

Short CV

Education/Training

5/2005-5/2008: Post-doctoral fellow (HFSP0, ENTER2004). Biomedical Research Foundation Academy of Athens (BRFAA). Cell Biology. Zebrafish endocardial cushion and valve development. (9/05–7/06 *military service*)

1/2002-4/2005: Postdoctoral fellow in Department of Biochemistry and Biophysics, University of California San Francisco (UCSF). Laboratory of Prof. Didier Y. R. Stainier.

2001 Ph.D. Department of Molecular Cell Biology, Molecular Genetics, University of Utrecht, The Netherlands. Laboratory of Prof. Ben Scheres.

1997 B.Sc /M.Sc. Biology and Biotechnology Department, Agricultural University of Athens, Greece.

1991 Varvakio high school.

Fluent in Greek, English, French and Dutch.

Positions / Employment:

2023- currently: Associate Professor of Biological Chemistry, Ioannina Medical School

2019-2023: Researcher B, Zebrafish Disease Models lab, BRFAA.

2008-2018: Researcher C, Developmental Biology lab, BRFAA.

Recent selected seminars and associations I participate

2023: Invited Speaker, Animod Cuba 2024. International workshop on Animal Models and Preclinical Research 2024. 2024, Cuba.

2023: Invited Speaker, Scientific Committee, 2nd Natural Cosmetics International Meeting. September 2023, Poland

2022: Organizing Committee, 2nd Cardiovascular Olympiad. Heraklio, Crete. April 2022

2021: Organizing Committee, 71st Meeting of the Hellenic Biochemistry and Molecular Biology Society, Athens

2021: Invited speaker and Scientific Committee: Natural Cosmetics International meeting, Poland.

2020-2024: Managing Committee, European Venom Network (EuVenom COST action), currently STSM co-coordinator. <https://euven-network.eu>

2019: 4th Zebrafish Personalised and Precision Medicine meeting. Toronto, Canada.

2019: Invited Speaker, Animod Cuba 2019. International workshop on Animal Models and Preclinical Research 2019

2019: Invited Speaker, Annual meeting of the Heart Valve Society, Barcelona, Spain.

2018-2022: Managing Committee, Catalysing transcriptomics research in cardiovascular disease (<https://cardiorna.eu>), currently STSM coordinator.

2018: Invited Speaker, European Society of Cardiology, Heart Failure 2018, Austria.

2018-2022: Re-elected at the Executive board of the European Zebrafish Society.

2018: European zebrafish PI meeting, Trento, Italy, speaker.

2017: Invited Speaker at Biotechnology Havana, Cuba, representing EuFishBiomed

2017: Zebrafish Disease Models Meetings, San Diego, USA, speaker.

SUPERVISION OF GRADUATE STUDENTS & POSTDOCTORAL FELLOWS

I have been the Scientific Supervisor of 7 completed Ph.D. theses, 9 completed master theses and 2 undergraduate theses. I have been also in the PhD thesis committee of another 8 Ph.D. theses for Greek Universities. I have been also invited as an examiner in 4 completed theses from the Biology Department of the University of Cyprus and the University of Madrid.

Graduate Students (as the Scientific Supervisor)

Name	Degree	Year Conferred	Current Position
Stamatia Kalogirou	PhD	2014	Cardiologist, MD (University of Athens Medical School. With Prof. Stefanadis, Prof. Tousoulis)
Nikos Malissovass	PhD	2015	Clinical Research Associate, Pharmaserve-Lilly (University of Crete Medical School. With Prof. Gravanis, Prof. Vardas)
Despina Bournele	PhD	2016	Scientific Personnel, Benakeio Institute, Athens (University of Athens Medical School. With Prof. Lekakis, Prof. Parisis)
Panagiotis Kefalos	PhD	2020	Medical Science Liaison, Abbvie (University of Patras, Biology. With Prof. Flytzanis, Prof. Mintzas)
Panagiotis Sarantis	PhD	2020	Research Assistant, Medical School Athens (University of Athens, Biology. With Prof. Gaitanaki, Prof. Efthimiopoulos)
Matina Katraki Pavlou	PhD	2021	Post-doctoral fellow, BRFAA, Beis lab (University of Patras, Pharmacology. With Prof. Papadimitriou, Prof. Topouzis)
Panagiota Giardoglou	PhD	2022	Post-doctoral fellow, Charokopeio (Charokopeio University with Prof. Dedoussis, Prof. Yiannakouris)

Postdoctoral Fellows

Name	Years	Current Position
Maria Zoupa	2012-2014	Scientific Personnel, Benakeio Insitute, Athens
Claudia Roedel	2012-2015	Postdoctoral fellow, University of Potsdam
Adamantia Agalou	2015- 2022	Scientific Personnel, Benakeio Insitute,
Vasiliki Tsata	2019-current	
Dimitris Grivas	2021-current	
Matina Katraki-Pavlou	2022-current	
Antonia Theodoridi	2023-current	

My research interests are in the areas of Cellular and Developmental Biology. During my PhD in the lab of Ben Scheres in Utrecht, I identified how the plant hormone, auxin acts to maintain the stem cell population of *Arabidopsis* roots and identified the *PLETHORA* family of transcription factors that act downstream of auxin and are the master regulators of several developmental processes. I moved to UCSF in 2002, as a post-doc in the lab of Didier Stainier and started working with zebrafish, focusing on cardiovascular development and more particularly on cardiac valve development. I was the first to describe this process at cellular resolution, using confocal microscopy. I also participated in a forward genetics screen, where I identified several mutants regulating cardiac valve development.

I moved back to Greece in 2005, as a Human Frontier Career Development awardee and was the first to introduce zebrafish Biomedical research in Greece in 2005. I have installed and maintained the largest zebrafish facility in Greece since then. I am a founding member of the European Zebrafish Society with more than 300 participating labs.

During the last years, I collaborated with several Greek research teams and trained numerous people to use zebrafish as an experimental model system. These projects include screenings for new Bioactive Compounds in Natural Extracts, Ecotoxicological studies of emerging pollutants, as well as generating zebrafish knock outs to study the function of novel genes. The main focus of my lab remains on Cardiovascular Disease and angiogenesis. We have been able to identify the significance of intracardiac flow dynamics during the development of the heart for proper cardiac valve development. We recently expanded our strategy to study the mechanisms of cardiovascular regeneration exploiting the extraordinary regenerative potential of zebrafish. We developed the first inducible system to genetically ablate valve cells and showed that zebrafish could regenerate their cardiac valves. We identified Notch and Tgfb signaling pathways as critical regulators for different stages of this process (Kefalos et al., 2019; Bensimon-Brito et al., 2020).

In parallel, we set up several assays to perform high-throughput chemical screens using zebrafish embryos. This approach is widely used for drug repurposing and identifying novel bioactive compounds. We have routinely screened for angiogenesis inhibition, melanogenesis inhibition, wound healing, cardiac function, and toxicity and used human cancer cells xenotransplantations in zebrafish. We collaborate with several pharmacologists and chemists who are providing us with unique compounds. We have screened plant extracts (with the lab of Prof. Skaltsounis at the Pharmacology department NKUA) (Agalou et al., 2019), macroalgae (with the lab of Prof. Roussis and Ioannou at the Pharmacology department NKUA) and compounds synthesized in the labs of Prof. Tzakos (University of Ioannina) (Diamantis et al., 2021) and Prof. Sarli (University of Thessaloniki) (Leonidis et al., 2021; Leonidis et al., 2023).

Bibliography August 2023:

Scopus author ID: 65079672 . 4748 citations, 54 documents, h-index: 22

<https://www.scopus.com/authid/detail.uri?authorId=6507967207>

GoogleScholar: 6485 citations, h-index:25, i-10-index:37

<http://orcid.org/0000-0003-2579-7848>

<https://pubmed.ncbi.nlm.nih.gov/?term=beis+d&sort=date>

1. Giardoglou P, Deloukas P, Dedoussis G, **Beis D**. (2023) *Cfdp1* Is Essential for Cardiac Development and Function. *Cells*. 3;12(15):1994. doi: 10.3390/cells12151994.
2. Maltabe VA, Melidoni AN, **Beis D**, Kokkinopoulos I, Paschalidis N, Kouklis P. (2023) VE-CADHERIN is expressed transiently in early ISL1⁺ cardiovascular progenitor cells and facilitates cardiac differentiation. *Stem Cell Reports*. 22:S2213-6711(23)00264-3. doi: 10.1016/j.stemcr.2023.07.002.
3. Siatra P, Vatsellas G, Chatzianastasiou A, Balafas E, Manolakou T, Papapetropoulos A, Agapaki A, Mouchtouri ET, Ruchaya PJ, Korovesi AG, Mavroidis M, Thanos D, **Beis D**, Kokkinopoulos I. (2023) Return of the Tbx5; lineage-tracing reveals ventricular cardiomyocyte-like precursors in the injured adult mammalian heart. *NPJ Regen Med*. 8(1):13. doi: 10.1038/s41536-023-00280-9.
4. Katsaros G, Giannoglou M, Chanioti S, Roufou S, Javaheri A, Mallia JO, Gatt J, Agalou A, **Beis D**, Valdramidis V. (2023) Production, characterization, microbial inhibition, and in vivo toxicity of cold atmospheric plasma activated water. *Innovative Food Science and Emerging Technologies*, 84, 103265
5. Leonidis G, Koukiali A, Sigala I, Tsimaratou K, **Beis D**, Giannakouros T, Nikolakaki E, Sarli V. (2023) Synthesis and Anti-Angiogenic Activity of Novel c(RGDyK) Peptide-Based JH-VII-139-1 Conjugates. *Pharmaceutics*. 22;15(2):381. doi: 10.3390/pharmaceutics15020381.
6. Modern venomics – Current insights, novel methods and future perspectives in biological and applied animal venom research. von Reumont BM, Anderlüh G, Antunes A, Ayvazyan N, **Beis D**, Caliskan F, Crnković A, Damm M, Dutertre S, Ellgaard L, Gajski G, German H, Halassy B, Hempel BF, Hucho T, Igci N, Ikonomopoulou MP, Karbat I, Klapa MI, Koludarov I, Kool J, Lüddecke T, Mansour RB, Modica MV, Moran Y, Nalbantsoy A, Pachón Ibáñez ME, Panagiotopoulos A, Reuveny E, Céspedes JS, Sombke A, Surm JM, Undheim EAB, Verdes A, Zancolli G. *Gigascience*. 2022 May 18;11:giac048. doi: 10.1093/gigascience/giac048.
7. Katraki-Pavlou S, Kastana P, Bousis D, Ntenekou D, Varela A, Davos CH, Nikou S, Papadaki E, Tsigkas G, Athanasiadis E, Herradon G, Mikelis CM, **Beis D***, Papadimitriou E. Protein tyrosine phosphatase receptor-ζ1 deletion triggers defective heart morphogenesis in mice and zebrafish. *Am J Physiol Heart Circ Physiol*. 2022 Jan 1;322(1):H8-H24. doi: 10.1152/ajpheart.00400.2021. Epub 2021 Nov 12.
8. **Beis D**. Zebrafish research in Greece: swimming against the current. *Int J Dev Biol*. 2021 Sep 20. doi: 10.1387/ijdb.210129db. Epub ahead of print. PMID: 34549794.
9. Leonidis G, Dalezis P, Trafalis D, **Beis D**, Giardoglou P, Koukiali A, Sigala I, Nikolakaki E, Sarli V. Synthesis and Biological Evaluation of a c(RGDyK) Peptide Conjugate of SRPIN803. *ACS Omega*. 2021 Oct 14;6(42):28379-28393. doi: 10.1021/acsomega.1c04576.
10. Serifi I, Besta S, Karetsou Z, Giardoglou P, **Beis D**, Niewiadomski P, Papamarcaki T.

Targeting of SET/12PP2A oncoprotein inhibits Gli1 transcription revealing a new modulator of Hedgehog signaling. *Sci Rep*. 2021 Jul 6;11(1):13940. doi: 10.1038/s41598-021-93440-0.

11. Giannopoulou AF, Velentzas AD, Anagnostopoulos AK, Agalou A, Papandreou NC, Katarachia SA, Koumoundourou DG, Konstantakou EG, Pantazopoulou VI, Delis A, Michailidi MT, Valakos D, Chatzopoulos D, Syntichaki P, Iconomidou VA, Tsitsilonis OE, Papassideri IS, Voutsinas GE, Hatzopoulos P, Thanos D, **Beis D**, Anastasiadou E, Tsangaris GT, Stravopodis DJ. From Proteomic Mapping to Invasion-Metastasis-Cascade Systemic Biomarkering and Targeted Drugging of Mutant BRAF-Dependent Human Cutaneous Melanogenesis. *Cancers* (Basel). 2021 Apr 22;13(9):2024. doi: 10.3390/cancers13092024.
12. Modica MV, Ahmad R, Ainsworth S, Anderluh G, Antunes A, **Beis D**, Caliskan F, Serra MD, Dutertre S, Moran Y, Nalbantsoy A, Oukkache N, Pekar S, Remm M, von Reumont BM, Sarigiannis Y, Tarallo A, Tytgat J, Undheim EAB, Utkin Y, Verdes A, Violette A, Zancolli G. (2021) The new COST Action European Venom Network (EUVEN)-synergy and future perspectives of modern venomics. *Gigascience* 10(3):giab019. doi: 10.1093/gigascience/giab019.
13. Diamantis D, Agalou A, Chatziathanasiadou MV, Markopoulos GS, Bellou S, Kanaki Z, Crook T, Syed N, Rampias T, Klinakis A, Kolettas E, **Beis D**, Tzakos AG (2021) Biotin-Yellow a biotin guided NIR turn-on fluorescent probe for cancer targeted diagnosis, *Sensors and Actuators B: Chemical* <https://doi.org/10.1016/j.snb.2021.129807>.
14. Giardoglou P, Bournele D, Park M, Kanoni S, Dedoussis GV, Steinberg SF, Deloukas P, **Beis D**. (2021) A zebrafish forward genetic screen identifies an indispensable threonine residue in the kinase domain of PRKD2. *Biol Open*. 10(3):bio058542. doi: 10.1242/bio.058542.
15. Tsata V, Möllmert S, Schweitzer C, Kolb J, Möckel C, Böhm B, Rosso G, Lange C, Lesche M, Hammer J, Kesavan G, **Beis D**, Guck J, Brand M, Wehner D. (2021) A switch in pdgfrb+ cell-derived ECM composition prevents inhibitory scarring and promotes axon regeneration in the zebrafish spinal cord. *Dev Cell*. 56(4):509-524.e9. doi: 10.1016/j.devcel.2020.12.009. Epub 2021 Jan 6.
16. Kakouri E*, Agalou A*, Kanakis C, **Beis D***, Tarantilis PA*. Crocins from *Crocus sativus* L. in the Management of Hyperglycemia. In Vivo Evidence from Zebrafish. *Molecules*. 2020 Nov 10;25(22):5223. doi: 10.3390/molecules25225223.
17. Tsata V, **Beis D**. (2020) In Full Force. Mechanotransduction and Morphogenesis during Homeostasis and Tissue Regeneration. *J Cardiovasc Dev Dis*. ;7(4):E40. doi: 10.3390/jcdd7040040.
18. **Beis D**, Zerr I, Martelli F, Doehner W, Devaux Y. (2020) RNAs in Brain and Heart Diseases. *Int J Mol Sci*. May 25;21(10):3717. doi: 10.3390/ijms21103717.
19. Robinson EL, Gomes CPDC, Potočnjak I, Hellemans J, Betsou F, de Gonzalo-Calvo D, Stoll M, Yilmaz MB, Ágg B, **Beis D**, Carmo-Fonseca M, Enguita FJ, Dogan S, Tuna BG, Schroen B, Ammerlaan W, Kuster GM, Carpusca I, Pedrazzini T, Emanuelli C, Martelli F, Devaux Y. (2020) A Year in the Life of the EU-CardioRNA COST Action: CA17129 Catalysing Transcriptomics Research in Cardiovascular Disease. *Noncoding RNA*. May 18;6(2):17. doi: 10.3390/ncrna6020017.
20. Katsouda, A.; Peleli, M.; Asimakopoulou, A.; Papapetropoulos, A.; **Beis, D**. (2020) Generation and Characterization of a CRISPR/Cas9 -Induced 3-mst Deficient Zebrafish. *Biomolecules* ; 10, 317.
21. Bensimon-Brito A, Ramkumar S, Boezio GLM, Guenther S, Kuenne C, Sánchez-Iranzo H, Iloska D, Piesker J, Pullamsetti S, Mercader N, **Beis D**, Stainier DYR. (2020)

- Cardiac valve regeneration in adult zebrafish: importance of TGF β signaling in new tissue formation *Dev Cell.* ;52(1):9–20.e7. doi:10.1016/j.devcel.2019.10.027
22. Kefalos P, Agalou A, Kawakami K and **Beis D** (2019) Reactivation of Notch signaling is required for cardiac valve regeneration *Sci Rep* **9**, 16059 (2019) doi:10.1038/s41598-019-52558-y
 23. **Beis D** and Agalou A (2019) Aging in zebrafish. *Encyclopedia of Biomedical Gerontology*, edited by Suresh Rattan (Elsevier); 241
 24. Sarantis P, Gaitanaki C, **Beis D**. (2019) Ventricular remodeling of single-chambered myh6^{-/-} adult zebrafish hearts occurs via a hyperplastic response and is accompanied by elastin deposition in the atrium. *Cell Tissue Res.* May 25. doi: 10.1007/s00441-019-03044-4.
 25. Psarras S, **Beis D**, Nikouli S, Tsikitis M, Capetanaki Y. (2019) Three in a Box: Understanding Cardiomyocyte, Fibroblast, and Innate Immune Cell Interactions to Orchestrate Cardiac Repair Processes. *Frontiers in Cardiovascular Medicine* 10.3389/fcvm.2019.00032
 26. Kastana P, Zahra FT, Ntenekou D, Katraki-Pavlou S, **Beis D**, Lionakis MS, Mikelis CM, Papadimitriou E. (2019) Matrigel Plug Assay for In Vivo Evaluation of Angiogenesis. *Methods Mol Biol.* 2019;1952:219-232. doi: 10.1007/978-1-4939-9133-4_18.
 27. Gomes CPDC, Ágg B, Andova A, Arslan S, Baker A, Barteková M, **Beis D**, Betsou F, et al. (2019) Catalyzing Transcriptomics Research in Cardiovascular Disease: The CardioRNA COST Action CA17129. *Noncoding RNA.* Mar 29;5(2). pii: E31. doi: 10.3390/ncrna5020031.
 28. Giardoglou P, **Beis D**. (2019) On Zebrafish Disease Models and Matters of the Heart. *Biomedicines.* Feb 28;7(1). pii: E15. doi: 10.3390/biomedicines7010015.
 29. Damalas DE, Bletsou AA, Agalou A, **Beis D**, Thomaidis NS. (2018) Assessment of the Acute Toxicity, Uptake and Biotransformation Potential of Benzotriazoles in Zebrafish (*Danio rerio*) Larvae Combining HILIC- with RPLC-HRMS for High-Throughput Identification. *Environ Sci Technol.* 52(10):6023-6031.
 30. Dimitriadi A, **Beis D**, Arvanitidis C, Adriaens D, Koumoundouros G. (2018) Developmental temperature has persistent, sexually dimorphic effects on zebrafish cardiac anatomy. *Sci Rep.* 8(1):8125.
 31. Agalou A, Thrapsianiotis M, Angelis A, Papakyriakou A, Skaltsounis A-L, Aligiannis N and **Beis D** (2018) Identification of Novel Melanin Synthesis Inhibitors From *Crataegus pycnoloba* Using an *in vivo* Zebrafish Phenotypic Assay. *Front. Pharmacol.* 9:265. doi: 10.3389/fphar.2018.00265.
 32. Katraki-Pavlou M and **Beis D** (2018). Zebrafish angiogenesis and valve morphogenesis: insights from development and disease models. Springer Special Book "Zebrafish, Medaka, and Other Small Fishes - New Model Animals in Biology, Medicine, and Beyond". Host Editors: Hiromi Hirata and Atsuo Iida.
 33. Argyros O, Karampelas T, Varela A, Asvos X, Papakyriakou A, Agalou A, **Beis D**, Davos CH, Fokas D, Tamvakopoulos C. (2017) Targeting of the Breast Cancer Microenvironment with A Potent And Linkable Oxindole Based Antiangiogenic Small Molecule. *Oncotarget*, doi: 10.18632/oncotarget.16763
 34. Chaita E, Lambrinidis G, Cheimonidi C, Agalou A, **Beis D**, Trougakos I, Mikros E, Skaltsounis AL, Aligiannis N. (2017) Anti-Melanogenic Properties of Greek Plants. A Novel Depigmenting Agent from *Morus alba* Wood. *Molecules* ;22(4). pii: E514. doi: 10.3390/molecules22040514.
 35. Papadimitriou E, Pantazaka E, Castana P, Tsalios T, Polyzos A and **Beis D**. (2016) Pleiotrophin and its receptor protein tyrosine phosphatase beta/zeta as regulators of

- angiogenesis and cancer. **Biochim Biophys Acta.**1866(2):252-265. doi:10.1016/j.bbcan.2016.09.007.
36. Serifi I, Tzima E, Soupsana K, Karetsoy Z, **Beis D**, Papamarcaki T. (2016) The zebrafish homologs of SET/I2PP2A oncoprotein: expression patterns and insights into their physiological roles during development. **Biochem J.** 15;473(24):4609-4627
 37. Bournele D and **Beis D**. (2016) Zebrafish models of cardiovascular disease. **Heart Fail Rev.** doi: 10.1007/s10741-016-9579-y.
 38. Malissov N, Griffin LB, Antonellis A and **Beis D** (2016) Dimerization is required for GARS-mediated neurotoxicity in dominant CMT disease. **Hum Mol Genet** 25(8):1528-42. doi: 10.1093/hmg/ddw031
 39. **Beis D**, Kalogirou S and Tsigkas N (2015). Insights into Heart Development and Regeneration. Chapter 2, **Introduction to Translational Cardiovascular Research**, D.V. Cokkinos (ed.), DOI 10.1007/978-3-319-08798-6_2, Springer International Publishing Switzerland.
 40. Papakyriakou A*, Kefalos P*, Sarantis P*, Tsiamantas C, Xanthopoulos KP, Vourloumis D, **Beis D**. (2014) A zebrafish in vivo phenotypic assay to identify 3-aminothiophene-2-carboxylic acid-based angiogenesis inhibitors. **Assay Drug Dev Technol.** (9-10):527-35.
 41. Kalogirou S, Malissov N, Moro E, Argenton F, Stainier DY, **Beis D**. (2014) Intracardiac flow dynamics affect the morphogenesis and maturation of the atrioventricular valves. **Cardiovasc Res.** 104(1):49-60
 42. Moro E, Ozhan-Kizil G, Mongera A, **Beis D**, Wierzbicki C, Young RM, Bournele D, Domenichini A, Valdivia LE, Lum L, Chen C, Amatruda JF, Tiso N, Weidinger G, Argenton F. (2012) In vivo Wnt signaling tracing through a transgenic biosensor fish reveals novel activity domains. **Dev Biol.**;366(2):327-40.
 43. Strähle U, Bally-Cuif L, Kelsh R, **Beis D**, Mione M, Panula P, Figueras A, Gothilf Y, Brösamle C, Geisler R, Knedlitschek G. (2012) EuFishBioMed (COST Action BM0804): a European network to promote the use of small fishes in biomedical research. **Zebrafish** ;9(2):90-3.
 44. Serafimidis I, Heximer S, **Beis D**, Gavalas A. (2011) GPCR signaling and S1P play a phylogenetically conserved role in endocrine pancreas morphogenesis. **Mol Cell Biol.** ;31(22):4442-53. Epub 2011 Sep 12.
 45. Chi NC, Shaw RM, Jungblut B, Huisken J, Ferrer T, Arnaout R, Scott I, **Beis D**, Xiao T, Baier H, Jan LY, Tristani-Firouzi M, Stainier DY. (2008) Genetic and physiologic dissection of the vertebrate cardiac conduction system. **PLoS Biol.** May 13;6(5):e109.
 46. Jin SW, Herzog W, Santoro MM, Mitchell TS, Frantsve J, Jungblut B, **Beis D**, Scott IC, D'Amico LA, Ober EA, Verkade H, Field HA, Chi NC, Wehman AM, Baier H, Stainier DY. (2007) A transgene-assisted genetic screen identifies essential regulators of vascular development in vertebrate embryos. **Dev Biol.** 307(1):29-42.
 47. Pyriochou A, **Beis D**, Koika V, Polytarchou C, Papadimitriou E, Zhou Z, Papapetropoulos A. (2006) Soluble guanylyl cyclase activation promotes angiogenesis. **J Pharmacol Exp Ther.** 319(2):663-71.
 48. **Beis D**. and Stainier DYR. (2006) In vivo cell Biology: following the zebrafish trend. **Trends in Cell Biology** 16(2):105-12
 49. Jin SW, **Beis D**, Mitchell T, Chen JN and Stainier DYR. (2005) Cellular and Molecular Analysis of Vascular Tube and Lumen Formation in Zebrafish. **Development** 132(23):5199-209
 50. **Beis D**, Bartman T, Jin SW, Scott I, D'Amico L, Ober E, Verkade H, Frantsve J, Field H, Wehman A, Baier H, Tallafuss A, Bally-Cuif L, Chen JN, Stainier DYR and Jungblut B. (2005) Genetic and Cellular analyses of zebrafish atrio-ventricular cushion

and valve development. **Development** 132(18):4193-204

51. Aida M*, **Beis D***, Heidstra R, Nussaume L, Noh Y.S, Amasino R, Sabatini S and Scheres B. (2004) The PLETHORA Genes Mediate Patterning of the Arabidopsis Root Stem Cell Niche. **Cell** 119:109-20.
52. Parker L.H, Schmidt M, Jin S.W, Gray A.M, **Beis D**, Pham T, Frantz G, Palmieri S, Hillan K, Stainier D.Y.R, de Sauvage F.J, and Ye W. (2004) The endothelial-cell-derived secreted factor Egfl7 regulates vascular tube formation. **Nature** 428:754-8.
53. Field H, Dong P.D, **Beis D**, and Stainier D.Y.R. (2003) Formation of the digestive system in zebrafish II. Pancreas morphogenesis **Dev Biol** 261:197–208
54. Stainier DY, **Beis D**, Jungblut B, Bartman T. (2002) Endocardial cushion formation in zebrafish. **Cold Spring Harb Symp Quant Biol.**;67:49-56.
55. Sabatini S*, **Beis D***, Wolkenfelt H, Murfett J, Guilfoyle T, Malamy J, Benfey P, Leyser O, Bechtold N, Weisbeek P and Scheres B. (1999) An auxin-dependent distal organizer of pattern and polarity in the Arabidopsis root. **Cell** 99:463-72.

**equal first author*