and Beug H. (1999) The Glucocorticoid Receptor Is Required for Stress Erythropoiesis. Genes & Development **13(22)**: 2996-3002
14. Agius E., Oegelschlaeger M., **Wessely O.** and De Robertis E.M (2000) Endodermal Nodal-related signals and mesoderm induction in *Xenopus*. Development **127(6)**, 1173-1183
15. **Wessely O.** and De Robertis E.M (2000) The *Xenopus* homologue of Bicaudal-C is a localized maternal RNA that functions in endoderm differentiation. Development, **127(10)**; 2053-2062.
16. De Robertis, E.M., Larraín, J., Oelgeschläger, M. and **Wessely, O.** (2000). The Establishment of Spemann's Organizer and Patterning of the Vertebrate Embryo. Nature Reviews Genetics, **1**; 171-181.
17. Brizuela B., **Wessely O.** and De Robertis E.M (2001) Overexpression of the *Xenopus* Claudin tight junction protein causes randomization of the left-right body axis. Dev. Biol., **230 (2)**; 217-229.
18. **Wessely O.**, Tran U., Zakin L. and De Robertis E.M. (2001) Identification and Expression of the Mouse Homologue of Bicaudal-C. Mechanisms of Development, **101 (1-2)**; 267-270.
19. **Wessely O.**, Agius E., Oelgeschläger M., Pera E.M., De Robertis E.M. (2001) Neural Induction in the Absence of Mesoderm: β-Catenin Dependent Expression of Secreted BMP Antagonists at the Blastula Stage in *Xenopus*. Dev. Biol., **234 (1)**;161-173
20. Heasman J., **Wessely O.**, Langland R., Craig E.J., Kessler D.S. (2001) Vegetal Localization of Maternal mRNAs is Disrupted by VegT Depletion. Dev. Biol., **240 (2)**, 377-386
21. Pera E.M., **Wessely O.**, Li, S.Y.., De Robertis E.M. (2001) Neural And Head Induction By Insulin-Like Growth Factors Signals. Dev. Cell, **1(5)**: 655-665.
22. **Wessely O.** and De Robertis E.M. (2002) Neural Plate Patterning by Secreted Signals. Neuron, **33 (4)**, 489-491
23. Pera E.M, Kim J.I., Martinez S.L., Brechner M., Li S.Y., **Wessely O.**, and De Robertis E.M. (2002) *Isthmin* Is a Novel Secreted Protein Expressed as Part of the *Fgf-8* Synexpression Group in the *Xenopus* Midbrain-Hindbrain Organizer. Mechanisms of Development, **116**, 169-172.
24. Pera E.M., Martinez S.L. Flanagan J., Brechner M., **Wessely O.**, and De Robertis E.M. (2003) *Darmin* is a Novel Secreted Protein Expressed During Endoderm Development in *Xenopus*. Gene Expression Patterns **3**, 147-152.
25. **Wessely O.** and De Robertis E.M. (2003) The Molecular Nature of Spemann's Organizer. The Vertebrate Organizer (ed. Grunz H.) Springer, Germany
26. Kuroda H., **Wessely O.** and De Robertis E.M. (2004) The Preorganizer Center Mediates Neural Induction in Ectoderm via β-Catenin, Chordin and Noggin signals. PLOS Biology **2**, 0623-0634
27. **Wessely O.**, Kim J. I., Geissert D., Tran U. and De Robertis E. M. (2004) Analysis of Spemann Organizer Formation in *Xenopus* Embryos by cDNA Macroarrays. Dev. Biol. **269**, 552-566
28. **Wessely O.,** Kim J. I., Tran U., Fuentealba L., De Robertis E.M. (2005). xBtg-x Regulates Wnt/b-Catenin Signaling During Early *Xenopus* Development. Dev. Biol. **283**, 17-28.
29. Pera E.M., Hou S., Strate I., **Wessely O**., De Robertis E.M. (2005). Exploration of the extracellular space by a large-scale secretion screen in the early *Xenopus* embryo. Int. J. Dev. Biol. **49**, 781-796.

30. Tran, U., Pickney L. M., Özpolat B. D. **Wessely O.** (2007). *Xenopus* Bicaudal-C Is Required for the Differentiation of the Amphibian Pronephros. Dev. Biol. **307**,152-164
31. Martello G., Zacchigna L., Inui M., Montagner M., Adorno M., Mamidi A., Morsut L., Soligo S., Tran U., Dupont S., Cordenonsi M., **Wessely O.**, Piccolo S. (2007). MicroRNA control of Nodal signalling. Nature **449**, 183-188
32. **Wessely O.**, Obara T. (2008). Fish and frogs: models for vertebrate cilia signaling. Front. Biosci. **13**,1866-1880.
33. Agrawal R., **Wessely O.**, Anand A., Singh L., Aggarwal R. (2009) Male-Specific Expression of Sox9 during Gonad Development of Crocodile and Mouse Is Mediated by Alternative Splicing of its PQA-rich Domain. FEBS J., **276(15)**, 4184-4196.
34. Agrawal R., Tran U., **Wessely O**. (2009) The *miR-30* miRNA Family Regulates *Xenopus* Pronephros Development and Targets the Transcription Factor Xlim1/Lhx1. Development. **136(23)**, 3927-3936.
35. Tran U., Zakin L., Schweickert A., Agrawal R., Döğer R., Blum M., De Robertis E.M., **Wessely O.** (2010) The RNA-Binding Molecule Bicaudal-C Is Required for Post-transcriptional Regulation of Polycystin-2 in the Kidney by Antagonizing *miR-17* Activity. Development. **in press**.

C. Research Support

Ongoing Research Support

1R01DK080745-01A2 Wessely (PI) 08/21/2009 – 07/31/2014
NIH/NIDDK
"The Role of Bicaudal-C in Polycystic Kidney Disease"
The main goal of this grant application is to study how Bicaudal-C causes Polycystic Kidney Disease and its function as a posttranscriptional regulator.
Role: PI

1R21DK077763-01 Wessely (PI) 6/15/2007-5/31/2010
NIH/NIDDK
"miRNAs and Kidney Development"
The main goal of this grant application is to describe the expression of microRNAs in kidney development and analyze their function.
Role: PI

Completed Research Support

103a2r Wessely (PI) 1/1/2005-5/31/2007
Polycystic Kidney Disease Foundation
"Identification of Downstream Targets of the Polycystic Kidney Disease Gene *Bicaudal-C*"
The goal of this project is to identify target genes of Bicaudal-C and characterize their role during pronephros development in *Xenopus laevis*.
Role: PI

5R21-DK070671-02 Wessely (PI) 6/01/2005-5/31/2009
NIH-NIDDK
"*Xenopus* Bicaudal-C a Model for Polycystic Kidney Disease"
The major goal of this project is to characterize the role of Bicaudal-C during pronephros development in *Xenopus laevis* and the use of this model to study polycystic kidney disease.
Role: PI