האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

Curriculum Vitae

Personal Data

Name: Buganim (Yossi) Yosef
Place of Birth: Israel
Date of Birth: March 5, 1977
Family Status: Married plus 3 children
Websites: http://www.buganimlab.com/

Education

03/2004- 12/2008 (**Ph.D.**)
Faculty of Molecular Cell Biology, Weizmann Institute of Science, Rehovot, Israel (Varda Rotter's Lab)
10/2001- 11/2003 (**M.Sc.**)
Faculty of Life Sciences, Bar-Ilan University, Ramat Gan, Israel (Ron Wides's Lab)- *finished with distinction*
10/1999- 09/2002 (**B.Sc.**)
Faculty of Life Sciences, Bar-Ilan University, Ramat Gan, Israel- *finished with distinction*

Past and Current Positions

12/2020- Present (**Principal Investigator, Associate Professor**)
Department of Developmental Biology and Cancer Research, the Hebrew University, Jerusalem, Israel

01/2014- 11/2020 (**Principal Investigator, Senior lecturer**)
Department of Developmental Biology and Cancer Research, the Hebrew University, Jerusalem, Israel

03/2010- 12/2013 (**Post doctorate**)
Whitehead Institute for Biomedical Research, MIT, Cambridge, USA (Rudolf Jaenisch's Lab)

01/2009- 02/2010 (**Research associate**)
Faculty of Molecular Cell Biology, Weizmann Institute of Science, Rehovot, Israel (Varda Rotter's Lab)

Honors

Date	Award Description
2019	Dean Award for "Outstanding Young investigator", Faculty of Medicine at the Hebrew University, Israel
2017	Appointment as an "HHMI International Research Scholar", UK-USA
2017	Prize for "Discovery in Medical Research", Sir Zelman Cowen Universities Fund, Israel-Australia
2017	Krill Prize for "Excellence in Scientific Research", Wolf Foundation, Israel
2017	Appointment as an EMBO young investigator, "Young Investigator Programme, (YIP)", Germany
2016	Hebrew University President Award in the Memory of Prof. Yoram Ben-Porat for "Outstanding Young Investigator", Israel
2016	KY Cha Award in "Stem Cell Technology", American Society for Reproductive Medicine, USA
2016	"Stem Cells and Regenerative Medicine" Award, Boyalife company, Science magazine and Science translational medicine magazine, USA
2016	"The Faculty of Medicine Outstanding Research", Hebrew University, Israel
2015	"ERC starting grant", European Research Council, Belgium
2014	"Alon foundation Scholar– Program for distinguished junior faculty" award, Council For Higher Education, Israel
2013	Best poster award, ISSCR 11th annual Stem cell meeting (5 winners out of 2000 posters), USA
2013	WIPDA Education Award, Whitehead Institute for Biomedical Research, MIT, USA
2011	Postdoc Fellowship- The NIH Ruth L. Kirschstein National Research Service Award (1 F32 GM099153-01A1), USA.
2008	Best lecture Award in the Molecular Cell Biology departmental seminar. The Weizmann Institute of Science, Israel
2002	"Wolf Foundation – to Promote Science and Art for the Benefit of Mankind" Award for excellence in studies for the M.Sc. degree in biology. Bar Ilan University, Israel
2001	Scholarship for excellence in the B.Sc degree. Bar-Ilan University, Israel

Patents

2021	Patent- METHOD FOR REPROFRAMMING HUMAN CELLS – US application 62/884,181, Hebrew University, Jerusalem, Israel
2014	Patent- GENERATION OF INDUCED TROPHOBLAST STEM CELLS BY DEFINED FACTORS - *provision in preparation*, Hebrew University, Jerusalem, Israel
2012	Patent- PROGRAMMING AND REPROGRAMMING OF CELLS - Docket No. WIBR-131-00, Whitehead Institute for Biomedical Research, MIT, Cambridge, USA

Selected Lectures at Conferences and Universities

- "New Approaches to Early Embryogenesis & Epigenetics", February 2023, Israel **(Invited speaker)**
- **"**The 12th Annual Meeting of the Israel Society for Placenta Research", November 2022, Israel **(Invited keynote speaker).**
- ISSCR Jerusalem International Symposium "Stem Cells: from Genes to Organs", March 2022, Israel (**Invited speaker**)
- EMBO workshop "Chromatin Structure, Organization and Dynamics", August 2021, Prague (**Invited speaker**)
- "TT2020: The 16th Transgenic Technology Meeting", October 2020, Israel (**Invited speaker**)
- **"**The 8th Annual Meeting of the Israel Society for Placenta Research", November 2018, Israel **(Invited keynote speaker).**
- "Stem cell and regenerative medicine school", September 2017, Greece **(Invited speaker)**
- Stem Cell Institute, Cambridge University, March, 2017, UK **(Invited speaker)**
- Birmingham University, March, 2017, UK **(Invited speaker)**
- "FISEB Congress (Ilanit)", February 2017, Eilat, Israel **(Invited speaker)**
- **"**EMBO Workshop on Nuclear Function and Cell Fate Choice", Sep 2016, Greece **(Oral presentation)**
- "Israstem the 6th international stem cell conference", April 2016, Israel **(Invited speaker)**
- "The Israel Fertility Association (IFA) meeting"**,** November 2015, Israel **(Invited speaker)**
- "World Conference on Regenerative Medicine", October 2015, Germany **(Invited keynote speaker)**
- 2nd UK-Israel "BIRAX Regenerative Medicine conference", March 2014, Israel **(Invited speaker)**
- "FISEB Congress (Ilanit)", February 2014, Eilat, Israel **(Invited speaker)**
- "The 5th International Stem Cell Meeting", October 2013, Israel **(Invited speaker).**
- "Fluidigm Single Cell Symposium: The Paradigm of The Single Cell", September 2013, Boston, USA **(Invited speaker)**.
- "Germinal Stem Cell Biology" Gordon Research Conference, July 2013, Hong Kong, China **(Invited speaker)**.
- MIT Sloan Bio Innovations, February 2013, Cambridge, USA **(Invited for poster presentation)**.
- ISSCR 11th annual meeting, June 2013, Boston, USA.
- The 14th International p53 Workshop: October 2008, Shanghai, China.

Ad Hoc reviewer in peer reviewed journals

Nature, Cell, Cell Stem Cell, Nature Communications, Developmental Cell, Cell Research, Cell Reports, Cell Discovery, Development, Stem Cell Reports, EMBO Reports, Scientific Reports, Plos One

Ad Hoc reviewer for national and international grants

Israel Science Foundation (ISF), Medical Research Council (MRC), European Research Council (ERC), French National Research Agency (ANR), Swiss National Science Foundation (SNSF), US-Israel Binational Science Foundation (BSF), Deutsche Forschungsgemeinschaft (DFG).

Conference organizer

- Co-organizer of the international stem cell conference "FRONTIERS IN STEM CELL BIOLOGY: From Embryogenesis to Tissue Maintenance and Regeneration", September, 2022, Israel.
- Member of the organizing committee of the international **"**TT2020: The 16th Transgenic Technology Meeting", October, 2020, Israel**.**

Past and Ongoing Grants

2023-2025 **The Good Food Institute Israel (GFI)- "**Direct Reprogramming of Bovine Mesenchymal Stem Cells into Super Potent Pre-Adipocyte Progenitors for Large Scale Fat Production"- NIS300,000

2022-2024 **European Research Council-Proof of Concept (ERC-PoC)-** "Cell Rejuvenation Therapy for Age-related Macular Degeneration"- EUR150,000

2019-2022 **MOST- "**Human induced trophoblast stem cells as a potential source of cells to treat implantation and placentation defects"- NIS750,000

2017-2019 **Bill and Melinda Gates**- "Inhibiting the fertilization of oocyte by sperm"- $159,153/$339,595 (in collaboration with Prof. Amiram Goldblum and Dr. Assaf Ben-meir)

2017-2018 **Wolfson foundation**, Equipment grant- "Single cell analysis"- GBP235,000/470,000 (in collaboration with Dr. Oren Ram, Dr. Amnon Buxboim and Dr. Dana Reichmann).

2017-2020 **DKFZ-MOST**- "Investigation of the permissiveness to chromothripsis in the context of the lineage, the differentiation status and the mitotic state of cells with compromised p53 or ATM function"- EUR129,000/258,000 (in collaboration with Dr. Aurelie Ernst and Prof. Peter Lichter).

2017-2023 **International Howard Hughes Medical Institute (HHMI)**- "The molecular basis of embryonic cell fate decisions and somatic nuclear reprogramming"- $750,000

2017-2020 **EMBO- Young Investigator Program, (YIP)**- EUR30,000 and benefits for 3 years

2016-2018 **The 2016 KY Cha Award in Stem Cell Technology**- "Development of functional in vivo assay for assessing the capability of induced trophoblast stem cells to rescue placental dysfunction diseases" $20,000

2016-2019 **March of Dimes**- "The production of stable and fully functional human induced trophoblast stem cells for modelling and treating placental dysfunction diseases"- $200,000

2016-2021 **European Research Council (ERC)**- "The Molecular Basis for somatic nuclear reprogramming"- EUR1,500,000

2015-2017 **Abisch-Frenkel**- "The production of placenta-generating cells from fibroblasts for modelling and treating placental dysfunction disease"-$45,000

2015-2017 **Kamin**- "Generation of mouse induced trophoblast stem cells"- $200,000

2015-2016 **Israeli Science Foundation (ISF), INCPM**- NIS54,000

2015-2020 **Israeli Science Foundation (ISF)**, Equipment grant- NIS500,000

2015-2020 **Israeli Science Foundation (ISF)**- "Deciphering the molecular mechanisms of somatic cells undergoing reprogramming to pluripotency"-$500,000

2014 **Hebrew University matching grant**- $24,000

2014 **Alon foundation Scholar**– Program for distinguished junior faculty - $50,000

2014-2019 **Israeli Centers of Research Excellence (I-CORE)**- "Generation of functional induced Sertoli-like cells"- $555,555

Institutional Responsibilities

- Head of the national mouse transgenic unit (GEMM) at the Hebrew University
- Member of the young higher academic forum in biotechnology
- Member of the core facilities committee
- Member of the MD/PhD program committee
- Member of the animal facility committee
- Internal and external Ph.D. and M.Sc. examiner

Others

- Elected as one of ten most promising young scientists, below 40, in Israel by the journal "TheMarker".
- Personal and independent TV interview for the Japanese NHK TV channel about "mechanisms of reprogramming".
- Biotech consultant: Aleph Farms, BelongTail.
- Member of the International Society for Stem Cell Research (ISSCR).
- Member of the EMBO young investigator, "Young Investigator Programme, (YIP)
- Member of the HHMI International Research Scholar program

Research background

During the 3rd year of my B.Sc. studies, I enrolled in a track honours (direct M.Sc. program, Bar-Ilan University). My M.Sc. research focused on characterizing the role of the *Ten-a* gene in the development of the fruit fly. I mutated the *Ten-a* gene using a screen for inexact excisions of a resident P-element insertion. This work resulted in a publication in which I found that knockout of *Ten-a* led to segmentation, eye and wing defects.
As a young scientist I thought that being exposed to a wide variety of biological fields, could contribute to my versatility as a researcher. For that reason, I joined the Weizmann Institute for a Ph.D. degree. In my thesis, I investigated the role of the early response gene *ATF3* in cancer and characterized its crosstalk both with WT p53 and with its oncogenic mutant forms. One of my main discoveries was a novel tumour suppressor activity for p53 in regulating Ras oncogene activity that was mediated by ATF3 and BTG2. These studies resulted in key publications in peer-reviewed journals.
The decision to pursue my postdoctoral training in embryonic stem cell (ESC) lab came after the observation of Takahashi and Yamanaka in 2006 that expression of four factors (Oct4, Sox2, Klf4 and Myc (OSKM)) can convert somatic cells to induced pluripotent stem cells (iPSCs). The notion that any given cell can adopt an alternative cell fate by ectopic expression of master regulators fascinated me. During my postdoctoral studies, I have utilized single-cell technologies (Fluidigm BioMark and sm-mRNA-FISH) to decipher the molecular mechanism of somatic cell reprogramming to pluripotency. I found that early stochastic gene expression in reprogramming was followed by a late deterministic phase with Sox2 being the upstream factor in the gene network. This network allows us to reprogram cells to iPSCs with the absence of "Yamanaka factors" and Nanog, demonstrating for the first time that the core pluripotency circuitry can be activated from different entries ***(Buganim et al. Cell, 2012)***. Next, I reasoned that a combination of factors derived from this network would reprogram cells more uniformly and yield iPSCs of high quality. Indeed, expression of Sall4, Nanog, Esrrb and Lin28 in MEFs generated iPSCs of superior quality compared to iPSCs derived from OSKM ***(Buganim et al. Cell stem cell, 2014)***. In a third project, I discovered a cocktail of factors that can convert fibroblasts into embryonic Sertoli-like cells. Sertoli cells are considered the "nurse cells" of the testis that play an essential role in spermatogenesis, therefore, making them a desirable cell type for *in vitro* fertilization treatment. Transduced fibroblasts underwent a mesenchymal to epithelial transition, acquired the ability to aggregate, formed tubular-like structures, expressed Sertoli-specific markers, integrated into testicular cords in gonad explants and supported germ cell survival ***(Buganim et al. Cell stem cell, 2012)***. These studies demonstrate that bioinformatic models derived from *in vitro* single-cell data can improve the quality of the converted cells, thus, bringing the regenerative medicine field closer to the clinic.

Publications

The PI has a total of **47 papers (H-index= 30)** in peer-reviewed journals.

Research articles

* Equal contribution
# Equal corresponding author

Papers under review

1. Lasry R*, Maoz N*, Cheng A. W, Yom Tov N, Kulenkampff E, Azagury A, Yang H, Ople O, Markoulaki S, Faddah A. D, Makedonski K, Sabbag O, Jaenisch R, **Buganim Y** (2023) Complex haploinsufficiency in pluripotent cells yields somatic cells with DNA methylation abnormalities and pluripotency induction defects. *BioRxiv*. doi: https://doi.org/10.1101/2022.05.18.492474. ***Submitted.***

2. Naama N*, Rahamim M*, Zayat V, Sebban S, Radwan A, Orzech D, Lasry R, Ifrah A, Jaber M, Sabag O, Yassen H, Khatib A, Epsztejn-Litman S, Novoselsky-Persky M, Makedonski K, Deri N, Goldman-Wohl D, Cedar H, Yagel S, Eiges R, **Buganim Y** (2022) Pluripotency-independent induction of trophoblast stem cells from human fibroblasts. *BioRxiv*. *doi: https://doi.org/10.1101/2021.11.10.468044*. ***Nat Commun***. Under revision.

Published papers

1. Jaber M*, Radwan A*, Loyfer N*, Abdeen M, Sebban S, Khatib A, Azagory M, Kolb T, Zapatka M, Makedonski K, Ernst E, Kaplan T#, **Buganim Y#** (2022) Comparative parallel multi-Omics

analysis of cell undergoing reprogramming to pluripotent and trophectoderm states. ***Nat Commun***. 17;13(1):3475.

2. Herchcovici Levy S, Feldman Cohen S, Arnon L, Lahav S, Awawdy M, Alajem A, Bavli D, Sun X, **Buganim Y**, Ram O (2022) Esrrb is a cell-cycle-dependent associated factor balancing pluripotency and XEN differentiation. ***Stem Cell Reports***. 10;S2213-6711(22)00205-3.

3. Stepanenko N*, Wolk O*, Bianchi E, Wright G.J, Schachter-Safrai N, Makedonski K, Ouro A, Ben-Meir A, **Buganim Y**, Goldblum A (2022) In silico docking analysis for blocking JUNO-IZUMO1 interaction identifies two small molecules that block in vitro fertilization. ***Front Cell Dev Biol***. 5;10:824629.

4. Kaduri M, Sela S, Kagan S, Poley M, Abdumanhal- Masarweh H, MoraRaimundo P, Ouro A, Dahan N, Hershkovitz D, Shklover J, Shainsky Roitman J, **Buganim Y**, Schroeder A (2021) Targeting neurons in the tumor microenvironment with bupivacaine nanoparticles reduces breast cancer progression and metastases. ***Sci Adv***. 8;7(41):eabj5435.

5. Ankawa R, Goldberger N, Yosefzon Y, Koren E, Yusupova M, Rosner D, Feldman A, Baror-Sebban S, **Buganim Y**, Simon D, Tessier-Lavigne M, Fuchs Y (2021) Apoptotic cells represent a dynamic stem cell niche governing proliferation and tissue regeneration. ***Dev Cell***. 12;56(13):1900-1916.e5.

6. Kolb T, Khalid U, Simović M, Ratnaparkhe M, Wong J, Jauch A, Schmezer P, Rode A, Sebban S, Haag D, Hergt M, Devens F, **Buganim Y**, Zapatka M, Lichter P, Ernst A (2020) A Versatile system to introduce clusters of genomic double-strand breaks in large cell populations. ***Genes Chromosomes Cancer***. doi: 10.1002/gcc.22890.

7. Seranova E, Palhegyi AM, Verma S, Dimova S, Lasry R, Naama M, Sun C, Barrett T, Rosenstock TR, Kumar D, Cohen MA, **Buganim Y**, Sarkar S (2020) Human induced pluripotent stem cell models of neurodegenerative disorders for studying the biomedical implications of autophagy. ***J Mol Biol***. 3;432(8):2754-2798.

8. Brill-Karniely YY, Dror D, Duanis-Assaf T, Goldstein Y, Schwob O, Millo T, Orehov N, Stern T, Jaber M, Loyfer N, Vosk R, Benyamini H, Bielenberg D, Kaplan T, **Buganim Y**, Reches R, Benny O (2019) Triangular correlation (TrC) between cancer aggressiveness, cell uptake capability and cell deformability. ***Sci Adv***. 15;6(3):eaax2861.

9. Benchetrit H*, Jaber M*, Zayat V*, Sebban S, Pushett A, Makedonski K, Zakheim Z, Radwan A, Maoz N, Rachel Lasry, Renous N, Inbar M, Ram O, Kaplan T, **Buganim Y** (2019) Direct induction of the three pre-implantation blastocyst cell types from fibroblasts. ***Cell Stem Cell***. 6;24(6):983-994.e7.
Recommended by faculty of 1000.

10. Ward C, Volpe G, Cauchy P, Ptasinska A, Almaghrabi R, Blakemore D, Nafria M, Kestner D, Frampton J, Murphy G, **Buganim Y**, Kaji K, García P (2018) Fine-tuning Mybl2 is required for proper mesenchymal-to-epithelial transition during somatic reprogramming. ***Cell Rep***. 7;24(6):1496-1511.

11. Yehuda Y, Blumenfeld B, Mayorek N, Makedonski K, Vardi O, Cohen-Daniel L, Mansour Y, Baror-Sebban S, Masika H, Farago M, Berger M, Carmi S, **Buganim Y**, Koren A, Simon I (2018) Germline DNA replication timing shapes mammalian genome composition. ***Nucleic Acids Res***. 46(16):8299-8310.

12. Masika H, Farago M, Hecht M, Condiotti R, Makedonski K, **Buganim Y**, Burstyn-Cohen T, Bergman Y, Cedar H (2017) Programming asynchronous replication in stem cells. ***Nat Struct Mol Biol***. 24(12):1132-1138.

13. Jaber M, Sebban S, **Buganim Y** (2017) Acquisition of the pluripotent and trophectoderm states in the embryo and during somatic nuclear reprogramming. ***Curr Opin Genet Dev***. 29;46:37-43.

14. Maoz N and **Buganim Y** (2017) Moving towards totipotency without a single miR-acle. ***Cell Res***. 27(5):600-601.

15. **Buganim Y** (2016) Back to basics: Refined nuclear reprogramming techniques yield higher quality stem cells. ***Science***. 17;352(6292):1401.

16. Cohen MA, Wert KJ, Goldmann J, Markoulaki S, **Buganim Y**, Fu D, Jaenisch R (2016) Human neural crest cells contribute to coat pigmentation in interspecies chimeras after in utero injection into mouse embryos. ***PNAS***. 9;113(6):1570-5.

17. Sebban S and **Buganim Y** (2015) Nuclear reprogramming by defined factors: quantity versus quality. ***Trends Cell Biol***. S0962-8924(15)00157-9.

18. Benchetrit H, Herman S, van Wietmarschen N, Wu T, Makedonski K, Maoz N, Yom Tov N, Stave D, Lasry R, Zayat V, Xiao A, Lansdorp PM, Sebban S, **Buganim Y** (2015) Extensive nuclear reprogramming underlies lineage conversion into functional trophoblast stem-like cells. ***Cell Stem Cell***. 5;17(5):543-56.
Highlight- *Biology of Reproduction.*(2015) DOI:10.1095/biolreprod.115.135913
Cell Stem Cell. (2015) 5;17(5):499-500.
Stem Cell Investig. (2016) 21;3:24.

19. **Buganim Y** (2015) Tex10: A new player in the core pluripotency circuitry. ***Cell Stem Cell***. 4;16(6):572-3.

20. **Buganim Y***#, Markoulaki S*, Wietmarschen NV, Hoke H, Wu T, Ganz K, Akhtar-Zaidi B, He Y, Abraham BJ, Porubsky D, Kulenkampff E, Faddah DA, Shi L, Gao Q, Sarkar S, Cohen M, Goldmann J, Nery JR, Schultz MD, Ecker JR, Xiao A, Young RA, Lansdorp PM, Jaenisch R#. (2014) The developmental potential of iPSCs is greatly influenced by the reprogramming factors selection. ***Cell Stem Cell***. 4;15(3):295-309. #**Corresponding author.**
Highlight- *Cell Stem Cell.* (2014)4;15(3):25960.
Molecular Therapy. (2014) doi:10.1038
This paper was elected as one of "Cell Stem Cell" best papers for 2014

21. Sarkar S, Carroll B, **Buganim Y**, Maetzel D, Ng AH, Cassady JP, Cohen MA, Chakraborty S, Wang H, Spooner E, Ploegh H, Gsponer J, Korolchuk VI, Jaenisch R. (2013) Impaired autophagy in the lipid storage disorder Niemann-Pick type C1 disease. ***Cell Rep***. 12;5(5):1302-15.

22. Faddah DA, Wang H, Cheng AW, Katz Y, **Buganim Y**, Jaenisch R. (2013) Single-cell analysis reveals that expression of Nanog is biallelic and equally variable as that of other pluripotency factors in mouse ESCs. ***Cell Stem Cell***. 3;13(1):23-9.

23. **Buganim Y**, Faddah D, Jaenisch R (2013) Mechanisms and models of somatic cell reprogramming. ***Nat Rev Genet***. 14(6):427-39.

24. Sahay G, Querbes W, Alabi C, Eltoukhy A, Sarkar S, Zurenko C, Karagiannis E, Love K, Chen D, Zoncu R, **Buganim Y**, Schroeder A, Langer R, Anderson DG. (2013) Efficiency of siRNA delivery by lipid nanoparticles is limited by endocytic recycling. ***Nat Biotechnol***. 31(7):653-8.

25. **Buganim Y***, Faddah DA*, Cheng AW, Itskovich E, Markoulaki S, Ganz K, Klemm SL, van Oudenaarden A, Jaenisch R (2012) Single-cell expression analyses during cellular reprogramming reveal an early stochastic and a late hierarchic phase. ***Cell***. 14;150(6):1209-22.
Highlight- *Cell Stem Cell.* (2012) 5;11(4):445-7.
Nat Rev Genet. (2012) 13(11):755.
Nature Methods (2012) 1047.
Nature. (2013) 17;493(7432):310-1.
This paper was selected as one of "Cell" best papers for 2012

Recommended by faculty of 1000

26. **Buganim Y**#, Itskovich E, Hu YC, Cheng AW, Ganz K, Sarkar S, Fu D, Welstead GG, Page DC, Jaenisch R (2012). Direct reprogramming of fibroblasts into embryonic Sertoli-like cells by defined factors. ***Cell Stem Cell***. 7;11(3):373-86. #***Corresponding author***
Highlight- **Buganim Y**# and Jaenisch R# *Cell Cycle*. (2012) 15;11(24):4485-6.
#***Corresponding author***.
Recommended by the ISSCR journal

27. Carey BW, Markoulaki S, Hanna JH, Faddah DA, **Buganim Y**, Kim J, Ganz K, Steine EJ, Cassady JP, Creyghton MP, Welstead GG, Gao Q, Jaenisch R (2011). Reprogramming factor stoichiometry influences the epigenetic state and biological properties of induced pluripotent stem cells. ***Cell Stem Cell***. 2;9(6):588-98.

28. Molchadsky A, Ezra O, Amendola P G, Krantz D, Kogan-Sakin I, **Buganim Y**, Rivlin N, Goldfinger N, Folgiero V, Falcioni R, Sarig R, Rotter V (2013) p53 is required for brown adipogenic differentiation and has a protective role against diet-induced obesity. ***Cell Death Differ***. 20(5):774-83.

29. Kalo E, Kogan-Sakin I, Solomon H, Bar-Nathan E, Shay M, Shetzer Y, Dekel E, Goldfinger N, **Buganim Y**, Stambolsky P, Goldstein I, Madar S, Rotter V (2012). Mutant p53R273H attenuates the expression of phase 2 detoxifying enzymes and promotes the survival of cells with high levels of reactive oxygen species. ***J Cell Sci***. 15;125(Pt 22):5578-86.

30. Leibovich-Rivkin T, **Buganim Y**, Solomon H, Meshel T, Rotter V, Ben-Baruch A (2012) Tumor-promoting circuits that regulate a cancer-related chemokine cluster: Dominance of inflammatory mediators over oncogenic alterations. ***Cancers***. ***4***(1), 55-76.

31. Solomon H*, **Buganim Y***, Kogan I, Pomeraniec L, Assia Y, Madar S, Goldstein I, Brosh R, Kalo E, Beatus T, Goldfinger N, Rotter V (2010) Various p53 mutant types differently regulate the Ras circuit to induce a cancer-related gene signature**.** ***J Cell Sci***. 125, 3144-3152.

32. **Buganim Y**, Madar S, Rais Y, Pomeraniec L, Harel E, Solomon H, Kalo E, Goldstein I, Brosh R, Haimov O, Avivi C, Polak-Charcon S, Goldfinger N, Barshack I, Rotter V (2011). Transcriptional activity of ATF3 in the stromal compartment of tumors promotes cancer progression. ***Carcinogenesis***. 32(12):1749-57.

33. Tabach Y, Kogan-Sakin I, **Buganim Y**, Solomon H, Goldfinger N, Hovland R, Ke XS, Oyan AM, Kalland KH, Rotter V, Domany E (2010) Amplification of the 20q chromosomal arm initiates cancer. ***PloS One***. 31; 6(1):e14632.

34. Kogan-Sakin I, Tabach Y, **Buganim Y**, Molchadsky A, Solomon H, Madar S, Kamer I, Stambolsky P, Shelly A, Goldfinger N, Valsesia-Wittmann S, Puisieux A, Zundelevich A, Gal-Yam EN, Avivi C, Barshack I, Brait M, Sidransky D, Domany E, Rotter V (2010) Mutant p53(R175H) upregulates Twist1 expression and promotes epithelial-mesenchymal transition in immortalized prostate cells. ***Cell Death Differ***. 18(2):271-81.

35. Brosh R, Sarig R, Natan EB, Molchadsky A, Madar S, Bornstein C, **Buganim Y**, Shapira T, Goldfinger N, Paus R, Rotter V (2010) p53-dependent transcriptional regulation of EDA2R and its involvement in chemotherapy-induced hair loss. ***FEBS Lett***. 584: 2473-2477.

36. Solomon H, Brosh R, **Buganim Y**, Rotter V (2010) Inactivation of the p53 tumor suppressor gene and activation of the Ras oncogene: cooperative events in tumorigenesis. ***Discov Med***. 9: 448-454.

37. **Buganim Y***, Goldstein I*, Lipson D, Milyavsky M, Polak-Charcon S, Mardoukh C, Solomon H, Kalo E, Madar S, Brosh R, Perelman M, Navon R, Goldfinger N, Barshack I, Yakhini Z, Rotter V (2010a) A novel translocation breakpoint within the BPTF gene is associated with a pre-malignant phenotype. ***PLoS One***. 11;5(3):e9657.

38. **Buganim Y***, Solomon H*, Rais Y, Kistner D, Nachmany I, Brait M, Madar S, Goldstein I, Kalo E, Adam N, Gordin M, Rivlin N, Kogan I, Brosh R, Sefadia-Elad G, Goldfinger N, Sidransky D, Kloog Y, Rotter V (2010b) p53 Regulates the Ras circuit to inhibit the expression of a cancer-related gene signature by various molecular pathways. ***Cancer Res***. 70**:** 2274-2284.

39. Aylon Y, Yabuta N, Besserglick H, **Buganim Y**, Rotter V, Nojima H, Oren M (2009) Silencing of the Lats2 tumor suppressor overrides a p53-dependent oncogenic stress checkpoint and enables mutant H-Ras-driven cell transformation. ***Oncogene***. 28: 4469-4479.

40. Kogan-Sakin I, Cohen M, Paland N, Madar S, Solomon H, Molchadsky A, Brosh R, **Buganim Y**, Goldfinger N, Klocker H, Schalken JA, Rotter V (2009) Prostate stromal cells produce CXCL-1, CXCL-2, CXCL-3 and IL-8 in response to epithelia-secreted IL-1. ***Carcinogenesis***. 30: 698-705.

41. **Buganim Y**, Rotter V (2009) p53: balancing tumour suppression and implications for the clinic. ***Eur J Cancer***. 45 Suppl 1: 217-234.

42. Madar S, Brosh R, **Buganim Y**, Ezra O, Goldstein I, Solomon H, Kogan I, Goldfinger N, Klocker H, Rotter V (2009) Modulated expression of WFDC1 during carcinogenesis and cellular senescence. ***Carcinogenesis***. 30(1):20-7.

43. **Buganim Y**, Rotter V (2008) RHAMM in the complex p53 cell cycle network. ***Cell Cycle***. 7.

44. Brosh R, Shalgi R, Liran A, Landan G, Korotayev K, Nguyen GH, Enerly E, Johnsen H, **Buganim Y**, Solomon H, Goldstein I, Madar S, Goldfinger N, Borresen-Dale AL, Ginsberg D, Harris CC, Pilpel Y, Oren M, Rotter V (2008) p53-Repressed miRNAs are involved with E2F in a feed-forward loop promoting proliferation. ***Mol Syst Biol***. 4**:** 229.

45. Kalo E, **Buganim Y**, Shapira KE, Besserglick H, Goldfinger N, Weisz L, Stambolsky P, Henis YI, Rotter V (2007) Mutant p53 attenuates the SMAD-dependent transforming growth factor beta1 (TGF-beta1) signaling pathway by repressing the expression of TGF-beta receptor type II. ***Mol Cell Biol***. 27**:** 8228-8242.

46. Tabach Y, Brosh R, **Buganim Y**, Reiner A, Zuk O, Yitzhaky A, Koudritsky M, Rotter V, Domany E (2007) Wide-scale analysis of human functional transcription factor binding reveals a strong bias towards the transcription start site. ***PLoS One***. 2: e807.

47. Milyavsky M, Shats I, Cholostoy A, Brosh R, **Buganim Y**, Weisz L, Kogan I, Cohen M, Shatz M, Madar S, Kalo E, Goldfinger N, Yuan J, Ron S, MacKenzie K, Eden A, Rotter V (2007) Inactivation of myocardin and p16 during malignant transformation contributes to a differentiation defect. ***Cancer Cell***. 11: 133-146.

48. **Buganim Y**, Kalo E, Brosh R, Besserglick H, Nachmany I, Rais Y, Stambolsky P, Tang X, Milyavsky M, Shats I, Kalis M, Goldfinger N, Rotter V (2006) Mutant p53 protects cells from 12-O-tetradecanoylphorbol-13-acetate-induced death by attenuating activating transcription factor 3 induction. ***Cancer Res***. 66: 10750-10759.

49. Milyavsky M, Tabach Y, Shats I, Erez N, Cohen Y, Tang X, Kalis M, Kogan I, **Buganim Y**, Goldfinger N, Ginsberg D, Harris CC, Domany E, Rotter V (2005) Transcriptional programs following genetic alterations in p53, INK4A, and H-Ras genes along defined stages of malignant transformation. ***Cancer Res***. 65: 4530-4543.