

CURRICULUM VITAE

Yehiel Zick

1. Contact Information

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2. Education

1970-1973: B.Sc. Chemistry/Biochemistry (*Cum Laude*), The Hebrew University of
Jerusalem.
1974-1975: M.Sc. Studies, The Feinberg Graduate School of The Weizmann Institute of
Science, Direct-track to Ph.D. studies.
1975-1980: Ph.D. studies (under the guidance of Prof. Shmuel Shaltiel) Dept. of Chemical
Immunology, The Weizmann Institute of Science, Rehovot, Israel.

3. Positions held

2014-Present Head, Dept. of Molecular Cell Biology, The Weizmann Institute of Science,
Rehovot, Israel.
2004-Present Professor, Dept. of Molecular Cell Biology, The Weizmann Institute of Science,
Rehovot, Israel.
2011 Visiting Professor, Division of Endocrinology, Metabolism, and Bone Diseases,
Department of Medicine, Mount Sinai School of Medicine, NY, NY
2004 Visiting Professor, Dep. of Clinical Biochemistry, University of Cambridge, UK
1989 –2004 Associate Professor, Dept. of Molecular Cell Biology, The Weizmann Institute
of Science, Rehovot, Israel.
1991-1992: Visiting Scientist, Diabetes Branch (Chief: Dr. Simeon I. Taylor), NIDDK,
National Institutes of Health, Bethesda, Maryland, USA.
1984-1989: Senior Scientist, Dept. of Chemical Immunology, The Weizmann Institute of
Science, Rehovot, Israel.
1983-1984: Scientist, Dept. of Chemical Immunology, The Weizmann Institute of Science,
Rehovot, Israel.
1982-1983: Visiting Associate, Diabetes Branch (Chief: Dr. Jesse Roth), NIDDK, National
Institutes of Health, Bethesda, Maryland.
1980-1982 Visiting Fellow, Diabetes Branch (Chief: Dr. Jesse Roth), NIDDK, National
Institutes of Health, Bethesda, Maryland.

4. Honors and Awards

1973 B.Sc. Cum Laude
1976 "Mifal Ha'pais" Prize, for distinction during M.Sc. studies
1978 The "Gad Resheff" Memorial Prize, for distinction in Ph.D. studies
1979 The John F. Kennedy Memorial Scholarship, for distinction during Ph.D. studies
1980 "Fulbright-Hays" Fellowship for Post-doctoral studies.
1980 The "Haim Weizmann" Post-doctoral Fellowship
1984 The "Allon" Fellowship - a Career Development Award for Excellent Young Scientists
1984 The "Bat Sheva de Rothschild" Fellowship award for young distinguished
investigators.
1986 Incumbent of the Philip Harris and Gerald Ronson Career Development Chair in
Diabetes Research

1988	Israel Cancer Research Career Development Award
2000	The CaP CURE Research Award
2000	The Siegler Diabetes Research Foundation Award
2000	Incumbent of the Marte R. Gomez Professorial Chair

5. Major Research Interests:

Insulin action; Insulin signal transduction; Mammalian lectins; Tumor Biology; Cell growth and Cell adhesion.

6. Extracurricular activities

1967-1970: Israeli Defense Army, Paratrooper Special Unit (wounded and discharged).

7. List of Publications

- 1) **Zick, Y.**, Goldblatt, D. and Bustin, M.: "Exposure of histone F1 subfraction in chromatin". *Biochem. Biophys. Res. Commun.* **65**, 637-643, 1975.
- 2) **Zick, Y.**, Cesla, R. and Shaltiel, S.: "Non-hormonal burst in the level of cAMP caused by a "temperature shock" to mouse thymocytes". *FEBS Letters* **90**, 239-242, 1978.
- 3) **Zick, Y.**, Cesla, R. and Shaltiel, S.: "cAMP-dependent protein kinase from mouse thymocytes: Localization, characterization and evaluation of the physiological relevance of a massive cytosol-to-nucleus translocation". *J. Biol. Chem.* **254**, 879-887, 1979.
- 4) **Zick, Y.**, Cesla, R. and Shaltiel, S.: "Inhibiting the onset of hormone induced- desensitization of viable mouse thymocytes by N-tosyl-L-lysine chloromethyl ketone". *Proc. Natl. Acad. Sci. USA.* **77**, 5967-5971, 1980.
- 5) Shaltiel, S., Jimenez, J. S., Kupfer, A., Alhanaty, E., Tauber-Finkelstein, M., **Zick, Y.** and Cesla, R.: "cAMP-dependent protein kinase. Active site structure, restricted degradation, and use in assessing the regulation of the hormonal response". In: "Metabolic Interconversion of Enzymes". H. Holzer, (ed.) Springer Verlag, pp. 10-27, 1981.
- 6) Shaltiel, S., Alhanaty, E., Cesla, R., Jimenez, J. S., Kupfer, A. and **Zick, Y.**: "cAMP-dependent protein kinase: Biorecognition and Bioregulation". In: "Cell Proliferation", Vol. 8: Protein Phosphorylation. Krebs, E.G., and Rosen, O. (eds.) Cold Spring Harbor Publishing Co., pp. 83-101, 1981.
- 7) **Zick, Y.**, Cesla, R. and Shaltiel, S.: "Exposure of viable thymocytes to a low temperature inhibits the onset of their hormone-induced cellular refractoriness". *J. Biol. Chem.* **257**, 4253-4259, 1982.
- 8) Kasuga, M., **Zick, Y.**, Blithe, D. L., Karlsson, F. A., Haring, H. U. and Kahn, C. R.: "Insulin stimulation of phosphorylation of the b-subunit of the insulin receptor: Formation of both phosphoserine and phosphotyrosine". *J. Biol. Chem.* **257**, 9891-9894, 1982.
- 9) Kasuga, M., **Zick, Y.**, Blithe, D., Crettaz, M. and Kahn, C. R.: "Insulin stimulated tyrosine phosphorylation of the insulin receptor in a cell-free system". *Nature* **298**, 667-669, 1982.
- 10) **Zick, Y.**, Cesla, R. and Shaltiel, S.: "Viable mouse thymocytes as a model system for studying the onset of hormone-induced cellular refractoriness". *Biochem. Biophys. Acta* **762**, 355-365, 1983.
- 11) **Zick, Y.**, Kasuga, M., Kahn, C. R. and Roth, J.: "Characterization of insulin-mediated phosphorylation of the insulin receptor in a cell-free system. *J. Biol. Chem.* **258**, 75-80, 1983.
- 12) **Zick, Y.**, Whittaker, J. and Roth, J.: "Insulin stimulated phosphorylation of its own receptor: Activation of a tyrosine-specific protein kinase that is tightly associated with the receptor". *J. Biol. Chem.* **258**, 3431-3434, 1983.

- 13) Grunberger, G., **Zick, Y.**, Roth, J., and Gorden, P.: "Protein kinase activity of the insulin receptor in human circulating and cultured mononuclear cells. *Biochem. Biophys. Res. Commun.* **115**, 560-566, 1983.
- 14) Rees-Jones, R., W., Hedo, J., A., **Zick, Y.**, and Roth, J.: "Insulin stimulated phosphorylation of the insulin receptor precursor. *Biochem. Biophys. Res. Commun.* **116**, 417-422, 1983.
- 15) **Zick, Y.**, Grunberger, G., Podskalny, J., M., Moncada, V., Taylor, S., I., Gorden, P., and Roth, J.: "Insulin stimulates phosphorylation of serine residues in soluble insulin receptors. *Biochem. Biophys. Res. Commun.* **116**, 1129-1135, 1983.
- 16) **Zick, Y.**, Rees-Jones, R., W., Grunberger, G., Taylor, S. I., Moncada, V., Gorden, P., and Roth, J.: "The insulin-stimulated receptor kinase as a tyrosine-specific casein kinase. *Eur. J. Biochem.* **137**, 631-637, 1983.
- 17) **Zick, Y.**, Rees-Jones, R., and Roth, J.: "Insulin receptor phosphorylation". In: Proceedings of the 11th Congress of the International Diabetes Federation (Kenya), Patel, S. (ed.), Excerpta Medica, pp. 161-170, 1983.
- 18) Grunberger, G., **Zick, Y.**, and Gorden, P.: "Defect in phosphorylation of the insulin receptor in cells of a patient with insulin-resistance but normal insulin binding". *Science* **223**, 932-934, 1984.
- 19) **Zick, Y.**, Rees-Jones, R., W., Taylor, S., I., Gorden, P., and Roth, J.: "The role of receptor antibodies in stimulating phosphorylation of the insulin receptor". *J. Biol. Chem.* **259**, 4396-4400, 1984.
- 20) **Zick, Y.**, Sasaki, N., Rees-Jones, R. W., Grunberger, G., Nissley, S., P., and Rechler, M., W.: "Insulin-like growth factor-I (IGF-I) stimulates tyrosine kinase activity in purified receptors from a rat liver cell line. *Biochem. Biophys. Res. Commun.* **119**, 6-13, 1984.
- 21) Grunberger, G., **Zick, Y.**, Taylor, S., I., and Gorden, P.: "Tumor promoting phorbol ester (TPA) stimulates tyrosine phosphorylation in U-937 monocytes. *Proc. Natl. Acad. Sci. USA* **81**, 2762-2766, 1984.
- 22) Whittaker, J., **Zick, Y.**, Roth, J., and Taylor, S. I., "Insulin-stimulated receptor phosphorylation appears normal in cultured Epstein-Barr virus-transformed lymphocyte cell line derived from patients with extreme insulin resistance". *J. Clin. End. Metab.* **60**, 381-386, 1985.
- 23) Sasaki, N., Rees-Jones, R., W., **Zick, Y.**, Nissley, S., P., and Rechler, M., M. "Characterization of insulin-like growth factor I (IGF-I) stimulated tyrosine kinase activity associated with the b-subunit of type I IGF receptors of rat liver cells". *J. Biol. Chem.* **260**, 9793-9804, 1985.
- 24) **Zick, Y.**, Grunberger, G., Rees-Jones, R., W., and Comi, R., J.: "Use of tyrosine-containing polymers to characterize the substrate specificity of insulin and other hormone-stimulated tyrosine kinases" *Eur. J. Biochem.* **148**, 177-182, 1985.
- 25) Heffetz, D. and **Zick, Y.**: "Receptor aggregation is necessary for activation of the insulin receptor kinase". *J. Biol. Chem.* **261**, 889-894, 1986.
- 26) **Zick, Y.**, Sagi-Eisenberg, R., Pines, M., Gierschik, P. and Spiegel, M.: "Multi-site phosphorylation of the alpha subunit of transducin by the insulin receptor kinase and protein kinase C". *Proc. Natl. Acad. Sci. USA* **83**, 9294-9297, 1986.
- 27) **Zick, Y.**: "Regulation of the insulin receptor kinase activity". In: "Mechanisms of insulin action" (Belfrage, P., Donner, J. and Stradfors, P., eds.) Elsevier, Amsterdam, pp. 43-57, 1986.
- 28) **Zick, Y.**, Spiegel, A., M., and Sagi-Eisenberg, R.: "IGF-1 receptors in retinal rod outer segments". *J. Biol. Chem.* **262**, 10259-10264, 1987.

- 29) Shemer, J., Adamo, M., Wilson, G. L., Heffetz, D., **Zick, Y.** and LeRoith, D.: "Insulin and insulin-like growth factor I stimulate phosphorylation of a common pp180 protein in neuroblastoma cells". *J. Biol. Chem.* **262**, 15476-15482, 1987.
- 30) **Zick, Y.**: "Natural and synthetic substrates for the insulin receptor kinase". In "The insulin receptors" (Kahn, C. R. and Harrison, L.C. eds.) part of series on "Receptor Biochemistry and Methodology" (Venter, C. J., and Harrison, L., C., eds.) Alan, R., Liss, New York, pp. 147-161, 1988.
- 31) LeRoith, D., Shemer, J., Adamo, M., Raizada, M., K., Heffetz, D., and **Zick, Y.**: "Insulin and IGF-1 stimulate phosphorylation of their respective receptors in intact neuronal and glial cells in primary culture". *J. Mol. Neurosci.* **1**, 3-8, 1989.
- 32) Seger, R., **Zick, Y.**, and Shaltiel, S.: "Studying the structure of the intracellular moiety of the insulin receptor with a kinase-splitting membranal proteinase". *EMBO J.* **8**, 435-440, 1989.
- 33) Heffetz, D., Fridkin, M., and **Zick, Y.**: "Antibodies directed against phosphothreonine residues as potent tools for studying protein phosphorylation". *Eur. J. Biochem* **182**, 343-348, 1989.
- 34) Heffetz, D., and **Zick, Y.**: "H₂O₂ potentiates phosphorylation of novel putative substrates for the insulin receptor kinase in intact Fao cells". *J. Biol. Chem.* **264**, 10126-10132, 1989.
- 35) **Zick, Y.**: "The insulin receptor structure and function". In: CRC Critical Reviews in Biochemistry. 24, 217-269, 1989.
- 36) Sagi-Eisenberg, R., Traub, L., M., Spiegel, A., M., and **Zick, Y.** "Protein kinase C- mediated phosphorylation of retinal rod outer segment membrane proteins". *Cellular Signaling* **1**, 519-531, 1989.
- 37) Heffetz, D., Bushkin, I., Dror, R., and **Zick, Y.** "The insulinomimetic agents H₂O₂ and Vanadate stimulate protein tyrosine phosphorylation in intact cells". *J. Biol. Chem.* **265**, 2896-2902, 1990.
- 38) Bushkin, I., and **Zick, Y.** "Alterations in insulin receptor kinase activity during differentiation of HL-60 cells". *Biochem. Biophys. Res. Commun.* **172**, 676-682, 1990.
- 39) **Zick, Y.**, and Sagi-Eisenberg, R. "A combination of H₂O₂ and Vanadate concomitantly stimulates protein-tyrosine phosphorylation and polyphosphoinositide breakdown in different cell lines". *Biochemistry* **29**, 10240-10245, 1990.
- 40) Biener, Y., and **Zick, Y.** "Basic polycations activate the insulin receptor kinase and a tightly associated serine kinase". *Eur. J. Biochem.* **194**, 243-250, 1990.
- 41) Nadiv, O., Cohen, O., and **Zick, Y.** "Impaired in vivo activation of the insulin receptor kinase and reduced phosphorylation of its putative substrate (pp180) in livers of old rats". In: Frontiers in Diabetes Research. II. Lessons from animal diabetes vol. III (E. Shafrir, ed.). Smith-Gordon Press, UK., pp. 253-259 1990.
- 42) Volberg, T., Geiger, B., Dror, R., and **Zick, Y.** "Modulation of intercellular adherens-type junctions and tyrosine phosphorylation of their components in RSV-transformed cultured chick lens". *Cell Regulation.* **2**, 105-120, 1991.
- 43) Bushkin, I., Roth, J., Heffetz, D., and **Zick, Y.** "pp75, a novel tyrosine phosphorylated protein that heralds HL-60 cell differentiation". *J. Biol. Chem.* **266**, 11890-11895, 1991.
- 44) Biener, Y., and **Zick, Y.** "Polylysine increases the number of insulin binding sites in soluble insulin receptor preparations". *J. Biol. Chem.* **266**, 17369-17375, 1991.
- 45) Heffetz, D., Fridkin, M., and **Zick, Y.** "Generation and use of antibodies to phosphothreonine". *Methods Enzymol.* **201**, 44-53, 1991.
- 46) Bushkin, I., Roth, J., Heffetz, D., and **Zick, Y.**, "pp75: a novel tyrosine phosphorylated protein that heralds HL-60 cell differentiation" In: Cellular Regulation by Protein

Phosphorylation. NATO ASI-Series, vol. 56 (L.M.G. Heilmeyer, Jr. ed.) Springer-Verlag, Berlin, pp. 289-294, 1991.

- 47) Nadiv, O., Cohen, O., and **Zick, Y.** "Defects in insulin's signal transduction in old rat livers" *Endocrinology*, **130**, 1515-1524, 1992.
- 48) Volberg, T., **Zick, Y.**, Dror, R., Sabanay, I., Gilon, C., Levitzki, A., and Geiger, B. " The effect of tyrosine-specific protein phosphorylation on the assembly of adherens-type junctions". *EMBO J.* **11**, 1733-1742, 1992
- 49) Hadari, Y. R., Tzahar, E., Nadiv, O., Rothenberg, P., Roberts, T. C., LeRoith, D., Yarden, Y., and **Zick, Y.** "Insulin and insulinomimetic agents induce activation of phosphatidylinositol 3'-kinase upon its association with pp185 (IRS-1) in intact rat livers" *J. Biol. Chem.* **267**, 17483-17486, 1992
- 50) Hecht, D., and **Zick, Y.** "Selective inhibition of protein tyrosine phosphatase activities by H₂O₂ and vanadate in vitro" *Biochem. Biophys. Res. Commun.* **188**, 773-779, 1992.
- 51) Heffetz, D., Rutter W. J., and **Zick, Y.** "The Insulinomimetic Agents H₂O₂ and vanadate stimulate tyrosine phosphorylation of potential target proteins for the insulin receptor kinase in intact cells" *Biochem J.* **288**, 631-635, 1992.
- 52) Hadari, Y R., Geiger, B., Nadiv, O., Sabanay I., Roberts Jr, C. T., LeRoith, D., and **Zick, Y.** "Hepatic tyrosine phosphorylated proteins identified and localized following *in vivo* inhibition of protein tyrosine phosphatases. Effects of H₂O₂ and vanadate administration into rat livers. *Mol. Cell. Endocrinology* **97**, 9-17, 1993
- 53) Hecht, D., and **Zick, Y.** "Involvement of Protein Tyrosine Phosphatases Activity in the Regulation of Insulin's Signal Transduction" in Handbook in Hormonal Assay Techniques (de Pablo F, and Scanes C. G. eds.) Academic Press, 1993, pp. 321-337
- 54) Nadiv, O., Shinitzky, M., Manu· H., Hecht, D., Roberts Jr, C. T., LeRoith, D., and **Zick, Y.** "Elevated Protein Tyrosine Phosphatase Activity and Increased Membrane Viscosity are Associated with Impaired Activation of the Insulin Receptor Kinase in Old Rats." *Biochem. J.*, **298**, 443-450, 1994
- 55) Roach, P. **Zick, Y.**, Formisano, P., Accili, D., Taylor, S., and Gorden, P. " A novel human insulin receptor gene mutation uniquely inhibits insulin binding without impairing post-translational processing" *Diabetes* **43**, 1096-1102, 1994
- 56) Hadari, Y. R., Paz, K., Dekel, R., Mestrovic, T., Accili, D., and **Zick, Y.** "Galectin-8: a new rat lectin, related to galectin-4". *J. Biol. Chem.* **270**, 3447-3453, 1995
- 57) Rosenblum, K., Schul, R., Meiri, N., Hadari, R. Y., **Zick, Y.**, and Dudai, Y. " Modulation of Protein Tyrosine Phosphorylation in Rat Insular Cortex following conditioned Taste Aversion Training" *Proc. Natl. Acad. Sci* **92**, 1157-1161, 1995.
- 58) Voliovitch, H., Schindler, D. G., Hadari, Y. R., Taylor, S. I., Accili, D., and **Zick, Y.** "Tyrosine Phosphorylation of insulin receptor substrate-1 *in vivo* depends upon the presence of its pleckstrin-homology region" *J. Biol. Chem.* **270**, 18083-18087, 1995.
- 59) Seger, R., Biener, Y., Feinstein, R., Hanoch, T., Gazit, A., and **Zick, Y.** "Differential activation of MAP kinase and S6 kinase signaling pathways by TPA- and insulin. Evidence for involvement of a TPA-stimulated protein tyrosine kinase." *J. Biol. Chem.* **270**, 28325-28330, 1995.
- 60) Paz, K., Voliovitch, H., Hadari, Y. R., Roberts, C. T., LeRoith, D., and **Zick, Y.** "Interaction between the insulin receptor and its downstream effectors: Use of individually-expressed receptor domains for Structure /Function Analysis". *J. Biol. Chem.*, **271**, 6998-7003, 1996 .
- 61) Biener, Y., Feinstein· R., Mayak, M., Kaburagi, Y. Kadowaki, T., and **Zick, Y.** "Annexin II - a novel player in insulin signal transduction. Role of annexin-II phosphorylation in insulin receptor internalization" *J. Biol. Chem.*, **271**, 29489-29496, 1996

- 62) Hadari, Y. R., Eisenstain, M., Zakut, R., and **Zick, Y.** "Galectin-8: On the road from structure to Function" *Trends In Glycoscience and Glycobiology* 9, 103-112, 1997
- 63) Hadari, Y. R., Haring, H. U., and **Zick, Y.** "p75, a member of the heat shock protein family, undergoes tyrosine phosphorylation in response to oxidative stress" *J. Biol. Chem.*, 272, 657-662, 1997
- 64) Cohen, J., Altaratz, H., **Zick, Y.**, Klingmuller, U., and Neumann, D. "Phosphorylation of erythropoietin receptors in the endoplasmic reticulum by pervanadate mediated inhibition of tyrosine phosphatases" *Biochem. J.* 327, 391-397, 1997
- 65) Paz, K., Hemi, R., LeRoith, D., Karasik, A., Elhanany, E., Kanety, H., and **Zick, Y.** "A Molecular Basis for Insulin Resistance: Elevated Ser/Thr Phosphorylation of IRS-1 and IRS-2 inhibits their binding to the Juxtamembrane Region of the Insulin Receptor and Impairs Their Ability to Undergo Insulin-Induced Tyr phosphorylation". *J. Biol. Chem.* 272, 29911-29918, 1997
- 66) Shu-lian, L., Termini, J., Hayward, A., Siddle, K., **Zick, Y.**, Koval, A., LeRoith, R. and Fujita-Yamaguchi, Y. "The carboxyl-terminal domain of insulin-like growth factor-I receptor interacts with the insulin receptor and activates its protein tyrosine kinase" *FEBS Lett.*, 421, 45-49, 1998
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- 70) Paz, K., Boura-Halfon, S., Wyatt, L. S., LeRoith, D., and **Zick, Y.** "The Juxtamembrane, but not the Carboxy-Terminal Domain of the Insulin Receptor Mediates Insulin's Metabolic Functions in Primary Adipocytes and Cultured Hepatoma Cells" *J. Mol. Endocrinol.* 24, 419-432, 2000
- 71) Hadari, Y. R., Goren, R., Levy, Y., Amsterdam, A., Alon, R., Zakut, R., and **Zick, Y.** "Galectin-8 Binding to Integrins Inhibits Cell Adhesion and Induces Apoptosis" *J. Cell Sci.* 113, 2385-2397, 2000.
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- 75) LeRoith D, and **Zick Y.** "Recent advances in our understanding of insulin action and insulin resistance". *Diabetes Care.* 24 :588-597, 2001
- 76) Sheikholeslam-Zadeh R, Decaestecker C, Delbrouck C, Danguy A, Salmon I, **Zick Y**, Kaltner H, Hassid S, Gabius HJ, Kiss R, and Choufani G. "The levels of expression of galectin-3, but

- not of galectin-1 and galectin-8, correlate with apoptosis in human cholesteatomas". *Laryngoscope* 111, 1042-1047, 2001
- 77) Choufani, G, Ghanooni R, Decaestecker C, Delbrouck K, Simon P, Schuring MP, **Zick Y**, Hassid S, Gabius HJ, and Kiss, R. "Detection of macrophage migration inhibitory factor (MIF) in human cholesteatomas and functional implications of correlations to recurrence status and to expression of matrix metalloproteinases-3/9, retinoic acid receptor-beta, and anti-apoptotic galectin-3. *Laryngoscope*. 111, 1656-1662, 2001.
 - 78) Simon, P., Decaestecker C., Choufani G., Delbrouck, C., Danguy A., Salmon I., **Zick Y.** , Kaltner H., Hassid S., Gabius H.-J., Kiss R., and Darro F. "The Levels of Retinoid RXR β Receptors Correlate with Galectin-1, -3 and -8 Expression in Human Cholesteatomas". *Hearing Res.*, 156, 1-9, 2001
 - 79) Liu, Y. F., Paz, K., Hershkowitz, A., Alt, A., Tenenboim, T., Sampson, S., Ohba, M., Kuroki, T., LeRoith, D., and **Zick, Y.** "Insulin Stimulates PKCz-Mediated Phosphorylation of Insulin Receptor Substrate-1 (IRS-1): A Self-Attenuated Mechanism Negatively Regulates IRS-1 Function" *J. Biol. Chem.*, 276, 14459-14465, 2001
 - 80) Levy, Y., Arbel-Goren, R., Hadari, Y. R., Eshhar, S., Ronen, D., Elhanany, E., Geiger, B., and **Zick, Y.**, "Galectin-8 Functions as a Matricellular Modulator of Cell Adhesion" *J. Biol. Chem.*, 276, 31285-31295, 2001
 - 81) Paz, K., and **Zick, Y.** "Defects in insulin Signal Transduction and Insulin-Resistance" in: *Frontiers in Animal Diabetes Research volume III: Insulin Signaling: From Cultured Cells to Animal Models* (Grunberger, G. & Zick, Y. eds.) Taylor & Francis, Publishers, London and New York, pp.259-280, 2001
 - 82) **Zick, Y.** "Insulin Resistance: a Phosphorylation-based uncoupling of Insulin Signal Transduction" *Trends. Cell Biol.* ,11, 437-441, 2001
 - 83) Nagy, N., Bronckart, Y., Camby, I. Legendre, H., Lahm, H., Kaltner, H., Hadari, Y.R., Van Ham, P., Yeaton, P., Pector, J.-C., **Zick, Y.**, Salmon, I., Danguy, A., Kiss, R., and Gabius, H.-J. "Galectin-8 Expression Decreases in Cancer as Compared to Normal and Dysplastic Human Colon Tissue and Acts Significantly on Human Colon Cancer Cell Migration as a Suppressor". *Gut*, 5, 392-401, 2002
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 - 85) Wollina U, Graefe T, Feldrappe S, Andre S, Wasano K, Kaltner H, **Zick Y**, and Gabius HJ. "Galectin fingerprinting by immuno- and lectin histochemistry in cutaneous lymphoma". *J Cancer Res Clin Oncol*. 128, 103-110, 2002
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 - 88) Levy, Y., Ronen, D., Bershadsky, A.D., and **Zick, Y.** "Sustained Induction of ERK, PKB and p70S6K Regulate Cell Spreading and Formation of F-actin Microspikes Upon Ligation of Integrins by Galectin-8, a Mammalian Lectin. *J. Biol. Chem* , 278, 14533-14542, 2003
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- Colon Carcinoma Using Immunohistochemical Galectin Fingerprinting” *Cancer* , 97, 1849-1858, 2003
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Patents

1. US Patent No 5,908,761 “Galectin-8 and galectin-8 –like proteins and DNA molecules Coding therefore” Inventor: Yehiel Zick
2. International Patent Application No: PCT/IL03/00153 “Binding Agents for CD44 Glycoproteins and Methods of Use”. Inventors: Yehiel Zick; David Naor, Itshak Golan and Lora Melnik. Published on 4/9/03 with IPN: WO 03/0726606 A2.
3. Composition and methods of using galectin-8 as an inhibitor of tumor cell growth. Us patent No; US 7,176,181, B2. Date of Patent Feb 13, 2007. Inventors : Y. Zick; R. Arbel-Goren; D. Ronen; Y. R. Hadari
4. U.S. Patent International Application No. WO 2006/046250 A2 in the name of Yeda Research and Development Co. Ltd. Title: “Compositions and Methods for Diagnosing and Treating Insulin Resistance”. Inventors: Yehiel Zick, Yanfang Liu, Denise Ronen, 2006