

KUBIAK Jacek Zbigniew

Born 5 January 1960 in Pruszkow, Poland

Polish and French nationality

Married family status, 2 children

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1. Institute of Genetics and Developmental Biology of Rennes, UMR 6290 CNRS /  
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languages: polish (mother tongue), french, english, russian, german

#### UNIVERSITY EDUCATION

\* Master (University of Warsaw, Poland, Prof. JA Tarkowska in collaboration with Dr. De Brabander and Dr. J. De Mey, Janssen Pharmaceutica Res.Lab, Beerse, Belgium) June 1983. "Microtubule studies in the cells of onion roots ". 1983.

\* Embryology Course, Marine Biological Laboratory, Woods Hole, USA (June-August 1986).

\* PhD (Warsaw University, Poland, Prof. AK Tarkowski in collaboration with Dr. G. Schatten, University of Wisconsin, Madison, USA), December 1988. "Studies on mouse oocyte activation and pronuclei formation ".

\* Habilitation to Direct Research (HDR), University of Rennes 1, March 2000.

#### LABORATORIES

\* Department of Embryology (Professor A. Tarkowski), Institute of Zoology, University of Warsaw, Poland (1983 - 1990).

\* Laboratory of Developmental Physiology (Dr. B. Maro), UMR 9922 CNRS, Jacques Monod Institute, Paris 7 University, France (March 1989 - December 1997)

\* Institute of Genetics and Development, UMR 6061 then UMR 6290 CNRS / University of Rennes 1, Cell Cycle Group, 35043 Rennes cedex (since December 1997)

#### PRE-DOCTORAL COURSES

\* Laboratory of Pathology, (Prof. P. Dustin), Free University of Brussels, Brussels, Belgium (August 1981).

\* Laboratory of Oncology (Dr. M. De Brabander), Janssen Pharmaceutica, Beerse, Belgium

(September-November 1982 and March-May 1985).

\* Zoology Department, (Dr. G. Schatten), University of Wisconsin, Madison, U.S.A. (September 1986-February 1987).

#### POSITIONS

\* Asystent (University of Warsaw, Poland) 1983 - 1986

\* Starszy asystent (University of Warsaw, Poland) 1986 - 1989

\* Adiunkt Lecturer (Warsaw University, Poland) 1989 - Nov. 1990

\* CNRS researcher 1 October 1992-October 2012

\* HDR since 2000

\* Director of Research at the CNRS since October 2012

#### SUPERVISION OF LABORATORY INTERNSHIPS

Supervision of several laboratory internships for master's students (Department of Embryology, Institute of Zoology, University of Warsaw, Poland, 1983-1989), several DEA, M1, M2 and PhD theses at the University of Rennes 1, since 1998 Postdoctoral staff: recently (2018) Katarzyna Klimczewska, EMBO fellow and Lukasz Szczepanski, EMBO fellow.

#### DIRECTION OR CO-DIRECTION OF PhD THESES

1. Zbigniew Polanski, PhD thesis, Jagiellonian University, Krakow, part of the work done in Paris at UMR 9922, 1992-1993, co-directed with H. Krzanowska and B. Maro.
2. Magdalena Zernicka-Goetz, PhD thesis, University of Warsaw, Warsaw, part of the work done in Paris at UMR 9922, 1991-1994, co-directed with A.K. Tarkowski and B. Maro.
3. Maria Anna Ciemerych, PhD thesis, University of Warsaw, Warsaw, part of the work done in Paris at UMR 9922, 1994-1997, co-directed with A.K. Tarkowski and B. Maro.
4. Stéphane Brunet, PhD thesis, Paris 6 University, 1994-1998, co-director with B. Maro.
5. Franck Bazile, PhD thesis, University of Rennes 1, Rennes, 2004-2007, thesis direction
6. Gaëlle Marteil, PhD thesis, University of Rennes 1, Rennes, 2007-2010, co-directed with L. Richard-Parpaillon.
7. Mohammed El Dika, PhD thesis, University of Rennes 1, 2010 - 2013, thesis direction

#### DIRECTION OF A RESEARCH GROUP

During the years 1996-97, I assumed the direction of a research group within the Laboratory of Development Physiology led by Dr. Bernard Maro at the Jacques Monod Institute, Paris, France.

During the years 2001-2010 I led the team "Mitosis and Meiosis" within the Institute of Genetics and Development of Rennes, UMR 6061 CNRS / University Rennes 1.

Since 2016 I direct the Laboratory of Regenerative Medicine and Cell Biology at the WIHE Institute in Warsaw, Poland.

#### ADMINISTRATION

Member of Commission 28 (Developmental Biology) of the CNRS 1998-2000

Member of the commission of specialists of the University Rennes 1 2001-2003

Member of the Scientific Committee of Rennes 1 University 2009-2012  
Member of the HDR commission of Rennes 1 University since 2009-2012

#### ACTIVITIES OF EXPERTISE

Reviewer of grant applications

- \* ANR, France
- \* BBSRC, David Phillips Research Fellowships, UK
- \* Wellcome Trust, UK
- \* Grant Agency of the Czech Republic
- \* KBN Poland
- \* Homing Poland

#### EDITORIAL ACTIVITY

Co-editor in chief: with Prof. Malgorzata Kloc, Houston, Texas of "Results & Progress in Cell Differentiation" in Springer Verlag <http://www.springer.com/series/400>

Editorial Boards: International Journal of Developmental Biology, Scientifica, The Open Enzyme Inhibition J., J. Integrated OMICs, Journal of Stem Cells and Regenerative Therapy (JSCRT), Journal of Stem Cell and Regenerative Biology

#### SUMMARY OF PUBLICATIONS IN NUMBERS

- Total number of publications: 144 (+ 2 submitted)
- Number of books as author or co-author: 6
- Number of books as editor in chief: 4
- Number of special issues of international journals: 3

#### LIST OF PUBLICATIONS

JACEK KUBIAK

H index=24

**Total number of papers published in peer-review journal n=146**

**Original papers in peer-review journals (n=90)**

#### 1985

1. **Kubiak, J.Z.** & Tarkowski, A.K. (1985). Electrofusion of mouse blastomeres. Exp. Cell Res., 157, 561-566.
2. Kaczanowski, A., Gaertig, J. & **Kubiak, J.** (1985). Effect of the anti-tubulin drug nocodazole on meiosis and postmeiotic development in *Tetrahymena thermophila*. Induction of achiasmatic meiosis. Exp. Cell Res., 158, 244-256.

## 1986

3. Czolowska, R., Waksmundzka, M., **Kubiak**, J.Z. & Tarkowski, A.K. (1986). Chromosome condensation activity in ovulated metaphase II mouse oocyte assayed by fusion with interphase blastomeres. *J. Cell Sci.*, 84, 129-138.
4. **Kubiak**, J., De Brabander, M., De Mey, J. & Tarkowska, J.A. (1986). Origin of the mitotic spindle in onion root cells. *Protoplasma*, 130, 51-56.
5. Forrester W.C. & **Kubiak** J. (1986) Sea-urchin blastomeres are not dye-coupled during early embryogenesis. *Biol. Bul.* 171(2), 473.

## 1987

6. **Kubiak**, J.Z. & Tarkowska, J.A. (1987). Evidence for two sets of cytoplasmic microtubules in interphase and preprophase cells of onion root. *Cytologia (Tokyo)*, 781-786.

## 1989

7. **Kubiak**, J. Z. (1989). Mouse oocytes gradually develop the capacity for activation during the metaphase II arrest. *Dev. Biol.*, 136, 537-545.

## 1991

8. Prather, R.S., **Kubiak**, J., Maul, G.G., First N.L. & Schatten, G. (1991). The expression of nuclear lamin A and C epitopes is regulated by the developmental stage of the cytoplasm in mouse oocytes or embryos. *J. exp. Zool.*, 257, 110-114.
9. **Kubiak**, J., Paldi, A., Weber, M. & Maro, B. (1991). Genetically identical parthenogenetic mouse embryos produced by inhibition of the first meiotic cleavage by cytochalasin D. *Development*, 111, 763-769
10. **Kubiak**, J.Z., Prather, R.S., Maul, G.G. & Schatten, G. (1991). Cytoplasmic modification of the nuclear lamina during pronuclear-like transformation of mouse blastomere nuclei. *Mechanisms of Development*, 35, 103-111.
11. Weber, M., **Kubiak**, J.Z., Arlinghaus, R.B., Pines, J. & Maro, B. (1991). c-mos proto-oncogene product is partly degraded after release from meiotic arrest and persists during interphase in mouse zygotes. *Dev. Biol.*, 148, 393-397.
12. **Kubiak**, J.Z. (1991). Cell cycle-dependent behaviour of microtubules in hybrids of mouse oocytes and blastomeres. *Intl. J. Dev. Biol.*, 35, 421-427.
13. **Kubiak**, J.Z. (1991). Cleavage divisions of bisected sea urchin eggs and zygotes: Implications for centrosome role and inheritance. *Europ. Arch. Biol. (Brux.)* 102, 103-109.

## 1992

14. **Kubiak, J.Z.**, Weber, M., Géraud, G. & Maro, B. (1992). Cell cycle modification during the transition between meiotic M-phases in mouse oocytes. *J. Cell Sci.* 102, 456-467.

## 1993

15. Zernicka-Goetz, M., **Kubiak, J.Z.**, Antony, C. & Maro, B. (1993). Cytoskeletal organization of rat oocytes during metaphase II arrest and following abortive activation: A study by confocal laser scanning microscopy. *Molec. Reprod. Dev.*, 35, 165-175.

16. Szöllösi, M. S., **Kubiak, J.Z.**, Debey, P., de Pennart, H., Szöllösi, D. & Maro, B. (1993). Inhibition of protein kinases by 6-dimethylaminopurine accelerates the transition to interphase in activated mouse oocytes. *J. Cell Sci.*, 104, 861-872.

17. **Kubiak, J.Z.**, Weber, M., de Pennart, H., Winston, N.J. & Maro, B. (1993). The metaphase II arrest in mouse oocytes is controlled through microtubule-dependent destruction of cyclin B in the presence of CSF. *The EMBO J.* (12), 10, 3773-3778.

## 1994

18. Verlhac, M.-H., **Kubiak, J.Z.**, Clarke, H.J. & Maro, B. (1994). Microtubule and chromatin behavior follow MAP kinase activity but not MPF activity during meiosis in mouse oocytes. *Development* 120, 1017-1025.

19. Pesty, A., Lefèvre, B., **Kubiak, J.**, Géraud, G., Tesarik, J. & Maro, B. (1994). Mouse oocyte maturation is affected by lithium via polyphosphoinositide metabolism and microtubule network. *Molec. Reprod. Dev.*, 38, 187-199.

## 1995

20. Zernicka-Goetz, M., Ciemerych, M.-A., **Kubiak, J.Z.**, Tarkowski, A.K. & Maro, B. (1995). Cytostatic factor inactivation is induced by a calcium-dependent mechanism present until the end of the first cell cycle in fertilized but not in parthenogenetically activated mouse oocytes. *J. Cell Sci.* 108, 469-474.

## 1996

21. Verlhac, M.-H., **Kubiak, J.Z.**, Weber, M., Géraud, G., Colledge, W.H., Evans, M.J. & Maro, B. (1996). Mos is required for MAP kinase activation and is involved in microtubule organisation during mouse meiosis. *Development* 122, 815-822.

22. Kalab, P., **Kubiak, J.Z.**, Verlhac, M.-H., Colledge, W.H. & Maro, B. (1996). Activation of p90<sup>rsk</sup> during meiotic maturation and first mitosis in mouse oocytes and eggs: MAP kinase-independent and dependent activation. *Development* 122, 1957-1964.

## 1997

23. Zernicka-Goetz, M., Verlhac, M-H., Géraud, G. & **Kubiak**, J. Z. (1997). Protein phosphatases control MAP kinase activation and microtubule organization during rat oocyte maturation. *European J. Cell Biol.* 72, 30-38.

## 1998

24. Ciemerych, M.A. & **Kubiak**, J.Z. (1998). Cytostatic activity develops during meiosis I in oocytes of LT/Sv mice. *Dev. Biol.* 200, 189-211.

25. Brunet, S., Polanski, Z. Verlhac, M.-H., **Kubiak**, J.Z. & Maro B. (1998). Bipolar meiotic spindle formation without chromatin. *Current Biol.* 8 (22), 1231-1234.

26. Polanski, Z., Ledan, E., Brunet, S., Louvet, S., Verlhac, M.-H., **Kubiak**, J.Z. & Maro, B. (1998). Cyclin synthesis controls the progression of meiotic maturation in mouse oocytes. *Development* 12 (125), 4989-4997.

27. Ciemerych, M.A., Tarkowski, A.K. & **Kubiak**, J.Z. (1998). Autonomous activation of histone H1 kinase, cortical activity and microtubule organization in one- and two-cell cycle mouse embryo. *Biol. Cell.* 90, 557-564.

## 1999

28. Brunet, S., Santa Maria A., Guillard, P., Dujardin, D., **Kubiak**, J.Z. & Maro, B. (1999). Kinetochore fibers are not involved in the formation of the first meiotic spindle in mouse oocytes, but control the exit from the first meiotic M-phase. *J. Cell Biol.* 146 (1), 1-11.

29. Ciemerych, M.A., Maro, B. & **Kubiak**, J.Z. (1999). Control of duration of first two mitoses in a mouse embryo. *Zygote* 7, 293-300.

30. Ciemerych, M.A. & **Kubiak**, J.Z. (1999). Transient reactivation of CSF in parthenogenetic one-cell mouse embryo. *Biol. Cell* 91, 641-647.

## 2000

31. Winston, N., Bourgain-Guglielmetti, F., Ciemerych, M.A., **Kubiak**, J.Z., Senamaud-Beaufort, C., Carrington, M., Brechot, C., Sobczak-Thepot, J. (2000). Early development of mouse embryos null mutant for the cyclin A2 gene occurs in the absence of maternally derived cyclin A2 gene products. *Dev Biol.* 223, 139-153.

32. Verlhac, M-H., Lefebvre, C., **Kubiak**, J.Z., Umbhauer, M., Rassinier, P., Colledge, W., Maro, B. (2000). Mos activates MAP kinase in mouse oocytes through two opposite pathways. *EMBO J.* 19, 6065-6074.

## 2001

33. **Kubiak J.Z.** & Ciemerych, M.A. (2001). Cell cycle regulation in early mouse embryos. In Novartis Foundation Symposium 237, ed. by. G. Bock, G. Cardew & J.A.Goode. John Wiley & Sons, LTD. 79-89; discussion 89-92.

## 2003

34. Detivaud, L., Pascreau, G., Karaiskou, A., Osborne, H.B. & **Kubiak, J.Z.** (2003). Regulation of EDEN-dependent deadenylation of Aurora A/Eg2-derived mRNA via phosphorylation and dephosphorylation in *Xenopus laevis* egg extracts. J. Cell Sci., 2003, 116, 2697-2705.

## 2005

35. Chesnel, F., Vignaux, F., Richard-Parpaillon, L., Huguet, A. & **Kubiak, J.Z.** (2005). Differences in regulation of the first two M-phases in *Xenopus laevis* embryo cell-free extracts. Dev. Biol. 285, 358-375.

## 2006

36. Sikora-Polaczek, M., Hupalowska, A., Polanski, Z., **Kubiak, J.Z.** & Ciemerych, M.A. (2006). The First Mitosis of the Mouse Embryo Is Prolonged by Transitional Metaphase Arrest. Biol. Reprod. 74, 734-743.

37. Hoffmann, S., Tsurumi, C., **Kubiak, J.Z.** & Polanski, Z. (2006). Germinal vesicle material drives meiotic cell cycle of mouse oocyte through the 3'UTR-dependent control of cyclin B1 synthesis. Dev. Biol. 292, 46-54.

38. Chesnel, F., Bazile, F., Pascal, A. & **Kubiak, J.Z.** (2006). Cyclin B dissociation from CDK1 precedes its degradation upon MPF inactivation in mitotic extracts of *Xenopus laevis* embryos. Cell Cycle 5, 1687-1698.

## 2007

39. Bazile F., Pascal A., Karaiskou A., Chesnel F. & **Kubiak J.Z.** (2007). Absence of reciprocal feedback between MPF and ERK2 MAP kinase in mitotic *Xenopus laevis* embryo cell-free extract. Cell Cycle, 6, 489-496.

40. Chesnel, F., Bazile, F., Pascal A. & **Kubiak J.Z.** (2007). Cyclin B2/cyclin-dependent kinase1 dissociation precedes CDK1 Thr-161 dephosphorylation upon M-phase promoting factor inactivation in *Xenopus laevis* cell-free extract. Int. J. Dev. Biol., 51, 297-305.

## 2008

41. **Kubiak J.Z.**, Bazile, F., Pascal A., Richard-Parpaillon L., Polanski Z., Ciemerych M. & Chesnel, F. (2008). Temporal regulation of embryonic M-phases. *Folia Histo. Cytobiol.* 46,5-9.
42. **Kubiak J.Z.**, Chesnel, F., Richard-Parpaillon L., Bazile, F., Pascal A., Polanski Z., Sikora-Polaczek M., Maciejewska Z. & Ciemerych M.A. (2008). Temporal regulation of the first mitosis in *Xenopus* and mouse embryos. *Mol Cell Endocrinol.* 282(1-2), 63-9.
43. **Kubiak J.Z.**, Ciemerych M.A., Hupalowska, A., Sikora-Polaczek M. & Polanski Z. (2008). On the transition from the meiotic to mitotic cell cycle during early mouse development. *Int J Dev Biol.* 52(2-3), 201-217.
44. Bazile F, Gagné JP, Mercier G, Lo KS, Pascal A, Vasilescu J, Figeys D, Poirier GG, **Kubiak\* JZ**, Chesnel\* F. (2008). Differential Proteomic Screen To Evidence Proteins Ubiquitinated upon Mitotic Exit in Cell-Free Extract of *Xenopus laevis* Embryos. *J Proteome Res.* 7(11), 4701-4714. (\* two corresponding authors).
45. Hupalowska A, Kalaszczynska I, Hoffmann S, Tsurumi C, **Kubiak JZ**, Polanski Z, Ciemerych MA. (2008). Metaphase I Arrest in LT/Sv Mouse Oocytes Involves the Spindle Assembly Checkpoint. *Biol Reprod.* 79(6), 1102-1110.

## 2009

46. Bazile F., Pascal A., Arnal I., Le Clainche C., Chesnel F. & **Kubiak J.Z.** (2009). Complex relationship between TCTP, microtubules and actin microfilaments regulates cell shape in normal and cancer cells. *Carcinogenesis* 30, 555-565.
47. Maciejewska Z., Polanski Z., Kisiel K, **Kubiak\* J.Z.** & Ciemerych\* M.A. (2009). Spindle assembly checkpoint-related failure perturbs early embryonic divisions and reduces reproductive performance of LT/Sv mice. *Reproduction* 137, 931-42. (\* two corresponding authors).
48. Pinot M., Chesnel F., **Kubiak J.Z.**, Arnal I., Nedelec F. & Gueroui Z. (2009). Effects of confinement on the self-organization of motors and microtubules. *Cur. Biol.* 19, 954-960.

## 2010

49. Marteil G., D'Inca, R., Pascal, A., Guitton, N., Midtun, T., Goksoyr, A., Richard-Parpaillon L. & **Kubiak J.Z.** (2010). EP45 accumulates in growing *Xenopus laevis* oocytes and has oocyte maturation enhancing activity involved in oocyte quality. *J. Cell Sci.* 123, 1805-13.
50. D'Inca R, Marteil G, Bazile F, Pascal A, Guitton N, Lavigne R, Richard-Parpaillon L, **Kubiak JZ.** (2010). Proteomic screen for potential regulators of M-phase entry and quality of meiotic resumption in *Xenopus laevis* oocytes. *J Proteomics.* 73, 1542-50.
51. Teperek-Tkacz M, Meglicki M, Pasternak M, **Kubiak JZ**, Borsuk E. (2010). Phosphorylation of histone H3 serine 10 in early mouse embryos: active phosphorylation at



late S phase and differential effects of ZM447439 on first two embryonic mitoses. *Cell Cycle*, 9(23), 56-69.

## 2011

52. Hoffmann S, Maro B, **Kubiak JZ**, Polanski Z. (2011) A single bivalent efficiently inhibits cyclin B1 degradation and polar body extrusion in mouse oocytes indicating robust SAC during female meiosis I. *PLoS One* 6(11):e27143.

## 2012

53. Skelton TS, Tejpal N, Gong Y, **Kubiak JZ**, Kloc M, Ghobrial RM. (2012). Allochimeric Molecules and Mechanisms in Abrogation of Cardiac Allograft Rejection *Journal of Heart and Lung Transplantation* 31(1):73-84.

54. Marteil G, Gagné JP, Borsuk E, Richard-Parpaillon L, Poirier GG, **Kubiak JZ**. (2012). Proteomics reveals a switch in CDK1-associated proteins upon M-phase exit during the *Xenopus laevis* oocyte to embryo transition. *Int J Biochem Cell Biol.* 44(1):53-64.

55. Maciejewska Z, Pascal A, **Kubiak JZ**, Ciemerych MA. (2012). Phosphorylated ERK5/BMK1 transiently accumulates within division spindles in mouse oocytes and preimplantation embryos. *Folia Histochem Cytobiol.* 49(3):528-34.

56. Piprek RP, Pecio A, **Kubiak JZ**, Szymura JM. (2012). Differential effects of busulfan on gonadal development in five divergent anuran species. *Reprod Toxicol.* 34(3):393-401.

57. Piprek RP, Pecio A, **Kubiak JZ**, Szymura JM. (2012). Differential effects of testosterone and 17 $\beta$ -estradiol on gonadal development in five anuran species. *Reproduction* 144(2):257-67.

58. Jaglarz MK, Bazile F, Laskowska K, Polanski Z, Chesnel F, Borsuk E, Kloc M, **Kubiak JZ**. (2012). Association of TCTP with centrosome and microtubules. *Biochem Res Int.* 2012:541906.

59. Kloc M, Tejpal N, Sidhu J, Ganachari M, Flores-Villanueva P, Jennings NB, Sood AK, **Kubiak JZ**, Ghobrial RM. (2012). Inverse relationship between TCTP/RhoA and p53 /cyclin A/actin expression in ovarian cancer cells. *Folia Histochem Cytobiol.* 50(3):358-67.

## 2013

60. **Kubiak JZ**. (2013). Protein kinase assays for measuring MPF and MAPK activities in mouse and rat oocytes and early embryos. *Methods Mol Biol.* 957:77-89.

61. Polanski Z, **Kubiak JZ**. (2013). Free-hand bisection of mouse oocytes and embryos. *Methods Mol Biol.* 957:255-65.

62. Chartrain I, Le Page Y, Hatte G, Körner R, **Kubiak JZ**, Tassan J-P. (2013). Cell-cycle dependent localization of MELK and its new partner RACK1 in epithelial versus mesenchyme-like cells in *Xenopus* embryo. *Biology Open* 2(10):1037-48. doi: 10.1242/bio.20136080. eCollection 2013.
63. Piprek RP, Pecio A, Laskowska-Kaszub K, Kloc M, **Kubiak JZ**, Szymura JM. (2013). Retinoic acid homeostasis regulates meiotic entry in developing anuran gonads and in Bidder's organ through Raldh2 and Cyp26b1 proteins. *Mech Dev.* 130(11-12):613-27.
64. Piprek RP, Pecio A, Laskowska-Kaszub K, **Kubiak JZ**, Szymura JM. (2013). Sexual dimorphism of AMH, DMRT1 and RSPO1 localization in the developing gonads of six anuran species. *Int J Dev Biol.* 57(11-12):891-5.

## 2014

65. El Dika M, Laskowska-Kaszub K, Koryto M, Dudka D, Prigent C, Tassan JP, Kloc M, Polanski Z, Borsuk E, **Kubiak JZ**. (2014). CDC6 controls dynamics of the first embryonic M-phase entry and progression via CDK1 inhibition. *Dev Biol.* 396 (1):67-80.
66. El Dika M, Dudka D, Prigent C, Tassan JP, Kloc M & **Kubiak JZ**. (2014). Control of timing of embryonic M-phase entry and exit is differentially sensitive to CDK1 and PP2A balance. *Intl. J. Dev. Biol.* 58: 767-774.
67. Piprek RP, Pecio A, Kloc M, **Kubiak JZ**, Szymura JM. (2014). Evolutionary trend for metamery reduction and gonad shortening in Anurans revealed by comparison of gonad development. *Int. J. Dev. Biol.* 58: 929-934.

## 2015

68. Liu Y, Zhang L, Tejpal N, **Kubiak JZ**, Ghobrial RM, Li XC, Kloc M. (2015). TCTP Silencing in Ovarian Cancer Cells Results in Actin Cytoskeleton Remodeling and Motility Increase. *Journal of Analytical Oncology*, 2015, 4, 122-131.

## 2016

69. Debowski M., El Dika M., Malejczyk J., Zdanowski R., Prigent C., Tassan J.-P., Kloc M., Lachowicz M., **Kubiak J.Z.** (2016). Flexibility vs. robustness in cell cycle control: mathematical model of interplay between CDK1, PP2A and CDC25 in regulation of timing of M-phase entry in *Xenopus laevis* embryo cell-free extract. *Intl. J. Dev. Biol.* 60(7-8-9):305-314.
70. Liu Y., Chen W., Minze L.J, **Kubiak J.Z.**, Li X.C., Ghobrial R.M., Kloc M. (2016). Dissonant response of M0/M2 and M1 bone marrow derived macrophages to RhoA pathway interference. *Cell. Tissue Res.* 366(3):707-720.

## 2017

71. Liu Y, Chen W, Wu C, Minze LJ, **Kubiak JZ**, Li XC, Ghobrial RM, Kloc M. (2017). Macrophage/monocyte-specific deletion of RhoA down-regulates fractalkine receptor and inhibits chronic rejection of mouse cardiac allografts. *J. Heart and Lung Transpl.* 36(3):340-354.
72. Chen W, Zhao Y, Li XC, **Kubiak JZ**, Ghobrial RM, Kloc M. (2017). Rho-specific Guanine nucleotide exchange factors (Rho-GEFs) inhibition affects macrophage phenotype and disrupts Golgi complex. *Int J Biochem Cell Biol.* 93:12-24.
73. Chen W, Sandoval H, **Kubiak JZ**, Li XC, Ghobrial RM, Kloc M. (2017). The phenotype of peritoneal mouse macrophages depends on the mitochondria and ATP/ADP homeostasis. *Cell Immunol.* 324:1-7.
74. Piprek RP, Kolasa M, Podkowa D, Kloc M, **Kubiak JZ**. (2017). Cell adhesion molecules expression pattern indicates that somatic cells arbitrate gonadal sex of differentiating bipotential fetal mouse gonad. *Mech Dev.* 147:17-27.
75. Piprek RP, Kloc M, Tassan JP, **Kubiak JZ**. (2017). Development of *Xenopus laevis* bipotential gonads into testis or ovary is driven by sex-specific cell-cell interactions, proliferation rate, cell migration and deposition of extracellular matrix. *Dev Biol.* 432(2):298-310.
76. Jarzabek K., Mikucka-Niczyporuk A., Bielawski T., Milewski R., **Kubiak JZ.**, Wolczynski S. Evaluation of steroid receptors mRNA fingerprints in two groups of normozoospermic patients: men from unexplained infertility couples vs. men from couples with tubal factor infertility. *Open J Obstet Gynecol* 7:290-302.

## 2018

77. Piprek RP, Kolasa M, Podkowa D, Kloc M, **Kubiak JZ**. (2018). Transcriptional profiling validates involvement of extracellular matrix and proteinases genes in mouse gonad development. *Mech Dev.* 149:9-19.
78. Piprek RP, Damulewicz M, Kloc M, **Kubiak JZ**. (2018). Transcriptome analysis identifies genes involved in sex determination and development of *Xenopus laevis* gonads. *Differentiation* 100:46-56.
79. Zdanowski R, Leśniak M, Karczmarczyk U, Saracyn M, Bilski M, Kiepusa A, **Kubiak JZ**, Lewicki S. (2018). The Effects of Isopropyl Methylphosphono-Fluoridate (IMPF) Poisoning on Tumor Growth and Angiogenesis in BALB/C Mice. *Ann Transplant.* 23:105-111.
80. Wosik J, Chen W, Qin K, Ghobrial RM, **Kubiak JZ**, Kloc M. (2018). Magnetic Field Changes Macrophage Phenotype. *Biophys J.* 114(8):2001-2013.

81. Leśniak M, Zdanowski R, Suska M, Brewczyńska A, Stankiewicz W, Kloc M, **Kubiak JZ**, Lewicki S. (2018). Effects of hexachlorophene, a chemical accumulating in adipose tissue, on mouse and human mesenchymal stem cells. *Tissue Eng Regen Med* 15(2): 211-222.
82. Lewicki S, Leśniak M, Bertrandt J, Kalicki B, **Kubiak JZ**, Lewicka A. (2018). The long-term effect of protein deficient diet enriched with vitamin b6 on the blood parameters in unexercised and exercised rats. *Food Agric Immunol*.  
<https://doi.org/10.1080/09540105.2018.1439900>
83. Lewicki S, Lewicka A, Kalicki B, Sobolewska-Ruta A, Dębski B, Zdanowski R, Syryło T, Kloc M, **Kubiak JZ**. (2018). Effects of genistein on insulin pathway related genes in mouse differentiated myoblast C2C12 cell line: evidences for two independent modes of action. *Folia Histochem Cytobiol*. 56(3): 1-10. doi: 10.5603/FHC.a2018.0014.

## 2019

84. Francikowski J, Krzyżowski M, Kochańska B, Potrzebska M, Baran B, Chajec Ł, Urbisz A, Małota K, Łozowski B, Lewicki S, Kloc M, **Kubiak J**. (2019); Characterisation of white and yellow eye colour mutant strains of house cricket (*Acheta domestica*) PLoS One. 14(5):e0216281.
85. Piprek RP, Damulewicz M, Tassan JP, Kloc M, **Kubiak JZ**. (2019). Transcriptome profiling reveals male- and female-specific gene expression pattern and novel gene candidates for the control of sex determination and gonad development in *Xenopus laevis*. *Dev Genes Evol*. 2019 May;229(2-3):53-72.
86. Piprek RP, Kloc M, **Kubiak JZ**. (2019). Matrix metalloproteinase-dependent regulation of extracellular matrix shapes the structure of sexually differentiating mouse gonads. *Differentiation*106:23-34. doi: 10.1016/j.diff.2019.01.006.
87. Piprek RP, Kolasa M, Podkowa D, Kloc M, **Kubiak JZ**. (2019). Tissue-specific knockout of E-cadherin (Cdh1) in developing mouse gonads causes germ cells loss. *Reproduction*. pii: REP-18-0621.R3. doi: 10.1530/REP-18-0621.
88. Piprek RP, Podkowa D, Kloc M, **Kubiak JZ** (2019). Expression of primary cilia-related genes in developing mouse gonads. *Intl. J. Dev. Biol (in press)*.
89. Piprek RP, Kolasa M, Podkowa D, Kloc M, **Kubiak JZ**. (2019). N-cadherin is critical for development of normal tissue architecture and survival of germ cells in mouse gonads of both sexes. [*resubmitted after a positive review in Reproduction*].
90. Debowski M, Szymanska Z, **Kubiak JZ**, Lachowicz. Mathematical model of the role of CDC6 in CDK1 activation upon M-phase entry [*submitted, in revision*].

## Review articles, technical articles and commentaries in journals with peer review (n=56)

### 1990

1. Maro, B., **Kubiak**, J., Gueth, C., de Pennart, H., Houliston, E., Weber, M., Antony, C. & Aghion, J. (1990). Cytoskeleton organisation during oogenesis, fertilisation and preimplantation development of the mouse. *Int. J. Dev. Biol.*, 34, 127-137.

### 1994

2. Maro, B., **Kubiak**, J.Z. Verlhac, M.-H. & Winston, N. (1994). Interplay between the cell cycle control machinery and the microtubule network in mouse oocytes. *Seminars in Dev. Biol.* 5, 191-198.

3. **Kubiak**, J.Z. & Szöllösi, M.S. (1994). Regulacja cyklu komórkowego w trakcie dojrzewania oocytów ssaków. Dans *Ultrastruktura i funkcja komórki. Oogeneza tom 6*. PWN. Warszawa 1994, Edité par S. Bilinski, Z. Bielanska-Osuchowska, J. Kawiak & A. Przelecka. (*Article de revue en polonais, titre français "Régulation du cycle cellulaire lors de la maturation méiotique des ovocytes de mammifères"*)

### 1998

4. Polanski, Z. & **Kubiak**, J.Z. (1998). Meiosis. in *Encyclopedia of Reproduction* 160-167, ed. by Knobil, E. & Neil, J.D., Academic Presse. <http://www.apnet.com/embryo>

28. **Kubiak**, J.Z. & Polanski, Z. (1998). Modyfikacje cyklu komorko podczas mejozy. *Kosmos*, 147-57, Cracovie, Pologne. (*édition spéciale consacrée à la reproduction, article de revue en polonais, titre français "Modifications du cycle cellulaire au cours de la méiose"*)

### 2000

5. **Kubiak**, J.Z. (2000). Cykl komórkowy. Dwie Konferencje w 30-lecie badań. *Postępy Biologii Komórki*, 27; 569-581 (*Article en polonais, titre français "Deux conférences pour la 30eme anniversaire des recherches sur le cycle cellulaire"*)

39. Johnson, M & **Kubiak** J. Z. (2000). Legal confusion over „cloning” risks throwing baby out with bathwater. *Nature* 407, 559.

### 2001

6. **Kubiak**, J.Z & Johson M.H. (2001). Human infertility, reproductice cloning and nuclear transfer: a confusion of meanings. *BioEssays* 23, 359-364.

41. **Kubiak**, J.Z. (2001). Rak i cykl komórkowy. *Postępy Biologii Komórki*, 28; 315-325 (*Article de revue en polonais, titre français "Cancer et le cycle celluliare"*)

## 2002

7. **Kubiak, J.Z.** (2002). Wczesne podziały zarodka kregowcow. in "Molekularne podstawy embriogenezy", ed. by H. Krzanowska et W. Sokol-Misiak, PWN, Varsovie, Pologne. (*Chapitre d'un livre en polonais, titre français "Divisions cellulaires précoces d'embryons de vertèbres"*).
8. Johnson, M.H. & **Kubiak, J.Z.** (2002). Working Words are Best. E-Letter in Science in response to Vogelstein, B., Alberts, B. & Shine K. Please Don't Call It Cloning! Science 2002; 295: 1237 <http://www.sciencemag.org/cgi/eletters/295/5558/1237#410>

## 2005

9. Chesnel, F., Gautier, I., Richard-Parpaillon, L. & **Kubiak, J.Z.** (2005). Each mitosis can be different: How the cell cycle machinery modulates early embryonic M-phases. In: New Impact of Protein Modifications in the Regulation of Reproductive System. Ed. by T. Tokumoto, Research Signpost.

## 2006

10. **Kubiak, J.Z.** Science is not a democracy. Int. J. Dev. Biol., 2006, 50, 586.

## 2009

11. Marteil M., Richard-Parpaillon L. & **Kubiak J.Z.** (2009). Role of oocyte quality in meiotic maturation and embryonic development. *Reprod.Biol.* 9, 203-224.
12. **Kubiak J.Z.** & Chesnel F. (2009). Cyclin B and MPF inactivation in *Xenopus laevis* meiosis and mitosis: to degrade or not to degrade? In: *Cell Cycle and Development in Vertebrates*. Ed. by J.Z. Kubiak, M.A. Ciemerych & L. Richard-Parpaillon, Research Signpost. 125-135.
13. Ciemerych M.A., Archacka K., Polanski Z., **Kubiak J.Z.** (2009). Cell cycle modification during oocyte maturation and early development of LT/Sv mice: normal development or teratoma formation? In: *Cell Cycle and Development in Vertebrates*. Ed. by J.Z. Kubiak, M.A. Ciemerych & L. Richard-Parpaillon, Research Signpost. 181-202.
14. **Kubiak J.Z.** & Smith, M.A. (2009). Ubiquitin/proteasome system in mitotic and mitotic-like regulation during brain development and pathology. In: *The Ubiquitin Proteasome System In Nervous System: From Physiology To Pathology - 2008 Update, vol. 2*; chapter 7; Ed. by M. Di Napoli et C. Wojcik, Nova Science Pub. Inc. Waltham, Mass. USA. 71-82. (*e-book sorti en 2009, paper book en 2010*)  
[https://www.novapublishers.com/catalog/product\\_info.php?cPath=23\\_29&products\\_id=10595&osCsid=8788451937aa01fb38d3259c5ae1d5c7](https://www.novapublishers.com/catalog/product_info.php?cPath=23_29&products_id=10595&osCsid=8788451937aa01fb38d3259c5ae1d5c7)

## 2010

15. **Kubiak J.Z.** (2010). Yes Fyn Can: Individual or Team Player in SFKs? *Cell Cycle* 9(8) (dans « Cell Cycle News & Views » écrit sous l'invitation de l'éditeur).

## 2011

16. Amson R, **Kubiak JZ**, Van Montagu M, Telerman A. (2011). Could TCTP contribute to Armin Braun's paradigm of tumor reversion in plants?. *Cell Cycle*, 10(1), 1.

17. Dobrzynski M, Bernatowicz P, Kloc M, **Kubiak JZ**. (2011). Evolution of bet-hedginglike mechanisms in cell cycle and embryo development stimulated by weak linkage of stochasticity. In : KUBIAK JZ, (ed.), 2011, *Cell Cycle in Development*, Springer Verlag, (Results and Problems in Cell Differentiation), 11-30.

18. Moh C, **Kubiak JZ**, Bajic VP, Zhu X, Lee H, Smith MA. (2011). Cell Cycle Deregulation in the Neurons of Alzheimer Disease. In : KUBIAK JZ, (ed.), 2011, *Cell Cycle in Development*, Springer Verlag, (Results and Problems in Cell Differentiation), 565-576.

19. **Kubiak JZ**. (2011). Proteomics of M-phase entry: Omen vs. Omre, a battle for oocyte quality and beyond. *Folia Histochem. Cytobiol.* 49(1):1-7.

20. Eot-Houllier G, Giet R, Fisher D, **Kubiak JZ** & Prigent C. (2011). Le ciblage des kinases cycline-dépendantes (CDK) et des kinases mitotiques Aurora et Polo-like. In : *Thérapie ciblée des cancers*. Ed. by. Axel Kahn & Jacques Robert. Collection: Application Médicale dy GENe. John Libbey Eurotext, 50-67.

21. **Kubiak JZ**, El Dika M. (2011). Canonical and alternative pathways in Cyclin-Dependent Kinase 1/cyclin B inactivation upon M-phase exit in *Xenopus laevis* cell-free extracts. *Enzyme Res.* 2011:523420.

## 2012

22. Kloc M, **Kubiak JZ**, Ghobrial RM. (2012). Translationally controlled tumor-associated protein. *Biochem Res Int.* 2012:432590.

23. Kloc M, Ghobrial RM, Borsuk E, **Kubiak JZ**. (2012). Polarity and asymmetry during mouse oogenesis and oocyte maturation. *Results Probl Cell Differ.* 2012;55:23-44.

24. Polański Z, Homer H, **Kubiak JZ**. (2012). Cyclin B in mouse oocytes and embryos: importance for human reproduction and aneuploidy. *Results Probl Cell Differ.* 2012;55:69-91.

25. **Kubiak JZ**, Prigent C. (2012). The centrosome life story in *Xenopus laevis*. In: Heide Schatten, (ed.). *The centrosome: cell and molecular mechanisms of functions and dysfunctions in disease*, Humana Press, 347-364.

## 2013

26. **Kubiak JZ**, Ciemerych MA. (2013). From Gurdon to Yamanaka, short story of cell reprogramming. *Postepy Biologii Komorki*, 2013, 59:2.

27. Kloc M, Ghobrial RM, **Kubiak JZ**. (2013). Recent advances in understanding the germ cell-specific organelles and functions. Recent Advances in Germ Cells Research, NY, Nova Science Publishers, pp. .

## 2014

28. **Kubiak JZ**, Chartrain I, Tassan JP. (2014). The *Xenopus* embryo as a model system to study asymmetric furrowing in vertebrate epithelial cells. In: Kloc L & Kubiak JZ, eds. *Xenopus Development*. Wiley, pp. 103-111.

29. Piprek RP, **Kubiak JZ**. (2014). Gonad development and sex determination in *Xenopus*. In: Kloc L & Kubiak JZ eds. *Xenopus Development*. Wiley, pp. 199-214.

30. Kloc M, **Kubiak JZ**, Li XC, Ghobrial RM. (2014). The newly found functions of MTOC in immunological response. *J Leukoc Biol*. 95(3):417-30.

31. **Kubiak JZ**, Kloc M. (2014). Developmental Herpetology - state of the art of amphibian and reptile developmental biology. *Int. J. Dev. Biol*. 58: 719 – 721.

32. Piprek RP, Kloc M, **Kubiak JZ** (2014). The Bidder's organ – structure, development and function. *Intl. J. Dev. Biol*. 58: 819-827.

## 2015

33. Kloc M, **Kubiak JZ**, Li XC, Ghobrial RM. (2015). Pericytes, microvascular dysfunction and chronic rejection. *Transplantation* 99(4): 658-67.

## 2016

34. Kloc M, **Kubiak JZ**, Li XC, Ghobrial RM. (2016). Noncanonical intercellular communication in immune response. *World Journal of Immunology* 6(1): 67-74.

35. Kloc M, **Kubiak JZ**, Ghobrial RM. (2016). Are morpholino technology dilemmas an affidavit of the non-translational structural role of mRNA? *Trends in Dev. Biol*. 79 (9) 11-16.

36. Piprek RP, Kloc M, **Kubiak JZ**. (2016). Early Development of Gonads – Origin and Differentiation of the Somatic Cells of the Genital Ridges. *Results Probl Cell Differ*. 58, 1-22.

37. Kloc M, Liu Y, **Kubiak JZ**, C. Li XC, Ghobrial RM (2016). Fighting chronic rejection of transplanted organs. *Atlas of Science* 12 April 2016: <http://atlasofscience.org/fighting-chronic-rejection-of-transplanted-organs/>

38. Kloc, L, **Kubiak JZ**, Bilinski S. (2016). Gametic synapses, nanotubes and sperm RNAs – redefining the origin of maternal determinants: *Mech. of Dev*. 141, 1-3.



39. **Kubiak J.Z.** & Prigent C. (2016). Aurora-A: an expedition to the pole of the spindle in *Xenopus* egg extracts. *Intl. J. Dev. Biol.* 60(7-8-9):255-261.

40. **Kubiak JZ,** Kishimoto T. (2016). MPF, starfish oocyte and cell-free extract in the background - an interview with Takeo Kishimoto. *Int J Dev Biol.* 2016;60(7-8-9):193-200.

41. **Kubiak JZ.** (2016). Cell-free extracts in Development and Cancer Research for over 40 years. *Int J Dev Biol.* 2016;60(7-8-9):189-191.

42. Kloc M, Bilinski S, **Kubiak JZ.** (2016). Cytoskeleton and cytoskeleton-bound RNA visualization in frog and insect oocytes. *Methods Mol Biol.* 1457:179-90.

## 2017

43. Borsuk E., Jachowicz J., Kloc M., Tassan J.-P., **Kubiak J.Z.** (2017). Role of Cdc6 during oogenesis and early embryo development in mouse and *Xenopus laevis*. *Results Probl Cell Differ.* 59:201-211.

44. Tassan J.-P., Wühr M., Hatte G., **Kubiak J.Z.** (2017). Asymmetric cell division, cell-size and furrowing in the *Xenopus laevis* embryo. *Results Probl Cell Differ.* 61:243-260.

45. Kloc M, **Kubiak JZ.** (2017). Structural mRNA. *Encyclopedia of Signaling Molecules*, 2nd Edition, edited by Sangdun Choi [*online*].

46. **Kubiak JZ.,** Cup M., Janiec J., Kloc M. (2017). Cyclin B. *Encyclopedia of Signaling Molecules*, 2nd Edition, edited by Sangdun Choi [*online*].

47. Borsuk E, Waksmundzka M, Szczepańska K, Ajduk A, Maleszewski M, Suwińska A, Humięcka M, Bożyk K, Szpila M, Czołowska R, Rogulska T, Ożdżeński W, Modliński JA, **Kubiak JZ,** Ciemerych MA. (2017). In Memoriam - Prof. Andrzej Krzysztof Tarkowski (1933-2016). *Int J Dev Biol.* 61(1-2):1-3.

48. Bilinski SM, **Kubiak JZ,** Kloc M. (2017). Asymmetric Divisions in Oogenesis. *Results Probl Cell Differ.* 61:211-228.

49. Liu Y, **Kubiak JZ,** Li XC, Ghobrial RM, Kloc M. (2017). Macrophages and RhoA Pathway in Transplanted Organs. *Results Probl Cell Differ.* 62:365-376.

50. Kloc M, **Kubiak JZ.** (2017). Exogenous Molecule and Organelle Delivery in Oogenesis. *Results Probl Cell Differ.* 63:3-16.

51. **Kubiak JZ,** Kloc M. (2017). Elusive Role of TCTP Protein and mRNA in Cell Cycle and Cytoskeleton Regulation. *Results Probl Cell Differ.* 64:217-225.

52. **Kubiak JZ.,** Ciemerych MA., Żernicka-Goetz M., Borsuk E., Modliński JA., Maleszewski M. Nulla dies sine linea – Andrzej Krzysztof Tarkowski, Embriolog, 1933-2016. *Kosmos* 66(1), 1–5.

## 2018

53. Borsuk E, **Kubiak JZ**. (2018). In Vitro Culture of Mouse Oocytes for Meiotic Maturation. Marie-Hélène Verlhac, Marie-Emilie Terret (eds.). Mouse Oocyte Development: Methods and Protocols. Methods Mol Biol. 1818:13-21. doi: 10.1007/978-1-4939-8603-3\_2.

## 2019

54. Kloc M, Uosef A, Wosik J, **Kubiak JZ**, Ghobrial RM. (2019). RhoA pathway and actin regulation of the Golgi/centriole complex. Results Probl Cell Differ. 67:81-93.

55. Piprek RP, **Kubiak JZ**. (2019). Determinacja płci i rozwój gonad kury domowej. Kosmos (*in press*) in polish; English title: Sex determination and development of domestic hen gonads

56. Piprek RP, **Kubiak JZ**. (2019). Historia badan nad determinacja płci. Kosmos (*in press*) in polish; English title: History of research on sex determination

## EDITION AND CO-EDITION OF BOOKS

1. **Cell Cycle and Development in Vertebrates**, ed. par J. Z. **Kubiak**, M.A. Ciemerych et L. Richard-Parpaillon, Research Signpost, 2009; 244 p., Hardcover.

<http://www.reassign.com/UserBookDetail.aspx?bkid=926&catid=196>

2. **Cell Cycle in Development**, ed. par J. Z. **Kubiak**, Springer Verlag, à paratitre en Mai 2011; 500 p., Hardcover nad e-book

<http://www.springer.com/life+sciences/evolutionary+%26+developmental+biology/book/978-3-642-19064-3>

3. **Mouse Development: From Oocyte to Stem Cells**, ed. par J. Z. **Kubiak**, Springer Verlag, 2012 ; 429 p. Hardcover and e-book

<http://www.springer.com/la/book/9783642304057>

4. **Xenopus Development**, ed. par M. Kloc & J. Z. **Kubiak**, Wiley's, USA, 2014, 413 p. Hardcover.

<http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1118492811,subjectCd-LS10.html>

5. **Asymmetric Cell Division in Development, Differentiation and Cancer**, ed. par. Jean-Pierre Tassan & Jacek Z. **Kubiak**, *Springer Verlag*, 2017 ; 421 p. Hardcover and e-book

<https://link.springer.com/book/10.1007%2F978-3-319-53150-2>

6. **Marine Organisms as Model Systems in Biology and Medicine**, ed. par. Malgorzata Kloc & Jacek Z. **Kubiak**, *Springer Verlag*, 2018 ; 624 p. Hardcover and e-book

<https://link.springer.com/book/10.1007%2F978-3-319-92486-1#editorsandaffiliations>

## EDITION OF SPECIAL ISSUES

1. **Biochemistry Research International**, volume 2012 (2012): **Translationally Controlled Tumor-Associated Protein**, Guest Editors: Malgorzata Kloc, Jacek Z. **Kubiak** & Rafik Mark Ghobrial <http://www.hindawi.com/journals/bri/si/672693/>

2. **International Journal of Developmental Biology**, Vol. 58 Nos. 10/11/12 (2014) pp.719-960: **Developmental Herpetology**, Guest Editors: Jacek Z. **Kubiak** & Malgorzata Kloc <http://www.ijdb.ehu.es/web/issues/contents/vol/58/issue/10-11-12>

3. **International Journal of Developmental Biology**, Vol. 60 Nos. 7/8/9 (2016) pp.189-320: **Cell Free Extracts in Development & Cancer Research**, Guest Editor: Jacek Z. **Kubiak** <http://www.ijdb.ehu.es/web/issues/contents/vol/60/issue/7-8-9>