RÉSUMÉ

BREANDÁN NOEL KENNEDY Ph.D.

UCD Conway Institute & UCD School of Biomolecular and Biomedical Sciences
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SCIENTIFIC EXPERIENCE

'Principal Investigator'

2003-present; UCD: Senior Lecturer in School of Biomolecular & Biomedical Sciences, and UCD Conway Institute Fellow.

'Postdoctoral Fellow'

2000-2003: UNIVERSITY OF WASHINGTON, SEATTLE, USA: Senior fellow in Prof. James Hurley's lab. Projects analysed eye development using mutant zebrafish and investigated cone photoreceptor function using transgenic zebrafish.

1999-2000, UNIVERSITY OF NOTRE DAME, INDIANA, USA: Postdoctoral fellow in Prof. David Hyde's lab. Projects include characterization of promoters directing rod photoreceptor-specific expression in transgenic zebrafish.

'Graduate Student'

1994-1998, W. ALTON JONES CELL SCIENCE CENTER, NEW YORK, USA: Ph.D. thesis research under supervision of Dr. John Crabb. Studies investigated the regulation of CRALBP transcription, targeted disruption of the mouse CRALBP gene, and identification and analysis of a mutation in CRALBP segregating with retinitis pigmentosa.

EDUCATION

1993-1999, UNIVERSITY COLLEGE DUBLIN: Ph.D. in Pharmacology/Cell and Molecular Biology.
1989-1993, UNIVERSITY COLLEGE DUBLIN: B.Sc. (Hons.) in Pharmacology.

GRANTS

2009, **Enterprise Ireland**, *Proof of Concept programme, Small Molecule Anti-Angiogenenics for Retinal Therapy. .* Primary PI.

2008, ***Science Foundation Ireland***, *Research Frontiers Project Grant. Defining the Targets and Functional Domains of RX3, an essential gene for eye development. .* Primary PI.

2007; ***Science Foundation Ireland*** Equipment Grant, Spinning Disk Confocal Co-Applicant.

2007-2010, **Medical Research Charities Group & Helath Research Board.** Co-funded Research Awards Scheme. *Directing Retinal Stem Cells to become Functionally Integrated Cone Photoreceptors in host Retinas*. Principal Investigator. .

2006; ***Science Foundation Ireland*** Equipment Grant, IVIS Spectrum In Vivo Imaging System Co-Applicant

2006-2009: ***Health Research Board,*** Research Project Grant '*CRALBP function in vision and circadian rhythms"*. Principal Investigator. .

2006-2009; ***Science Foundation Ireland***, *Research Frontiers Project Grant. Identification and Characterisation of Molecular Regulators of Circadian Rhythms.* Primary PI.

2006-2009: ***Science Foundation Ireland***, *Research Frontiers Project Grant. Identification and Characterisation of Genetic Determinants of Retinal Vasculature using Zebrafish*. Primary PI.

2006-2009; **Science Foundation Ireland**. UREKA site Award. 'Explorations from gene to protein function'. Co-applicant

2005+2006; **Science Foundation Ireland**. UREKA Supplement Award.PI

2004-2008: ***Science Foundation Ireland*** *Investigator Programme Grant* 'Applying Mutagenesis Screens in Zebrafish to Identify and Characterise Genes with Unique and Essential Functions in Cone Photoreceptors of the Visual System. Principal Investigator.

2004-2006: ***American Health Assistance Foundation, Macular Degeneration Grant***. '*Novel Cone-Specific Genes: Therapeutic Targets for MD*'.

2005-2008, ***Science Foundation Ireland***, *Research Frontiers Project Grant*. Applying Transgenic Zebrafish Technology to Characterise In Vivo the Molecular Regulators of Cone Photoreceptor Specification. Principal Investigator

2003-2006; ***Health Research Board,*** Research Project Grant '*In Vivo Models of Human Blindness Characterized by Dominant Cone-Rod Dystrophy (dCORD)*'. Principal Investigator .

2004; ***Science Foundation Ireland*** Equipment Grant, 'Imaging Lab'. Co-Applicant.

2005-2008; **European Union**. *Molecular Neuro-Immunology Early Stage Training*. Co-Applicant.

AWARDS

2004, National Eye Institute "Young Investigator Travel Award" to XIth International Symposium on Retinal Degeneration (RD2004), Perth, Australia

2004-2005*; 'Presidents Research Award'*

2000-2001, Postdoctoral fellowship from Howard Hughes Medical Institute.

2000, Travel award to 4th International Zebrafish Development & Genetics Meeting, CSH, NY.

1999-2000, Postdoctoral fellowship from the Keck Center for Transgene Research.

1993-1998, Ph.D. scholarship from W. Alton Jones Cell Science Center.

INVITED JOURNAL REVIEWER

Invited *ad hoc* reviewer for *Journal Biological Chem*istry, *Investigative Ophthalmology and Visual Science*; *Current Eye Research.*; *Proceedings National Academy Science, USA*; *Nucleic Acids Research.*, Molecular Cellular Neuroscience, Molecular Vision, European Journal Human Genetics, *DNA SEQUENCE*

INVITED GRANT REVIEWER

2010, Medical Research Council, UK.

2007, UCD Seed Funding Scheme.

PUBLICATIONS

2011, AL. Reynolds, OE. Blacque and **BN. Kennedy**.THE GENETICS OF OUTER SEGMENT MORPHOGENESIS IN ZEBRAFISH. *Adv Exp Med Biol.* IN PRESS

2010, ML. Cederlund, T Baden, V Vendrell, L Lagnado, VP Connaughton and **BN. Kennedy.** ZEBRAFISH Tg(7.2mab21l2:EGFP) TRANSGENICS REVEAL A UNIQUE POPULATION OF RETINAL AMACRINE CELLS. IN PRESS.

2010, P Atzei; F Yang; R Collery; **BN Kennedy**; P Moynagh. Characterisation of expression patterns and functional role of Cactin in early zebrafish development. *Gene Expression Patterns Gene Expr Patterns. 2010 Jun;10(4-5):199-206, PMID: 20348034*.

2010, J Yin, S McLoughlin, IB Jeffery, A Glaviano, **BN Kennedy,** DG Higgins Integrating multiple genome annotation databases improves the interpretation of microarray gene expression data. BMC GENOMICS. Jan 20;11(1):50. PMID: 20089164.

2010, Alvarez Y, Chen K, Reynolds A, Waghorne N, O'Connor J. and. **Kennedy. BN**. Predominant Cone Photoreceptor Dysfunction in a Hyperglycaemic Model of Non- Proliferative Diabetic Retinopathy. *Dis Model Mech. Mar-Apr;3(3-4):236-45 PMID: 20142328*

2010, Collery R.F, and. **Kennedy B.N**. Photoreceptor Guanylate Cyclases and cGMP Phosphodiesterases in Zebrafish. *Adv Exp Med Biol.*;664:55-61, PMID: 20238002

2009, Y. Alvarez, O Astudillo-Fernandez, L. Jensen, A. Reynolds, N. Waghorne, D. Brazil, Y. Cao, J. O'Connor, **BN Kennedy**. *Selective Inhibition of Retinal Angiogenesis by Targeting PI3 Kinase*". *Plos One*. Nov 17;4(11):e7867.PMID: 19924235.

2009, Malicki, J and **Kennedy B.N,** What drives cell morphogenesis - a look inside the vertebrate photoreceptor. *Dev. Dyn*. *Sep;238(9):2115-38. Review. PMID: 19582864*

2008, Coss A, Tosetto M, Fox E, Sapetto-Rebow B, Gorman S, **Kennedy B**, Lloyd, Hyland J, O'Donoghue D, Sheahan K, Leahy D, Mulcahy H, O'Sullivan J. Increased Topoisomerase IIα Expression in Colorectal Cancer is Associated with Pathologically Aggressive Disease and Leads to Chemotherapy Resistance via Inhibition of Apoptosis. *Cancer Lett. Apr 18;276(2):228-38*.

2008, Collery R, McLoughlin S, Vendrell V, Finnegan J, Crabb JW, Saari JC, **Kennedy BN**. Duplication And Divergence Of Zebrafish CRALBP Genes Uncovers A Novel Role For RPE- And Muller-CRALBP In Cone Vision. *Invest Ophthalmol Vis Sci.* Sep;49(9):3812-20. PMID: 18502992

2008; Smyth VA, Di Lorenzo D, **Kennedy BN**. *A novel, evolutionary conserved enhancer of cone photoreceptor-specific expression. J Biol Chem*. 18;283(16):10881-91; [Epub ahead of print]

2007, Alvarez, Y.; Cederlund, M. L.; Cottell, D. C.; Bill, B. R.; Ekker, S. C.; Torres-Vazquez, J.; Weinstein, B. M.; Hyde, D. R.; Vihtelic, T. S.; **Kennedy, B. N.** *Genetic determinants of hyaloid and retinal vasculature in zebrafish*. BMC Dev Biol. 7, 114.

2007, **Kennedy, B.N.**; Yolanda Alvarez; Brockerhoff, S.E.; Stearns, G.; Sapetto-Rebow, B., Taylor, M.R.; and Hurley, J.B. Identification Of A Zebrafish Cone-Specific Promoter And Genetic Rescue Of Achromatopsia In The nof Mutant. *Invest. Ophth. Vis. Sci.,* 48, 522-529.

2004, **Kennedy, B.N**., Stearns, G.W., Smyth, V.S., Ramamurthy, V, Ankoudinova, I., Van Eeden, F, Raible, D., Hurley, J.B. and Brockerhoff, S.E. *Zebrafish rx3 and mab21l2 Are Required During Eye Morphogenesi*s. Dev. Biol. 270, 2, 336-342.

2003, **Kennedy, B.N.**, Li, C., Ortego, J., Coca-Prados, M., Sarthy, V.P. and Crabb, J.W. *CRALBP Transcriptional Regulation in Ciliary Epithelial, Müller and Retinal Pigment Epithelial Cells. Exp. Eye Res. 76, 257-260*.

2003, Brockerhoff S.E., Rieke, F., Matthews, H.R., Taylor, M.R., **Kennedy, B.N**., Ankoudinova, I., Niemi, G.A., Tucker, C.L., Xiao, M., Cilluffo, Fain, G.L., and Hurley, J.B. *Light stimulates a transducin-independent increase of cytoplasmic Ca^{2+} and a suppression of current in cones from the zebrafish mutant nof. J. Neurosci. 23, 470-480*.

2001, **Kennedy, B.N.**, Vihtelic, T.S., Checkley, L, Vaughan, K.T. and Hyde D. *Isolation of a Zebrafish Rod Opsin Promoter to Generate a Transgenic Zebrafish Line Expressing EGFP in Rod Photoreceptors*. *J. Biol. Chem.,* 276, 14037-14043.

2001, Saari, J.C., Nawrot, M., **Kennedy, B.N.**, Garwin, G.G., Hurley, J.B., Huang, J., Possin, D.E. and Crabb, J.W. *Visual Cycle Impairment in the Cellular Retinaldehyde-Binding Protein (CRALBP) Knockout Mice Results in Delayed Dark Adaptation*. *Neuron*, 29, 739-748.

1998, **Kennedy, B.N.**, Huang, J., Saari, J.C. and Crabb, J.W. *Molecular characterization of the mouse gene encoding cellular retinaldehyde-binding protein*. *Molecular Vision*, 4, 14

1998, **Kennedy, B.N**., Goldflam, S., Chang, M.A., Campochiaro, P.A., Davis, A.A., Zack, D.J., and Crabb, J.W. *Transcriptional regulation of the human gene encoding cellular retinaldehyde-binding protein*. *J. Biol. Chem.,* 273, 5591-5598.

1998, Sarthy, V., Brodjian, S., Dutt, K., **Kennedy, B.N**, French, R., and Crabb, J. *Establishment and characterization of a retinal Müller cell line*. *Invest. Ophth. Vis. Sci.,* 39, 212-216.

1997, Maw, M.A., **Kennedy, B.N**., Knight, A., Bridges, R., Roth, K., Mani, E., Mukkadan, J., Nancarrow, D., Crabb, J.W., and Denton, M.J. *R150Q mutation of cellular retinaldehyde-binding protein in autosomal recessive retinitis pigmentosa*. *Nature Genetics,* 17, 198-200.

BOOK CHAPTERS

2006, Collery, R.F., Cederlund, M.L., Smyth, V.A. and **Kennedy, B.N.** *Applying Transgenic Zebrafish Technology To Study The Retina*, in: *Advances in Experimental Medicine and Biology vol 572: Retinal Degenerative Diseases* (eds. Hollyfield J.G., Anderson, R.E., and La Vail M.M.) Springer pp 201-207.

1999, **Kennedy, B.N.**, Saari, J.C., and Crabb, J.W. CRALBP and inherited retinal degeneration, in: *Retinal Degenerative Disease and Experimental Therapy* (eds. Hollyfield J.G., Anderson, R.E., and La Vail M.M.) Plenum, NY pp 43-53.

ABSTRACTS

2009, S. McLoughlin, B. N. Kennedy. Genetics of the zebrafish shadow response. XI Congress of the European Biological Rhythms Society, Strasbourg, France

2009, L. Shine, B. Sapetto-Rebow, Y. Alvarez, S. McLoughlin, B. N. Kennedy. Retinal Progenitor Apoptosis and Aberrant Photoreceptor Morphology Characterise The dying on edge (dye) Mutant. 6th European Zebrafish Genetics and Development Meeting, Rome, Italy.

2009, Y. Alvarez, N. Waghorne, O. Astudillo-Fernandez, L. Jensen, S. McLoughlin, Y. Cai & BN. Kennedy. Chemical Inhibitors of Developmental Angiogenesis in the Eye. 6th European Zebrafish Genetics and Development Meeting, Rome, Italy.

2009, AL. Reynolds, B. Sapetto-Rebow, KJ. Curtin, L. Shine, D. Cottell, Y. Alvarez and BN. Kennedy. DEFECTIVE PHOTORECEPTORS UNDERLIE INHERITED BLINDNESS IN THE RAIFTEIRI MUTANT. 6th European Zebrafish Genetics and Development Meeting, Rome, Italy.

2009, Yolanda Alvarez, Kenneth Chen, Alison Reynolds, Nora Waghorne, John O'Connor and Breandan Kennedy. Recapitulating Early Stages of Diabetic Retinopathy in Hyperglycaemic Zebrafish. 6th European Zebrafish Genetics and Development Meeting 2009, Rome, Italy.

2009, Y. Alvarez, N. Waghorne, O. Astudillo-Fernandez, L. Jensen, S. McLoughlin, Y. Cao & BN. Kennedy. Chemical Inhibitors of Developmental Angiogenesis in the Eye. 6th European Zebrafish Genetics and Development Meeting 2009, Rome, Italy.

2009 AL Reynolds, B.Sapetto-Rebow, KJ Curtin, L Shine, S McLoughlin, D. Cottell, Y Alvarez and BN Kennedy Defective Photoreceptors Underlie Inherited Blindness in the Raifteirí mutant. Association for Research in Vision and Ophthalmology. (ARVO) 2009 Annual Meeting, Fort Lauderdale, Florida.

2008. **B. Kennedy**, R. Collery, M. Cederlund, A. Glaviano, S. McLoughlin, O. Astudillo-Fernandez, Y. Alvarez. Determinants of Retinal Vasculature and Cone Photoreceptor Integrity. Invest. Ophthalmol. Vis. Sci. .

2007: S. McLoughlin, R. Collery, **B. Kennedy**. The Role of Visual Phototransduction Genes in Zebrafish Circadian Rhythms. 72nd CSHL Symposium, Clocks and Rhythms, Cold Spring Harbor, Long Island, New York, USA

2007: M. Cederlund, P. O'Gaora, B. Sapetto-Rebow, F. Yang, and **B. Kennedy.** A Novel Role for Mab21l2 in Zebrafish Retinogenesis?. Invest. Ophthalmol. Vis. Sci. 2007 48: E-Abstract 61.

2007, ML Cederlund, DC. Cottell, B Sapetto-Rebow, F Yang, **BN Kennedy**. Novel roles for mab21l2 in zebrafish eye, branchial arches and pectoral fin development. 5th European Zebrafish Genetics and Development Meeting, Amsterdam, Netherlands

2007 B. Sapetto-Rebow, Y. Alvarez, R. Collery, F. Yang, O. Astudillo Fernandez, S.McLoughlin, T. Heffernan, Maria Cederlund, Vincent Smyth, Maria Morrisey, A. Glaviano, E. Wickham, R. Kuehn, J. Lewis, E. Breen, G. Plucinska, **B.N. Kennedy**. Mutagenesis screen for cone photoreceptors determinants. Irish Network of Developmental Biologists , Cork. Meeting, Cork

2007. Morrissey, M.E., Smyth, V.A., **Kennedy, B.N.** Defining Determinants that Control Cone Photoreceptor-Specific Gene Expression. Irish Network of Developmental Biologists meeting 2007.

2007: V. A. Smyth, M. E. Morrissey, D. D. Lorenzo, P. O'Gaora, M. Flanagan, C. Cagney, and **B. N. Kennedy.** A Novel 20 bp Enhancer Region Controls Cone-Specific Expression. Invest. Ophthalmol. Vis. Sci. 48: E-Abstract 4665.

2007: **B.N. Kennedy**, O. Astudillo, D. C. Cottell, G. Plucinska, E. Breen, B. Bill, J. Torres-Vazquez, T. Vihtelic, and Y. Alvarez. Characterisation of the Morphology and Genetic Determinants of Retinal Vasculature in Zebrafish. Invest. Ophthalmol. Vis. Sci. 48: E-Abstract 5702.

2007: R. Collery, M. Cederlund, B. Sapetto-Rebow, F. Yang, D. Cottell, and **B. Kennedy**. Transgenic Expression of Human Mutant RetGC-1 in Zebrafish Cone Photoreceptors Leads to Progressive Degenerate Cone Morphology. Invest. Ophthalmol. Vis. Sci. 48: E-Abstract 2984.

2007: Smyth,ViA.; Morrissey, ME.; Di Lorenzo, D.; O' Gaora, P.; Flanagan, M.; Cagney, G.; **Kennedy, B N.** *A novel 20 bp enhancer region is necessary for cone photoreceptor gene expression in zebrafish.* CSHL Symposium, Mechanisms of Eukaryotic Transcription, Cold Spring Harbor, Long Island, New York, USA

2007: Alvarez Y, Astudillo, O., Cederlund M., Cottell DC., Bill B., Torres-Vazquez J., Vihtelic T. and **Kennedy B.N.** *Zebrafish: A Novel In Vivo Model To Identify And Characterise Molecular Regulators Of Retinal Vasculature.* 5th European Zebrafish Genetics & Development Conference, Amsterdam.

2007: Cederlund M., Cottell D.C., Sapetto-Rebow. B.. and **Kennedy B.N.** *Novel roles for mab21l2 in zebrafish eye, branchial arches, and pectoral fin development.* 5th European Zebrafish Genetics & Development Conference, Amsterdam.

2006; Smyth, V.A.; Heffernan, T.A.; Di Lorenzo, D.; ***Kennedy, B.N****. A Novel 20 bp Enhancer Region Controls Cone-specific Expression. 1st International Conference of Ocular Cell Biology, Cambridge UK.*

2006: RF Collery, ML Cederlund and ***BN Kennedy****. Transgenic Expression of Human RetGC-1 in Zebrafish Cone Photoreceptors. 1st International Conference of Ocular Cell Biology, Cambridge UK*

2006: Y Alvarez, E Breen, B Bill, J Torrez-Vazquez, T Vihtelic and ***B.N. Kennedy.*** *Zebrafish: A Novel Model to Characterise Genetic Determinants of Retinal Vasculature. 1st International Conference of Ocular Cell Biology, Cambridge UK.*

2006; Smyth, V.A.; Heffernan, T.A.; Di Lorenzo, D.; ***Kennedy, B.N****. Characterisation of an Enhancer within the 5' flanking region of the Zebrafish Cone Transducin α-subunit. 7th International Conference on Zebrafish Development & Genetics, Madison, Wisconsin.*

2006, Cederlund M, Sapetto-Rebow B, O'Callaghan L, ***Kennedy B.N****. Regulation and function of zebrafish mab21l1 and mab21l2 genes. 7th International Conference on Zebrafish Development & Genetics, Madison, Wisconsin.*

2006, Y. Alvarez, E. Breen, B. Bill, J. Torres-Vazquez, T. Vihtelic and ***B.N. Kennedy****. Zebrafish: A Novel In Vivo Model To Identify And Characterise Genetic Determinants Of Retinal Vasculature.... "2nd PRO-RETINA RESEARCH-COLLOQUIUM. Retinal degeneration: "Illuminating the Molecular Complexities of the Retina" Postdam 7th-8th April,2006"*

2006, M. Cederlund, M. Ader, B. Sapetto-Rebow, **B.N. Kennedy.** *Regulation and function of Mab21l1 and `Mab21l2 genes. 5th Irish Network of Neuronal Stem Cell Investigators Conference, NUIG, Galway.*

2005; ***B.N. Kennedy*** *Y. Alvarez, Cederlund, M., Collery, R. &. Smyth, V.* Genetic Determinants of cone photoreceptor development and function. Strategic Conference of Zebrafish Investigators, MDIBL, ME.

2005; Y. Alvarez, U. Fearon, D. Veale & ***B.N. Kennedy****.* Characterisation Of The Zebrafish Retinal Vasculature. 4th European Zebrafish Genetics & Development Conference, Dresden. P156.

2005; M.C. Cederlund, R.F. Collery, & **B.N. Kennedy.** Generating transgenic zebrafish expressing human RetGC-1. 4th European Zebrafish Genetics & Development Conference, Dresden. P223.

2005; R.F. Collery, J.M. Finnegan *&* **B.N. Kennedy.** Characterisation of zebrafish *CRALBP* orthologues. 4th European Zebrafish Genetics & Development Conference, Dresden. *P138*.

2005; **B.N. Kennedy,** R.F. Collery, J.M. Finnegan**.** Characterisation of zebrafish *CRALBP* orthologues. Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL. *Invest. Ophthal. Vis Sci.* 46 (5), E3148

2005, V.A. Smyth, **B.N. Kennedy.** Identification of an enhancer within the 5' flanking region of the ConeTransducin α-subunit. Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL. *Invest. Ophthal. Vis Sci.* 46 (5), E3070

2004; **Kennedy, B.N.**; Collery, Ross; Cederlund, Maria; Hurley, James and Brockerhoff, Susan. *Determinants Of Cone Photoreceptor Function And Survival. XIth International Conference on Retinal Degeneration. Perth, Australia.*

2004, **Kennedy, B.N**., Bhattacharya, S, Crabb, J.S., Bonilha, V.L. and Crabb J.W. Preliminary In Vivo Analysis of CRALBP Transcriptional Regulation. *Invest. Ophthal. Vis Sci.* 45 (5), E1261. Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL.

2003, **Kennedy, B.N.**, Stearns, G.W., Ankoudinova I., Raible, D., Hurley, J.B. and Brockerhoff, S.E. Rx3 is required for eye development. European Zebrafish & Medaka Development and Genetics, Paris.

2002, **Kennedy, B.N.**, Stearns, G.W., Ankoudinova I., Raible, D., Hurley, J.B. and Brockerhoff, S.E. Visual and Photoneuroendocrine System Development in *eym* and TG(*T□CP-EGFP*). Zebrafish Development and Genetics, Madison, WI.

2001, **Kennedy, B.N.**, Shelton, S., Brockerhoff, S. and Hurley, J. Gene regulation and function in zebrafish cone photoreceptors. West Coast Zebrafish Meeting, Seattle, WA.

2001, **Kennedy, B.N.**, Shelton, S., Brockerhoff, S. and Hurley, J. Gene regulation and function in zebrafish cone photoreceptors. The Chemistry and Biology of Vision, FASEB Summer Conference, Tucson, AZ.

2000, Saari, J.C., Nawrot, M., **Kennedy, B.N.**, Hurley, J.B., Garwin G.G., Huang, J., and Crabb, J.W. CRALBP is required for a normal rate of 11-*cis*-retinal synthesis. *Invest. Ophthal. Vis Sci.* 41 (4). Association for Research in Vision and Ophthalmology (ARVO), Ft. Lauderdale, FL.

2000, **Kennedy, B.N.**, Vihtelic, T.S., Checkley, L. and Hyde, D.R. (2000) Retina-specific transgene expression in zebrafish. Zebrafish Development and Genetics, CSH, NY.

1999, **Kennedy, B.N.**, Checkley, L., Vihtelic, T.S., and Hyde, D.R. Cloning the zebrafish genes for rod and ultraviolet opsin. Great Lakes Vision Research Conference, Rochester, MI.

1999, Hyde, D.R., **Kennedy, B.N.**, Milligan, S.C., Elagina, R,B., Besharse, J.C. Expression of dominant RdgB transgenes in *Drosophila* and *Xenopus*. *Invest. Ophthal. Vis Sci.* 40 (4). ARVO, Ft. Lauderdale, FL.

1998, **Kennedy, B.N.**, Huang, J., Saari, J.C. and Crabb, J.W. Characterization of the mouse CRALBP gene. *Invest. Ophthal. Vis. Sci.* 39 (4), S39. ARVO, Ft. Lauderdale, FL.

1998, Ortego, J., **Kennedy, B.N.**, Crabb, J.W. and Coca-Prados, M. CRALBP gene regulation in ciliary epithelial cells. *Invest. Ophthal. Vis. Sci.* 39 (4), S39. ARVO, Ft. Lauderdale, FL.

1997, **Kennedy, B.N.**, Maw, M.A., Hulmes, J.D., Knight, A., Bridges, R., Roth, K., Mani, E., Mukkadan, J., Nancarrow, D., Denton, M.J. and Crabb, J.W. Autosomal recessive retinitis pigmentosa: characterization of a recombinant CRALBP mutant. 13th International Symposium on Cellular Endocrinology, Lake Placid, NY.

1997, **Kennedy, B.N.**, Huang, J., Saari, J.C. and Crabb, J.W. Comparison of the promoter regions of the mouse and human cellular retinaldehyde-binding protein (CRALBP) genes. *Invest. Ophthal. Visual. Sci* 38 (4), S1128. ARVO, Ft. Lauderdale, FL.

1997, Brodjian, S., **Kennedy, B.N.**, Crabb, J.W. and Sarthy, V. Regulation of the cellular retinaldehyde-binding protein (CRALBP) gene in Müller cells. *Invest. Ophthal. Vis. Sci.* 38 (4), S1129. ARVO, Ft. Lauderdale, FL.

1996, **Kennedy, B.N.**, Chang, M.A., Campochiaro, P., Zack, D.J. and Crabb, J.W. Potential regulators of CRALBP gene expression. *Invest. Ophthal. Vis. Sci.* 37 (3), S336. ARVO, Ft. Lauderdale, FL.

1995, **Kennedy, B.N.**, Goldflam, S., Chang, M.A., Hacket, S., Campochiaro, P., Davis, A., Zack, D.J., and Crabb, J.W. Promoter analysis of the human CRALBP gene. *Invest. Ophthal. Vis. Sci.* 36 (4), S124. ARVO, Ft. Lauderdale, FL.

1995, Chang, M.A., **Kennedy, B.N.**, Crabb, J.W., Hackett, S., Campochiaro, P., and Zack, D.J., (1995) Mobility shift assay of human CRALBP promoter. *Invest. Ophthal. Vis. Sci.* 36 (4), S124. ARVO, Ft. Lauderdale, FL.

1995, Saari, J.C., Huang, J., Champer, R.J., **Kennedy, B.N.**, Goldflam, S., and Crabb, J.W. Cloning of the mouse gene encoding cellular retinaldehyde-binding protein (CRALBP). *Invest. Ophthal. Vis. Sci.* 36 (4), S125. ARVO, Ft. Lauderdale, FL.

TEACHING

Teaching Certificate. University of Notre Dame (1999). A *Striving for Excellence in Teaching* Certificate following completion of teaching workshops.

Undergraduate Lectures. University College Dublin (2003, 2004, 2005, 2006. 2007), 2nd/3rd/4th year Science: *Introduction to Pharmacological Principles*, *Neuropharmacology I & Ocular Pharmacolgy*. 3rd year Medicine; *Anti-Asthmatic Drugs, Neuropharmacology*.

University of Notre Dame: (1999) 3rd year Genetics;*Transcription factors*; (1998) 3rd year Genetics; *Mechanisms of genetic diversity*,.

PHD STUDENTS.

Sarah McLoughlin. Genetic Investigation of Light-Responsive Behaviours and Circadian Rhythms in the Zebrafish Pineal. Completed Viva Sept. '10

-Maria Cederlund. *Genetic Analysis Of Zebrafish Mab21l2 In Development And Human RETGC In Disease*. Completed Viva July 09.

-Paola Altzei. Role *of Cactin in Innate Immunity Signalling and Development.* Completed Viva May 09.
-Vincent Smyth. *Molecular determinants of Cone Photoreceptor Exprerssion*. Completed Viva Nov. 08
-Ross Collery. *Genetic Analysis of RetGC and CRALBP in the zebrafish retina*. Completed Viva Jan. 08

. Yr. 3. Theresa Heffernan. Yr 3. Maria Morrissey. Yr. 3, Lisa Shine Yr 1
Jun. Yin. Co-supervisor. Yr. 2

PHD EXAMINER

2010. Fiona Lanigan. UCD School Biomolecular & Biomedical Sciences *"Molecular Links Between Mammary Gland Development and Breast cancer.*" Intern Examiner
2009: Stephen Nolan. UCD School Biomolecular & Biomedical Sciences *"An Immune Mediated Model Of Renal Epithelial-Mesenchymal Transition: Pro-Fibrotic Roles For Increased Tissue Transglutaminase Expression.*" Intern Examiner
2008, Aoife Campbell, UCD School Biomolecular & Biomedical Sciences *"Midblastula transition in Xenopus laevis. A proteomic analysis of the MBT".*" Intern Examiner.
2007: Caroline Currid, UCD School Biomolecular & Biomedical Sciences *"Links between Cancer and Ageing: p21 ^{waf1} and fibulin 4 as case studies*". Intern Examiner.
2006: Ping Gu, Center for Vision Research, Queens University Belfast. *"Isolation and Characterisatio of Porcine Retinal Progenitor* Stem Cells". Extern Examiner.
2006: Therese Cronin, Dept. Genetics, Trinity College Dublin. "*Exploration of Novel Therapeutics for ADRP*". Extern Examiner.
2006: Emmett Mc Ardle, UCD School Biomolecular & Biomedical Sciences. "*JNK in Mammary Acinus Formation*". Intern Examiner.
2006: Matt Campbell, UCD School Biomolecular & Biomedical Sciences. "*Tight Junction Expression at the Blood Retinal Barrier*". Intern Examiner.
2005: Lorna Cryan, Dept. Clinical Pharmacology, Royal College Surgeons, Ireland. "*The cyclooxygenase enzymes in health and disease*". Intern Examiner.

MEMBERSHIPS

International Society for Ocular Cell Biology (ISOCB)
Association for Research in Vision & Ophthalmology (ARVO)
All-Ireland Retinal Research Network (AIRRN)
Irish Network of Neuronal Stem Cell Investigators (INNSI)
Irish Network of Developmental Biologists (INDB)
COST Action BM0804 EuFishBioMed (Managing Committee Member)

INVITED SEMINARS

2010, RETINA 10 Conference, Dublin.
2010. UCD Conway Institute CLASS Seminar
2010, ANGIOKEM COST meeting, Malahide, Dublin
2009, International Society for Ocular Cell Biology Conference, Ericeira, Portugal
2008. Association for Research Vision and Ophthalmology Conference, Ft. Lauderdale, USA
2007; SFI Science Summit, Dublin
2007; (Keynote speaker) Vision, Recognised Research Group (Northern Ireland), Ballymena
2006, Neurogenetics Symposium, Trinity College Institute Neuroscience
2006, Biochemical Society, Trinity College Dublin
2006: Dept. Ophthalmology, Queens University Belfast.
2005, Dept. Genetics, Trinity College Dublin
2005, Institute of Molecular Medicine, St. James Hospital, Dublin.
2005, The Fighting Blindness Science Forum, Dublin.
2004, XIth International Symposium on Retinal Degeneration, Perth, Australia
2003, Irish Network of Developmental Biologists Conference, Dublin
2003, Dept. Zoology, Trinity College Dublin.
2002, 5th International Zebrafish Development and Genetics Conference, Madison, WI; USA.

2001, 2nd West Coast Zebrafish Meeting, Seattle, WA; USA.
2000, Dept. Biochemistry, University of Washington, WA; USA.
2000, Dept. Biochemistry, University of California San Francisco, CA; USA.
1998, Dept. Ophthalmology, Cleveland Clinic Foundation, OH; USA.
1998, Dept. Ophthalmology, Harvard Medical School, MA; USA.
1998, Dept. Biological Sciences, University of Notre Dame, IN; USA.
1998, Dept. Genetics, Hospital for Sick Children, ON, Canada.

MEETINGS ATTENDED

2007, 5th European Conference on Zebrafish & Medaka Development and Genetics, Amsterdam.
2006, 2009, International Society for Ocular Cell Biology, Cambridge/Portugal.
2005, Strategic Conference of Zebrafish Investigators, MDIBL, Maine
2005, 4th European Conference on Zebrafish & Medaka Development and Genetics, Dresden.

2008, 2007, 2005, 2004, 1999, 1998, 1997, 1996, 1995 Association for Research in Vision and Ophthalmology (ARVO) International Meeting, Ft. Lauderdale, FL.

2004, XIth International Symposium on Retinal Degeneration, Perth, Australia

2004, Fighting Blindness Science Forum, Dublin.
2004, Irish Network of Developmental Biologists, Galway.
2003, 3rd European Conference on Zebrafish & Medaka Development and Genetics, Paris.

2002, 5th International Conference on Zebrafish Development & Genetics, Madison, USA.

2001, Chemistry & Biology of Vision, FASEB Summer Conference, Tucson, AZ, USA.

1998, Great Lakes Vision Research Conference, Ann Arbor, MI, USA.

1997, *1996*, *1995*, *1994*, *1993*, International Symposia on Cellular Endocrinology; Lake Placid, USA:

1996, Third Dartmouth Symposium in Life Sciences, New Hampshire, USA, 'Regulation of Gene Expression'.

Training

NOVA UCD IPR Course
STEM CELL MASTER COURSE (DCU)

Commercialisation

Licence agreement signed with DanioLabs UK
Product development with Biostatus, UK

IDF on novel antiangiogenic drugs submitted to NOVA UCD.- patent application in process