

CURRICULUM VITAE

Biographical

JONATHAN BRUCE JACOBS, Ph.D.

Professional Address: Ocular Motor Neurophysiology Laboratory (W151),
Louis Stokes Cleveland Veterans Affairs Medical Center
Cleveland, Ohio 44106 (216) 421-3224

Birth Date: December 5, 1964; New York, New York

Academic Education:

Cornell University	1982–1986	B.S (E.E.)	(May, 1986)
Cornell University (Graduate studies)	1988–1987	M.Eng. (Electrical)	(May, 1987)
Cornell University (Extramural studies)	1987–1988	Coursework in neurosciences	
Case Western Reserve University	1992–2001	Ph.D.	(May, 2001)

Professional

Industrial Experience:

Comverse Technology, Inc. Woodbury, N.Y.	September, 1989– January, 1991	Electrical Engineer
MacCentrics Huntington, N.Y.	January, 1991– August 1992	Sr. Systems Engineer
Case Western Reserve University Biomedical Engineering	Sept. 1994– August 2000	Computer Laboratory Manager, System Administrator

Academic Appointments:

Case Western Reserve University Graduate Studies	Sept. 1993– June 1994	Graduate Teaching Assistant
Case Western Reserve University School of Medicine	October 2001– Present	Adjunct Instructor of Neurology

Hospital Staff Appointments:

Veterans Affairs Medical Center Cleveland, OH	March 1995– May 2001	Healthcare Technician
Veterans Affairs Medical Center Cleveland, OH	May 2001– Present	Biomedical Engineer

Teaching Responsibilities:

Graduate Teaching Assistant (1993-1994)
Dept. of Biomedical Engineering, Case Western Reserve University

Biomedical Engineering Laboratory (EBME314) (1996-present)
Section: "Quantitative Analysis of the Ocular Motor System"
Dept. of Biomedical Engineering, Case Western Reserve University

Research Activities:

1. "Neurophysiology and Pathophysiology of Eye Movements,"
Research Assistant, VA MR No. 102-32-8483, FY 1995–1998. (\$701,654)
2. "Neurophysiology and Pathophysiology of Eye Movements,"
Research Assistant, VA MR No. 102-32-8483, FY 1999–2003. (\$1,070,800)
3. "Neurophysiology and Pathophysiology of Eye Movements,"
Co-Investigator, VA MR No. 102-32-8483, FY 2005-09. (\$1,250,000)

Membership in Scientific Societies:

Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Engineering in Medicine and Biology Society (IEEE)
Association for Research in Vision and Ophthalmology (ARVO)

Scientific Presentations

1. "Achiasmatic Mutant Belgian Sheepdogs: A Congenital Nystagmus Model," Poster at North American Neuro-Ophthalmology Society, Snowbird, Utah, February 11–15, 1996. (presented by L.F. Dell'Osso)
2. "Latent Nystagmus Fast–Phase Generation," Poster at North American Neuro-Ophthalmology Society, Snowbird, Utah, February 11–15, 1996. (presented by L.F. Dell'Osso)
3. "Braking Saccade Generation in Congenital Nystagmus," North American Neuro-Ophthalmology Society, Snowbird, Utah, February 11–15, 1996. (presented by L.F. Dell'Osso)
4. "Achiasmatic Mutant Belgian Sheepdogs: An Animal Model for Congenital Nystagmus." Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, April 21–26, 1996. (presented by L.F. Dell'Osso)
5. "Latent Nystagmus Fast–Phase Generation," Poster at Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, April 21–26, 1996. (presented by D.M. Erchul).
6. "Braking Saccade Generation in Congenital Nystagmus," Poster at Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, April 21–26, 1996.
7. "Achiasmatic Mutant Belgian Sheepdogs: An Animal Model for Congenital Nystagmus," XI International Neuro-Ophthalmology Society, Sydney, Australia, August 14–16, 1996. (presented by L.F. Dell'Osso)

8. "The Generation of Braking Saccades in Congenital Nystagmus." Dept. of Biomedical Engineering, Case Western Reserve University, Cleveland, OH, August 23, 1996.
9. "Eye Movements in Canine Hemiachiasma," North American Neuro-Ophthalmology Society, Keystone, Colorado, February 9–13, 1997. (presented by L.F. Dell'Osso)
10. "Congenital Nystagmus Braking Saccade Characteristics," Poster at North American Neuro-Ophthalmology Society, Keystone, Colorado, February 9–13, 1997. (presented by L.F. Dell'Osso)
11. "Latent Nystagmus in Down's Syndrome," American Academy of Neurology, Boston, April 11–19, 1997. (presented by L. Averbuch-Heller).
12. "Eye Movements in Canine Hemichiasma." Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, May 11–16, 1997. (presented by L.F. Dell'Osso)
13. "Congenital Nystagmus Braking Saccade Characteristics," Poster at Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, May 11–16, 1997.
14. "Latent Nystagmus Fast-Phase Generation," Poster at Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, May 11–16, 1997. (presented by D.M. Erchul).
15. "Extraocular Muscle Tenotomy Alone (the Dell'Osso Procedure): Results on Congenital Nystagmus (CN) in Achiasmatic Belgian Sheepdogs (ABS)," 24th Annual Meeting, American Association for Pediatric Ophthalmology and Strabismus, Palm Springs, California, April 4–8, 1998. (presented by R.W. Hertle).
16. "An Expanded Nystagmus Acuity Function," Poster at Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, May 10–15, 1998.
17. "A Preliminary Model of Congenital Nystagmus (CN) Incorporating Braking Saccades," Poster at Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, May 10–15, 1998. (presented by L.F. Dell'Osso)
18. "Extraocular Muscle Tenotomy (*The Dell'Osso Procedure*): Damping of Congenital (CN) and See-Saw (SSN) Nystagmus in the Achiasmatic Belgian Sheepdog (ABS)," Poster at Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, May 10–15, 1998. (presented by R.W. Hertle).
19. "A Preliminary Model of Congenital Nystagmus (CN) Incorporating Braking Saccades," XII International Neuro-Ophthalmology Society, Dublin, Ireland, July 19–23, 1998. (presented by L.F. Dell'Osso)
20. "Extraocular Muscle Tenotomy: Damping of Congenital (CN) and See-Saw (SSN) Nystagmus in the Achiasmatic Belgian Sheepdog (ABS)," XII International Neuro-Ophthalmology Society, Dublin, Ireland, July 19–23, 1998. (presented by L.F. Dell'Osso)

21. "An Expanded Nystagmus Acuity Function," XII International Neuro-Ophthalmology Society, Dublin, Ireland, July 19–23, 1998. (presented by L.F. Dell'Osso)
22. "A Preliminary Model of Congenital Nystagmus." Dept. of Biomedical Engineering, Case Western Reserve University, Cleveland, OH, March 9, 1999.
23. "A Dual-Mode Model for Latent Nystagmus," Poster at North American Neuro-Ophthalmology Society, Snowmass, Colorado, March 14–18, 1999. (presented by L.F. Dell'Osso)
24. "A Dual-Mode Model for Latent Nystagmus," Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, May 9–14, 1999.
25. "A Model of Congenital Nystagmus (CN) Incorporating Braking and Foveating Saccades," Poster at North American Neuro-Ophthalmology Society, Mt. Tremblant, Quebec, Canada, March 26–30, 2000. (presented by L.F. Dell'Osso)
26. "A Model of Congenital Nystagmus (CN) Incorporating Braking and Foveating Saccades," Poster at Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, April 30–May 5, 2000.
27. "A Hypothetical Fixation System Capable of Extending Foveation in Congenital Nystagmus." Poster at Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, April 29– May 4, 2001.
28. "The Torsional Component of "Horizontal" Congenital Nystagmus (CN)." Association for Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, April 29–May 4, 2001. (presented by L.F. Dell'Osso).
29. "Neurobiology of Eye Movements: From Molecules to Behavior." Cleveland, Ohio. October 4–6, 2001.
Presentations: "A Robust, Normal Ocular Motor System Model with Latent/Manifest Latent Nystagmus (LMLN) and Dual-Mode Fast Phases" Poster
"A Hypothetical Fixation System Capable of Extending Foveation in Congenital Nystagmus" Poster
30. "A Hypothetical Fixation System Capable of Extending Foveation in Congenital Nystagmus," Poster at North American Neuro-Ophthalmology Society, Copper Mt., Colorado, February 10–14, 2002. (presented by L.F. Dell'Osso).
31. "Effects on Congenital Nystagmus (CN) of Combined Gaze-Angle and Vergence Variation: Therapeutic Implications," Poster at North American Neuro-Ophthalmology Society, Copper Mt., Colorado, February 10–14, 2002. (presented by L.F. Dell'Osso).
32. "Oscillating Scotomas of Migraine Auras or Induced See-Saw Nystagmus (SSN) with Loss of Vertical Fusion in Congenital Nystagmus (CN)," Poster at North American Neuro-Ophthalmology Society, Copper Mt., Colorado, February 10–14, 2002. (presented by L.F. Dell'Osso).
33. XIV International Neuro-Ophthalmology Society, Buenos Aires, Argentina, May 5-8, 2002. Posters: (presented by L.F. Dell'Osso).

“A Hypothetical Fixation System Capable of Extending Foveation in Congenital Nystagmus”
“Effects on Congenital Nystagmus (CN) of Combined Gaze-Angle and Vergence Variation:
Therapeutic Implications”

Presentation: (presented by L.F. Dell’Osso).

“Oscillating Scotomas of Migraine Auras or “Induced” See-Saw Nystagmus (SSN)
with Loss of Vertical Fusion in Congenital Nystagmus (CN)”

34. “Effects on Congenital Nystagmus (CN) of Combined Gaze-Angle and Vergence Variation:
Therapeutic Implications,” Poster at Association for Research in Vision and Ophthalmology, Spring
Meeting, Ft. Lauderdale, Florida, May 5-10, 2002. (presented by A. Serra).

35. “Oscillating Scotomas of Migraine Auras or “Induced” See-Saw Nystagmus (SSN) with Loss of
Vertical Fusion in Congenital Nystagmus (CN),” Poster at Association for Research in Vision and
Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, May 5-10, 2002.

36. “Staircase” Saccadic Intrusions and Transient Yoking and Neural Integrator Failures Associated
with Cerebellar Hypoplasia.” Poster at North American Neuro-Ophthalmology Society, Snowbird,
Utah, February 9-13, 2003. (presented by L.F. Dell’Osso)

37. North American Neuro-Ophthalmology Society, Snowbird, Utah, February 9-13, 2003.
“Gene Therapy to Abolish Congenital Nystagmus in PRE65-Deficient Canines.” (presented by L.F.
Dell’Osso)

38. “Staircase” Saccadic Intrusions and Transient Yoking and Neural Integrator Failures Associated
with Cerebellar Hypoplasia,” Poster at Association for Research in Vision and Ophthalmology,
Spring Meeting, Ft. Lauderdale, Florida, May 4-9, 2003. (presented by S. Garbutt).

39. “Gene Therapy to Abolish Congenital Nystagmus in RPE65-Deficient Canines,” Association for
Research in Vision and Ophthalmology, Spring Meeting, Ft. Lauderdale, Florida, May 4-9, 2003.

40. “The Influence of Fixation on Ocular Oscillations,” American Academy of Optometry 2003,
Dallas, Texas, December 4–7, 2003. (presented by J. Shallo-Hoffmann)

41. “Gene Therapy to Abolish Congenital Nystagmus in RPE65-Deficient Canines,” First Ibero-
American Congress of Neuro-Ophthalmology, Lima, Peru, December 6–8, 2003. (presented by L.F.
Dell’Osso)

42. ““Staircase” Saccadic Intrusions and Transient Yoking and Neural Integrator Failure Associated
with Cerebellar Hypoplasia.” First Ibero-American Congress of Neuro-Ophthalmology, Lima, Peru,
December 6–8, 2003. (presented by L.F. Dell’Osso)

43. “The Damping Effects of Full-field Optokinetic Backgrounds on Fusion Maldevelopment
Nystagmus.” Poster at Association for Research in Vision and Ophthalmology, Spring Meeting, Ft.
Lauderdale, Florida, April 25–30, 2004.

44. “Engineering (just a little) for Neurologists,” Guest Lecture, Dept. of Neuro-ophthalmology,
University of Sassari, Sardinia, Italy, June 10, 2004.