

## BIOGRAPHICAL SKETCH

<b>NAME</b> Yuval Dor	<b>POSITION TITLE</b> Professor		
<b>EDUCATION/TRAINING</b>			
<b>INSTITUTION AND LOCATION</b>	<b>DEGREE</b>	<b>YEAR(s)</b>	<b>FIELD OF STUDY</b>
The Hebrew University, Jerusalem, Israel	B.Sc.	1992-1994	Biology
The Hebrew University, Jerusalem, Israel	M.Sc.	1994-1995	Biochemistry, genetics
The Hebrew University, Jerusalem, Israel	Ph.D.	1996-2001	Vascular biology
Harvard University, Cambridge MA	Postdoc	2001-2004	Pancreas dynamics

**A. Positions and Honors.** List in chronological order previous positions, concluding with your present position. List any honors. Include present membership on any public or private advisory committee.

**Positions and Employment**

2004-2010 Senior Lecturer, The Hebrew University of Jerusalem  
 2010-2013 Associate Professor, The Hebrew University of Jerusalem  
 2013-present Professor, The Hebrew University of Jerusalem

**Recent honors**

2008 Krill (Wolf) Prize for junior faculty, Wolf foundation.  
 2008 Wolfson prize, Israel Diabetes Association.  
 2010 Grodsky award for outstanding contributions to diabetes research, JDRF  
 2011 Faculty of medicine best teacher award  
 2012 Bruno award, Yad Hanadiv  
 2013 Abisch-Frenkel award  
 2014 Teva founders research award

**B. Selected peer-reviewed publications (in chronological order).** List the title and complete reference to all publications during the past three years and to representative earlier publications pertinent to this application. Do not include publications submitted or in preparation. **(Do not exceed this page plus one continuation page.)**

1. **Dor Y**, Camenisch T, Itin A, Fishman G, McDonald J, Carmeliet P, Keshet E (2001) A novel role for VEGF in endocardial cushion formation and its potential contribution to heart septation defects. *Development* 128:1531-1538.
2. **Dor Y**, Djonov V, Abramovitch R, Itin A, Fishman GI, Carmeliet P, Goelman G, Keshet E (2002). Conditional switching of VEGF provides new insights into adult neovascularization and pro-angiogenic therapy. *EMBO J* 21:1939-47
3. **Dor Y**, Brown J, Martinez O, Melton D (2004). Adult pancreatic b cells are formed by self-duplication rather than stem cell differentiation. *Nature* 429:41-46.
4. Stanger BZ, Stiles B, Lauwers GY, Bardeesy N, Mendoza M, Wang Y, Greenwood A, McLaughlin M, Brown D, DePinho RA, Wu H, Melton DA, **Dor Y** (2005). Pten constrains centroacinar cell expansion and malignant transformation in the pancreas. *Cancer Cell*, 8(3):185-95.
5. Murtaugh LC, Law AC, **Dor Y**, Melton DA (2005). Beta-Catenin is essential for pancreatic acinar but not islet cell development. *Development* 132(21):4663-74.
6. Weinberg N, Ouziel-Yahalom L, Knoller S, Efrat S, **Dor Y**. (2007). Lineage tracing evidence for in-vitro dedifferentiation, but rare proliferation, of mouse pancreatic beta cells. *Diabetes*. 56(5):1299-304
7. Nir T, Melton DA, **Dor Y** (2007). Recovery from diabetes by beta cell regeneration. *JCI* 117:2553-61.
8. Granot Z, Swisa A, Magenheim J, Stolovich-Rain M, Fujimoto W, Manduchi E, Miki T, Lennerz JK, Stoeckert CJ, Meyuhos O, Seino S, Permutt MA, Piwnicka-Worms H, Bardeesy N, **Dor Y** (2009). LKB1 regulates pancreatic beta cell size, polarity and function. *Cell Metabolism* 10:296-308.
9. Gur C, Porgador A, Elboim M, Gazit R, Mizrahi S, Stern-Ginossar N, Achdout H, Ghadially H, **Dor Y**, Nir T, Doviner V, Hershkovitz O, Mendelson M, Naparstek Y, Mandelboim O (2010). The activating receptor NKp46 is essential for the development of type 1 diabetes. *Nat Immunol*. 11(2):121-8
10. Salpeter S, Klein A, Huangfu D, Grimsby J, **Dor Y** (2010). Glucose and Aging control the quiescence period that follows pancreatic beta cell replication. *Development* 137:3205-3213.

11. Melkman-Zehavi T., Oren R., Kredo-Russo S., Shapira T., Mandelbaum AD., Rivkin N., Nir T., Lennox KA., Behlke MA, **Dor Y.**, Hornstein E. (2011). miRNA control insulin content in pancreatic beta cells via downregulation of transcriptional repressors. *Embo J.*, 30(5):835-45.
12. Porat S, Weinberg-Corem N, Tornovsky-Babaey S, Schyr-Ben-Haroush R, Hija A, Stolovich-Rain M, Dadon D, Granot Z, Ben-Hur V, White P, Girard CA, Karni R, Kaestner KH, Ashcroft FM, Magnuson MA, Saada A, Grimsby J, Glaser B, **Dor Y** (2011). Control of Pancreatic Beta Cell Regeneration by Glucose Metabolism. *Cell Metabolism* 13: 440–449.
13. Salpeter SJ, Klochender A, Weinberg-Corem, Porat S, Granot Z, Shapiro AM, Magnuson MA, Eden A, Grimsby J, Glaser B, **Dor Y** (2011). Glucose regulate Cyclin D2 expression in quiescent and replicating pancreatic beta cells through glycolysis and calcium channels. *Endocrinology*, 152(7):2589-98.
14. Magenheim J, Klein AM, Stanger BZ, Ashery-Padan A, Sosa-Pineda B, Gu G, **Dor Y** (2011). Ngn3<sup>+</sup> endocrine progenitor cells control the fate and morphogenesis of pancreatic ductal epithelium. *Developmental Biology*, 359(1):26-36.
15. Magenheim J, Ilovich O, Lazarus O, Klochender A, Ziv O, Werman R, Hija A, Cleaver O, Mishani E, Keshet E, **Dor Y** (2011). Blood vessels restrain pancreas branching, differentiation and growth. *Development*, 138:4743-52.
16. Cleaver O, **Dor Y** (2012). Vascular instruction of pancreas development. *Development*, 139(16):2833-43.
17. Stolovich-Rain M, Hija A, Grimsby J, Glaser B, **Dor Y** (2012). Pancreatic beta cells in very old mice retain capacity for compensatory proliferation. *J Biol Chem.* 287(33):27407-14.
18. Klochender A, Weinberg-Corem N, Moran M, Swisa A, Pochet N, Savova V, Vikeså J, Van de Peer Y, Brandeis M, Regev A, Nielsen FC, **Dor Y**, Eden A (2012). A transgenic mouse marking live replicating cells reveals in vivo transcriptional program of proliferation. *Developmental Cell*, 23(4):681-90.
19. Boj SF, van Es JH, Huch M, Li VS, Jose A, Hatzis P, Mokry M, Haegerbarth A, van den Born M, Chambon P, Voshol P, **Dor Y**, Cuppen E, Fillat C, Clevers H (2012). Diabetes risk gene and Wnt effector Tcf7l2/TCF4 controls hepatic response to perinatal and adult metabolic demand. *Cell* 151(7):1595-607.
20. **Dor Y**, Glaser B (2013). Beta-Cell Dedifferentiation and Type 2 Diabetes. *N Engl J Med*, 368(6):572-3.
21. Khalailieh A, Dreazen A, Kahtib A, Apel R, Swisa A, Kidess-Bassir N, Maitra A, Meyuhas O, **Dor Y**, Zamir G (2013). Phosphorylation of ribosomal protein S6 attenuates DNA damage and tumor suppression during development of pancreatic cancer. *Cancer Res.* 73(6):1811-20 (correspond. author).
22. Salpeter S, Khalailieh A, Weinberg-Corem N, Ziv O, Glaser B, **Dor Y** (2013). Systemic regulation of the age-related decline of pancreatic beta-cell replication. *Diabetes*, 62(8):2843-8.
23. Ziv O, Glaser B, **Dor Y** (2013). The Plastic Pancreas. *Developmental Cell*, 26(1):3-7.
24. Suissa Y, Magenheim J, Stolovich-Rain M, Hija A, Collombat P, Mansouri A, Sussel L, Sosa-Pineda B, McCracken K, Wells JM, Heller S, **Dor Y**, Glaser B (2013). Gastrin: a distinct fate of Neurogenin3 positive progenitor cells in the embryonic pancreas. *PLoS ONE* PMID 23940571 (co-correspon. author).
25. Hija A, Salpeter S, Klochender A, Grimsby J, Brandeis M, Glaser B, **Dor Y** (2014). G0-G1 transition and the restriction point in pancreatic beta-cells in vivo. *Diabetes*, 63(2):578-84.
26. Tornovsky-Babeay S, Dadon D, Ziv O, Tzipilevich E, Kadosh T, Schyr-Ben Haroush R, Hija A, Stolovich-Rain M, Furth-Lavi J, Granot Z, Porat S, Philipson LH, Herold KC, Bhatti TR, Stanley C, Ashcroft FM, In't Veld P, Saada A, Magnuson MA, Glaser B, **Dor Y** (2014). Type 2 diabetes and congenital hyperinsulinism cause DNA double strand breaks and p53 activity in  $\beta$ -cells. *Cell Metabolism*, 19(1):109-21.
27. Stolovich-Rain M, Enk J, Vikesa J, Nielsen FC, Saada A, Glaser B, **Dor Y** (2015). Weaning Triggers a Maturation Step of Pancreatic beta Cells. *Developmental Cell* 32(5):535-45.
28. Swisa A, Granot Z, Tamarina N, Sayers S, Bardeesy N, Philipson L, Hodson DJ, Wikstrom JD, Rutter GA, Leibowitz L, Glaser B, **Dor Y** (2015). Loss of LKB1 in Beta Cells Enhances Glucose-Stimulated Insulin Secretion Despite Profound Mitochondrial Defects. *JBC*, 290(34):20934-46.
29. Helman A, Klochender A, Azazmeh N, Gabai Y, Horwitz H, Anzi S, Swisa A, Condiotti R, Granit RZ, Nevo Y, Fixler Y, Shreibman D, Zamir A, Tornovsky-Babeay S, Dai C, Glaser B, Powers AC, Shapiro AMJ, Magnuson MA, **Dor Y**, Ben-Porath I (2016). p16Ink4a-induced senescence of pancreatic beta cells enhances insulin secretion. *Nature Medicine*, doi:10.1038/nm.4054 (co-corresponding author).
30. Lehmann-Werman R, Neiman D, Zemmour H, Moss J, Magenheim J, Vaknin-Dembinsky A, Rubertsson S, Nellgård B, Blennow K, Zetterberg H, Spalding K, Haller M, Wasserfall C, Schatz D, Greenbaum C, Dorrell C, Grompe M, Zick A, Hubert A, Maoz M, Fendrich V, Bartsch DK, Golan T, Ben-Sasson M, Zamir G,

- Razin A, Cedar C, Shapiro AM J, Glaser B, Shemer R, **Dor Y**. Identification of tissue specific cell death using methylation patterns of circulating DNA (2016). *PNAS*, 113(13):E1826-34.
31. Drazean A, Azar S, Klochendler A, Stolovich-Rain M, Avraham S, Birnbaum L, Binder Gallimidi A, Katz M, **Dor Y**, Meyuhas O (2016). Phosphorylated ribosomal protein S6 is required for Akt-driven hyperplasia and malignant transformation, but not for hypertrophy, aneuploidy and hyperfunction of pancreatic  $\beta$ -cells. *Plos One*, 11(2):e0149995.
  32. Hashimshony T, Senderovich N, Avital G, Klochendler A, de Leeuw Y, Anavy L, Gennert D, Li S, Livak KJ, Rozenblatt-Rosen O, **Dor Y**, Regev A, Yanai I (2016). CEL-Seq2: sensitive highly-multiplexed single-cell RNA-Seq. *Genome Biol.*, in press.
  33. Klochendler A, Caspi I, Corem N, Moran M, Friedlich O, Elgavish E, Nevo Y, Helman A, Glaser B, Eden A, Itzkovitz S, **Dor Y** (2016). The genetic program of pancreatic beta-cell replication in vivo. *Diabetes*, 65(7):2081-93.
  34. Malakar P, Chartarifsky L, Hija A, Leibowitz G, Glaser B, **Dor Y**, Karni R (2016). Insulin receptor alternative splicing is regulated by insulin signaling and modulates beta cell survival. *Sci Rep*. 2016 Aug 16;6:31222. doi: 10.1038/srep31222.
  35. Helman A, Avrahami D, Klochendler A, Glaser B, Kaestner KH, Ben-Porath I and **Dor Y** (2016). Effects of ageing and senescence on pancreatic  $\beta$ -cell function, *Diabetes Obes Metab* 2016, 18 (Suppl. 1), 58–62. DOI:10.1111/ dom.12719
  36. Swisa A, Avrahami A, Eden N, Zhang Z, Feleke E, Cohen-Tayar Y, Stolovich-Rain M, Kaestner KH, Glaser B, Ashery-Padan R, **Dor Y** (2017). Pax6 maintains beta cell identity by repressing genes of alternative islet cell types. *J Clin Invest* 127(1):230-243. doi: 10.1172/JCI88015. (highlighted by editorials at JCI and Nature Reviews).
  37. Azizoglu DB, Chong DC, Villasenor A, Magenheim J, Barry DM, Lee S, Marty-Santos L, Fu S, **Dor Y**, Cleaver O (2016). Vascular development in the vertebrate pancreas, *Developmental Biology*, <http://dx.doi.org/10.1016/j.ydbio.2016.10.009>
  38. Brereton MF, Rohm M, Shimomura K, Holland C, Tornovsky-Babeay S, Dadon D, Iberl M, Chibalina MV, Lee S, Glaser B, **Dor Y**, Rorsman P, Clark A, Ashcroft FM (2016). Hyperglycaemia induces metabolic dysfunction and glycogen accumulation in pancreatic beta-cells. *Nature Communications* 24;7:13496.
  39. He Z, Grunewald M, **Dor Y**, Keshet E (2016). VEGF regulates relative allocation of Is11+ cardiac progenitors to myocardial and endocardial lineages. *Mechanisms of Development*, 142:40-49.
  40. Dahan T, Ziv O, Horwitz E, Zemmour H, Lavi J, Swisa A, Leibowitz G, Ashcroft FM, Veld PI, Glaser B, **Dor Y** (2016). Pancreatic Beta Cells Express the Fetal Islet Hormone Gastrin in Rodent and Human Diabetes. *Diabetes* 66(2):426-436.
  41. Karin O, Swisa A, Glaser B, **Dor Y**, Alon U (2016). Dynamical compensation in physiological circuits. *Mol Syst Biol*. 2016 Nov 8;12(11):886. doi: 10.15252/msb.20167216.
  - 42.