

LIDIA KOS
Curriculum Vitae

University Graduate School and Office of Research and Economic Development
Department of Biological Sciences, Florida International University,
[REDACTED]
[REDACTED]

EDUCATION

<u>Degree</u>	<u>Institution</u>	<u>Field</u>	<u>Dates</u>
Ph.D.	University of California, Berkeley	Neurobiology	1991
B.Sc.	Federal University of Rio de Janeiro, Brazil	Biology/Genetics	1984

FULL-TIME ACADEMIC EXPERIENCE

<u>Institution</u>	<u>Rank</u>	<u>Field</u>	<u>Dates</u>
FIU	Associate VP Research	Research and Economic Development	1/17-present
FIU	Associate Dean	Graduate School	1/17-present
FIU	Professor	Biological Sciences	8/15-present
FIU	Associate Dean	Graduate School	7/12-7/14
FIU	Grad. Program Director	Biological Sciences	8/08-6/12
FIU	Associate Professor	Cell/Developmental Biol.	8/05-7/15
FIU	Assistant Professor	Cell/Developmental Biol.	8/98-7/05
NHGRI, NIH	Post-doctoral Fellow	Genetics	7/95-7/98
NICHHD, NIH	Post-doctoral Fellow	Developmental Biol.	6/92-6/95
UC, Berkeley	Ph.D. student/TA/RA	Neurobiology	1986-1991
UFRJ, Brazil	Research Assistant	Neurobiology	1982- 1984

ADMINISTRATIVE EXPERIENCE

Graduate Program Director (08-12, 15-16)

Oversaw recruitment, admission, progression and retention of 100 graduate students
Performed Carnegie style review of the program and identified areas that needed improvement
Responsible for student and program outcomes for accreditation reporting

Associate Dean, University Graduate School (12-14)

Revised and updated all University Graduate School Policies
Responsible for review of all FIU graduate programs for accreditation reporting
Responsible for review of academic agreements with international institutions
Developed and implemented annual evaluation and mentoring plan for all FIU doctoral students
Developed doctoral program data annual program summaries facilitating monitoring
Developed and implemented program performance based allocation of assistantships

Associate Dean, University Graduate School and Associate Vice President, Office of Research and Economic Development (17-present)

Supervision of 9 staff members to deliver excellent service to graduate community
 Collaborate with Dean of the Graduate School to manage and allocate tuition waivers and assistantships to Colleges (over \$10M)
 Responsible for monitoring and approving graduate curricular changes and new degrees
 Responsible for assessment of administrative unit for accreditation reporting
 Responsible for creating Graduate School accountability reports for Board of Trustees
 Redesigned professional development program for graduate students with focus in career preparation and wellness
 Established office of training and external fellowships increasing number of training grants and external fellowships
 Established Inclusion and Veteran's fellowships to increase diversity in doctoral programs
 Support office of postdoctoral affairs with professional development opportunities
 Developed a professional development program for Graduate Program Directors
 Collaborated with Advancement Office to obtain donation (\$400,000) to provide scholarships to DACA graduate students
 Established first dual degree program in Environmental Sciences with University of Firenze in collaboration Office of Planning and Accountability
 Institutional point of contact for incoming Fulbright graduate students and Fulbright Hays program

PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS

Inclusive Culture and Equity Award (AGEP leadership team), WEPAN, 2022
 Presidential Excellence Award, FIU, 2019
 Outstanding Graduate Program Director Provost Award, FIU, 2016
 Kauffman Professor Award, Pino Center FIU, 2009
 FIU Foundation Research Award, 2006
 College of Arts and Sciences Research Award, FIU, 2004
 Excellence in Teaching Award, FIU, 2004
 Provost's Summer Research Award, FIU, 2000
 Outstanding Oral Presentation Award, National Human Genome Research Institute, 1996
 Fogarty Postdoctoral Fellowship, 1992-1996
 Outstanding Graduate Instructor Award, UC, Berkeley, 1990
 The Elizabeth Roboz Einstein Fellowship in Developmental Neurosciences, 1990
 Abraham Rosenberg Research Fellowship, 1990
 Regent's Fellowship, UC, Berkeley, 1988-1989
 Doctoral Fellowship, National Council for Research, Brazil, 1985-1989
 Trainee Fellowship, National Council for Research, Brazil, 1982-1984

OFFICES HELD IN PROFESSIONAL SOCIETIES

Council Member, PanAmerican Society for Pigment Cell Research, 2007-09, 2012-15

OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE

Professional Affiliations

American Association for the Advancement of Science
 PanAmerican Society for Pigment Cell Research
 The American Society for Cell Biology
 The Society for Melanoma Research
 American Association of Cancer Research

Review of Manuscripts

Journal of Neurosciences
 Mechanisms of Development
 Pigment Cell and Melanoma Research (Editorial board, Executive Editor)
 Melanoma Research
 International Journal of Developmental Biology
 Circulation Research
 Journal of Investigative Dermatology
 Archives Dermatological Research
 PLoS Genetics (Guest Editor)
 PLoS One
 Experimental Dermatology
 Theranostics
 Frontiers in Oncology (Editorial board)
 Science Advances

Review of Grant Proposals

Member, National Science Foundation REU 2001-2002
 Member, National Science Foundation UMEB 2003
 Member, American Heart Association CVD 2006-2009
 Member, American Heart Association CVD 2012-2013
 Ad Hoc Member, NIH/NIAMS, RO3 2014-2015
 Member, NIH/NIGMS, TWD 2019-present
 Member, DOD CDMRP, 2020-2022
 Ad Hoc - Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO)
 Ad Hoc – Austria Academy of Sciences

Meeting Organization

Weinstein Meeting in Cardiovascular Development, St. Petersburg, FL. May 2005. Organizing Committee Member
 International Pigment Cell Research Meeting, Reston, VA. September 2005.
 Chair: Plenary Section III: Developmental Biology
 15th Panamerican Society for Pigment Cell Research Meeting, Memphis, 2009.
 Chair: Plenary Section: Developmental Biology.
 Genetics and Development of Melanocytes Workshop IPCC, Bordeaux, France. September 2011. Organizing Committee Member
 The 2019 Conference of Florida Graduate Schools: Career Pathways and Preparedness in the 21st Century, Miami, FL. April 2019. Organizer.

Advisory Board (current)

Florida-Transatlantic (FL-TA) Center for Cancer Disparities Translational Research
 FIU NIGMS-MARC U-STAR
 FIU Ronald E McNair Post-Baccalaureate Achievement Program
 FIU NSF-ADVANCE (Office to Advance Women, Equity & Diversity)
 FIU Biomolecular Sciences Institute
 Florida Atlantic University NIGMS-U RISE

FIU ServiceDepartment

Graduate Committee (Member – 8 years - and Chair-8 years)
 Honors Committee (Member – 3 years)
 Glazer Seminar Series (Chair- 4 years)
 Tissue Culture Facility (Chair- 5 years)
 Animal Facility (Chair- 4 years)
 Facilities Committee (Member- 2 years)
 Executive Committee (Member- 3 years)
 Job Search and Screening (for 15 different positions)

College

Pre-Medical Advising Committee (Member)
 Founding committee member for the Institute of Biomolecular Sciences
 Search Committee: joint positions for the Biomolecular Sciences Institute

University

Faculty Senate 2008 (Senator)
 Dissertation Advisor Status Committee 2008-2009 (Member and Chair)
 MARC selection committee (2009-2012)
 Graduate Council 2009-present (Vice-Chair; Ex-officio)
 IACUC 2010-present (Member)
 Undergraduate Research Committee 2012-2015(Member)
 2020-Pre-Strategic Plan Committee
 2025 –Strategic Plan Committee
 International Working Group 2017-present
 Bargaining Team 2019-present (Administration member)

PUBLICATIONSRefereed Publications

Nasim, S., Abujamra, B., Hutcheson, J.D., Kos, L. (2022) Atypical melanocytes produce and regulate elastin patterning in the murine aortic valve. ATVB (under revision).

Nasim, S., Pandey, P., Kanashiro-Takeuchi, R.M., He, J., Hutcheson, J.D., Kos, L. (2021) Pigmentation Affects Elastic Fiber Patterning and Biomechanical Behavior of the Murine Aortic Valve. Front Cardiovasc Med 8:754560. doi: 10.3389/fcvm.2021.754560.

Freitas, J., Lopez, J., Llorian, C., Boroni, M., Kos, L. (2021) The immunosuppressive role of Endothelin 3 over-expression in the melanoma microenvironment. *Pigment Cell Melanoma Res.* 34:1084-1093. doi: 10.1111/pcmr.13002.

Hutcheson, J.D., Schlotter, F., Creager, M.D., Li, X., Pham, T., Vyas, P., Higashi, H., Body, S.C., Aikawa, M., Singh, S.A., Kos, L., Aikawa, E. (2021) Elastogenesis Correlates with Pigment Production in Murine Aortic Valve Leaflets. *Front. Cardiovasc. Med.* 8:678401. doi: 10.3389/fcvm.2021.678401.

Su, L., Bryan, N., Battista, S., Freitas, J., Garabedian, A., D'Alessio, F., Romano, M, Falanga, F., Fusco, A., Kos, L., Chambers, J., Fernandez-Lima, F., Chapagain, P.P., Vasile, S., Smith, L., Leng, F. (2020) Identification of HMGA2 inhibitors by AlphaScreen-based ultra-high-throughput screening assays. *Sci Rep.*10:18850. doi: 10.1038/s41598-020-75890-0.

Chen, F., Panday, N., Li, X., Ma, T., Guo, J., Wang, X., Kos, L., Hu, K., Gu, N., He, J. (2020) Simultaneous mapping of nanoscale topography and surface potential of charged surfaces by scanning ion conductance microscopy. *Nanoscale.* 12:20737-20748.

Li, X., Karras, P., Torres, R., Rambow, F., van den Oord, J., Marine, J-C., Kos, L. (2020) Disseminated melanoma cells transdifferentiate into endothelial cells in intravascular niches at metastatic sites. *Cell Rep.* 31: 107765.

Saldana-Caboverde, A., Perera, E.M., Watkins-Chow, D., Hansen, N.A., Vemulapalli, M., Mullikin, J.C., NISC Comparative Sequencing Program, Pavan, W.J., Kos, L. (2015) The Transcription Factors *Ets1* and *Sox10* Interact During Murine Melanocyte Development. *Dev Biol.* 407:300-12.

Carneiro, F., Kruithof, B.P.T., Balani, K., Agarwal, A., Gaussin, V., Kos, L. (2015) Relationships between melanocytes, mechanical properties and extracellular matrix composition in the mouse heart valves. *Long Term Eff Med Implants.* 25: 17-26.

Benaduce, A.P., Batista, D., Grilo, G., Jorge, K., Cardero, D., Milikowski, C., Kos, L. (2014) Novel UV-induced melanoma mouse model dependent on Endothelin 3 signaling. *Pigment Cell Melanoma Res.* 27: 839-42.

Martinez, C., Rath, S., Van Gulden, S., Pelaez, D., Alfonso, A., Fernandez, N., Kos, L., Cheung, H, Ramaswamy, S. (2013) Periodontal ligament cells cultured under steady-flow environments demonstrate potential for use in heart valve tissue engineering. *Tissue Eng Part A.* 19:458-66.

Kaelin, C.B., Xu, X., Hong, L.Z., David, V.A., McGowan, K.A., Schmidt-Küntzel, A., Roelke, M.E., Pino, J., Pontius, J., Cooper, G.M., Manuel, H., Swanson, W.F., Marker, L., Harper, C.K., van Dyk, A., Yue, B., Mullikin, J.C., Warren, W.C., Eizirik, E., Kos, L., O'Brien, S.J., Barsh, G.S., Menotti-Raymond, M. (2012) Specifying and sustaining pigmentation patterns in domestic and wild cats. *Science.* 337:1536-41.

Lahiri, D., Benaduce, A.P., Rouzaud, F., Solomon, J., Keshri, A. K., Kos, L., Agarwal, A. (2011) Wear behavior and in-vitro cytotoxicity of wear debris generated from hydroxyapatite-carbon nanotube composite coating. *J Biomedical Mater A.* 96A: 1–12.

Lahiri, D., Singh, V., Benaduce, A.P., Seal, S., Kos, L., Agarwal, A. (2011) Boron nitride nanotube reinforced hydroxyapatite composite: Mechanical and tribological performance and in-vitro biocompatibility to osteoblasts. *J Mech Behav Biomed Mater.* 4:44-56.

Lahiri, D., Benaduce, A.P., Kos, L., Agarwal, A. (2011) Quantification of carbon nanotube induced adhesion of osteoblast on hydroxyapatite using nano-scratch technique. *Nanotechnology.* 22: 355703.

Weeks, O., Villamor, E., Tracey, M., Stoddard, P., Shapiro, S., Makemson, J., García, R., Gavassa, S., Philippi, T., Pitzer, T., Dewsbury, B., Narasimhan, G., McGoron, A., Bhajee, S., Alberte, J., Graves, P., Gómez, R., Koptur, S., Galvez, M., Heffernan, J., Kos, L., Lowenstein, M., Rosenblatt, A., Baker, J., Quirke, M., Brew, E., Tashakkori, A. (2011) QBIC, an interdisciplinary and quantitative biological sciences curriculum: concept to implementation. *J Science Education.* 12(1) 11-13.

Lahiri, D., Rouzaud, F., Richard, T., Keshri, A.K., Bakshi, S.R., Kos, L., Agarwal, A. (2010) Boron nitride nanotube reinforced polylactide-polycaprolactone copolymer composite: Mechanical properties and cytocompatibility with osteoblasts and macrophages *in vitro*. *Acta Biomaterialia.* 6: 3524-3533.

Perera, E.M., Bao, Y., Kos, L., Berkovitz, G. (2010) Structural and functional characterization of the mouse tescalcin promoter. *Gene.* 464: 50-62.

Rouzaud, F., Oulmouden, A., Kos, L. (2010) The untranslated side of hair and skin mammalian pigmentation: beyond coding sequences. *IUMB Life.* 62: 340-6.

Saldana-Caboverde, A. and Kos, L. (2010) Roles of endothelin signaling in melanocyte development and melanoma. *Pigment Cell Melanoma Res.* 23: 160-170.

Lahiri, D., Rouzaud, F., Namin, S., Keshri, A. K., Valdes, J.J., Kos, L., Tsoukias, N., Agarwal, A. (2009) Carbon nanotube reinforced polylactide-caprolactone copolymer: mechanical strengthening and interaction with human osteoblasts in vitro. *App. Mat. Interface.* 11: 2470-76.

Balani, K., Brito, F. C., Kos, L., Agarwal, A. (2009) Melanocyte pigmentation stiffens murine cardiac tricuspid valve leaflet. *J. Royal Soc Interface.* 6:1097-102.

Brito, F.C. and Kos, L. (2008) Timeline and distribution of melanocyte precursors in the mouse heart. *Pigment Cell Melanoma Res.* 21:464-70.

Garcia, R.J., Ittah, A., Mirabal, S., Figueroa, J., Lopez, L., Glick, A.B., Kos, L. (2008) Endothelin 3 induces skin pigmentation in a keratin-driven inducible mouse model. *J Invest Dermatol.* 128, 131-42.

Patel, R. and Kos, L. (2005) Endothelin-1 and neuregulin-1 convert embryonic cardiomyocytes into cells of the conduction system in the mouse. *Dev Dyn.* 233, 20-25.

Kozmik, Z., Daube, M., Frei, E., Norman, B., Kos, L., Dishaw, L.J., Noll, M., Piatigorsky, J. (2003) Role of Pax genes in eye evolution: an ancestral PaxB gene uniting Pax2 and Pax6 functions. *Developmental Cell.* 5, 773-785.

Piatigorsky, J., Norman, B., Dishaw, L.J., Kos, L., Horwitz, J., Steinbach, P.J., Kozmik, Z. (2001) J3-crystallin of the jellyfish lens: Similarity to saposins. Proceedings of the National Academy of Sciences, USA. 98, 12362-12367.

Perera, E.M., Martin H., Seecherunvong, T., Kos, L., Hughes, L.A., Hawkins, J.R., Berkovitz, G. (2001) *Tescalcin*, a novel gene belonging to the family of EF-hand Ca²⁺ binding proteins, *Col9a3* and *Renin* are expressed in the mouse testis during early stages of gonadal differentiation. Endocrinology. 142, 455-463.

Kos, L., Takayama, H., Maina, F., Ponzetto, C., Merlino, G., Pavan, W.J. (1999) Hepatocyte Growth Factor/Scatter Factor-MET signaling in neural crest-derived melanocyte development. Pigment Cell Research. 12, 13-21.

Opdecamp, K., Kos, L., Arnheiter, H., Pavan, W.J. (1998) Endothelin signalling in the development of neural crest-derived melanocytes. Biochemistry and Cell Biology. 76, 1093-1099.

Southard-Smith, E.M., Kos, L., Pavan, W.J. (1998) *Sox 10* mutation disrupts neural crest development in Dom Hirschsprung mouse model. Nature Genetics. 18, 60-64.

Kos, L., Chiang, C., Mahon, K.A. (1998) Mediolateral patterning of somites: Axial signals including *Sonic hedgehog* regulate *Nkx-3.1* expression. Mechanisms of Development. 70, 25-34.

Duncan, M.K., Kos, L., Jenkins, N.A, Gilbert, J.C., Copeland, N.G., Tomarev, S.I. (1997) Eyes Absent: a gene family found in several metazoan phyla. Mammalian Genome. 8, 479-485.

Tomarev, S.I., Callaerts, P., Kos, L., Zinovieva, R., Halder, G., Gehring, W., Piatigorsky, J. (1997) Squid *Pax-6* and eye development. Proceedings of the National Academy of Science, USA. 94, 2421-2426.

Hellmich, H.L., Kos, L., Cho, E.S., Mahon, K.A., Zimmer, A. (1996) Embryonic expression of glial cell-line derived neurotrophic factor (GDNF) suggests multiple developmental roles in neural differentiation and epithelial-mesenchymal interactions. Mechanisms of Development. 54, 95-105.

Gleizer*, L., and Stent, G. (1993). Developmental origin of segmental identity in the leech mesoderm. Development. 117, 177-189.

Volchan, E., Bernardes, R.F., Rocha-Miranda, C.E., Gleizer*, L., Gawryszewski, L.G. (1988). The ipsilateral field representation in the striate cortex of the opossum. Experimental Brain Research. 73, 297-304.

Volchan, E., Kos, L., Gawryszewski, L.G., Bernardes, R.F., Rocha-Miranda, C.E. (1984). Reference axis for visuotopy in the opossum's striate cortex. Brazilian Journal of Medical and Biological Research. 17, 5-7.

Non-Refereed Publications

Kelsh, R., Kos, L., Arnheiter, H., Aplin, A., Bosenberg, M. (2015). What shall we do this year? *Pigment Cell Melanoma Res.* 28, 1.

Aplin, A., Bosenberg, M., Soengas, M., Kos, L., Arnheiter, H., Kelsh, R. (2014). Unmet needs in melanoma research. *Pigment Cell Melanoma Res.* 27, 1003.

Book Chapters

Thomas, S, Johson Austin, S, Lane, TB, Rowley, A, Watson, A, Walker, BL, Kos, L., Dome, C, Mariella-Walrond, H, Cooper, A, Lee-Thomas, G. Culturally relevant mentoring: a differentiator for institutional change (2022). *In Implementing Diversity, Equity, Inclusion, and Belonging in Educational Management Practices.* Pp. 290-309. IGI Global, PA, USA.

Pino, J and Kos, L. (2013) The regulation of skin and hair pigmentation by signaling pathways and related disorders. *In Skin Pigmentation: Genetics, Geographic Variation and Disorders*, pp.57-88. Nova Science Publishers, NY, USA.

Kos, L. and Garcia, R. (2004) Molecular Biology and Applications. *In Biomedical Technology and Devices Handbook*, pp.13-1- 19. CRC Press, FL, USA.

*Gleizer, L.: Name used previously

PRESENTED LECTURES (invited)

“Research-intensive professional development program as a counterspace: A qualitative study of academic women of color in STEM”, (FL AGEP leadership team), January 2022, Annual Hawaii International Conference for Education, Waikoloa, HI

“Phenotypic Plasticity of melanoma metastatic cells”, August 2017, Instituto Nacional do Cancer, Rio de Janeiro, Brazil.

“Ets1 and melanocyte development”, July 2014, Institut Curie, Orsay Cedex, France.

“The role of Ets1 in melanocyte development”, May 2013, Pigment Cell Development Workshop, Edinburgh, Scotland.

“What are melanocytes doing in the heart?”, April 2013, Department of Physiology and Biophysics, Miller School of Medicine, Miami, FL

“The other ones: non-cutaneous melanocytes”, September 2011, XXIst International Pigment Cell Conference, Bordeaux, France.

“Mouse models of melanoma based on the over-expression of Endothelin 3 signaling”, December 2010, NHGRI/NIH, Bethesda, MD

“Endothelin 3 in melanocyte development and pathogenesis”, May 2009, Department of Biochemistry and Molecular Biology, Miller School of Medicine, Miami, FL

“Endothelin in melanocyte development and pathogenesis”, September 2006, Centro de Investigacion del Cancer, Salamanca, Spain

“Signaling in melanocyte and Purkinje fiber development”, January 2006, College of Biomedical Sciences, FAU, Davie, FL

“Converting mammalian cardiomyocytes into Purkinje fibers: roles for ET-1 and NRG-1.” February 2005, Medical University of South Carolina, Charleston, NC

“Inducible transgenic expression of Edn3: A mouse model of dermal melanocytosis”, December 2004, Johnson & Johnson, Skin Research Center, Skillman, NJ

“Over-expression of EdnrB or Edn3 produces opposite pigmentation phenotypes”, September 2004, ESPCR 2004, Institut Curie, Paris, France

“Signaling in Melanocyte Development”, December 2002
Program of Neurosciences, Federal University of Rio de Janeiro, Brazil

“Signaling in Neural Crest Development”, April 2002
Department of Biophysics and Physiology, University of Miami Medical School

"Loss of/Gain of Function Animal Models", November 2000
Division of Pediatrics, University of Miami Medical School

“Making a melanocyte – Genetic Controls”, October 1998
Department of Anatomy and Cell Biology, University of Miami Medical School

“Nkx-3.1 and somite patterning”, May 1994
Laboratory of Developmental Genetics, NINDS, NIH

“Developmental Origin of Segmental Identity in the Leech”, March 1992
EK Shriver Center, Waltham

“Developmental Origin of Segmental Identity in the Leech”, March 1992
Department of Genetics, Harvard Medical School

FUNDING

Title: Developmental Origin of Elastin Producing Cells and Mechanism Underlying Elastogenesis in the Murine Aortic Valve
PI: Lidia Kos (with Perony Nogueira – PhD student)
Funding Agency: Florida Heart
Amount: \$60,000
Duration: 2023

Title: LSAMP BD: Florida International University FGLSAMP
PI: Andres Gil, Lidia Kos (co-PI), Richard Alo (co-PI), Alla Mirzoyan (co-PI), Mark Finlayson (co-PI)
Funding Agency: NSF
Amount: \$1,075,000

Duration: 2022-2024

Title: The AGEP Florida Alliance Model: Improving Minority Women Success in STEM Faculty Careers.

PI: Lidia Kos (at FIU)

Funding Agency: NSF

Amount: \$347,449 (FIU allocation)

Duration: 2019-2023

Title: Phenotypic and Functional Characterization of Neural Crest-Derived Aortic Valve Interstitial Cells

PI: Lidia Kos (with Sana Nasim – PhD student)

Funding Agency: Florida Heart

Amount: \$120,000

Duration: 2019-2021

Title: Transdisciplinary Training in Biomolecular and Biomedical Sciences

PI: Yuk-Ching Tse-Dinh, Lidia Kos (co-I)

Funding Agency: NIH/NIGMS

Amount: \$1,496,250

Duration: 2019-2024

Title: LSAMP BD: Florida International University FGLSAMP

PI: Shekhar Bansali, Lidia Kos (co-PI), Sonja Montas Hunter (co-PI)

Funding Agency: NSF

Amount: \$1,075,000

Duration: 2018-2021

Title: The Role of Metabotropic Glutamate Receptor 1 Signaling in Leptomeningeal Melanoma

PI: Lidia Kos

Funding Agency: Moffitt Cancer Center Skin Spore (NIH/NCI)

Amount: \$300,000

Duration: 2016-2017

Title: The role of *Ets1* in melanocyte development

PI: Lidia Kos

Funding Agency: NIH/NIAMS

Amount: \$300,000

Duration: 2012-2015

Title: Generation of a UV Dependent Mouse Model of Melanoma

PI: Lidia Kos

Funding Agency: NIH/NCI/1SC2CA138175

Amount: \$225,000

Duration: 2008-2012

Title: Development of a α -MSH/Edn3 based topical composition for skin wound-healing and repigmentation.

PI: Lidia Kos

Funding Agency: FIU Pino Global Entrepreneurship Center

Amount: \$15,000
Duration: 2009

PI: Lidia Kos
Funding Agency: FIU Access to Biomedical Research Program/NIH
Amount: \$4,000
Duration: 2006

Title: Signaling in Melanocyte Development
Sub-Project PI: Lidia Kos
Funding Agency: NIH/NIGM/MBBRS 2S06GM08205
Amount: \$279,757
Duration: 2002-2004

Title: Analysis of Transgenic Over-Expression of Edn3 in the Skin
PI: Lidia Kos
Funding Agency: FIU/College of Arts and Sciences
Amount: \$5,000
Duration: 2004

Title: Regulation of Ednrb in Melanocyte Precursors
PI: Lidia Kos
Funding Agency: FIU Access to Biomedical Research Program/NIH
Amount: \$5,000
Duration: 2004

Title: Identification of Genes in Melanocyte Precursors
PI: Lidia Kos
Funding Agency: FIU Access to Biomedical Research Program/NIH
Amount: \$4,500
Duration: 2003

Title: Signaling in Cardiac Development
PI: Lidia Kos
Funding Agency: American Heart Association 01WM029
Amount: \$60,000
Duration: 2001-2002

Title: Identification of Candidate Genes for Hirschsprung's Disease
PI: Lidia Kos
Funding Agency: FIU Provost's Office Summer Competition
Amount: \$12,748
Duration: 2000

TEACHING

Undergraduate Courses

BSC1010 General Biology (3x)
PCB4253 Cell Biology (10x)
ZOO3603 Embryology (1x)

PCB4253 Developmental Biology (13x)
 BSC 3915 Undergraduate Research
 BSC4915 Honors Research
 BSC 4915L Honors Laboratory

Graduate Courses

PCB6027 Molecular and Cell Biology II (7x)
 BSC6457 Introduction to Biological Research (7x)
 PCB5596 Workshop: In Situ Hybridization (7x)
 BSC6913 Graduate Student Research
 BSC6971 Master's Thesis
 BSC7980 PhD Dissertation

TRAINEES

Major Advisor to Graduate Students

- Aniveny Ayala (99 - MS 2001) Current Position: Senior Account Manager, Illumina, FL.
 Thesis: Identification of genes downstream of endothelin-3 signaling: characterization of WSB1 and SPC12.
- Kalaiselvi Panneerselvam (99 - MS 2002) Current Position: Chair, Science Dept, Archimedean Academy, Miami, FL
 Thesis: The Role of Endothelins in Late Melanocyte Development.
- Avner Ittah (99- Ph.D. 2005) Current Position: Professor, Miami Dade College Kendall Campus, Miami, FL
 Dissertation: Endothelin receptor B and neural crest derived melanocyte development.
- Erasmio Miguel Perera (99-Ph. D. 2006) Current Position: Tissue Culture Core Director, FIU, Miami, FL
 Dissertation: The isolation and characterization of tescalcin, a novel gene differentially expressed in the mouse testis during the early stages of gonadal differentiation.
- Rita Patel (2001-MS 2004) Current Position: Orthodontist, Davie, FL
 Thesis: Endothelin and Neuregulin induced conversion of embryonic murine cardiomyocytes into impulse conducting cells.
- Roman Garcia (2002-Ph.D. 2007) Current Position: Psychiatrist, University of Washington, Seattle, WS
 Dissertation: Endothelin 3 induces skin pigmentation in a keratin - driven inducible mouse model.
- Irina Fernandez (2002-MS 2006) Current Position: Research Associate, Miller School of Medicine, University of Miami, Miami, FL
 Thesis: The role of ErbB3 in melanocyte development.
- Marcia Kravec (2002-Ph.D. 2009) Current Position: Associate Teaching Professor and Associate Director of Faculty Leadership and Success, Department of Biological Sciences and Provost Office , FIU, Miami, FL
 Dissertation: Interactions among Endothelin Receptor B and transcription factors Sox10, and Pax3, in melanocyte and glial lineages.
- Flavia Carneiro (2003- Ph.D. 2008) Current Position: Research Coordinator, VA Healthcare System, Miami, FL
 Dissertation: Melanocytes in the developing and adult atrioventricular valves of the murine heart.

- Amy Saldana-Caboverde (2007-Ph.D. 2014) Current Position: Lecturer, Department of Biological Sciences, Florida International University, Miami, FL
Dissertation: The role of Ets1 in melanocyte development.
- Ana Paula Benaduce (2008-Ph.D. 2014) Current Position: Assistant Teaching Professor, Department of Biological Sciences, Florida International University, Miami, FL
Dissertation: UV-Induced Melanoma Mouse Model Dependent on Endothelin 3 Over-Expression.
- Nikeisha Chin (2008-Ph.D. 2015) Current Position: Homemaker.
Dissertation: The Role of Endothelin 3 in Melanoma Progression and Metastasis.
- Xiaoshuang Li (2011- Ph.D. 2017) Current Position: Post-doctoral Fellow, Cleveland Clinic, Cleveland, OH.
Dissertation: Identification and Phenotypic Plasticity of Metastatic Cells in a Mouse Model of Melanoma.
- Javier Pino (2012- Ph.D. 2018) Current Position: Veterinarian, Fort Carson, CO
Dissertation: Transgenic Endothelin 3 Regulates Pigment Production and Coat Color.
- Juliano Freitas (2012-Ph.D. 2019) Current Position: Post-doctoral Fellow, Miller School of Medicine, University of Miami, Miami, FL.
Dissertation: The Immunosuppressive Role of Endothelin 3 in Melanoma.
- Sana Nasim (2017-Ph.D. 2020) Current Position: Post-doctoral Fellow, Boston Children's Hospital, Harvard Medical School, Cambridge, MA.
Dissertation: The Role of Neural Crest Cells in Valve Elastogenesis.
- Israel Castillo Gonzalez (2018-present)
Dissertation: Extracellular Matrix Regulation of Melanoma Cell Dormancy.
- Perony Nogueira (2019-present)
Dissertation: Elastogenesis in the Developing Murine Aortic Valve.

Major Advisor to Post-Doctoral Fellows

- Francois Rouzaud (2008-2009) Current Position: Director, Equal Opportunity Life Sciences, Washington, DC
- Flavia Carneiro (2009-2010) Current Position: Research Coordinator, VA Healthcare System, Miami, FL

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 Alejandro Conde (Institut Curie, Orsay, France (Larue) Ph.D. 2014)
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I have also mentored over 60 undergraduate students in my laboratory that have gone to PhD, MD, MD/PhD, DDS and PA programs at several institutions in the US.