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Board Certification:

5/2001 The American Board of Neurological Surgery (Certificate 21038, original time-limited certification dates: 05/01/2001 – 12/31/2011, first renewed certification dates: 01/01/2012 – 12/31/2021, second renewed certification dates: 01/01/2022 – 12/31/2031; enrolled in the Continuous Certification (CC) process)

Other Professional Certifications:

10/2009 The American Board of Independent Medical Examiners; Certified Independent Medical Examiner (CIME) (next recertification date 10/2025)

04/2012 The American Heart Association; Basic Life Support (BLS) (next recertification date 02/2026)

07/2017 The Neurocritical Care Society; Emergency Neurological Life Support (ENLS) (currently recertifying, next recertification 2026)

02/2020 International Commission on Healthcare Certifications; Certified Life Care Planner (CLCP) (next recertification date 02/2030)

Professional Experience:

9/2000 – present Neurosurgical practice: Bernhard Zunkeler, M.D., P.A.

5/2012 – 3/2016 Staff neurosurgeon, teleneurology, Walter Reed National Military Medical Center (WRNMMC), Bethesda, Maryland

4/2015 – 3/2016 Assistant Professor of Surgery, Uniformed Services University of the Health Sciences, Bethesda, Maryland

5/1999 – 5/2006 Chief, Division of Neurosurgery, St. Joseph Medical Center, Towson, Maryland

9/1997 – 9/2000 Neurosurgeon in a multispecialty group practice in Baltimore, Maryland

7/1997 – 8/1997 Interim employment as emergency room staff physician, University of Iowa Hospitals and Clinics, Iowa City, Iowa

7/1994 – 6/1996	Neuropathology research (Training Grant NS07294), University of Iowa Hospitals and Clinics, Iowa City, Iowa
7/1991 – 6/1997	Resident in neurosurgery, University of Iowa Hospitals and Clinics, Iowa City, Iowa
2/1989 – 6/1991	Visiting Fellow and Medical Staff Fellow, NINDS, Surgical Neurology Branch, National Institutes of Health, Bethesda, Maryland
10/1987 – 10/1988	Subinternship (Medizinisches Praktisches Jahr), medical and surgical rotations, University of Münster (Westfälische Wilhelmsuniversität Münster (WWU)), Münster, Germany

Education:

1984 – 1988	University of Münster (WWU), Münster, Germany, clinical training
1982 – 1984	University of Münster (WWU), Münster, Germany, preclinical training
1973 – 1982	Archigymnasium Soest, Soest, Germany, high school

Degrees/Credentials:

10/1988	M.D. – equivalent, Staatsexamen, University of Münster (WWU), Münster, Germany
3/1989	Ph.D. – equivalent, Inauguraldissertation (summa cum laude), University of Münster (WWU), Münster, Germany
3/1989	ECFMG Certificate (430-569-4)

Honors:

10/2002 – present	Fellow of the American College of Surgeons
3/1989	Medical Doctorate (summa cum laude), Westfälische Wilhelmsuniversität Münster
1983 – 1988	German National Scholarship Foundation (Studienstiftung des Deutschen Volkes)

Medical Licenses:

7/1997	Maryland Medical License (D52426)
5/1993	Iowa Medical License (29278), placed on inactive status in 12/2000
8/1990	German Medical License (Approbation als Arzt)

Professional Society Memberships:

1992 – present	Congress of Neurological Surgeons
2000 – present	North American Spine Society
2002 – present	German Neurosurgical Society (Deutsche Gesellschaft für Neurochirurgie)

Hospital Privileges:

Greater Baltimore Medical Center

6701 N. Charles Street, Towson, MD 21204

The Johns Hopkins Hospital

1800 Orleans Street, Baltimore, MD 21287

Research and Clinical Interests:

Head injury, spinal cord injury, spine surgery (techniques, indications, second opinions, complications), telemedicine, evidence-based medicine, patient safety, neurological impairment and disability, needs-based healthcare-associated cost assessment in cases of catastrophic loss of neurological function

Teaching Experience:

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|-------------|-----------------------------------------------------------------------------------|
| 2012 – 2016 | Neurosurgical residents and mid-level providers, WRNMMC, Bethesda, MD |
| 2014 – 2015 | Neurology resident teaching conferences, DC VAMC, Washington, DC |
| 1998 – 2012 | Neurosurgical residents, part-time faculty, Johns Hopkins Hospital, Baltimore, MD |
| 2000 – 2005 | Surgical residents, Union Memorial Hospital, Baltimore, MD |
| 1995 – 1996 | Medical students, Medical Neuroscience Course, University of Iowa, Iowa City, IA |

Oral Presentations:

- (1) Zünkeler B., Hofferberth B., Rotatory Evoked Potentials Following Labyrinthectomy in Rabbits. Congress of the Neurootological and Equilibrimetric Society, Bad Kissingen, Germany, 1988.
- (2) Zünkeler B., Hofferberth B., The Effect of Flunarizine and Nimodipine on Rotatory Evoked Potentials in Rabbits. Symposium on Calcium and the Vestibular System, Beerse, Belgium, 1988.
- (3) Zünkeler B., Fabry Z., Follett K., Brayton J., VanGilder J., Hart M.N., Donelson J.E., Human Brain Endothelial Cells in Culture. Sticky Issues. Iowa-Midwest Neurosurgical Society Meeting, Iowa City, Iowa; Department of Surgery Residents' Research Day, Iowa City, Iowa, 6/1995.
- (4) Zünkeler B., Fabry Z., Follett K., Brayton J., VanGilder J., Hart M.N., Donelson J.E., Adhesion of African Trypanosomes to Human Brain Microvascular Endothelial Cells. Society for Neuroscience Meeting, San Diego, California, 11/1995.
- (5) Zünkeler B., Reed L., Schelper R., Menezes A.W., Retro-odontoid Calcium Pyrophosphate Dihydrate Deposition Disease. Pseudogout of the Craniocervical Junction. Spine Section Meeting of the American Association of Neurological Surgeons, Orlando, Florida, 2/1996.

Bibliography:

- (1) Hofferberth B., Zünkeler B., Deitmer T., Hirschberg M., Rotatory Evoked Potentials in Normal and Labyrinthectomized Rabbits. *Adv. Oto-Rhino-Laryngo.*, 41:206-209, 1988.
- (2) Zünkeler B., Hofferberth B., Hirschberg M., Rotatory Evoked Potentials Following Labyrinthectomy in Rabbits. in: *Vertigo, Nausea, Tinnitus and Hypoacusia in Metabolic Disorders*, Claussen C.F., Kirtane M.V., Schlitter K. (eds.), pp. 103-106, Elsevier, Amsterdam, 1988.

- (3) Hirschberg M., Hofferberth B., Husstedt I., Zünkeler B., Oculomotor Findings in Patients Suffering from Diabetes Mellitus. in: *Vertigo, Nausea, Tinnitus and Hypoacusia in Metabolic Disorders*, Claussen C.F., Kirtane M.V., Schlitter K. (eds.), pp. 465-468, Elsevier, Amsterdam, 1988.
- (4) Hofferberth B., Zünkeler B., Rotatorisch Evozierte Potentiale bei Versuchstieren und beim Menschen. *Arch. Oto-Rhino-Laryngol.*, SII:196-198, 1988.
- (5) Muhonen M.G., Zünkeler B., Management of Acute Hydrocephalus (Landmarks and Techniques). in: *Neurosurgical Emergencies: Neurosurgical Topics*, Vol. 1, Loftus, C.M. (ed.), American Association of Neurological Surgeons, Chicago, 1994.
- (6) Zünkeler B., Hofferberth B., The Effect of Flunarizine and Nimodipine on Rotatory Evoked Potentials in Rabbits. *Acta Otolaryngol.*, S460:66-71, 1988.
- (7) Zünkeler B., Rotatorisch Evozierte Potentiale an Kaninchen. Inauguraldissertation zur Erlangung des Doktorgrades der Medizin, Klinik und Poliklinik für Neurologie, Westfälischen Wilhelmsuniversität Münster, Münster, Germany, 1988.
- (8) Zünkeler B., Carson R.E., Olson J., Blasberg R.G., Girton M., Bacher J., Herscovitch P., Oldfield E.H., Hyperosmolar Blood-Brain Barrier Disruption in Baboons. An in-vivo Study Using Positron Emission Tomography and ⁸²Rubidium. *J. Neurosurg.*, 84:494-502, 1996.
- (9) Zünkeler B., Carson R.E., Olson J., Blasberg R.G., DeVroom H., Lutz R.J., Saris S., Wright D.C., Kammerer W., Patronas N.J., Dedrick R.L., Herscovitch P., Oldfield E.H., Quantification and Pharmacokinetics of Blood-Brain Barrier Disruption in Humans. *J. Neurosurg.*, 85:1056-1065, 1996.
- (10) Zünkeler B., Schelper R., Menezes A.W., Periodontoid Calcium Pyrophosphate Dihydrate Deposition Disease: "Pseudogout" Mass Lesions of the Craniocervical Junction. *J. Neurosurg.*, 85:803-809, 1996.
- (11) Zünkeler, B., Case 1-1999: Acute Hemorrhagic Leukoencephalitis. *N. Engl. J. Med.*, 341:1314, 1999.

Published Abstracts:

- (1) Carson R.E., Zünkeler B., Blasberg R.G., Olson J., Girton M., Green S., Doppman J., Oldfield E.H., Herscovitch P., Quantitative Measurement of Hyperosmotic Blood-Brain Barrier Disruption with ⁸²Rb and PET. *J. Nucl. Med.*, 31:810, 1990.
- (2) Herscovitch P., Carson R.E., Zünkeler B., Jacobs G., Plascjak P., A Method for Rapid Repeat Measurements of Regional Cerebral Blood Flow with Positron Emission Tomography and ¹⁵O-water. *Soc. Neurosci. Abstr.*, 16:23, 1990.
- (3) Herscovitch P., Carson R.E., Olson J., Blasberg R.G., DeVroom H., Lutz R., Saris S., Wright D., Kammerer W., Patronas N., Herscovitch P., Oldfield E.H., Quantification of Hyperosmolar Blood-Brain Barrier Disruption in Human Brain Tumor Patients with ⁸²Rb and Positron Emission Tomography. *J. Cereb. Blood Flow Metab.*, 13:5378, 1993.
- (4) Zünkeler B., Fabry Z., Follett K., Brayton J., VanGilder J., Hart M.N., Donelson J.E., Adhesion of African Trypanosomes to Human Brain Microvascular Endothelial Cells. *Soc. Neurosci. Abstr.*, 688:6, 1995.

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