

Paul Constable
Full Member
Caring Futures Institute
College of Nursing and Health Sciences



Research Biography

I lead the **The SPARKLE Project: Shining a Light on Neurodevelopment: Electroretinogram Diagnosis for Autism** which is a team of clinicians, visual electrophysiologists, and bioengineers, that aims to develop a new clinical test to provide earlier diagnosis and improved management for the over 200,000 Australians diagnosed with ASD each year. Building on our previous studies that have shown a difference in the retinal signals of children with ASD and ADHD we are applying machine learning to help classify and identify ASD earlier to improve its management and outcomes for individuals and their families.

Qualifications

Postgraduate Certificate, Ocular Therapeutics, Australian College of Optometry
Award Date: 17 Jun 2020

PhD, City University of London
Award Date: 28 Feb 2007

Bachelor of Science, Optometry, University of Melbourne
Award Date: 31 Mar 1991

Employment

Full Member

Caring Futures Institute
Flinders University
29 Nov 2019 → present

Senior Lecturer

College of Nursing and Health Sciences
Flinders University
21 Sept 2015 → 31 Dec 2019

Research outputs

Retinal electrophysiology in central nervous system disorders: A review of human and mouse studies
Constable, P., Lim, J. & Thompson, D., 2 Aug 2023, In: *Frontiers in Neuroscience*. 17, 30 p., 1215097.

OculusGraphy: Signal Analysis of the Electroretinogram in a Rabbit Model of Endophthalmitis Using Discrete and Continuous Wavelet Transforms
Zhdanov, A., Constable, P., Manjur, S. M., Dolganov, A., Posada-Quintero, H. & Lizunov, A., Jun 2023, In: *Bioengineering*. 10, 6, 21 p., 708.

Visual search and childhood vision impairment: A GAMLSS-oriented multiverse analysis approach
Constable, P. A., Loh, L., Prem Senthil, M. & Marmolejo-Ramos, F., May 2023, In: *Attention, Perception & Psychophysics*. 85, 4, p. 968-977 10 p.

A review of patient-reported outcome measures used in uveitis
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Detecting Autism Spectrum Disorder Using Spectral Analysis of Electroretinogram and Machine Learning: Preliminary results

Manjur, S. M., Hossain, M. B., Constable, P. A., Thompson, D. A., Marmolejo-Ramos, F., Lee, I. O., Skuse, D. H. & Posada-Quintero, H. F., 8 Sept 2022, *44th Annual International Conference of the IEEE Engineering in Medicine & Biology Society*. Institute of Electrical and Electronics Engineers Inc., Vol. 2022. p. 3435-3438 4 p. (Annual International Conference of the IEEE Engineering in Medicine and Biology Society; vol. 2022).

Discrete Wavelet Transform Analysis of the Electroretinogram in Autism Spectrum Disorder and Attention Deficit Hyperactivity Disorder

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The electroretinogram b-wave amplitude: a differential physiological measure for Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorder

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A review of ocular complications associated with medications used for anxiety, depression, and stress

Constable, P. A., Al-Dasooqi, D., Bruce, R. & Prem-Senthil, M., 24 Feb 2022, In: *Clinical Optometry*. 14, p. 13-25 13 p.

Cone dystrophy, childhood vision impairment and education: are clinical measures of visual function adequate to support a child through education?

Loh, L., Gatsios, A., Prem Senthil, M. & Constable, P. A., 2022, In: *Clinical and Experimental Optometry*. 105, 7, p. 774-777 4 p.

Is white the right light for the clinical electrooculogram?

Constable, P. A. & Kapoor, G., Dec 2021, *Documenta Ophthalmologica*, 143, 3, p. 297-304 8 p.

The photopic negative response in autism spectrum disorder

Constable, P., Lee, I., Marmolejo-Ramos, F., Skuse, D. & Thompson, D., 7 Apr 2021, In: *Clinical and Experimental Optometry*. 104, 8, p. 841-847 7 p.

A snapshot of optometry teaching in Australia and New Zealand in response to COVID-19

Schmid, K., Backhouse, S., Cochrane, A., Collins, A., Constable, P., Jalbert, I. & Sabeti, F., 2021, In: *Clinical and Experimental Optometry*. 104, 6, p. 723-727 5 p.

Optical coherence tomography angiography in primary eye care

Coffey, A. M., Hutton, E. K., Combe, L., Bhindi, P., Gertig, D. & Constable, P. A., 2021, In: *Clinical and Experimental Optometry*. 104, 1, p. 3-13 11 p.

Effect size of search superiority in autism spectrum disorder

Constable, P. A., Bailey, K., Beck, A., Borrello, D., Kozman, M. & Schneider, K., 1 May 2020, In: *Clinical and Experimental Optometry*. 103, 3, p. 296-306 11 p.

Light-adapted electroretinogram differences in Autism Spectrum Disorder

Constable, P., Ritvo, E., Ritvo, A., Lee, I., McNair, M., Stahl, D., Sowden, J., Quinn, S., Skuse, D., Thompson, D. & McPartland, J., 7 Feb 2020, In: *Journal of Autism and Developmental Disorders*. 50, 8, p. 2874-2885 12 p.

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Are motion coherence thresholds in individuals with autism spectrum disorder associated with retinal function?

Lee, I., Fritsch, D. M., Kerz, M., Sowden, J. C., Constable, P. A., Skuse, D. H. & Thompson, D. A., 10 Oct 2019, p. S6. 1 p.

Spectral properties of the light rise of the electro-oculogram

Kapoor, G., Le Dieu, T., Kyi, S., Hoang, H., Tiong, F., Trinh, S. & Constable, P., 10 Oct 2019, p. S3. 1 p.

The Electroretinogram As a Candidate Biomarker for Autism Spectrum Disorder

Constable, P., Ritvo, E., Ritvo, R., Thompson, D., Lee, I., Stahl, D., McNair, M., Gertig, D., Quinn, S., Skuse, D. & McPartland, J., 4 May 2019.

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The slow light and dark oscillation of the clinical EOG

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Systematic review and meta-analysis of the association of Autism Spectrum Disorder in visually or hearing impaired children

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International Society for Clinical Electrophysiology of Vision, 1 Feb 2017, In: Documenta Ophthalmologica. 134, 1, p. 1-9 9 p.

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Constable, P., Ngo, D., Quinn, S. & Thompson, D., 2017, (E-pub ahead of print) In: Documenta Ophthalmologica. 135, 3, p. 219-232 14 p.

How blood barrier stands up to drug treatments

Mahmood, M. & Constable, P., 17 Jun 2016, In: Optician. p. 24-29 5 p.

Full-field electroretinogram in autism spectrum disorder

Constable, P., Gaigg, S., Bowler, D., Jagle, H. & Thompson, D., 1 Apr 2016, In: Documenta Ophthalmologica. 132, 2, p. 83-99 17 p.

Concept, Creativity and Complexity in Autism Spectrum Disorders: A Study using the Vygotsky Blocks

Constable, P., Ring, M., Gaigg, S. & Bowler, D., 2016.

The Physiology of the retinal pigment epithelium in Danon disease

Thompson, D., Constable, P., Liasis, A., Walters, B. & Esteban, M., 2016, In: Retina-The Journal of Retinal and Vitreous Diseases. 36, 3, p. 629-638 10 p.

Genetic associations to the ERG in autism spectrum disorder

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A perspective on the mechanism of the light-rise of the electrooculogram.

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Motion and pattern cortical potentials in adults with high-functioning autism spectrum disorder

Constable, P., Gaigg, S., Bowler, D. & Thompson, D., Dec 2012, In: Documenta Ophthalmologica. 125, 3, p. 219-227 9 p.

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Autism Part 2: Early Signs and Managing an Individual with ASD

Constable, P., 2011, In: Optician. 241, 6300, p. 12-16 5 p.

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Constable, P., 2011, In: Optician. 242, 6320, p. 34-41 8 p.

Fundamentals of genetic screening for eye disease

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Nifedipine alters the light-rise of the electro-oculogram in man

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Glial cell factors and the outer blood retinal barrier

Constable, P. & Lawrenson, J., 2009, In: Ophthalmic and Physiological Optics. 29, 5, p. 557-564 8 p.

P-Glycoprotein Expression and Function in the Retinal Pigment Epithelium

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The electro-oculogram

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Role of the cystic fibrosis transmembrane conductance regulator in the electro-oculogram

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Compartmental analysis of taurine transport to the outer retina in the bovine eye

Hillenkamp, J., Hussain, A., Jackson, T., Constable, P., Cunningham, J. & Marshall, J., 2004, In: Investigative Ophthalmology and Visual Science. 45, 11, p. 4099-4105 7 p.