**F12: Recent significant research output and ARC grants since 2005**

**(1) – Publications: SG Crewther, 2005– 2015**

\* indicates relevant to this application

**(ii) Scholarly Book Chapters**

1. **Crewther, SG**, Goharpey N, Bannister L, Lamp G (2012) Goal-driven attention in recovery post-stroke. In Carey, LM (Ed.) Stroke Rehabilitation: Insights from Neuroscience and Imaging. Oxford University Press.
2. \* Goharpey N, Laycock R, Crewther, DP, **Crewther SG** (2010) Does disregard of transient changes in the environment differentiate behaviour of children with autism from typically developing children and those with Down syndrome and idiopathic intellectual disability? In: Eklund LC, Nyman AS (Eds.) Learning and Memory Developments and Intellectual Disabilities. Nova Science Publishers.
3. \* Cooper A, **Crewther SG**, Laycock R (2009). Examining the multidimensional nature of reading fluency. In: Thompson DR, Bushnell LE (Eds.) Reading: Learning, Writing and Disorders. Nova Science Publishers.
4. \* Goharpey N, Crewther DP, **Crewther SG** (2010) Intellectual Disability: Beyond IQ Scores. In: Eklund LC, Nyman AS (Eds.) Learning and Memory Developments. Nova Science Publishers.
5. Murphy MJ,  **Crewther SG**, Crewther DP (2009) An ON/Off solution for myopia. In: Higgins J, Peyton DD (Eds.) Eye Infections, Blindness and Myopia. Nova Science Publishers.
6. \* Cotton, SM, **Crewther SG** (2009) Developmental dyslexia: a conceptual and measurement quandary. In Salas NH, Peyton DD (Eds.) Reading: Assessment, Comprehension and Teaching. Nova Science Publishers.
7. **\* Crewther SG**. Kiely PM, Junghans BM, Crewther DP. 2005 Why regular visual assessments are aids to educational outcomes rather than unnecessary luxuries**.** Invited Editorial Education Magazine. WA Australia

**(iii) Refereed Journal Articles**

1. H Wang, **SG Crewther**, ZQ Yin (In Press) The role of eye movement driven attention in functional strabismic amblyopia.Journal of Opthalmology.
2. \* Downing H, Barutchu A, **Crewther SG** (2015) Developmental trends in the facilitation of multisensory objects with distractors. Frontiers in Psychology 5:1559.
3. Palmer SM, **Crewther SG**, Carey LM and START Team (2015) A meta-analysis of changes in brain activity in clinical depression. Frontiers in Human Neuroscience 8:1045.

Journal IF (Web of Science) = 2.895

1. Pascoe MC, Howells DW, Crewther DP, Carey LM, **Crewther SG** (2015) Fish oil supplementation associated with decreased cellular degeneration and increased cellular proliferation 6 weeks after middle cerebral artery occlusion in the rat. Neuropsychiatric Disease and Treatment, 11:153-64.

Journal IF (Web of Science) = 2.154

1. Pascoe MC, Howells DW, Crewther DP, Constantinou N, Carey LM, Rewell SS, Turchini GM, Kaur G, **Crewther SG** (2014) Fish oil diet associated with acute reperfusion related hemorrhage, and with reduced stroke-related sickness behaviors and motor impairment. Frontiers in Neurology, 5:14.
2. **\*** Laycock R, Cross A, Di Nogare F, **Crewther SG** (2014) Self-rated social skills predict visual perception: impairments in object discrimination requiring transient attention associated with high autistic tendency. Autism Research, 7: 104-111.

Journal IF (Web of Science) = 3.988

1. \* Bauer I,  Crewther DP, Hughes M,  Rowsell R,  Cockerell R,  Pipingas A, **Crewther SG**. (2014) Omega-3 supplementation improves cognition and modifies functional activation in young adults- an FMRI study. Human Psychopharmacology, 29(2):133-44.

Journal IF (Web of Science) = 2.480

1. \* Bauer I,  **Crewther SG**,  Pipingas A, Sellick L, Crewther DP.  (2014) Does omega-3 fatty acid supplementation enhance neural efficiency? A review of the literature. Human Psychopharmacology, 29(1):8-18.

Journal IF (Web of Science) = 2.480.

1. **\*** Goharpey N, Crewther D, **Crewther SG**. (2013) Problem solving ability in children with Intellectual Disability as measured by the Raven's Coloured Progressive Matrices. Research in Developmental Disabilities, 34(12): 4366-4374.

Journal IF (Web of Science) = 2.483

1. Carey LM, **Crewther S**, Salvado O, Lindén T, Connelly A, Wilson W, ... & Donnan GA (2013). STroke imAging pRevention and treatment (START): A longitudinal stroke cohort study: Clinical trials protocol. International Journal of Stroke.

Journal IF (Web of Science) = 2.738

1. **\*** Fifer JM, Barutchu A, Shivdasani MH, **Crewther SG** (2013) Verbal and novel multisensory associative learning in adults.  F1000Research, 2:34
2. Murphy MJ, **Crewther SG**. (2013) Ouabain inhibition of Na/K-ATPase across the retina prevents signed refractive compensation to lens-induced defocus, but not default ocular growth in young chicks. F1000Research, 2:97.
3. Noonan K, **Crewther SG**, Carey LM, Pascoe MC, Linden T. (2013). Sustained inflammation 1.5 years post-stroke is not associated with depression in elderly stroke survivors. [Clinical Interventions in Aging](http://www.dovepress.com/clinical-interventions-in-aging-journal) 8:69-74.

Journal IF (Web of Science) = 2.083

1. Noonan K, Carey LM, **Crewther SG**. (2013) Meta-analyses Indicate Associations between Neuroendocrine Activation, Deactivation in Neurotrophic and Neuroimaging Markers in Depression after Stroke. (2012) Journal of Stroke and Cerebrovascular Diseases 22(7): e124-e135.

Journal IF (Web of Science) = 1.984

1. \* Barutchu A, Freestone DR, Innes-Brown H, Crewther DP, **Crewther SG** (2013) Evidence for enhanced multisensory facilitation with stimulus relevance: An electrophysiological investigation. PLoS One 8(1): e52978.

Journal IF (Web of Science) = 4.240

1. **\*** Laycock R, Crewther DP, **Crewther SG.** (2012). Abrupt and ramped flicker-defined form shows evidence for a large magnocellular impairment in dyslexia. Neuropsychologia 50(8), 2107-2113.

Journal IF (Web of Science) = 3.477

1. Pascoe MC, **Crewther SG**, Carey LM, Noonan K, Crewther DP, Linden T. (2012) Homocysteine as a potential biomarker for depression in elderly stroke survivors. Food and Nutrition Research 2012;56.

Journal IF (Web of Science) = 1.785

1. Marshall, AT, Goodyear MJ, **Crewther SG.** (2012). Sequential quantitative X-ray elemental imaging of frozen-hydrated and freeze-dried biological bulk samples in the SEM. Journal of Microscopy. 245(1):17-25.

Journal IF (Web of Science) = 1.633

1. \* Bauer I, Crewther DP, Pipingas A, Rowsell R, Cockerall R, **Crewther SG.** (2011) Omega 3 fatty acids modify human cortical visual processing- double blind crossover study. PLoS One 6(12):e28214.

Journal IF (Web of Science) = 4.240

1. \* Laycock R, Cross AJ, Lourenco T, **Crewther SG.** (2011) Dorsal stream involvement in recognition of objects with transient onset but not with ramped onset. Behavioral and Brain Functions 6;7:34.

Journal IF (Web of Science) = 2.790

1. Murphy MJ, Crewther DP, Goodyear MJ, **Crewther SG**, (2011) Light modulation, not choroidal vasomotor action, is a regulator of refractive compensation to signed optical defocus. British Journal of Pharmacology 164(6):1614-26.

Journal IF (Web of Science) = 5.067

1. \* Azizoglu S., Junghans BM, Barutchu A, **Crewther SG** (2011) Refractive errors in students from Middle Eastern backgrounds living and undertaking schooling in Australia. Clinical and Experimental Optometry 94(1) 67-75.

Journal IF (Web of Science) = 1.256

1. Pascoe MC, **Crewther SG**, Carey LM, Crewther DP. (2011). Inflammation and depression: Why post stroke depression may be the norm and not the exception. International Journal of Stroke 6(2):128-35.

Journal IF (Web of Science) = 2.738

1. Pascoe MC, **Crewther SG**, Carey LM, Crewther DP. (2011). What you eat is what you are- A role for poly unsaturated fatty acids in neuroinflammation induced depression. Clinical Nutrition 30 (4) 407-415.

Journal IF (Web of Science) = 3.870

1. \* Barutchu A, **Crewther SG**, Fifer J, Shivdasani MN, Innes-Brown H, Toohey S, Danaher, Paolini AG. (2011) The relationship between multisensory integration and IQ in children. Developmental Psychology 7, 877-85.

Journal IF (Web of Science) = 2.976

1. \* Crewther DP, **Crewther SG.** (2010) Different temporal structure for form versus surface cortical color systems – Evidence from chromatic non-linear VEP. PLoS One 15(12) e 15266.

Journal IF (Web of Science) = 4.240

1. Goodyear MJ, **Crewther SG**, Murphy MJ, Guimmarra L, Hazi A, Junghans BM, Crewther DP. (2010) Spatial and temporal dissociation of AQP4 and Kir4.1 expression during the induction of refractive errors. Molecular Vision: 16:1610-1619.

Journal IF (Web of Science) = 2.311

1. \* Barutchu A, Danaher J, **Crewther SG**, Innes-Brown H, Shivdasani M.N, Paolini AG. (2010) Audiovisual integration in noise by children and adults. Journal of Experimental Child Psychology 105(1-2):38-50.

Journal IF (Web of Science) = 2.988

1. Goodyear MJ, **Crewther SG**, Junghans BM. (2009) A role for aquaporin-4 in fluid regulation in the inner retina. Visual Neuroscience 26(2):159-65.

Journal IF (Web of Science) = 1.676

1. **\*** Laycock R,Crewther D.P,Fitzgerald P.B, **Crewther SG**(2009) TMS disruption of V5/MT+ suggests a role for the dorsal stream in reading. Experimental Brain Research 197(1): 69-79.

Journal IF (Web of Science) = 2.168

1. **\*** Barutchu A, Crewther DP, **Crewther SG** (2009) The Race that Precedes Coactivation: Development of Multisensory Facilitation in Children. Developmental Science 12(3):464-73.

Journal IF (Web of Science) = 4.278

1. Bello KD, Goharpey N, **Crewther SG**, Crewther DP (2008). A puzzle form of a non-verbal intelligence test gives significantly higher performance measures in children with severe intellectual disability. BMC Pediatrics 8:30-38.

Journal IF (Web of Science) = 1.918

1. **Crewther SG,** Murphy MJ, Crewther DP (2008). Potassium channel and NKCC cotransporter involvement in ocular refractive control mechanisms. PLoS ONE 3:2839-2845.

Journal IF (Web of Science) = 4.240

1. Goodyear M.J, Junghans BM,Guimmarra L, Murphy MJ, Crewther DP, **Crewther S.G**, (2008) A role for aquaporin-4 during induction of form deprivation myopia in chick. Molecular Vision 14:298-307.

Journal IF (Web of Science) = 2.311

1. **\*** Laycock R**,** Crewther DP, **Crewther SG** (2008) The advantage of being magnocellular: a few more remarks on attention and the magnocellular system. Neuroscience and Biobehavioral Reviews, 32:1409-1415.

Journal IF (Web of Science) = 10.284

1. **\*** Laycock R, **Crewther SG** (2008) Towards an understanding of the role of the ‘magnocellular advantage’ in fluent reading. Neuroscience and Biobehavioral Reviews, 32:1494-1506.

Journal IF (Web of Science) = 10.284

1. **\*** Barutchu A, **Crewther SG**, Kiely PM, Murphy M, Crewther DP (2008) When /b/ill with /g/ill becomes /d/ill: Evidence for a lexical effect in audiovisual speech perception. European Journal of Cognitive Psychology, 20:1-11.
2. **\*** Crewther DP, Lawson M, **Crewther SG** (2007) Global and local attention in the attentional blink. Journal of Vision, 7:1-12.

Journal IF (Web of Science) = 2.727

1. **\*** Laycock R, **Crewther SG,** Crewther DP (2007) A role for the 'magnocellular advantage' in visual impairments in neurodevelopmental and psychiatric disorders. Neuroscience and Biobehavioral Reviews, 31:363-376.

Journal IF (Web of Science) = 10.284

1. **\*** Laycock R, Crewther DP, Fitzgerald PB, **Crewther SG** (2007) Evidence for Fast Signals and Later Processing in Human V1. Journal of Neurophysiology, 98:1253-1262.

Journal IF (Web of Science) = 3.041

1. **\* Gillard-Crewther S**, Lawson ML, Bello K, Crewther DP (2007) The visual attentional blink reflects constraints on temporal visual processing, not just a lapse of visual memory. Clinical and Experimental Optometry, 90:282-289. Journal IF (Web of Science) = 1.256
2. **\*** Kiely PM, Crewther DP, **Crewther SG** (2007) Threshold recognition of phantom contour objects requires constant contrast velocity. Perception and Psychophysics**,** 69:1035-1039.
3. Junghans BM, **Crewther SG**.2006 "Refraction in Australian Children” eLetter to *IOVS Feb 17 2006*
4. **Crewther SG,** Barutchu A, Murphy MJ, Crewther DP (2006) Low Frequency Temporal Modulation of Light Promotes a Myopic Shift in Refractive Compensation to all Spectacle Lenses. Experimental Eye Research, 83:322-328.

Journal IF (Web of Science) = 3.017

1. Yin ZQ, Crewther SG, Wang C, Crewther DP (2006). Pre-and post-critical period induced reduction of Cat-301 immunoreactivity in the lateral geniculate nucleus and visual cortex of cats Y-blocked as adults or made strabismic as kittens. Molecular Vision, 12:858-866.

Journal IF (Web of Science) = 2.311

1. **\*** CrewtherDP, KielyPM, **CrewtherSG** (2006) Monocular and binocular thresholds for abruptly and gradually presented illusory contours. Clinical and Experimental Optometry 89:368-373.

Journal IF (Web of Science) = 1.256

1. **\*** Laycock R, **Crewther SG,** Kiely PM, Crewther DP (2006) Parietal function in good and poor readers. Behavioral and Brain Function 2:26-42.

Journal IF (Web of Science) = 2.00

1. **\*** Thomson B, Crewther DP, **Crewther SG** (2006) Wots that werd? Pseudowords are a misleading measure of phonological skills in early readers. Dyslexia 12:289-299

Journal IF (Web of Science) = 1.189

1. **Crewther SG,** Liang H, Junghans BM, Crewther DP. (2006). Ionic control of ocular growth and refractive change. Proceedings of the National Academy of Science USA, 103 (42):15663-15668.

Journal IF (Web of Science) = 9.809

1. Junghans BM, Crewther SG (2005). Little evidence for an epidemic of myopia in Australian primary school children over the last 30 years. BMC Ophthalmology, 5(1):1.

Journal IF (Web of Science) = 1.075

1. \* Lawson ML, **Crewther SG**, Junghans BM, Crewther DP, Kiely PM (2005). Changes in ocular accommodation when shifting between global and local attention. Clinical and Experimental Optometry, 88(1), 28-3.

Journal IF (Web of Science) = 1.256

1. Cotton SM, Crewther DP, **Crewther SG**. (2005) Measurement error: Implications for diagnosis and discrepancy-models of developmental dyslexia. Dyslexia, 11930:186-202.

Journal IF (Web of Science) = 1.189

1. Cotton SM, **Crewther SG,** Kiely PM, Crewther DP, Milano V, Thomson B, Laycock R (2005) A normative and reliability study for the Raven’s Coloured Progressive Matrices for primary school aged children from Victoria, Australia. Journal of Personality and Individual Differences, 39: 647-659.

**(v) Other**

1. **Crewther SG.** Autism 2003 Review for the Victorian Government Dept. Human Services.

**(2) – ARC Grants: SG Crewther, 2005– 2015**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Project ID | CI Names | Amount Funded | Years | Project Title | Publications |
| DP110103784 | Crewther DP **Crewther SG** | $255,000 | 3 | The mechanism of defocus-driven ocular growth | 19, 28, 29 |
| DP0985837 | **Crewther SG**, Crewther DP | $300,000 | 3 | The advantage of being magnocellular: the role of the dorsal visual stream in object identification. | 3, 9, 13, 22, 23, 27, 32, 33 |
| LP0884003 | Crewther DP, Pipingas A, Sinclair A, **Crewther SG** | $75,000 | 4 | Biomarkers and objective assessment of cognitive and brain effects of fish oil dietary supplementation | 11, 12, 14, 15, 26, 31 |
| LE0989920 | Whitchurch CB, Harry EJ, Phillips MR, Ford MJ, Dalton JP, Ralph PJ, Doblin MA, Smith NC, Firth N, Trewhella J, Cox GC,  Braet FC, Carter DA, Newsome TP, Dixon NE, Walker MJ, Mackenzie JM, Hanssen E, Tilley L,  Mak J, Murphy RM, Ryan MT, Stephenson DG, Vaux DL,Tang C,  Fisher PR, Gendall AR, **Crewther SG,**  Smith TA, Robins Browne RM, Hartland EL. | $750,000 | N.A. | Microbial and cellular imaging and analysis facility | 9, 28, 34, 41, 51, 52 |
| LE0668482 | A.Peele, P.Pigram, N.Brack, J.Liesengang, B.James, **SG Crewther**, G.Kelly, M.Barnett, YS Morsi, DV Nicolau | $485,000 | 1 | X-ray microtomography facility. | 5, 25, 40, 56 |
| LP0346984 | Crewther DP, **Crewther SG**, Parsons C | $138,198 | 3 | Neuroscience based assessment and treatment software for developmental disabilities | 2, 3, 4, 6, 7, 9, 13, 16, 18, 23, 27, 32, 35, 37, 38, 39, 42, 43, 45, 46, 48, 49, 54, 58, 59, 60 |
| DP0345767 | Crewther DP, **Crewther SG**, Loesch D | $235,000 | 3 | Phenotypic differences in behaviour, brain function and structure of genetically dissimilar forms of intellectual disability. | 2, 43, 54, 58, 59, 60 |