JESSICA COSTA, D.M.D., Ph.D.

CURRICULUM VITAE

PERSONAL INFORMATION

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EDUCATION AND TRAINING

2000	B.A., Mount Holyoke College, South Hadley, MA Major: Biochemistry
2009	D.M.D., University of Connecticut School of Dental Medicine, Farmington, CT
2009	Ph.D. in Biomedical Sciences, University of Connecticut, Farmington, CT Area of Concentration: Skeletal, Craniofacial and Oral Biology
2009-2015	Postdoctoral Fellow Center for Molecular Medicine University of Connecticut Health Center, Farmington, CT

ACADEMIC APPOINTMENTS

2015-present	Research Instructor, Center for Regenerative Medicine and Skeletal Development, Department of Reconstructive Sciences University of Connecticut School of Dental Medicine Farmington, CT Affiliated Investigator, Center for Molecular Medicine University of Connecticut School of Medicine Farmington, CT

AWARDS

2004	University of Connecticut School of Dental Medicine Dean's Award for Outstanding Student Research
2004	"Most Outstanding Presentation" at Hinman Student Research Symposium, a national meeting co-sponsored by the Hinman Dental Society and the University of Tennessee College of Dentistry, Memphis, TN
2007	Lepow Fellowship Award for outstanding graduate student at the University of Connecticut Health Center in his/her fourth year
2010	Endocrine Society Travel Award

2010	ASBMR President's Poster Competition Award
2011	Lawrence G. Raisz Fund for Musculoskeletal Research and Education Travel Award

FUNDED GRANTS

F32 DE021307 8/1/2010-9/30/2012
NIH / NIDCR
Modeling of Hyperparathyroidism-Jaw Tumor Syndrome by Targeted Deletion of *Hrpt2*

PRESENTATIONS

2001	Poster presentation, American Society for Bone and Mineral Research Annual Meeting "Mutational Analysis Of Connexin 26 as a Candidate Tumor Suppressor Gene in Parathyroid Carcinoma"
2002	Poster presentation, American Society for Bone and Mineral Research Annual Meeting "Spectrum of Mitochondrial Sequence Variants in Normal and Hyperplastic Parathyroid Glands"
2003	Poster presentation, Endocrine Society Annual Meeting **"**Mutational Analysis of *PPARG* as a Candidate Tumor Suppressor Gene in Enteropancreatic Endocrine Tumors"
2004	Oral presentation, Hinman National Student Research Symposium "Nonrandom Clustering of Mitochondrial DNA Mutations in Parathyroid Adenomas"
2005	Poster presentation, American Society for Bone and Mineral Research Annual Meeting "Mutational Analysis of the PTH 3' Untranslated Region in Primary Parathyroid Disorders"
2006	Poster presentation, American Association for Cancer Research Annual Meeting "Loss of Heterozygosity Analysis of Parathyroid Adenomas by Single Nucleotide Polymorphism Arrays"
2006	Invited speaker for Skeletal, Craniofacial and Oral Biology Area of Concentration, University of Connecticut Health Center Graduate Student Research Day "Molecular Pathogenesis of Parathyroid Neoplasia"
2006	Poster presentation, Endocrine Society Annual Meeting "DiGeorge Syndrome Critical Region Gene 8 as a Candidate Gene in Familial Isolated Hypoparathyroidism"
2006	Plenary poster presentation, American Society for Bone and Mineral Research Annual Meeting "MicroRNA Genes *miR-15a* and *miR-16-1* are Frequently Deleted but not Mutated in Parathyroid Carcinoma
2006	Oral presentation, American Society of Human Genetics Annual Meeting "Genome-Wide Copy-Number Analysis of Parathyroid Carcinomas by Single Nucleotide Polymorphism Arrays"
2007	Lepow Award presentation, University of Connecticut Health Center Graduate Student Research Day "Molecular Pathogenesis of Parathyroid Neoplasia"

2010 Poster Presentation, American Society for Bone and Mineral Research Annual Meeting
"Germline and Somatic Mutations of CDKN1B, encoding p27Kip1, in Sporadic Parathyroid Adenomas"

2011 Poster Presentation, NIDCR Poster Session at the American Association for Dental Research Annual Meeting
"Germline and Somatic Mutations of CDKN1B, encoding p27Kip1, in Sporadic Parathyroid Adenomas"

2011 Poster Presentation, American Society for Bone and Mineral Research Annual Meeting
"Germline and Somatic DNA Variants in Cyclin-Dependent Kinase Inhibitor Genes in Sporadic Parathyroid Adenomas"

2013 Poster presentation, Endocrine Society Annual Meeting
"Parathyroid-Specific Deletion of *Hrpt2* in Mice Results in Hypoparathyroidism"

2013 Poster Presentation, University of Connecticut Health Center's Endocrine Research Symposium
"Parathyroid-Specific Deletion of *Hrpt2* in Mice Results in Hypoparathyroidism"

2013 Poster presentation, American Society for Bone and Mineral Research Annual Meeting
"Loss of Parafibromin Immunoreactivity in Sporadic Ossifying Fibroma"

2014 Poster presentation, American Association for Dental Research Annual Meeting
"Whole Exome Sequence Analysis of Sporadic Ossifying Fibroma"

2014 Career Panel; Skeletal, Craniofacial and Oral Biology Program Annual Symposium, University of Connecticut Health Center

ORIGINAL ARTICLES

1. Ferrington DA, Sun H, Murray KK, **Costa J,** Williams TD, Bigelow DJ, Squier TC. Selective degradation of oxidized calmodulin by the 20 S proteasome. J Biol Chem. 2001 276(2):937-43

2. Shattuck TM, **Costa J**, Bernstein M, Jensen RT, Chung DC, Arnold A. Mutational analysis of Smad3, a candidate tumor suppressor implicated in TGF-beta and menin pathways, in parathyroid adenomas and enteropancreatic endocrine tumors. J Clin Endocrinol Metab. 2002 87(8):3911-4

3. Arnold A, Shattuck TM, Mallya SM, Krebs LJ, **Costa J**, Gallagher J, Wild Y, Saucier K. Molecular pathogenesis of primary hyperparathyroidism. J Bone Miner Res. 2002 17(Suppl 2):N30-6

4. Shattuck TM, Kim TS, **Costa J**, Yandell DW, Imanishi Y, Palanisamy N, Gaz RD, Shoback D, Clark OH, Monchik JM, Wierman ME, Hollenberg A, Tojo K, Chaganti RS, Arnold A. Mutational analyses of RB and BRCA2 as candidate tumour suppressor genes in parathyroid carcinoma. Clin Endocrinol (Oxf). 2003 59(2):180-9

5. **Costa J,** Shattuck TM, Imanishi Y, Palanisamy N, Gaz RD, Shoback D, Clark O, Monchik J, Wierman M, Hollenberg A, Tojo K, Chaganti RSK, Arnold A. Mutational analyses of Connexin 26 , Connexin 30 and Connexin 46 as candidate tumor suppressor genes in parathyroid carcinoma. J Endocr Genet. 2003 3:57-62

6. **Costa-Guda J**, Rosen ED, Jensen RT, Chung DC, Arnold A. Mutational analysis of PPARG as a candidate tumour suppressor gene in enteropancreatic endocrine tumours. Clin Endocrinol (Oxf). 2005 62(5):603-6

7. Mallya SM, Gallagher JJ, Wild YK, Kifor O, **Costa-Guda J**, Saucier K, Brown EM, Arnold A. Abnormal parathyroid cell proliferation precedes biochemical abnormalities in a mouse model of primary hyperparathyroidism. Mol Endocrinol. 2005 19(10):2603-9

8. **Costa-Guda J**, Lauter K, Naveh-Many T, Silver J, Arnold A. Mutational analysis of the PTH 3' untranslated region in parathyroid dysfunction. Clin Endocrinol (Oxf). 2006 65(6):806-9

9. **Costa-Guda J**, Arnold A. Absence of stabilizing mutations of β-catenin encoded by CTNNB1 exon 3 in a large series of sporadic parathyroid adenomas. J Clin Endocrinol Metab. 2007 92(4):1564-6

   Invited commentary: J Clin Endocrinol Metab. 2007 92(4):1235-6

10. **Costa-Guda J**, Tokura T, Roth SI, Clive J, Arnold A. Mitochondrial DNA mutations in oxyphilic and chief cell parathyroid adenomas. BMC Endocrine Disorders. 2007 7:8

11. **Costa-Guda J,** Marinoni I, Molatore S, Pellegata N, Arnold A. Somatic mutation and Germline Sequence Abnormalities in *CDKN1B*, encoding p27Kip1, in sporadic parathyroid adenomas. J Clin Endocrinol Metab. 2011 96(4):E701-6

12. **Costa-Guda J,** Imanishi Y, Palanisamy N, Kawamata N, Koeffler HP, Chaganti RSK, Arnold A. Allelic imbalance in parathyroid carcinoma. Endocrine. 2013 DOI 10.1007/s12020-013-9903-4

13. **Costa-Guda J**, Soong CP, Parekh VI, Agarwal SK, Arnold A. Germline and Somatic Mutations in Cyclin-Dependent Kinase Inhibitor Genes CDKN1A, CDKN2B, and CDKN2C in Sporadic Parathyroid Adenomas. Horm Cancer. 2013 DOI 10.1007/s12672-013-0147-9

REVIEWS/CHAPTERS

1. **Costa-Guda J**, Arnold A. Hyperparathyroidism. In: Thakker RV, Whyte MP, Eisman JA, Igarashi T, editors. Genetics of Bone Biology; Elsevier/Academic Press. 2012

2. **Costa-Guda J**, Arnold A. Genetics and Epigenetics of Endocrine Neoplasia: Parathyroid Tumors. Mol Cell Endocrinol. 2014 http://dx.doi.org/10.1016/j.mce.2013.09.005

PUBLISHED ABSTRACTS

Costa J, Shattuck T, Arnold A. Mutational analysis of Connexin 26 as a candidate tumor suppressor gene in parathyroid carcinoma. J Bone Miner Res. 2001 16(Suppl 1):S242

Mallya SM, Gallagher JJ, Wild YK, **Costa J**, Saucier K, Arnold A. Abnormal parathyroid cell proliferation preceded biochemical abnormalities in a mouse model of primary hyperparathyroidism. Program and Abstracts-Endocrine Society Annual Meeting 2002 #OR2-3

Shattuck TM, Kim TS, **Costa J**, Yandell D, Imanishi Y, Palanisamy N, Gaz RD, Shoback D, Clark O, Monchik J, Wierman M, Hollenberg A, Tojo K, Chaganti RSK, Arnold A. Investigation of Rb and BRCA2 as candidate tumor suppressor genes in parathyroid carcinoma. Program and Abstracts-Endocrine Society Annual Meeting 2002 #P3-502

Shattuck TM, **Costa J**, Bernstein M, Jensen RT, Chung DC, Arnold A. Mutational Analysis of *SMAD3*, a candidate tumor suppressor implicated in TGFβ and menin pathways, in parathyroid adenomas and enteropancreatic endocrine tumors. Program and Abstracts-Endocrine Society Annual Meeting 2002 #P3-501

Costa J, Tokura T, Arnold A. Spectrum of mitochondrial sequence variants in normal and hyperplastic parathyroid glands. J Bone Miner Res. 2002 17(Suppl 1):S281

Costa J, Rosen ED, Jensen RT, Chung DC, Arnold A. Mutational analysis of PPARG as a candidate tumor suppressor gene in enteropancreatic endocrine tumors. Program and Abstracts-Endocrine Society Annual Meeting 2003 #P2-440

Costa-Guda J, Naveh-Many T, Silver J, Arnold A. Mutational analysis of the PTH 3' untranslated region in primary parathyroid disorders. J Bone Miner Res. 2005 20(Suppl 1):S299

Costa-Guda J, Samander E, Arnold A. Loss of heterozygosity analysis of parathyroid adenomas by single nucleotide polymorphism arrays. Proc AACR Annual Meeting 2006 #2615

Costa-Guda J, Forbes V, Arnold A. DiGeorge syndrome critical region gene 8 as a candidate gene in familial isolated hypoparathyroidism. Program and Abstracts-Endocrine Society Annual Meeting 2006 #P3-498

Costa-Guda J, Arnold A. MicroRNA genes *miR-15a* and *miR-16-1* are frequently deleted but not mutated in parathyroid carcinoma. J Bone Miner Res. 2006 21(Suppl 1):S118

Costa-Guda J, Kawamata N, Koeffler HP, Arnold A. Genome-wide copy-number analysis of parathyroid carcinomas by single nucleotide polymorphism arrays. Abstracts-ASHG Annual Meeting 2006 #97

Costa-Guda J, Arnold A. A screen of parathyroid carcinoma for commonly altered cancer genes, Proc AACR Annual Meeting 2007

Costa-Guda J, Marinoni I, Molatore S, Pellegata N and Arnold A. Germline and Somatic Mutations of CDKN1B, encoding p27Kip1, in Sporadic Parathyroid Adenomas. ASBMR Annual Meeting 2010: SU0451

Costa-Guda J, Soong CP, Arnold A. Germline and Somatic DNA Variants in Cyclin-Dependent Kinase Inhibitor Genes in Sporadic Parathyroid Adenomas. ASBMR Annual Meeting 2011: SU0172

Costa-Guda J, Cohen ST, Acostamadiedo J, Saucier K, Arnold A. Parathyroid-Specific Deletion Of Hrpt2 In Mice Results In Hypoparathyroidism, Endocrine Society Annual Meeting 2013

Costa-Guda J, Arnold A. Loss of Parafibromin Immunoreactivity in Sporadic Ossifying Fibroma, ASBMR Annual Meeting 2013: SU0464

Costa-Guda J, Arnold A. Whole Exome Sequence Analysis of Sporadic Ossifying Fibroma, AADR Annual Meeting 2014: 1603

Romano R, Soong CP, Rose M, **Costa-Guda J**, Bellizzi J and Arnold A. EZH2 Copy Number and Mutational Analyses in Sporadic Parathyroid Adenomas, Endocrine Society Annual Meeting 2015: LBT-056

Ellis LS, Romano R, **Costa-Guda J**, Bellizzi J and Arnold A. Mutational Analysis of ZFY in Sporadic Parathyroid Adenomas, Endocrine Society Annual Meeting 2015: PP08