



## Keith Van Haren, MD

Associate Professor of Neurology and Neurological Sciences (Pediatric Neurology) and of Pediatrics

### CLINICAL OFFICE (PRIMARY)

- **Child Neurology**

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Palo Alto, CA 94304

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### Bio

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#### CLINICAL FOCUS

- Autoimmune Diseases of the Nervous System
- Adrenoleukodystrophy
- Multiple Sclerosis
- Autoimmune encephalitis
- MOGAD
- Leukodystrophies
- Neurology with Special Qualifications in Child Neurology

#### ACADEMIC APPOINTMENTS

- Associate Professor - Univ Med Line, Pediatric Neurology
- Associate Professor - Univ Med Line, Pediatrics
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

#### HONORS AND AWARDS

- Excellence in Clinical Neurology, Stanford Dept of Neurology (2021)
- Ann Moser Award for Science & Humanism, ALD Connect (2020)
- Finalist, DP2 New Innovator Award, NIH (2019)
- Morgridge Endowed Faculty Scholar in Pediatric Translational Medicine, Stanford Maternal & Child Health Research Institute (2019)
- K23 Clinician-Scientist Training Award, NIH/NINDS (2015)
- PERF-CNF Scientific Award, Child Neurology Foundation (2011)
- Chief Resident, Stanford Dept Neurology (2009)
- Medical Student Teaching Award, Stanford Dept Neurology (2009)

- Commencement Speaker, University of Rochester School of Medicine (2005)
- Inductee, Arnold Gold Humanism Honor Society (2004)
- Moore Award, Honorable Mention, American Association of Neuropathology (2003)

## **BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS**

- Founding Member, ALD Connect (2014 - present)
- Founding Member, The Global Leukodystrophy Initiative (GLIA) (2014 - present)

## **PROFESSIONAL EDUCATION**

- Residency: Stanford University School of Medicine (2010) CA
- Medical Education: University of Rochester School of Medicine and Dentistry (2005) NY
- Board Certification: Neurology with Special Qualifications in Child Neurology, American Board of Psychiatry and Neurology (2010)
- BA, College of the Holy Cross , Chemistry (1999)
- MD, University of Rochester School of Medicine , Medicine (2005)
- PGY1-2 Pediatrics, Massachusetts General Hospital , Pediatrics (2007)
- PGY3-5 Neurology, Stanford University Hospitals & Clinics , Child & Adult Neurology (2010)
- Fellowship, Stanford University Hospital & Clinics , Neuroimmunology (2012)
- Post-doc, Steinman & Robinson Labs, Stanford University , Neuroimmunology (2014)

## **LINKS**

- The VH Lab at Stanford: <http://med.stanford.edu/van-haren-lab.html>
- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>

## **Research & Scholarship**

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### **CURRENT RESEARCH AND SCHOLARLY INTERESTS**

Our aim: to preserve brain health in kids with genetic and autoimmune disorders

Multiple sclerosis (MS) and X-linked adrenoleukodystrophy (ALD) are disorders that damage the protective myelin membrane that surrounds nerve fibers in the brain and spinal cord. This disrupted myelin disrupts communication between neurons, causing neurological symptoms such as muscle weakness, imbalance, and cognitive problems.

ALD is a genetic disorder that affects approximately 1 in 15,000 people. It is caused by mutations in the ABCD1 gene, which leads to the accumulation of very long-chain fatty acids. For reasons that are still unclear, many (but not all) boys and men with ALD develop inflammatory brain lesions, which are often fatal.

MS is an autoimmune disorder that affects approximately 1 in 1,000 people. The inflammatory brain lesions in MS are less severe but more numerous than ALD lesions. MS lesions occur because the body's immune system mistakenly targets brain myelin.

While their biological origins differ, both MS and ALD exhibit metabolic abnormalities and inflammatory injuries that cause progressive neurodegeneration.

Our research team in the Van Haren Lab is developing therapies for both MS and ALD. We are developing traditional "rescue" therapies that stop inflammatory brain lesions after they have started, as well as "preventive" therapies that stop inflammatory brain lesions before they begin.

We are especially interested in how a lack of essential nutrients, such as vitamin D, during key developmental windows make the brain and immune system more susceptible to damage later in life. By understanding these underlying mechanisms, we hope to design preventive strategies, through dietary strategies or drug therapies that correct metabolic disturbances. Ultimately, our goal is to develop safe, effective ways to preserve brain health and prevent neurological decline in children with genetic and autoimmune conditions.

## CLINICAL TRIALS

- A Clinical Study to Assess the Efficacy and Safety of Leriglitazone in Adult Male Subjects With Cerebral Adrenoleukodystrophy, Recruiting
- A Study of Participants With Cerebral Adrenoleukodystrophy (CALD) Treated With Elivaldogene Autotemcel, Recruiting
- A Study to Evaluate the Safety and Efficacy of Zilganersen (ION373) in Patients With Alexander Disease (AxD), Recruiting
- The Myelin Disorders Biorepository Project, Recruiting
- A Pilot Study of Vitamin D in Boys With X-linked Adrenoleukodystrophy, Not Recruiting

## Teaching

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### STANFORD ADVISEES

#### Postdoctoral Faculty Sponsor

Danielle (HyunJung) Kim

## Publications

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### PUBLICATIONS

- **Influenza-Associated Acute Necrotizing Encephalopathy in US Children.** *JAMA*  
Silverman, A., Walsh, R., Santoro, J. D., Thomas, K., Ballinger, E., Fisher, K. S., Thomas, A. X., Appavu, B., Kruer, M. C., Neilson, D., Knoll, J., Sharp, A. N., Edelman, et al  
2025
- **A Novel Mouse Model for Cerebral Inflammatory Demyelination in X-Linked Adrenoleukodystrophy: Insights into Pathogenesis and Potential Therapeutic Targets.** *Annals of neurology*  
Hashemi, E., Srivastava, I. N., Aguirre, A., Yoseph, E. T., Kaushal, E., Awani, A., Ryu, J. K., Akassoglou, K., Talebian, S., Chu, P., Pisani, L., Musolino, P., Steinman, et al  
2024
- **Vitamin D status and latitude predict brain lesions in adrenoleukodystrophy.** *Annals of the Child Neurology Society*  
van Haren, K. P., Wilkes, J., Moser, A. B., Raymond, G. V., Richardson, T., Aubourg, P., Collins, T. W., Mowry, E. M., Bonkowsky, J. L.  
2023; 1 (2): 155-161
- **A Phase 1 Study of Oral Vitamin D3 in Boys and Young Men With X-Linked Adrenoleukodystrophy.** *Neurology. Genetics*  
Van Haren, K. P., Cunanan, K., Awani, A., Gu, M., Peña, D., Chromik, L. C., Považan, M., Rossi, N. C., Goodman, J., Sundaram, V., Winterbottom, J., Raymond, G. V., Cowan, et al  
2023; 9 (2): e200061
- **Effect of vitamin D supplementation on cerebral blood flow in male patients with adrenoleukodystrophy.** *Journal of neuroscience research*  
Zhao, M. Y., Dahlen, A., Ramirez, N. J., Moseley, M., Van Haren, K., Zaharchuk, G.  
2023
- **Subacute Neuropsychiatric Syndrome in Girls With SHANK3 Mutations Responds to Immunomodulation.** *Pediatrics*  
Bey, A. L., Gorman, M. P., Gallentine, W. n., Kohlenberg, T. M., Frankovich, J. n., Jiang, Y. H., Van Haren, K. n.  
2020; 145 (2)

- **Acute Flaccid Myelitis of Unknown Etiology in California, 2012-2015.** *JAMA*  
Van Haren, K., Ayscue, P., Waubant, E., Clayton, A., Sheriff, H., Yagi, S., Glenn-Finer, R., Padilla, T., Strober, J. B., Aldrovandi, G., Wadford, D. A., Chiu, C. Y., Xia, et al  
2016; 314 (24): 2663-71
- **Pediatric Neuroinflammatory and Neuropsychiatric Syndromes Associated with Dupilumab Treatment for Atopic Dermatitis.** *The Journal of pediatrics*  
Mathiesen, L., Santoro, J. D., Lee, N. J., van Haren, K. P.  
2026: 115201
- **Normative modeling for quantitative brain MRI phenotyping and biomarker discovery for pediatric leukodystrophies.** *medRxiv : the preprint server for health sciences*  
Karandikar, S., Sevagamoorthy, A., Zimmerman, D., D'Aiello, R., Dorfschmidt, L., Cyr, K., Jung, B., Levitis, E., Adang, L. A., Arnold, K., Bennett, M. L., Charsar, B. A., Dominguez Gonzalez, et al  
2026
- **Small Subjects, Big Data: The Project BIG Pediatric Biorepository**  
Kramer, N., Tomczak, A., Van Haren, K., Srivastava, I., Joseph, Y., Sumera, J., Timmons, G., Wu, D., Loeffler, J., McDonald, J., Galetta, K., Kipp, L., Lock, et al  
SAGE PUBLICATIONS LTD.2026: 44
- **Use of Brain MRI in Cerebral Adrenoleukodystrophy: International Recommendations for Screening, Monitoring, and Research.** *Neurology*  
Yska, H. A., Golse, M., Galanaud, D., Amartino, H. M., Bergner, C., Bruschi, F., Eichler, F. S., Fatemi, A., García-Cazorla, À., Gomez-Chiari, M., Köhler, W., Loes, D., Lund, et al  
2026; 106 (5): e214657
- **The Grey Zone Project: Risk-Based Classification of ABCD1 Variants in X-Linked Adrenoleukodystrophy.** *Journal of inherited metabolic disease*  
Lund, T. C., Miettunen, K., Jaspers, Y. R., Bergner, C., Bonkowsky, J. L., Bruschi, F., Cohen, J. S., Dijkstra, I. M., Eichler, F. S., Mallack, E. J., Salomons, G. S., Thompson, R., Tonduti, et al  
2026; 49 (2): e70157
- **Differentiating Incidental From Pathologic Brain MRI Findings in Asymptomatic Boys With X-Linked Adrenoleukodystrophy: A Multicenter Study.** *Neurology*  
Srivastava, I. N., Kim, D. H., Gauna, J., Videbæk, C., Corwin, N., Chang, S., Cheng, J., Dahmouh, H., Loes, D. J., Mallack, E. J., Van Haren, K. P.  
2025; 105 (10): e214321
- **Sex-associated and disease state-dependent monocyte polarization and CNS-trafficking phenotypes in pediatric acute-onset neuropsychiatric syndrome (PANS).** *Journal of neuroinflammation*  
Rahman, S. S., Hussein, N., Galfrè, S. G., Gaertner, F., Macaubas, C., Chan, A., Columbo, L., Gao, J., Galehdari, S., Bayram, B., Ma, M., Manko, C., Miles, et al  
2025; 22 (1): 273
- **Pediatric Influenza-Associated Encephalopathy and Acute Necrotizing Encephalopathy - United States, 2024-25 Influenza Season.** *MMWR. Morbidity and mortality weekly report*  
Fazal, A., Harker, E. J., Neelam, V., Olson, S. M., Rolfes, M. A., Reinhart, K., Kniss, K., Frutos, A., Leonard, J., Reed, C., Dugan, V. G., Safi, H., Dulski, et al  
2025; 74 (36): 556-564
- **Distinct Reactivity Patterns to EBV Nuclear Proteins and CNS Antigens Distinguish CNS Demyelinating Disorders from Systemic Autoimmunity**  
Sattarnejhad, N., Held, F., Babaei, M., Gawde, S., Ho, P., Barrett, A., Wijerante, T., Comanescu, A., Parsafar, S., Bartels, F., McDonald, J., Kipp, L., Van Haren, et al  
SAGE PUBLICATIONS LTD.2025: 309-310
- **Inflammation and Immunomodulation in Cerebral X-linked Adrenoleukodystrophy: Review of Pathology and Interventions.** *Journal of child neurology*  
Wright, M. A., Demmitt-Rice, C., Van Haren, K. P., Lund, T. C., Eichler, F., Bonkowsky, J. L.  
2025: 8830738251353034
- **Clinically Important Endpoints in Individuals With Leukodystrophy: A Multisite Study.** *Annals of the Child Neurology Society*

- Kotes, E. R., Woidill, S., D'Aiello, R., Khan, A., McCann, J., Ramos, M., Gavazzi, F., Keller, S., Van Haren, K., Fatemi, A., Eichler, F., Bonkowsky, J., Fraser, et al  
2025
- **Pediatric Influenza-Related Acute Necrotizing Encephalopathy in the United States: A Multicenter Retrospective Analysis**  
Silverman, A., Walsh, R., Santoro, J., Thomas, K., Ballinger, E., Fisher, K., Appavu, B., Kruer, M., Neilson, D., Knoll, J., Sharp, A., Edelman, H., Otallah, et al  
LIPPINCOTT WILLIAMS & WILKINS.2025
  - **Reporting ABCD1 Variants as Actionable Secondary Findings on Exome and Genome Sequencing.** *Genetics in medicine : official journal of the American College of Medical Genetics*  
Dominguez Gonzalez, C. A., Spinner, N. B., Ahrens-Nicklas, R. C., Young, L. R., Voss, L. A., Reichert, S. L., Gallo, D. J., Cohen, J. S., Bonkowsky, J. L., Keller, S. R., Bennett, M. L., Pizzino, A. M., Swantkowski, et al  
2025: 101425
  - **Pediatric Patients With Acute Flaccid Myelitis: Long-term Respiratory and Neurologic Outcomes.** *The Pediatric infectious disease journal*  
Patel, D., Kragel, E. A., Liu, S. D., Sonne, C., Zhu, S., Malhotra, A., Van Haren, K. P., Ritterman Weintraub, M., Kane, M.  
2024
  - **Child Neurology: Remarkable Recovery From Severe Acute Necrotizing Encephalopathy.** *Neurology*  
Silverman, A., Sasaki, M., Espindola Lima, J. E., Cheronis, C., Lin, G. L., Johnson, A., Dahmouh, H., Archer, E., Grekov, K., LaRocca, T. J., Van Haren, K.  
2024; 103 (8): e209877
  - **Practical Approach to Longitudinal Neurologic Care of Adults With X-Linked Adrenoleukodystrophy and Adrenomyeloneuropathy.** *Neurology. Genetics*  
Kornbluh, A. B., Baldwin, A., Fatemi, A., Vanderver, A., Adang, L. A., Van Haren, K., Sampson, J., Eichler, F. S., Sadjadi, R., Engelen, M., Orthmann-Murphy, J. L.  
2024; 10 (5): e200192
  - **Systemic complications of Aicardi Goutières syndrome using real-world data.** *Molecular genetics and metabolism*  
Peixoto de Barcelos, I., Jan, A. K., Modesti, N., Woidill, S., Gavazzi, F., Isaacs, D., D'Aiello, R., Sevagamoorthy, A., Charlton, L., Pizzino, A., Schmidt, J., van Haren, K., Keller, et al  
2024; 143 (1-2): 108578
  - **High-dimensional, targeted immunogenetic profiles of "idiopathic" myelitis with correlative risk and protective factors**  
Sarkar, T., Sumera, J., Tomczak, A., Bachar, S., Ton-Nu, C., Joseph, Y., Lee, J., Osoegawa, K., Vina, M., Wu, D., Nie, E., Sattarnezhad, N., McDonald, et al  
SAGE PUBLICATIONS LTD.2024: 1230-1231
  - **Developmental delay can precede neurologic regression in early onset metachromatic leukodystrophy.** *Molecular genetics and metabolism*  
Adang, L. A., Groeschel, S., Grzyb, C., D'Aiello, R., Gavazzi, F., Sherbini, O., Bronner, N., Patel, A., Vincent, A., Sevagamoorthy, A., Mutua, S., Muirhead, K., Schmidt, et al  
2024; 142 (4): 108521
  - **Consensus guidelines for the monitoring and management of metachromatic leukodystrophy in the United States.** *Cytotherapy*  
Adang, L. A., Bonkowsky, J. L., Boelens, J. J., Mallack, E., Ahrens-Nicklas, R., Bernat, J. A., Bley, A., Burton, B., Darling, A., Eichler, F., Eklund, E., Emrick, L., Escolar, et al  
2024
  - **Longitudinal natural history studies based on real-world data in rare diseases: Opportunity and a novel approach.** *Molecular genetics and metabolism*  
Adang, L. A., Sevagamoorthy, A., Sherbini, O., Fraser, J. L., Bonkowsky, J. L., Gavazzi, F., D'Aiello, R., Modesti, N. B., Yu, E., Mutua, S., Kotes, E., Shults, J., Vincent, et al  
2024; 142 (1): 108453
  - **A Novel Mouse Model for Cerebral Inflammatory Demyelination in X-Linked Adrenoleukodystrophy: Insights into Pathogenesis and Potential Therapeutic Targets** *Annals of Neurology*  
Hashemi, E., Srivastava, I., Aguirre, A., Yoseph, E. T., Van Haren, K. P.  
2024

- **A novel mouse model of cerebral adrenoleukodystrophy highlights NLRP3 activity in lesion pathogenesis.** *bioRxiv : the preprint server for biology*  
Hashemi, E., Narain Srivastava, I., Aguirre, A., Tilahan Yoseph, E., Kaushal, E., Awani, A., Kyu Ryu, J., Akassoglou, K., Talebian, S., Chu, P., Pisani, L., Musolino, P., Steinman, et al  
2023
- **Immunotherapy in Autoimmune Encephalitis: So Many Options, So Few Guidelines.** *Neurology*  
Srivastava, I., Van Haren, K.  
2023
- **Clinical Outcomes in Aicardi Goutieres Syndrome: A Natural History Study**  
Modesti, N. B., Barcelos, I., Jan, A. K., Isaacs, D., Gavazzi, F., Sevagamoorthy, A., Woidill, S., D'Aiello, R., Muirhead, K., Schmidt, J., Pizzino, A., Van Haren, K., Keller, et al  
WILEY.2023: S210
- **Time-to-Event Measures by Electronic Medical Record Extraction in a Multisite Leukodystrophy Population**  
Kotes, E., D'Aiello, R., Woidill, S., McCann, J., Khan, A. N., Ramos, M. O., Hackett, A., Amos, D., Goodman, J., Gauna, J., Grant, N., Lee, S., Page, et al  
WILEY.2023: S220
- **Brain Magnetic Resonance Imaging Abnormalities in Acute Flaccid Myelitis.** *Pediatric neurology*  
Caceres, J. A., Saucier, L., Murphy, O. C., Gordon-Lipkin, E. M., Santoro, J. D., Van Haren, K., Pardo, C. A., Hopkins, S.  
2023; 149: 56-62
- **Developmental delay can precede neurologic regression in metachromatic leukodystrophy**  
Adang, L. A., Groeschel, S., Grzyb, C., Eichler, F. S., Fraser, J. L., Emrick, L., Van Haren, K., Keller, S., Poe, M., Bernat, J., Bonkowsky, J. L., Bernard, G., Stutterd, et al  
ACADEMIC PRESS INC ELSEVIER SCIENCE.2023: 3
- **Safety and efficacy of leriglitzone for preventing disease progression in men with adrenomyeloneuropathy (ADVANCE): a randomised, double-blind, multi-centre, placebo-controlled phase 2-3 trial** *LANCET NEUROLOGY*  
Koehler, W., Engelen, M., Eichler, F., Lachmann, R., Fatemi, A., Sampson, J., Salsano, E., Gamez, J., Molnar, M., Pascual, S., Rovira, M., Vila, A., Pina, et al  
2023; 22 (2): 127-136
- **Safety and efficacy of leriglitzone for preventing disease progression in men with adrenomyeloneuropathy (ADVANCE): a randomised, double-blind, multi-centre, placebo-controlled phase 2-3 trial.** *The Lancet. Neurology*  
Kohler, W., Engelen, M., Eichler, F., Lachmann, R., Fatemi, A., Sampson, J., Salsano, E., Gamez, J., Molnar, M. J., Pascual, S., Rovira, M., Vila, A., Pina, et al  
2023; 22 (2): 127-136
- **Vitamin D status and latitude predict brain lesions in adrenoleukodystrophy** *Annals of the Child Neurology Society*  
Van Haren, K. P., Wilkes, J., Moser, A. B., Raymond, G. V., Richardson, T., Aubourg, P., Collins, T. W., Mowry, E. M., Bonkowsky, J. L.  
2023; 1 (2): 155-61
- **Pulmonological issues.** *Current problems in pediatric and adolescent health care*  
Perez, G., Young, L., Kravitz, R., Sheehan, D., Adang, L., Van Haren, K., Lin, J. L., Jaffe, N. N., Kuo, D., Ball, L., Keller, J., Sank, J., DiVito, et al  
2022: 101313
- **Peripheral T-Cells, B-Cells, and Monocytes from Multiple Sclerosis Patients Supplemented with High-Dose Vitamin D Show Distinct Changes in Gene Expression Profiles.** *Nutrients*  
Kim, D., Witt, E. E., Schubert, S., Sotirchos, E., Bhargava, P., Mowry, E. M., Sachs, K., Bilen, B., Steinman, L., Awani, A., He, Z., Calabresi, P. A., Van Haren, et al  
2022; 14 (22)
- **A Novel Mouse Model of Cerebral Demyelination in X-Linked Adrenoleukodystrophy Highlights NLRP3 Activation in Lesion Pathogenesis**  
Srivastava, I., Van Haren, K., Hashemi, E., Kaushal, E., Han, M., Lund, T., Bonkowsky, J., Yoseph, E.  
WILEY.2022: S174
- **A retrospective investigation of MOG-IgG titers in relapse and disability prediction in adult and pediatric myelin oligodendrocyte glycoprotein antibody-associated disease patients**

- McDonald, J., Santoro, J. D., Sattarnezhad, N., Tomczak, A., Sumera, J., Van Haren, K., Corwin, N., Kipp, L., Lock, C., Dunn, J., Hinman, J., Nelson, L., Han, et al  
SAGE PUBLICATIONS LTD.2022: 427-428
- **Developmental Delay Can Precede Neurologic Regression in Metachromatic Leukodystrophy**  
Adang, L. A., Groeschel, S., Grzyb, C., D'Aiello, R., Sherbini, O., Bronner, N., Patel, A., Vincent, A., Jin, D., Eichler, F., Fraser, J. L., Emrick, L., Van Haren, et al  
WILEY.2022: S164
  - **International Recommendations for the Diagnosis and Management of Patients With Adrenoleukodystrophy: A Consensus-Based Approach.** *Neurology*  
Engelen, M., van Ballegoij, W. J., Mallack, E. J., Van Haren, K. P., Köhler, W., Salsano, E., van Trotsenburg, A. S., Mochel, F., Sevin, C., Regelman, M. O., Tritos, N. A., Halper, A., Lachmann, et al  
2022
  - **Presymptomatic Lesion in Childhood Cerebral Adrenoleukodystrophy: Timing and Treatment.** *Neurology*  
Mallack, E. J., Van Haren, K. P., Torrey, A., van de Stadt, S., Engelen, M., Raymond, G. V., Fatemi, A., Eichler, F. S.  
2022
  - **Nocturnal hypoventilation as a respiratory complication of acute flaccid myelitis.** *The Journal of pediatrics*  
Aziz-Bose, R., Bhargava, S., Buu, M., Bove, R., van Haren, K.  
2022
  - **Inadequate Vaccine Responses in Children with Multiple Sclerosis**  
Santoro, J. D., Saucier, L. E., Tanna, R., Pagarkar, D., Tempchin, A. G., Khoshnood, M., Ahsan, N., Van Haren, K.  
SAGE PUBLICATIONS LTD.2022: 204-205
  - **Biochemical Studies in Fibroblasts to Interpret Variants of Unknown Significance in the ABCD1 Gene.** *Genes*  
van de Stadt, S. I., Mooyer, P. A., Dijkstra, I. M., Dekker, C. J., Vats, D., Vera, M., Ruzhnikov, M. R., van Haren, K., Tang, N., Koop, K., Willemsen, M. A., Hui, J., Vaz, et al  
1800; 12 (12)
  - **A variant of uncertain significance in SDHAF1, the succinate dehydrogenase chaperone protein, in an adult patient with spastic paraparesis and leukoencephalopathy.** *Multiple sclerosis and related disorders*  
Vlahovic, L., Lock, C. B., Han, M. H., Van Haren, K., Sampson, J. B.  
2021; 54: 103132
  - **Gastrostomy Tubes Placed in Children With Neurologic Impairment: Associated Morbidity and Mortality.** *Journal of child neurology*  
Lin, J. L., Rigdon, J. n., Van Haren, K. n., Buu, M. n., Saynina, O. n., Bhattacharya, J. n., Owens, D. K., Sanders, L. M.  
2021: 8830738211000179
  - **Inadequate Vaccine Responses in Children With Multiple Sclerosis.** *Frontiers in pediatrics*  
Santoro, J. D., Saucier, L. E., Tanna, R., Wiegand, S. E., Pagarkar, D., Tempchin, A. F., Khoshnood, M., Ahsan, N., Van Haren, K.  
2021; 9: 790159
  - **Acute flaccid myelitis: cause, diagnosis, and management.** *Lancet (London, England)*  
Murphy, O. C., Messacar, K., Benson, L., Bove, R., Carpenter, J. L., Crawford, T., Dean, J., DeBiasi, R., Desai, J., Elrick, M. J., Farias-Moeller, R., Gombolay, G. Y., Greenberg, et al  
2020
  - **The NLRP3 Inflammasome as a Link Between Metabolic Failure and Cerebral Demyelination in X-linked Adrenoleukodystrophy**  
Aguirre, A., Cayrol, R., Srivastava, I., Vogel, H., Van Haren, K.  
OXFORD UNIV PRESS INC.2020: 675
  - **Natural history of brain lesions in X-linked adrenoleukodystrophy: On-again, off-again.** *Neurology*  
Thompson Stone, R., van Haren, K.  
2020
  - **Clinical approach to the diagnosis of autoimmune encephalitis in the pediatric patient.** *Neurology(R) neuroimmunology & neuroinflammation*  
Cellucci, T., Van Mater, H., Graus, F., Muscal, E., Gallentine, W., Klein-Gitelman, M. S., Benseler, S. M., Frankovich, J., Gorman, M. P., Van Haren, K., Dalmau, J., Dale, R. C.

2020; 7 (2)

- **Genetic and phenotypic spectrum associated with IFIH1 gain-of-function.** *Human mutation*  
Rice, G. I., Park, S. n., Gavazzi, F. n., Adang, L. A., Ayuk, L. A., Van Eyck, L. n., Seabra, L. n., Barrea, C. n., Battini, R. n., Belot, A. n., Berg, S. n., Billette de Villemeur, T. n., Bley, et al  
2020
- **Randomized Clinical Trial of First-Line Genome Sequencing in Pediatric White Matter Disorders.** *Annals of neurology*  
Vanderver, A. n., Bernard, G. n., Helman, G. n., Sherbini, O. n., Boeck, R. n., Cohn, J. n., Collins, A. n., Demarest, S. n., Dobbins, K. n., Emrick, L. n., Fraser, J. n., Masser-Frye, D. n., Hayward, et al  
2020
- **MRI Surveillance of Boys with X-linked Adrenoleukodystrophy Identified by Newborn Screening: Meta-analysis and Consensus Guidelines.** *Journal of inherited metabolic disease*  
Mallack, E. J., Turk, B. R., Yan, H. n., Price, C. n., Mlis, M. D., Moser, A. B., Becker, C. n., Hollandsworth, K. n., Adang, L. n., Vanderver, A. n., Van Haren, K. n., Ruzhnikov, M. n., Kurtzberg, et al  
2020
- **Five men with arresting and relapsing cerebral adrenoleukodystrophy.** *Journal of neurology*  
Carlson, A. M., Huffnagel, I. C., Verrips, A. n., van der Knaap, M. S., Engelen, M. n., Van Haren, K. n.  
2020
- **Incidence, Risk Factors and Outcomes Among Children With Acute Flaccid Myelitis: A Population-based Cohort Study in a California Health Network Between 2011 and 2016** *PEDIATRIC INFECTIOUS DISEASE JOURNAL*  
Kane, M. S., Sonne, C., Zhu, S., Malhotra, A., Van Haren, K., Messacar, K., Glaser, C. A.  
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