CURRICULUM VITAE - CORNEIL, Brian D., Ph.D.

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POSITIONS:

Professor,
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EDUCATION:

B.Sc.H. Life Sciences, Queen's University, 1990-1994
Ph.D., Physiology, Queen's University, 1994-2001

AWARDS:

2022	Schulich School of Medicine & Dentistry Excellence in Education Award (Postgraduate/Graduate)
2017	Faculty Scholar, Western University
2016-17	University Student Council Teaching Honour Roll Award of Excellence for teaching in Medicine.
2014-15	University Student Council Teaching Honour Roll Award of Excellence for teaching in Neuroscience 2000.
2008	Schulich School of Medicine & Dentistry Dean's Award of Excellence – Junior Faculty
2007	Schulich School of Medicine & Dentistry Dean's Award of Excellence – Team Award
2005	New Investigator Award, Canadian Institutes of Health Research
2002	Society for Neuroscience Donald B. Lindsley award for most outstanding PhD in Behavioural Neuroscience
	Post-doc conference travel award, Neural Control of Movement
2001	Governor General's Gold Medal for best PhD thesis, Queen's University
	Human Frontier Science Program Long-term Fellowship
2000	Abrahams Prize in Physiology for best PhD thesis
	Canadian Institutes of Health Research Postdoctoral Fellowship

1999	Field travel award, Queen's University, for research in Nijmegen, The Netherlands
1998	Medical Research Council Doctoral Award Ontario Graduate Scholarship (declined)
1997-1995	Ontario Graduate Scholarship (awarded 3 times)

POSITIONS HELD:

2018-2024	Director, Neuroscience Graduate Program
2016	Professor, Depts of Physiology & Pharmacology and Psychology, University of Western Ontario, London, Canada
2011-2012	Visiting professor, Donders Centre for Cognition, Nijmegen NL
May 2011	Scientist, Robarts Research Institute
2009-2016	Associate Professor, Depts of Physiology & Pharmacology and Psychology, University of Western Ontario, London, Canada
2003-2009	Assistant Professor, Depts of Physiology & Pharmacology and Psychology, University of Western Ontario, London, Canada
2001-2003	Post-doctoral research, California Institute of Technology, Pasadena, California, USA. Supervisor: Dr. R. A. Andersen

PROFESSIONAL AFFILIATIONS: Canadian Association for Neuroscience, Canadian Physiological Society, Society for Neuroscience, Society for the Neural Control of Movement, The American Physiological Society, F1000 Prime (Motor Systems)

RESEARCH INTERESTS: Neural control of movement, Neurophysiology, Gaze shifts, Eye-head coordination, Visually-guided reaching, Multi-sensory integration, Kinesthesia, Neural prosthetics

FUNDING (as PI unless otherwise noted):

2025-2028 COMPERE Network grant *COMPERE and contrast: the neural control of dorsal neck muscles in new and old world primates*. $297,600 for 3 years).

2024-2027 Australian Research Council (P.I. Tim Carrol; 4 other co-PIs) *Subcortical control of human reaching?* $523,500 AUD for 3 years

2023-2028 CIHR Operating Grant *Temporal interference stimulation in the awake brain: Spatiotemporal resolution and interactions with endogenous activity* $856,800 for 5 years.

2022-2027 CIHR Operating Grant *A subcortical circuit for coordinating express reaches* $857,435 for 5 years.

2021-2026 NSERC Discovery Grant *Assessing the contribution of a subcortical circuit for express visuomotor responses.* $200,000 for 5 yrs

2021-2022 NSERC Research Tools and Instruments Grant *Neurophysiological equipment for network-level analyses in sensorimotor neuroscience.* $115,207 for 1 year.

2020-2021 Western BrainsCAN Accelerator Stimulus Grant *Temporal interference stimulation in the marmoset* $95,340 for 1 year.

2020-2021 Western Strategic Support for CIHR Success Accelerator grant *A marmoset-based test-bed for brain stimulation* $50,000 for 1 year.

2020-2024 Radboud University Medical Centre, Junior Researcher Position (PI: Vivian Weerdesteyn) *Watch your step! Mechanisms of defective visuomotor control in Parkinson's Disease* 240,000E for 4 years to fund Dutch PhD student.

2019-2021 Schulich School of Medicine and Dentistry Collaborative Research Seed Grant *The role of dopamine in the contextual control of the fast visuomotor network in health and in Parkinson's Disease* $47,000 for 2 years.

2017-2018 Western BrainsCAN Accelerator Stimulus Grant *Magneto-vestibular stimulation (MVS): effects on behaviour and resting state networks* $63,895 for 1 year.

2017-2020 Australian Research Council (P.I. Tim Carrol; 4 other co-PIs) *A common sub-cortical system for human eye and limb control?* $318,500 for 3 years

2017-2022 Canadian Foundation for Innovation (PI: Mel Goodale) *New Horizons in Human Cognitive Neuroscience Research at the Brain and Mind Institute* $3,302,294

2016-2021 NSERC Discovery Grant *Sensory and integrative properties of the fast visuomotor system.* $195,000 for 5 yrs

2015-2021 CIHR Operating Grant *Overt responses during covert orienting: novel biomarkers for the oculomotor system in health and disease.* $887,257 for 6 years (1 additional year funding provided due to COVID crisis)

2015-2016 NSERC Research Tools and Instruments Grant *A portable system for integrated measurement of human actions.* $139,665 for 1 year.

2012-2017 CIHR Operating Grant *Behavioural and neurophysiological effects of transcranial magnetic stimulation in the primate oculomotor system.* $754,470 for 5 years

2012-2013 CIHR Operating Grant *Behavioural and neurophysiological effects of transcranial magnetic stimulation in the primate oculomotor system.* $100,000 for 1 year.

2011-2016 NSERC Discovery Grant *Indexing covert activity within the oculomotor system via recordings of neck muscle activity.* $200,000 for 5 yrs

2010-2013 Infrastrucutre operating fund *Laboratory for multidisciplinary measurements of human performance.* $37,515 for 3 yrs

2009-2014 CIHR Operating Grant *Neural mechanisms for contextual control of Movement* $818,395 for 5 yrs

2009-2015 NSERC Create Grant (P.I. Mel Goodale, 10 other co-PIs) *Computational Approaches to Sensorimotor Transformations for the control of Action* $1.65M for 6 yrs

2008-2009 CIHR Operating Grant *Neural mechanisms for contextual control of Movement* $50,000 for 6 months

2005-2008 Human Frontier Science Program Career Development Award *Committing to decisions in the Oculomotor System.* $180,000 US for 3 yrs

2005-2010 CFI & Ontario Innovation Fund New Opportunities Fund *Laboratory for Multidisciplinary Measurements of Human Performance*. $312,627 for 5 years

2005-2010 NSERC Discovery Grant *Properties of Human Eye-head Gaze Shifts in Complex Oculomotor Tasks.* $100,000 for 5 years

2005-2010 Ontario Ministry of Research and Innovation Early Researcher Award, $150,000 for 5 yrs

2004-2009 CIHR Group Grant (P.I. Mel Goodale) *Neural transformations for perception and action***.** $454,440/yr for 5 yrs

2003-2008 CIHR Operating Grant *Sensory and motor roles for neck muscles in coordinate transformations*. $437,710 for 5 years

REFEREED PAPERS:
(trainees are underlined; visting international collaborators double-underlined)

1. Mekhaiel, D.Y., Goodale, M.A., **Corneil, B.D.** (2024) Rapid integration of face detection and task set in visually guided reaching. Preprint posted to *bioXriv*. Accepted pending minor revisions at *Eur J Neurosci*
2. Contemori, S., Loeb, G.E., **Corneil, B.D.**, Wallis, G., Carroll, T.J. (2023) Express visuomotor responses reflect knowledge of both target location and concious intent during reaches of different amplitudes. *J Neurosci* 18: 7041-7055
3. Billen, L.S., **Corneil, B.D.**, Weerdesteyn, V. (2023) Evidence for an intricate relationship between express visuomotor responses, postural control, and rapid step initiation in lower limbs. *Neuroscience* 531: 60-74
4. Cecala, A.L., Kozak, R.A., Pruszynski, J.A., **Corneil, B.D.** (2023) Done in 65 ms: Express visuomotor responses in upper limb muscles in rhesus macaques. *eNeuro* 10:8 doi: 10.1523/ENEURO.0078-23.2023
5. Selen, L.P.J., **Corneil, B.D.**, Medendorp, W.P. (2023) Single-trial dynamics of competing reach plans in the human motor periphery. *J Neurosci* 116: 977-985.

6. Contemori, S., Loeb, G.E., **Corneil, B.D.**, Wallis, G., Carroll, T.J. (2022) Symbolic cues enhance express visuomotor responses in human arm muscles at the motor planning rather than the visuospatial processing stage. *J Neurophysiol* 128: 494-510
7. Kearsley, S.L., Cecala, A.L., Kozak, R.A., **Corneil, B.D.** (2022) Express arm responses appear bilaterally on upper-limb muscles in arm choice reaching task. *J Neurophysiol* 127: 969-983.
8. Lehmann, S.J. and **Corneil, B.D.** (2022) Completing the puzzle: why studies in non-human primates are needed to better understand the effects of non-invasvie brain stimulation. *Neurosci Biobehav Rev* 132: 1074-1085. **Recommended in Faculty Opinions (M. Nitsche and A. Salehinejad).*
9. Gordon, K.A., Baitz, J., Gnanasegaram, J.J., McKnight, C., **Corneil, B.D.,** Camp, A.J., Cushing, S.L. (2022) Response characteristics of cervical vestibular evoked myogenic potentials recorded over splenius capitis in a clinical setting. *Acta Otorrinolaringologica Espanola*. 73: 164-176.
10. Contemori, S., Loeb, G.E., **Corneil, B.D.**, Wallis, G., Carroll, T.J. (2021) Trial-by-trial modulation of express visuomotor responses induced by symbolic or barely detectable cues. *J Neurophysiol*. 126: 1507-1523
11. Kozak, R.A. and **Corneil, B.D.** (2021) High contrast, moving targets in an emerging target paradigm promote fast visuomotor responses during visually guided reaching. *J Neurophysiology* 126: 68-81
12. Contemori, S., Loeb, G.E., **Corneil, B.D.**, Wallis, G., Carroll, T.J. (2021) The influence of temporal predictability on express visuomotor responses. *J Neurophysiol* 125: 731-747.
13. Peel, T.R., Dash, S., Lomber, S.G., **Corneil, B.D.** (2021) Frontal eye field inactivation alters the readout of superior colliculus activity for saccade generation in a task-dependent manner. *J Comput Neurosci*. 49: 229-249.
14. Kozak, R.A., Cecala, A.L., **Corneil, B.D.** (2020) An emerging target paradigm to evoke fast visuomotor responses on human upper limb muscles *J Vis Exp* 162, doi.org/10.3791/61428.
15. Dash, S., Peel, T.R., Lomber, S.G., **Corneil, B.D.** (2020) Impairment but not abolishment of express saccades after unilateral or bilateral inactivation of the frontal eye fields. *J Neurophysiol* 123: 1907-1919.
16. Kozak, R.A., Kreyenmeier, P., Gu, C., Johnston, K., **Corneil, B.D.** (2019) Stimulus-locked responses on human upper limb muscles and corrective reaches are preferentially evoked by low spatial frequencies. *eNeuro*. 6(5) doi: 10.1523/ENEURO.0301-19.2019
17. Ali, F.M., Westling, M., Zhao, L.H., **Corneil, B.D.,** Camp, A.J. (2019) Splenius capitis: sensitive target for the cVEMP in older and neurodegenerative patients. *Eur Arch Otorhinolaryngol*. 276: 2991-3003. doi: 10.1007/s00405-019-05582-7
18. Verbruggen, F., Aron, A.R., Band, G.P.H., Beste, C., Bissett, P.G., Brockett, A.T., Brown, J.W., Chamberlain, S.R., Chambers, C.D., Colonius, H., Colzato, L.S., **Corneil, B.D.**, Coxon, J.P., Eagle, D.M., Dupuis, A., Garavan, H., Greenhouse, I., Heathcote, A., Huster, R.J., Jahfari, S., Kenemans, J.L., Leunissen, I., Logan, G.D., Matzke, D., Morein-Zamir, S., Murthy, A., Li, C.R., Paré, M., Poldrack, R.A., Ridderinkhof, K.R., Robbins, T.W., Roesch, M.R., Rubia, K., Schachar, R.J., Schall, J.D., Stock, A.K., Swann, N.C., Thakkar, K.N., van der Molen, M.W., Vermeylen, L., Vink, M., Wessel, J.R., Whelan, R., Zandbelt, B.B., Boehler, C.N. (2019) Capturing the ability to inhibit actions and impulsive behaviors: A consensus guide to the stop-signal paradigm. *Elife* 8, e46323, https://doi.org/10.7554/eLeife.46323.

19. Sedov, A., Usova, S., Semenova, U., Gamaleya, A., Tomisky, A., Crawford, J.D., **Corneil, B.D.**, Jinnah, H., Shaikh, A.G. (2019) The role of pallidum in the neural integrator model of dystonia. *Neurobiol Dis*. 125: 45-54. **Recommended by Faculty of 1000 (A. Berardelli and D. Belvisi.*

20. Gu, C., Pruszynski, J.A., Gribble, P.L. **Corneil, B.D.** (2019) A rapid visuomotor response on the human upper limb is selectively influenced by implicit, but not explicit, motor learning. *J Neurophysiol.* 121: 85-95.

21. **Corneil, B.D.**, and Camp, A.J. (2018) Animal models of vestibular evoked myogenic potentials: The past, present, and future. *Front Neurol.* 9:489. https://doi.org/10.3389/fneur.2018.00489.

22. Atsma, J., Maij, F., Gu, C., Medendorp, W.P., **Corneil, B.D.** (2018) Active braking of whole-arm reaching movements provides single-trial neuromuscular measures of movement cancellation. *J Neurosci*. 38: 4367-4382.

23. *Dash, S., Peel, T.R., Lomber, S.G., **Corneil, B.D.** (2018) Frontal eye field inactivation reduces saccade preparation in the superior colliculus, but does not alter how preparatory activity relates to saccades of a given latency. *eNeuro*. 5(2) DOI: https://doi.org/10.1523/ENEURO.0024-18.2018. **Recommended by Faculty of 1000 (A Moschovakis)*.

24. *Gu., C., Pruszynski, J.A., Gribble, P.L., **Corneil, B.D.** (2018) Done in 100 ms: path-dependent visuomotor transformations in the human upper limb. *J Neurophysiol.* 119: 1319-1328. **Highlighted on J Neurophysiol's Twitter feed*

25. *Peel, T.R., Dash, S., Lomber, S.G., **Corneil, B.D.** (2017) Frontal eye field inactivation diminishes superior colliculus activity, but delayed saccadic accumulation governs reaction time increases. *J Neurosci* 37: 11715-11730. **Featured in J Neurosci's Journal Club commentary; Recommended by Faculty of 1000 (R. Shadmehr)*

26. Camp, A.J., Gu, C., Cushing, S.L., Gordon, K.A., **Corneil, B.D.** (2017) Splenius capitis is a reliable target for measuring cervical vestibular evoked myogenic potenitals in adults. *Eur J Neurosci*. 45: 1212-1223.

27. Peel, T.R., Hafed, Z.M., Dash, S., Lomber, S.G., **Corneil B.D.** (2016) A causal role for the cortical frontal eye fields in microsaccade generation. *PLOS Biol* 14(8): e1002531.

28. *Gu, C., Wood, D.K., Gribble, P.L., **Corneil, B.D.** (2016) A trial-by-trial window into sensorimotor transformations in the human motor periphery. *J Neurosci* 36: 8273-8282. **Recommended by Faculty of 1000 (R. Shadmehr)*.

29. Rincon-Gonzalez, L., Selen, L.P.J., Halfwerk, K., Koppen, M., **Corneil, B.D.**, Medendorp, W.P. (2016) Decisions in motion: Vestibular contributions to saccadic target selection. *J Neurophysiol* 116: 977-985.

30. Lehmann, S.J. and **Corneil, B.D.** (2016) Transient pupil dilation after sub-saccadic microstimulation of primate Frontal Eye Fields. *J Neurosci* 36: 3765-3776.

31. Walton, D.M., Elliott, J., Lee, J., Loh, E., MacDermid, J., Schabrun, S., Siqueira, W., **Corneil, B.D.,** Birmingham, T., Brown, A., Cooper, L., Dickey, J.P., Dixon, J., Frasher, D., Gati, J, Gloor, G., Good, G., Holdsworth, D., Lanius, R., McLean, S.A., Millard, W., Miller, J., Sadi, J., Seguin, C., Seminowicz, D.A., Shoemaker, K., Siegmund, G., Van Uum, S., Vertseegh, T., Wideman, T.H. (2016) Research priorities in the field of post-traumatic pain and disability: Results of an interdisciplinary consensus-gathering workshop. *Pain Res Manag* 1859434.

32. Goonetilleke, S.C., Katz, L., Wood, D.K., Gu, C., Huk, A.C., **Corneil, B.D.** (2015) Cross-

species comparison of anticipatory and stimulus-driven neck muscle activity well before saccadic gaze shifts in humans and non-human primates. *J Neurophys* 114: 902-913.

33. Wood, D.K., Gu, C., **Corneil, B.D.**, Gribble, P.L., Goodale, M.A. (2015) Transient visual responses reset the phase of low-frequency oscillations in the skeletomotor periphery. *Eur J Neurosci* 42: 1919-1932.

34. Gu, C. and **Corneil, B.D.** (2014) TMS of the prefrontal cortex in awake non-human primates evokes a polysynaptic neck muscle response that reflects oculomotor activity at the time of stimulation. *J Neurosci* 34: 14803-14815.

35. Corneil, B.D. and Munoz, D.P. (2014) Overt responses during covert orienting. *Neuron* 82: 1230-1243.

36. Atsma, J., Maij, F., **Corneil, B.D.**, Medendorp, P. (2014) No peri-saccadic mislocalization with abruptly cancelled saccades. *J Neurosci* 34: 5497-5504.

37. Zenon, A., **Corneil, B.D.,** Falali-Sadouk, N., Olivier, E. (2014) Counterproductive effect of saccadic suppression during attention shifts. *PLoS One* 9: e86633.

38. Chapman, B.B. and **Corneil, B.D.** (2014) Short-duration stimulation of the supplementary eye fields perturbs anti-saccades while potentiating contralateral head orienting. *Eur J Neurosci* 39: 295-307.

39. Peel, T.R., Johnston, K, Lomber, S.G., **Corneil, B.D.** (2014) Bilateral saccadic deficits following large and reversible inactivation of unilateral frontal eye field. *J Neurophysiol* 111: 415-433.

40. Corneil, B.D., Chen, J.C., Goonetilleke, S.C. (2013) Dynamic and opposing adjustment of movement cancellation and generation in an oculomotor countermanding task. *J Neurosci* 33: 9975-9984.

41. Farshadmanesh, F., Byrne, P., Yan, X., Wang, H., **Corneil, B.D.,** Crawford, J.D. (2012) Relationships between neck muscle electromyography and three dimensional head kinematics during centrally-induced torsional head movements. *J Neurophysiol* 108: 2867-2883.

42. Goonetilleke, S.C., Wong, J.P., **Corneil, B.D.** (2012) Validation of a within-trial measure of the oculomotor stop process. *J Neurophysiol* 108: 760-770.

43. Buchholz, V.N., Goonetilleke, S.C., Medendorp, W.P., **Corneil, B.D.** (2012) Greater benefits of multisensory integration during complex sensorimotor transformations. *J Neurophysiol* 107: 3135-3143.

44. Corneil, B.D., Goonetillek, S.C., Peel, T.R., Green, K.A., Welch, I. (2012) Ultrasound-guided insertion of intramuscular electrodes into suboccipital muscles in the non-human primate. *J. Electromyograph Kinesiol* 22: 553-559.

45. Chapman, B.B., Pace, M.A., Cushing, S.L., **Corneil, B.D.** (2012) Recruitment of a contralateral head turning synergy by stimulation of supplementary eye fields. *J. Neurophysiol.* 107: 1694-1710.

46. Farshadmanesh, F., Byrne, P., Keith, G.P., Wang, H., **Corneil, B.D.,** Crawford, J.D. (2012) Cross-validated models of the relationships between neck muscle electromyography and three-dimensional head kinematics during gaze behaviour. *J. Neurophysiol.*107: 573-590.

47. Goonetilleke, S.C., Gribble, P.L., Mirsattari, S.M., Doherty, T.J., **Corneil, B.D.** (2011) Neck muscle responses evoked by transcranial magnetic stimulation of the human frontal eye fields. *Eur J Neurosci* 33: 2155-2167.

48. Chapman, B.B., and **Corneil, B.D.** (2011) Neuromuscular recruitment related to stimulus presentation and task instruction during an anti-saccade task. *Eur. J. Neurosci.* 33: 349-360.

49. Goonetilleke, S.C., Doherty, T.J., **Corneil, B.D.** (2010) A within trial measure of the stop signal reaction time in a head-unrestrained oculomotor countermanding task. *J. Neurophysiol.* 104: 3677-3690.
50. Corneil, B.D., Elsley, J.K., Nagy, B., Cushing, S.L. (2010) Motor output evoked by sub-saccadic stimulation of primate frontal eye fields *Proc Natl Acad Sci* 107: 6070-6075.
51. Nagy, B. and **Corneil, B.D.** (2010) Representation of horizontal head-on-body position in the primate superior colliculus. *J. Neurophysiol.* 103: 858-874.
52. Brien, D.C., **Corneil, B.D.**, Fecteau, J.H., Bell, A.H., Munoz, D.P. (2009) The behavioural and neurophysiological modulation of microsaccades in monkeys. *J. Eye Movement Res.* 3(2):4, 1-12.
53. Stevenson, S.A., Elsley, J.K., **Corneil, B.D.** (2009) A "Gap effect" on stop signal reaction times in a human saccadic countermanding task. *J. Neurophysiol.* 101: 580-590.
54. Farshadmanesh, F., Chang, P., Wang, H., Yan, X., **Corneil, B.D.**, Crawford, J.D. (2008) Neck muscle synergies during stimulation and inactivation of the interstitial nucleus of Cajal (INC). *J. Neurophysiol.* 100: 1677-1685.
55. Rezvani, S. and **Corneil, B.D.** (2008) Recruitment of a head turning synergy by low-frequency activity in the primate superior colliculus. *J. Neurophysiol.* 100: 397-411.
56. Chapman, B.B., and **Corneil, B.D.** (2008) Properties of human eye-head gaze shifts in an Anti-gaze shift task. *Vis. Research* 48: 538-548.
57. Corneil, B.D., Munoz, D.P., Chapman, B.B., Admans, T., Cushing, S.L. (2008) Neuromuscular consequences of reflexive covert orienting. *Nat. Neurosci.* 11(1): 13-15.
58. Elsley, J.K., Nagy, B., Cushing, S.L., **Corneil, B.D.** (2007) Widespread presaccadic recruitment of neck muscles by stimulation of the primate frontal eye fields. *J Neurophysiol*. 98: 1333-1354.
59. Corneil, B.D., Munoz, D.P. Olivier, E. (2007) Priming of head premotor circuits during oculomotor preparation. *J. Neurophysiol*. 97: 701-714
60. Corneil, B.D. and Elsley J.K. (2005) Countermanding eye-head gaze shifts in humans: marching orders are delivered to the head first *J. Neurophysiol.* 94: 883-895.
61. Musallam, S., **Corneil, B.D.**, Greger, B., Scherberger, H., Andersen, R.A. (2004) Cognitive control signals for neural prosthetics. *Science* 305(5681): 258-262.
62. Corneil, B.D., Olivier, E., Munoz, D.P. (2004) Visual responses on neck muscles reveal selective gating that prevents express saccades. *Neuron* 42(5): 831-841.
63. Corneil, B.D., Andersen, R.A. (2004) Dorsal neck muscle vibration induces upward shifts in the endpoints of memory-guided saccades in monkeys. *J. Neurophysiol.* 92: 553-566.
64. Andersen, R.A., Burdick, J.W., Musallam, S., Scherberger, H., Pesaran, B., Meeker, D., **Corneil, B.D.**, Fineman, I., Nenadic, Z., Branchaud, E., Cham, J.G., Greger, B., Tai, Y.C., Mojarradi, M.M. (2004). Recording advances for neural prosthetics. *Conf. Proc. IEEE. Eng. Med. Biol. Soc.* 7: 5352-5355.
65. Bell, A.H., **Corneil, B.D.,** Munoz, D.P., Meredith, A.M. (2003) Engagement of visual fixation suppresses sensory responsiveness and multisensory integration in the primate superior colliculus. *Eur. J. Neurosci.* 18: 2867-2873.
66. Scherberger, H., Fineman, I., Musallam, S., Dubowitz, D.J., Bernheim, K.A., Pesaran, B., **Corneil, B.D.,** Gilliken, B., Andersen, R.A. (2003). Magnetic resonance image-guided implantation of chronic recording electrodes in the macaque intraparietal sulcus. *J. Neurosci. Meth* 130: 1-8.

67. Corneil, B.D., Olivier, E., Munoz, D.P. (2002) Neck muscle responses to stimulation of monkey superior colliculus. I. Topography and manipulation of stimulation parameters. *J. Neurophysiol*. 88:1980-1999.

68. Corneil, B.D., Olivier, E., Munoz, D.P. (2002) Neck muscle responses to stimulation of monkey superior colliculus. II. Gaze shift initiation and volitional head movements. *J. Neurophysiol*. 88: 2000-2018.

69. Corneil, B.D., Van Wanrooij, M., Munoz, D.P., Van Opstal, A.J. (2002) Auditory-visual interactions subserving goal-directed saccades in a complex scene. *J. Neurophysiol.* 88: 438-454.

70. Richmond, F.J.R., Singh, K., **Corneil, B.D.** (2001) Neck muscles in the rhesus monkey. I. Muscle morphometry and histochemistry. *J. Neurophysiol.* 86: 1717-1728.

71. Corneil, B.D., Olivier, E., Richmond, F.J.R., Loeb, G.E., Munoz, D.P. (2001) Neck muscles in the rhesus monkey. II. Electromyographic patterns of activation underlying postures and movements. *J. Neurophysiol.* 86: 1729-1749.

72. Bell, A.H., **Corneil, B.D.**, Meredith, M.A., Munoz, D.P. (2001) The influence of stimulus properties on multisensory processing in the awake primate superior colliculus. *Can. J. Exp. Psychol.* 55:123-132.

73. Richmond, F.J.R., **Corneil, B.D.**, Singh, K. (1999). Animal models of motor systems: Cautionary tales from studies of head movement. *Prog. Brain Res.* Vol. 123: 411-416

74. Corneil, B.D., Hing, C.A., Bautista, D.V., Munoz, D.P. (1999). Human eye-head gaze shifts in a distractor task. I. Truncated gaze shifts. *J. Neurophysiol.* 82: 1390-1405.

75. Corneil, B.D., Munoz, D.P. (1999). Human eye-head gaze shifts in a distractor task. II. Reduced threshold for initiation of early head movements. *J. Neurophysiol.* 82: 1406-1421.

76. Richmond, F.J.R., Singh, K., **Corneil, B.D.** (1999). Marked non-uniformity of fiber-type composition in the primate suboccipital muscle obliquus capitis inferior. *Exp. Brain Res.* 125: 14-18.

77. Corneil, B.D. and Munoz, D.P. (1996) The influence of auditory and visual distractors on human orienting gaze shifts. *J. Neurosci.* 16: 8193-8207.

78. Goldring, J.E., Dorris, M.C., **Corneil, B.D.**, Ballantyne, P.A., Munoz, D.P. (1996) Combined eye-head gaze shifts to visual and auditory targets in humans. *Exp. Brain Res.* 111: 68-78.

79. Munoz, D.P. and **Corneil, B.D.** (1995) Evidence for interactions between target selection and visual fixation for saccade generation in humans. *Exp. Brain Res.* 103: 168-173.

MANUSCRIPTS SUBMITTED OR UNDER REVISION

1. Divakar, R., Loeb. G.E., **Corneil, B.D.**, Wallis, G., Carroll, T.J. A subcortical origin for rapid, target-oriented corticospinal excitability changes during visually guided reaching. Preprint posted to *bioXriv*.

2. Divakar, R., Loeb. G.E., **Corneil, B.D.**, Wallis, G., Carroll, T.J. A complex reach direction rule that delays rection time causes alternating excitation and inhibtion in express muscle responses and corticospinal excitability. Preprint posted to *bioXriv*.

3. Botzanowski, B., Acerbo, E., Lehmann, S.J., Kearsley, S.L., Steiner, M., Neufeld, E., Missey, F., Muller, L., Jirsa, V., **Corneil, B.D,** Williamson, A. Controlling focality and intensity of non-invasive deep brain stimulation using multipolar temporal interference in non-human primates and rodents. Preprint posted to *bioXriv.*

4. Weerdesteyn, V., Kearsley, S.L., Cecala, A.L., MacPherson, E.A., **Corneil, B.D.** Startling acoustic stimuli hasten choice reaching tasks by strengthening, but not changing the timing of, express visuomotor responses. Preprint posted to *bioXriv*.

BOOK CHAPTERS

1 **Corneil, B.D.** (2011) Neuromuscular strategies for eye-head gaze shifts. Oxford Handbook on Eye Movements. Liversedge, S.P., Gilchrist, I.D., Everling, S. (eds.) Oxford University Press.

2 Musallam, S. and **Corneil, B.D.** (2010) Motor Neural Prosthetic Systems. Sage Encyclopedia of Perception. Goldstein, E.B. (ed.). Sage Publishers, Thousand Oaks, CA.

3 **Corneil, B.D.** and Musallam, S. (2008) Vestibulospinal system & Eye-head/neck movement. The New Encyclopedia of Neuroscience. Squire, L. (ed). Elsevier Ltd. Chpt 1350.

4 Richmond, F.J.R. and **Corneil, B.D.** (2001) Afferent mechanisms in the upper cervical spine. The Cranio-cervical syndrome: Mechanisms, assessment and treatment. Vernon, H. (ed.). Butterworth-Heinemann, Oxford. pp.14-30.

INVITED COMMENTARY

1 **Corneil, B.D.** (2004) Book review of *The Superior Colliculus: New Approaches for Studying Sensorimotor Integration*, Hall, W.C. and Moschovakis, A. eds; *Quarterly Reviews of Biology.* 79(4), 457.

INVITED PRESENTATIONS:

2024	Johns Hopkins, Host: Dr. David Zee
	University of British Columbia, Host: Dr. Doug Altshuler
2022	Arizona State University, Host: Dr. Claire Honeycutt
2019	University of Mississippi, Host: Dr. P. J. May
	Queen's University, Host: Dr. D.P. Munoz
2018	University of British Columbia, Host: Dr. Miriam Spering
	Speaker, Origins of Balance Deficits and Falls Cluster conference, UBC
2017	Monash University, Host: Dr. Kim Cornish
2015	Speaker, Plenary Symposium, Canadian Association for Neuroscience
	Speaker, Gordon Conference on Eye Movements
	Hospital for Sick Children, Host: Dr. Sharon Cushing
2014	Vanderbilt University, Host: Dr. J.D. Schall
2012	University of Michigan, Host: Dr. M. King
	University of Texas at Austin, Host: Dr. A. Huk
	Université Paris Descartes, Host: Dr. P.P. Vidal
	The University of Exeter, Host: Dr. F. Verbruggen
	University of Oxford, Host: Dr. A. Bell
	German Primate Centrum, Host: Dr. H. Scherberger
	University of Louvain, Belgium, Host: Dr. E. Olivier
	Radboud University Nijmegen. Host: Dr. D. Stegeman
	Umea University, Sweden. Host: Dr. A. Pruszynski
	Rotterdam University. Host: Dr. M. Frens
2011	University of Bourgogne. Host: Dr. F. Bonnetblanc
	University of Utrecht. Host: Dr. S.F.W. Neggers