

# CURRICULUM VITAE

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## 1 PERSONAL DETAILS

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Name: Johannes (Hans) Wilhelmus Von den Hoff  
Date of birth: September 17, 1964  
Place of birth: Oss, The Netherlands  
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Nationality: Dutch  
Researcherid: L-8762-2015

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## 2 EDUCATION

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**1982-1989** Biology at the University of Nijmegen. Main courses in Cell biology and Microbiology.  
**1990-1993** PhD in Medical Sciences on the subject 'Proteoglycan homeostasis in articular cartilage' at the University of Amsterdam, Amsterdam. Date of defense: November 23, 1993.

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## 3 PROFESSIONAL EXPERIENCE AND RESEARCH INTEREST

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Hans Von den Hoff is staff member and Assistant Professor of the department of Orthodontics and Craniofacial Biology. He is strongly involved in teaching for postgraduate students in orthodontics and graduate students in dentistry. He also developed a research line on the molecular etiology of cleft lip and palate. **Research summary:** Cleft lip and palate is a congenital disorder that is caused by genetic as well as environmental factors. Mutations in several genes are known to be associated with cleft palate but the underlying molecular mechanisms are still unknown. I am investigating the (epi)genetic and biological mechanisms that regulate palatogenesis and, when impaired, lead to palatal clefting. This involves the study of cells from cleft palate patients and normal subjects as well as studies in mouse embryos and zebrafish. The expression of Wnt proteins and other signaling molecules in the formation of the palate is studied in mouse embryos and palatal mesenchymal cells. The palatal fusion process is further studied in *in vitro* cultures of isolated palates. In zebrafish, research is focused on identifying the molecular mechanisms that lead to disturbed craniofacial development caused by mutations in cleft-related genes. This will ultimately offer new opportunities for the prevention of this disorder. At the moment, research is focusing on FGF signaling and the transcription factor FOXE1, which involves gene-editing using CRISPR/Cas9. Parts of this research belong to a longstanding collaboration with the School of Stomatology, Wuhan University, China (Prof. Dr. Bian). Next to this, Hans Von den Hoff is studying tissue regeneration and fibrosis after cleft palate repair in order to prevent post-surgical complications in growth and speech development. This involves rat models for intra-oral wound healing and cultured fibroblasts and myoblasts. Hans Von den Hoff supervised 12 PhD students and published more than 100 articles mainly in the field of cleft palate (H-index: 26).

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## 4 SELECTED PUBLICATIONS

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1. Zhou J, Meng LY, Ye XQ, **Von den Hoff** JW, Bian Z. Increased expression of integrin alpha2 and abnormal response to TGF-beta1 in hereditary gingival fibromatosis. *Oral diseases*. 2009;15(6):414-424. Ackermans MM, Zhou H, Carels CE, Wagener FA, **Von den Hoff** JW. Vitamin A and clefting: putative biological mechanisms. *Nutrition reviews*. 2011;69(10):613-24.
2. Jiang Z, **Von den Hoff** JW, Torensma R, Meng L, Bian Z. Wnt16 is involved in intramembranous ossification and suppresses osteoblast differentiation through the Wnt/beta-catenin pathway. *Journal of cellular physiology*. 2014;229(3):384-92.
3. Mammadova A, Ackermans MM, Bloemen M, Oostendorp C, Zhou H, Carels CE, et al. Effects of retinoic acid on proliferation and gene expression of cleft and non-cleft palatal keratinocytes. *European journal of orthodontics*. 2014;36(6):727-34.
4. Meng L, Wang X, Torensma R, **Von den Hoff** JW, Bian Z. Lithium inhibits palatal fusion and osteogenic differentiation in palatal shelves *in vitro*. *Archives of oral biology*. 2015;60(3):501-7.

5. Schoen C, Glennon JC, Abghari S, Bloemen M, Aschrafi A, Carels CEL, **Von den Hoff JW**. Differential microRNA expression in cultured palatal fibroblasts from infants with cleft palate and controls. *Eur J Orthod*. 2018 Jan 23;40(1):90-96.
6. Gebuijs , L. et al. Fgf8a mutation affects craniofacial development and skeletal gene expression in zebrafish larvae. *Biology Open*, 2019. 8: bio039834.
7. Gebuijs IGE, Metz JR, Zethof J, Carels CEL, Wagener FADTG, **Von den Hoff JW**. The anti-epileptic drug valproic acid causes malformations in the developing craniofacial skeleton of zebrafish larvae. *Mech Dev*. 2020 Sep;163:103632.
8. Rosero-Salazar DH, Carvajal-Monroy PL, Wagener FADTG, **Von den Hoff JW**. Functional analysis of the rat soft palate by real-time wireless electromyography. *Arch Oral Biol*. 2021 Feb;122:105021.
9. Carvajal Monroy PL, Grefte S, Kuijpers-Jagtman AM, **Von den Hoff JW**, Wagener FA. Neonatal Satellite Cells Form Small Myotubes In Vitro. *J Dent Res*. 2017 Mar;96(3):331-338.
10. Carvajal Monroy PL, Grefte S, Kuijpers-Jagtman AM, Helmich MP, Wagener FA, **Von den Hoff JW**. Fibrosis impairs the formation of new myofibers in the soft palate after injury. *Wound Repair Regen*. 2015 Nov-Dec;23(6):866-73.