

**Unsere wichtigsten Forschungsleistungen im Jahr 2023.** Es gelang uns in vielen Teilbereichen wichtige Forschungsarbeiten abzuschließen und neue zu initiieren:

**Implantologie:** In einer multizentrischen Studie haben wir verschiedene Implantat-Oberflächen-Dekontaminationsmethoden auf ihre Effizienz und Zytokompatibilität hin untersucht (Stein et al. 2023). Dafür gab es den **1. Preis für Grundlagenforschung** bei der Jahrestagung der DGParo 2023.

**Parodontologie/Laserzahnheilkunde:** In einer aufwändigen klinisch-mikrobiologischen Studie haben wir Laser-basierte (Er,Cr:YSGG) Dekontaminationsverfahren für Titanimplantat-Oberflächen untersucht (Kottmann et al. 2023). Wir konnten zudem zeigen, dass der initiale Einsatz eines neuartigen Diodenlasers mit blauem Licht (445 nm) bei der Parodontalbehandlung hilft Bakteriämien (Eintrag von Bakterien ins Blutgefäßsystem) zu vermeiden (Jansen et al. 2023). Wir haben in 2023 drei Studien zur differentiellen Virulenz des Schlüssel-Pathogens (*Porphyromonas gingivalis*) der Parodontitis publiziert (IZKF-gefördert): Klomp et al. 2023, Schön et al. 2023, Meyer et al. 2023.

**Systemische Erkrankungen reflektieren sich in der Mundhöhle:** Als Spezialisten der oralen Mikrobiologie und Immunologie sind unsere Methoden im Stande die Fernwirkungen von entzündlichen Darmerkrankungen in der menschlichen Mundhöhle zu erkennen. So verändert sich der Anteil von *Veillonella* spp., *Prevotella* spp., und *Prevotella salivae* bei entzündlichen Darmerkrankungen (IBD) im Speichel (Hammad et al. 2023), was man diagnostisch nutzen könnte..

**Kongress-Beiträge/Sonstiges:** *Porphyromonas gingivalis* ist der bedeutendste Pathobiont bei der Parodontitis. In Aachen legen wir zu diesem Erreger innerhalb eines IZKF- (Interdisziplinäres Zentrum für klinische Forschung) geförderten Projekts die weltweit größte Stamm- und Genomdaten- Sammlung an. In einem Vortrag bei der 55. Jahrestagung des Arbeitskreises für Grundlagenforschung haben wir über die Ergebnisse berichtet. (12.-13.01.2023). Auf der ECCMID (European Congress of Clinical Microbiology and Infectious Diseases) hatten wir zwei Präsentationen (15.-18.04.2023, Abdelbary et al.) über den Themenbereich Mikrobiom und systemische Erkrankungen. An der FH Jülich durften wir über Orale Erkrankungen und den Einsatz von Nanotechnologie berichten (24.04.2023, Jülich). Bei einer Fortbildung der Deutschen Pharmazeutischen Gesellschaft haben wir Einblicke in das Orale Mikrobiom gegeben (13.06.2023). In Tromsø an der arktischen Universität haben wir auf Einladung norwegische Zahnmedizin studierende in den Themen Mikrobiom/Genomik und Orales Ökosystem weitergebildet (Conrads, 18.10.2023). Der Masterstudiengang "M.Sc. Periodontology" an der RWTH International Academy (<https://master-periodontology.com/de/>) ging im WS2023-24 mit 14 Teilnehmern aus 11 Ländern in die dritte Runde (Braun [Leitung], Conrads, Deschner u.v.a.).

Unsere Abteilung hat zum dritten Mal (13th. Edition) zum Standard-Lehrbuch *Manual of Clinical Microbiology* ein Kapitel (57) über Gram-negative Anaerobier (z.B. Bacteroides, Fusobakterien, Prevotellen und Porphyromonaden) beigetragen.

**2023 Peer-reviewed publications**

Schön, C., Rogerio B. Craveiro, Christian Niederau, **G. Conrads**, Holger Jahr, Thomas Pufe and Michael Wolf. High concentrations of Porphyromonas gingivalis-LPS downregulate TLR4 and modulate phosphorylation of ERK and AKT in murine cementoblasts, *Ann Anat.* 2023 Feb;246:152023. doi: 10.1016/j.aanat.2022.152023. Epub 2022 Nov 15. **IF 2.698**

Stein, J., **G. Conrads**, **M. M. H. Abdelbary**, S. Said-Yekta Michael, P. Buttler, J. Glock, G. Sadvandi, R. Kaufmann, and C. Apel. Antimicrobial efficiency and cytocompatibility of different decontamination methods on titanium and zirconium surfaces *Clin Oral Implants Res.* 2023 Jan;34(1):20-32. doi: 10.1111/clr.14014. Epub 2022 Oct 27 **IF 5.977 (Meridol-Preis, Grundlagenforschung).**

Kottmann, L., R. Franzen, **G. Conrads**, St. Wolfart, and J. Marotti. Effect of Er,Cr:YSGG laser with a side-firing tip on decontamination of titanium disc surface. *Int J of Implant Dentistry*, 2023 Feb 20;9(1):7. doi: 10.1186/s40729-023-00469-z. **IF 2.984**

**Klomp, T.**, D. Deng, H. Jahr, **M. M. H. Abdelbary**, and **Conrads, G.** The evaluation of hydrocortisone as a strain-dependent growth-regulator of Porphyromonas gingivalis *Anaerobe.* 2023 Jan 18;80:102698. doi: 10.1016/j.anaerobe.2023.102698. Online ahead of print. **IF 3.331**

**Meyer, M. M. H. Abdelbary**, E.M. Buhl, C. Kuppe, and **Conrads, G.** Exploring the Genetic and Functional Diversity of Porphyromonas gingivalis Long Fimbriae. *Molecular Oral Microbiology*, 2023 Sep 26. doi: 10.1111/omi.12433. Online ahead of print. **IF 4.107**

Böcher, S., **H.L. Meyer, E. Dafni, and G. Conrads.** Prevalence and Phylogenetic Analysis of Lipoprotein-Gene ragB-1 of Porphyromonas gingivalis - A Pilot Study *Antibiotics (Basel)* 2023 Sep 19;12(9):1458. doi: 10.3390/antibiotics12091458. **IF 4.8**

Jansen, P., **G. Conrads**, J.-S. Wenzler, F. Krause, and A. Braun. Bacteremia prevention during periodontal treatment — an in vivo feasibility study. *Antibiotics, Antibiotics (Basel)* 2023, 12, 1555. <https://doi.org/10.3390/antibiotics12101555>. **IF 4.8**

Hammad, M. I., **G. Conrads, M.H.H. Abdelbary.** Isolation, identification, and significance of salivary Veillonella spp., Prevotella spp., and Prevotella salivae in patients with inflammatory bowel disease. *Frontiers in Cellular and Infection Microbiology*, Volume 13 – 2023. **IF 5.7**

**Pressespiegel:**

**Conrads-G:** Ein Mund voll Leben- Einblicke in das orale Mikrobiom. *Pharmakon*, 11.Jg. 3/2023

**2023 Book(chapters)**

**Conrads G**, Nagy E, Könönen E. 09-2023. Bacteroides, Porphyromonas, Prevotella, Fusobacterium, and Other Anaerobic Gram-Negative Rods, p 1100-1130 (Chapter 57). In Carroll KC, Pfaller MA, Karlowsky JA, McAdam AJ, Landry ML, Patel R, Pritt BS. *Manual of Clinical Microbiology*, 13th Edition. ASM Press, Washington, DC.

### 2023 Meeting abstracts V= Vortrag, P=Poster

**Abdelbary, M. M. H.**, C. Kuppe, S. S. Yekta-Michael, T. Krüger, J. Floege, and **G. Conrads**. Impact of sucroferic oxyhydroxide on the oral and intestinal microbiome in hemodialysis patients.

33rd European Congress of Clinical Microbiology and Infectious diseases (ECCMID), 15 - 18 April 2023, Copenhagen, Denmark.

**Abdelbary, M.H.**, Maximilian Hatting, Moshira Hammad, Alexandra Bott, Andrea Dahlhausen, Doris Keller, Christian Trautwein, **G. Conrads**. The oral-gut axis: salivary and fecal microbiome dysbiosis in patients with inflammatory bowel disease (IBD).

33rd European Congress of Clinical Microbiology and Infectious diseases (ECCMID), 15 - 18 April 2023, Copenhagen, Denmark.

**Conrads, G.** (Invited speaker)

Caries, periodontitis, peri-implantitis: widespread diseases and how nanotechnology could help. Institut für Nano- und Biotechnologien (INB)

FH Aachen | University of Applied Sciences

24.04.2023 in Jülich

**Conrads, G.** (Invited speaker)

Einblicke in das Orale Mikrobiom

Deutsche Pharmazeutische Gesellschaft e.V.

13.06.2023 in Zoom (deutschlandweit)

**Conrads, G.** (Invited speaker, faculty member)

The Microbial World (45'), The Genomic World (60'), The Oral Environment (60')

Seminars on invitation of Mohammed El-Haroni for training postgraduates in dentistry

Department of Clinical Dentistry

UiT The Arctic University of Norway

18.10.2023 in Tromsø, Norway

**M.M.H. Abdelbary, Hendrik Meyer, Tim Klomp, and G. Conrads**

A Genomic Portrait Reveals the Genetic Plasticity and Evolutionary Adaptation of *Porphyromonas gingivalis*

55. Jahrestagung der Arbeitsgemeinschaft für Grundlagenforschung (AfG) am

12. -13.01.2023, Mainz, ZMK-Klinik der Universitätsmedizin

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### 2022 Peer-reviewed publications

Braga, A.S., **M. M. H. Abdelbary**, R. R. Kim, F. P. de Souza Rosa de Melo, L. L. Saldanha, A. L. Dokkedal, **G. Conrads**, M. Esteves-Oliveira, and A. C. Magalhães,

The effect of toothpastes containing natural extracts on total bacterial species of a microcosm biofilm and on enamel caries development, *Antibiotics* (Basel). 2022 Mar 19;11(3):414. doi: 10.3390/antibiotics11030414.

**Shi, Y.**, C. Bergs, **M. M. H. Abdelbary**, A. Pich, and **G. Conrads**

Isoeugenol-functionalized nanogels inhibit peri-implantitis associated bacteria in vitro *Anaerobe* 2022 Mar 30:102552. doi: 10.1016/j.anaerobe.2022.102552.

**Abdelbary, M. M. H.**, F. Schittenhelm, S. S. Yekta-Michael, S. Reichert, S. Schulz., A.

Kasaj, A. Braun, **G. Conrads\***, and J. M. Stein\*. Impact of three non-surgical full-mouth periodontal treatments on total bacterial load and selected periodontopathogens. *Antibiotics* 2022, 11(5), 686. doi.org/10.3390/antibiotics11050686. \*shared senior position.

Schulz, S., J. M. Stein, A. Schumacher, D. Kupitz, S. Michael, F. Schittenhelm, **G. Conrads**, H.-G. Schaller, and S. Reichert. Non-surgical periodontal treatment options and their impact on subgingival microbiome. *J Clinical Medicine* 2022 Feb 23;11(5):1187. doi: 10.3390/jcm11051187.

**Abdelbary, M. M. H.**, C. Kuppe, S. S. Yekta-Michael, T. Krüger, J. Floege, and **G. Conrads**. Impact of sucroferic oxyhydroxide on the oral and intestinal microbiome in hemodialysis patients. *Scientific Reports*, 2022 Jun 10;12(1):9614. doi: 10.1038/s41598-022-13552-z.

**Abdelbary, M.M.H.**, M. Hatting, **A. Bott**, A. Dahlhausen, D. Keller, C. Trautwein, and **G. Conrads**. The oral-gut axis: salivary and fecal microbiome dysbiosis in patients with inflammatory bowel disease. *Frontiers in Cellular and Infection Microbiology*, 12:1010853. doi: 10.3389/fcimb.2022.1010853

### Pressespiegel:

**Conrads, G.** Das orale Mikrobiom: Freund oder Feind? Up2date, Eine überwiegend naturwissenschaftliche Betrachtung. *Zahnmedizin up2date* 2022; 16(05): 401-411. doi: 10.1055/a-1929-7572.

### 2022 Book(chapters)

Claros, M.C., Z.C. Claros, S. S. Yekta-Michael, and **G. Conrads**  
Oral and Intestinal Bacteroidetes  
Chapter 7 (20 Seiten)  
In: I. de Filippis and M.L. McKee (Eds.): *Molecular Typing in Bacterial Infections*, 2nd. Edition, Springer Nature Switzerland AG 2022, ISBN Print 978-3-030-83216-2, eBook 978-3-030-83217-9.

### 2022 Meeting abstracts V= Vortrag, P=Poster

**Abdelbary, M.M.H., Tim Klomp, and Conrads, G.** (V)  
A Genomic Portrait Reveals the Genetic Plasticity and Evolutionary Adaptation of *Porphyromonas gingivalis*  
In: Abstract book "2022 Anaerobe Seattle"  
The 16th Biennial Congress of the Anaerobe Society of the Americas  
28.07.-32.07.2022 in Seattle, Washington, USA

**Abdelbary, M. M. H.**, F. Schittenhelm, S. S. Yekta-Michael, S. Reichert, S. Schulz., A. Kasaj, A. Braun, **G. Conrads\***, and J. M. Stein\*. (P)  
Impact of three non-surgical full-mouth periodontal treatments on total bacterial load and selected pathobionts.  
In: *J Clin Periodontology* 2022;143-288  
EuroPerio10, 15.-18.06.2022 Copenhagen, Denmark

**Abdelbary, M.M.H.**, M. Hatting, A. Dahlhausen, A. Bott, C. Trautwein, and **G. Conrads**. The oral-gut axis - salivary and fecal dysbiosis in inflammatory bowel diseases (IBD).  
In: Abstract Band [https://t3-1.conventus-hetzner.de/fileadmin/congress/media/dghm2022/pdf/DGHM\\_2022\\_abstracts.pdf](https://t3-1.conventus-hetzner.de/fileadmin/congress/media/dghm2022/pdf/DGHM_2022_abstracts.pdf)  
74. Jahrestg. der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM),  
05-07.09.2022, Berlin

**Conrads, G.**  
Infektionsprävention mittels Laser – Aktueller Stand und Perspektive  
30. Jahrestagung der Deutschen Gesellschaft für Laserzahnheilkunde,  
01.10.2022 in Aachen

**2021 Peer-reviewed publications**

**Walther, W., S. Zumbülte**, C. M. Faerber, R. J. Wierichs, H. Meyer-Lueckel, **G. Conrads, K. Henne**, and M. Esteves-Oliveira. Analysis of relative bacterial activity and *ldh*-gene expression of caries-associated bacteria in a site-specific natural biofilm  
Clin Oral Investig. 2021 Jun;25(6):3669-3679. doi: 10.1007/s00784-020-03691-w. Epub 2020 Nov 23.

Goldschmidt, G.-M., M. Krok-Borkowicz, R. Zybal, E. Pamula, R. Telle, **G. Conrads\***, K. Schickle\*. Biomimetic in situ co-precipitation of calcium phosphate/silver composite on zirconia ceramic materials for surface functionalization in terms of antimicrobial and osteoconductive properties  
Dent Mater. 2021 Jan;37(1):10-18. doi: 10.1016/j.dental.2020.09.018. Epub 2020 Nov 26.  
\*shared senior position

Braga, A.S., F. P. de Souza Rosa de Melo, L. L. Saldanha, A. L. Dokkedal, T. Meißner, M. Bemmann, E. Schulz-Kornas, R. Haak, M. M. H. Abdelbary, **G. Conrads**, A. C. Magalhães, M. Esteves-Oliveira  
The effect of solutions containing extracts of *Vochysia tucanorum* Mart., *Myrcia bella* Cambess., *Matricaria chamomilla* L. and *Malva sylvestris* L. on cariogenic bacterial species and enamel caries development.  
Caries Res. 2021 May 17:1-12. doi: 10.1159/000515234. Online ahead of print.

**Abdelbary, M.H.H., G. Willms and G. Conrads**

A new species-specific typing method for salivarius group streptococci based on the dephospho-coenzyme A kinase (coaE) gene sequencing  
Front Cell Infect Microbiol. 2021 Aug 6;11:685657. doi: 10.3389/fcimb.2021.685657. eCollection 2021.

**Jansen, P. M., M. H. H. Abdelbary, and G. Conrads**

A concerted probiotic activity to inhibit periodontitis-associated bacteria  
PLoS One 2021 Mar 5;16(3):e0248308. doi: 10.1371/journal.pone.0248308. eCollection 2021.

**Conrads, G., T. Klomp**, D. Deng, J.-S- Wenzler, A. Braun, and **M. M. H. Abdelbary**. The antimicrobial susceptibility of *Porphyromonas gingivalis*: genetic repertoire, global phenotype, and review of the literature. Antibiotics 2021, 2021 Nov 24;10(12):1438. doi: 10.3390/antibiotics10121438.

Wenzler, J.-S., F. Krause, S. Böcher, W. Falk, A. Birkenmaier, **G. Conrads**, and A. Braun  
Antimicrobial impact of different air-polishing powders in a subgingival biofilm model  
Antibiotics 2021, Nov 28;10(12):1464. doi: 10.3390/antibiotics10121464.

Böcher, S., **G. Conrads**, A. Braun und J.-S- Wenzler  
Integration photochemischer Prozesse in die Parodontistherapie  
Quintessenz Zahnmedizin, Jhg. 72, Ausgabe 04, April 2021.

**Conrads, G.** Orales Mikrobiom: opportunistische Pathogene reduzieren – aber wie?  
Hamburger Expertenkreis Mikrobiom  
Newsletter 03/2021, Ferring Arzneimittel GmbH in Kooperation mit der DGMIM (Deutsche Gesellschaft für Mukosale Immunologie und Mikrobiom)

**Pressespiegel:**

**Conrads, G.** Gurgeln gegen Corona? Ein Interview von Helmut Broeg.  
Focus-Magazin. Ausgabe 07-2021

## 2021 Meeting abstracts

### Conrads, G.

Cross-talk between the oral and intestinal microbiome (V)  
8th. Hamburg Expert Meeting, Microbiome, inflammatory bowel and other gastrointestinal diseases. 26.04.2021, virtuell.

### M.M.H. Abdelbary, G. Wilms and G. Conrads (P)

The evolution and population structure of *Streptococcus parasanguinis*  
In: Abstract – Band [https://www.dghm-kongress.de/fileadmin/congress/media/dghm2021/pdf/DGHM\\_2021\\_digital\\_Programme\\_boeklet.pdf](https://www.dghm-kongress.de/fileadmin/congress/media/dghm2021/pdf/DGHM_2021_digital_Programme_boeklet.pdf)  
73. Jahrestg. der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM), 12-14.09.2021, virtuell.

### Jansen, P. M., M. H. H. Abdelbary, and G. Conrads (V)

A concerted probiotic activity to inhibit periodontitis-associated bacteria  
13th. European Oral Microbiology Workshop  
27.-28.05.2021 virtual, organized by Tromsø, Norway.

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## 2020 Peer-reviewed publications

Kniha, K., S. Möhlhenrich, a. Bock, N. Ayoub, A. Modabber, F. Hölzle, **G. Conrads\***, and E. Goloborodko\*  
\*geteilte Seniorposition  
Evaluation of the bactericidal effect of cold atmospheric pressure plasma on contaminated human bone – an in vitro study  
British Journal of Oral and Maxillofacial Surgery, 2020 Apr;58(3):329-333. doi: 10.1016/j.bjoms.2020.01.003. Epub 2020 Jan 20. PMID: 31969253

### Froeber, K., C. Bergs, A. Pich, and G. Conrads

Biofunctionalized zinc peroxide nanoparticles inhibit peri-implantitis associated anaerobes and *Aggregatibacter actinomycetemcomitans* pH-dependent.  
Anaerobe, 2020 Apr;62:102153. doi: 10.1016/j.anaerobe.2020.102153. Epub 2020 Jan 18.

Herrmann, H., J.S. Kern, Th. Kern, J. Lautensack, **G. Conrads**, and S. Wolfart  
Early bacterial adhesion/biofilm formation and mature plaque composition on four different dental implant materials: an in vivo human study.  
Clinical Oral Implant Research, 2020 Sep 1. doi: 10.1111/clr.13656. Online ahead of print.

**Conrads, G.** Zutritt verboten: Wie im Mund die Invasion von Mikroben verhindert wird  
Quintessenz Zahnmedizin, Jhg. 71, Ausgabe 12, Dez. 2020.

**Conrads, G.** Das orale Mikrobiom und seine kariogenen Spezies  
ZM Zahnärztliche Mitteilungen 23-24/2020 Dez 2020.

### Pressespiegel:

**Conrads, G.** Mundflora: Schwer was los. Ein Interview von Claudia Doyle  
Apotheken Umschau Online, 13.11.2020.

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## 2020 Book Chapters:

M. C. Claros, Z.C. Claros, S. S. Yekta-Michael, and **G. Conrads**  
Oral and Intestinal Bacteroidetes

Chapter 7 (20 Seiten)

In: I. de Filippis and M.L. McKee (Eds.): Molecular Typing in Bacterial Infections, 2nd. Edition, Springer Science+Business Media New York  
Submitted 01-2020, In press

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**2020 Besondere Auszeichnung:**

Franziska Hetrodt: Beste Dissertation in der Kategorie Zahnmedizin 2020 für die Arbeit:

Hetrodt, F., J. Lausch, H. Meyer-Lückel, G. Conrads, and C. Apel, Evaluation of restorative materials containing preventive additives in a secondary caries model in vitro. Caries Research, 2019 Feb 20:1-10. doi: 10.1159/000496401. Gelichzeitig Oral-B-goldprize 2018, Deutsche Gesellschaft für Kinderzahnheilkunde.

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**2020 Meeting abstracts**

**M.M.H. Abdelbary, G. Wilms and G. Conrads (P)**

Typing method for identifying and discriminating salivarius group streptococci  
6th. Joint Conference of the German Society for Hygiene and Microbiology (DGHM) and the Association for General and Applied Microbiology (VAAM).  
In: BIOSpektrum (expected)  
08-11 March 2020 in Leipzig, Germany.

**M.M.H. Abdelbary, G. Wilms and G. Conrads (P)**

Comparative genomics reveal insights into genomic plasticity and habitat adaptation of Streptococcus parasanguinis  
6th. Joint Conference of the German Society for Hygiene and Microbiology (DGHM) and the Association for General and Applied Microbiology (VAAM).  
In: BIOSpektrum (expected)  
08-11 March 2020 in Leipzig, Germany.

A. S. Braga, J. G. Pires<sup>1</sup>, F. Melo, L. L. Saldanha, A. L. Dokkedal, **G. Conrads**, A. C. Magalhães, M. Esteves-Oliveira (V)

Effect of different experimental mouthrinses containing natural/herbal extracts on caries-associated bacteria. A microcosm biofilm model 66th. ORCA Congress (The European Organisation for Caries Research), session 1: Microbiology  
08.-11. 07. 2020 in Cagliari, Sardinia, Italy.

**Froeber, K., C. Bergs, A. Pich, and G. Conrads (P)**

Biofunctionalized zinc peroxide nanoparticles inhibit peri-implantitis associated anaerobes  
In: Abstract book "2020 Anaerobe Seattle"  
The 15th Biennial Congress of the Anaerobe Society of the Americas  
23.07.-26.07.2020 in Seattle, Washington, USA (as Zoom conference because of Corona-Pandemic)

**Y. Shi, C. Bergs, A. Pich, and G. Conrads (P)**

Isoeugenol-modified nanogel-coatings for implant protection  
In: Abstract book "2020 Anaerobe Seattle"  
The 15th Biennial Congress of the Anaerobe Society of the Americas  
23.07.-26.07.2020 in Seattle, Washington, USA (as Zoom conference because of Corona-Pandemic)

Braga, A.S., J. G. Pires, F. Melo, L. L. Saldanha, A. L. Dokkedal, **G. Conrads**, A. C. Magalhães and M. Esteves-Oliveira (P)

Effect of different experimental mouthrinses containing natural/herbal extracts on caries-associated bacteria. A microcosm biofilm model  
37th. Annual Congress Brazilian Division of IADR (SBPqO). Virtula congress (corona) 09.-12.09.2020 in Brazil  
In: Brazilian Oral Research

Braga, Aline S., Fernanda P.S.R de Melo, Dr. Leonardo L. Saldanha, Anne L. Dokkedal, Tobias Meißner, Maximilian Bemann, Ellen Schulz-Kornas, Rainer Haak, **Georg Conrads**, Ana Carolina Magalhães, and Marcella Esteves-Oliveira  
Karieshemmende Wirkung von Pflanzenextrakten aus *Vochysia tucanorum*, *Myrica bella*, *Matricaria chamomilla* and *Malva sylvestris*  
4. Gemeinschaftstagung der DGZ und der DGET mit der DGPZM und der DGR<sup>2</sup>Z; 26. – 28.11.2020; Dresden: HAUPTKONGRESS am 27./28.11.2020

### **Conrads, G.**

Das orale Mikrobiom und seine Virulenzfaktoren  
28. Jahrestagung der NAgP e.v. (Neue Arbeitsgruppe Parodontologie)  
26.09.2020 (virtuell)

### **2019 Peer-reviewed publications**

Clever, K., K. A. Schlegel, H. Kniha, **G. Conrads**, L. Rink, A. Modabber, F. Hölzle, and K. Kniha. Experimental peri-implant mucositis around titanium and zirconia implants in comparison to a natural tooth: **part 1**-host derived immunological parameters. *International Journal of Oral & Maxillofacial Surgery*, 2019 Apr;48(4):554-559.

Clever, K., K. A. Schlegel, H. Kniha, **G. Conrads**, L. Rink, A. Modabber, F. Hölzle, and K. Kniha. Experimental peri-implant mucositis around titanium and zirconium implants in comparison to a natural tooth: **part 2**-clinical and microbiological parameters. *International Journal of Oral & Maxillofacial Surgery*, 2019 Apr;48(4):560-565.

**Hetrodt, F.**, J. Lausch, H. Meyer-Lückel, **G. Conrads**, and C. Apel, Evaluation of restorative materials containing preventive additives in a secondary caries model in vitro *Caries Research*, 2019 Feb 20:1-10. doi: 10.1159/000496401. **Oral-B-goldprize 2018, Deutsche Gesellschaft für Kinderzahnheilkunde. Beste Dissertation in der Kategorie Zahnmedizin 2020**

**Hetrodt, F.**, J. Lausch, H. Meyer-Lückel, **G. Conrads**, and C. Apel, Einfluss von Carolactonhaltigen Füllungsmaterialien auf die Entstehung einer Sekundärkaries in vitro. *Oralprophylaxe und Kinderzahnheilkunde* 41, 2019 (1) Seiten 44-45.

**Conrads, G.**, J. Westenberger, M. Lürkens, M. M.H. Abdelbary. Isolation and bacteriocin-related typing of *Streptococcus dentisani*. *Frontiers in Cellular and Infection Microbiology* 2019 Apr 16;9:110. doi: 10.3389/fcimb.2019.00110. eCollection 2019.

**Conrads, G.**, L. Wendt, F. Hetrodt, Z.-L. Deng, D. Pieper, **MMH Abdelbary**, A. Barg, I. Wagner-Döbler, and C. Apel. Deep sequencing of biofilm microbiomes on dental composite materials. *Journal of Oral Microbiology*, 2019 May 14;11(1):1617013. doi: 10.1080/20002297.2019.1617013. eCollection 2019.

**Conrads, G. and MMH Abdelbary**, Challenges of next-generation sequencing targeting anaerobes, *Anaerobe*. 2019 Feb 12. pii: S1075-9964(19)30029-0. doi: 10.1016/j.anaerobe.2019.02.006. [Epub ahead of print].

### **2019 Book Chapter**



**G. Conrads**, E. Nagy, and E. Könönen, *Bacteroides*, *Porphyromonas*, *Prevotella*, *Fusobacteria*, and other anaerobic Gram-negative rods, In: Manual of Clinical Microbiology, Edition 12, section II, chapter 56, pages 995-1023 (29 Seiten), (February 2019).

### 2019 Meeting abstracts

**C. Walther**, **S. Zumbülte**, C. M. Faerber, H. Meyer-Lueckel, **G. Conrads**, **K. Henne**, M. Esteves-Oliveira, Analysis of relative bacterial activity and Idh-gene expression of caries-associated bacteria in a site-specific natural biofilm, 66th. ORCA Congress (The European Organisation for Caries Research), session 1: Microbiology 03.-06. 07. 2019 in Cartagena, Colombia.

K. Kniha, H. Kniha, **G. Conrads**, L. Rink, K. Clever, A. Modabber, and F. Hölzle, Effect of inflammation on the soft tissue around titanium and zirconium implants in comparison to natural teeth, 28. Annual Meeting of the European Association for Osseointegration (EAO) 26.-28.09.2019 in Lisboa, Portugal

**G. Conrads** (discussion panel)

Tackling infectious diseases & antimicrobial resistance, European Research and Innovation days.

24.-26.09.2019 in Brussels, Belgium

### 2018 Peer-reviewed publications

**Hetrodt, F.**, J. Lausch, H. Meyer-Lückel, C. Apel, and **G. Conrads**

Natural saliva as an adjuvant in a secondary caries model based on *Streptococcus mutans* Archives in Oral Biology, 2018, 90, 138–143. Impact: 2.050

**Conrads, G.**, **J. A. Bockwoldt**, **C. Kniebs**, and **M. M.H. Abdelbary**

Commentary: Health-associated niche inhabitants as oral probiotics: the case of *Streptococcus dentisani*

Frontiers in Microbiology, 2018 | <https://doi.org/10.3389/fmicb.2018.00340> Impact: 4.019

**Henne, K.**, **H. Schilling**, **M. Stoneking**, **G. Conrads**, and H.-P. Horz

Sex-specific differences in the occurrence of *Fusobacterium nucleatum* subspecies and *Fusobacterium periodonticum* in the oral cavity

Oncotarget, 2018, Vol. 9, (No. 29), pp: 20631-20639. Impact: 5.168

**Walther, C.**, H. Meyer-Lückel, **G. Conrads**, M. Esteves-Oliveira, and **K. Henne**

Correlation between relative bacterial activity and lactate dehydrogenase expression of co-cultures in vitro

Clinical Oral Investigations, 2018 Jul 6. doi: 10.1007/s00784-018-2547-2. Impact: 2.386

**Conrads G.** and I. About

Pathophysiology of Dental caries

Monogr Oral Sci. 2018;27:1-10. RG Journal Impact: 4.89

Clever, K., K. A. Schlegel, H. Kniha, **G. Conrads**, L. Rink, A. Modabber, F. Hölzle, and K. Kniha

Experimental peri-implant mucositis around titanium and zirconium implants in comparison to a natural tooth – Part 1

International Journal of Oral & Maxillofacial Surgery, in press, Impact: 2.164

Clever, K., K. A. Schlegel, H. Kniha, **G. Conrads**, L. Rink, A. Modabber, F. Hölzle, and K. Kniha

Experimental peri-implant mucositis around titanium and zirconium implants in comparison to a natural tooth – Part 2

International Journal of Oral & Maxillofacial Surgery, in press, Impact: 2.164

### 2018 Meeting abstracts

#### **G. Conrads and M.M.H Abdelbary (V)**

Challenges of Next-Generation-Sequencing Targeting Anaerobes

In: Abstract book "2018 Anaerobe Las Vegas" SVIII-1 (page 32)

The 14th Biennial Congress of the Anaerobe Society of the Americas

09.07.-12.07.2018 in Las Vegas, Nevada, USA

#### **K. Henne, H. Schilling, M. Stoneking, G. Conrads, and H.-P. Horz (P)**

Sex-specific differences in the incidence of *Fusobacterium nucleatum* subspecies in the oral cavity

In: Abstract book "2018 Anaerobe Las Vegas" PI-8 (page 116)

The 14th Biennial Congress of the Anaerobe Society of the Americas

09.07.-12.07.2018 in Las Vegas, Nevada, USA

#### **M.M.H Abdelbary and G. Conrads (P)**

Evaluation of commonly used primers targeting 16S rRNA genes in next-generation sequencing (NGS) based studies.

In: Abstract book "2018 Anaerobe Las Vegas" PI-38 (page 148)

The 14th Biennial Congress of the Anaerobe Society of the Americas

09.07.-12.07.2018 in Las Vegas, Nevada, USA

### 2017 Peer-reviewed publications

Kather, M., **M. Skischus**, P. Kandt, A. Pich\*, **G. Conrads\***, S. Neuss-Stein\*

\*shared authorship

Functional isoeugenol modified-nanogel coatings for design of biointerfaces

Angew Chem Int Ed Engl. 2017 Feb 20;56(9):2497-2502. doi: 10.1002/anie.201609180.

Kather, M., **M. Skischus**, P. Kandt, A. Pich\*, **G. Conrads\***, S. Neuss-Stein\*

\*geteilte Autorenschaft

Funktionelle Isoeugenol modifizierte Nanogel-Beschichtungen für Biologische Grenzflächen

Angewandte Chemie, Communication – 2017 (Übersetzung zu engl. Artikel, separat erschienen)

Preshaw Ph., **K. Henne**, J.J. Taylor, R.A. Valentine, and **G. Conrads**

Age-related changes in immune function (immune senescence) in caries and periodontal diseases: a systematic review

J Clin Periodontol. 2017 Mar;44 Suppl 18:S153-S177. doi: 10.1111/jcpe.12675.

M.S. Tonetti, S. Paris, P. Bottenberg, **G. Conrads**, P. Eickholz, P. Heasman, M.-Ch.

Huysmans, R. Lopez, Ph. Madianos, F. Müller, I. Needleman, B. Nyvad, Ph. Preshaw, I.

Pretty, St. Renvert, F. Schwendicke, L. Trombelli, G.- J. van der Putten, J. Vannobergen, N.

West, and A. Young

Dental caries and periodontal diseases in the ageing population: call to action to protect and enhance oral health and wellbeing as essential component of healthy aging. Consensus report of group 4 of the joint EFP/ORCA workshop on the boundaries between caries and periodontal diseases.

J Clin Periodontol. 2017 Mar;44 Suppl 18:S135-S144. doi: 10.1111/jcpe.12681.

**Conrads G., S. Barth, M. Möckel, L. Lenz, M. van der Linden, and K. Henne**

Streptococcus tigurinus is frequent among gtfR-negative *S. oralis* endocarditis-isolates and in oral samples of healthy adults but highly virulent strains are uncommon

Journal of Oral Microbiology, 2017 Apr 20;9(1):1307079.

Bergs Ch., L. Brück, R. R. Rosencrantz, **G. Conrads**, L. Elling, and A. Pich  
 Biofunctionalized zinc peroxide (ZnO<sub>2</sub>) nanoparticles as active oxygen source and  
 antibacterial agents  
 RSC Advances 2017, 7, 38998-39010.

### 2017 Meeting abstracts

**Conrads G., S. Barth, M. Möckel, L. Lenz**, M. van der Linden, **and K. Henne** (P, eP and V)  
*Streptococcus tigurinus* is frequent among gtfR-negative *S. oralis* endocarditis-isolates and in  
 oral samples of healthy adults but highly virulent strains are uncommon  
 5th. Joint Conference of the German Society for Hygiene and Microbiology (DGHM) and the  
 Association for General and Applied Microbiology (VAAM).  
 In: BIOSpektrum Sonderausgabe 2017, ISSN 0947-0867, Seite 290-291  
 05-08 March 2017 in Würzburg, Germany.

**Hetrodt**, J. Lausch, H. Meyer-Lueckel, **G. Conrads** and C. Apel, (P and V).  
 Influence of Carolacton-containing composite materials on the development of secondary  
 caries in vitro  
 In: Caries Research 2017  
 64th. ORCA Congress (The European Organisation for Caries Research), session 1:  
 Microbiology  
 05.-06. 07. 2017 in Oslo, Norway

**C. Walther**, H. Meyer-Lueckel, **G. Conrads**, M. Esteves-Oliveira and **K. Henne** (P and V)  
 Correlation between relative bacterial activity and sucrose-related H<sup>+</sup>-concentration of  
*Lactobacillus paracasei* and *Fusobacterium nucleatum*  
 In Caries Research 2017  
 64th. ORCA Congress (The European Organisation for Caries Research), session 1:  
 Microbiology  
 05.-06. 07. 2017 in Oslo, Norway

**Die Arbeit hat zudem zum Gewinn des Oral-B-Preises, 2. Platz, 2017 geführt.**

Kather, M., **M. Skischus**, P. Kandt, A. Pich\*, S. Neuss-Stein and **G. Conrads** (V)  
 Functional isoeugenol-modified-nanogel coatings for implants  
 In: Journal of Oral Microbiology, 2017, Suppl. 1325239  
 12. European Oral Microbiology Workshop, 25.-28. May 2017 in Stockholm, Sweden.

M. Teichmann, K. Groß, M. Rückbeil, **G. Conrads**, S. Wolfart (P)  
 Einzelzahnimplantate mit Lithium-Disilikat-Suprakonstruktionen: Risikofaktoren für den  
 bakteriellen Befall nach 1 Jahr in Funktion  
 In: 31. Kongress der Deutschen Gesellschaft für Implantologie  
 30.11.-02.12.2017 in Düsseldorf

### Conrads, G (invited speaker)

Bioactive NanoCoat - Controlling biofilm by functional coatings  
 SFB 1027 seminar, invited by Prof. Hannig  
 20.06.2017 in Homburg

### 2016 Peer-reviewed publications

Functional isoeugenol modified-nanogel coatings for design of biointerfaces  
 Kather, M., M. Skischus, P. Kandt, A. Pich\*, **G. Conrads\***, S. Neuss-Stein\*  
**\*shared authorship**

**Angewandte Chemie International Edition**, Communication – accepted 11-2016

Gutknecht N., T. Sardar Al-Karadaghi, M. Abbood Al-Maliky, **G. Conrads**, and R. Franzen.  
The effectiveness of 2780 nm and 940 nm laser irradiation on *Enterococcus faecalis* in bovine root dentin slices of different thicknesses.  
**Photomedicine and Laser Surgery**, 34, 1 (2016)

Falkenstein S., J.M. Stein, K. Henne, and **G. Conrads**.  
Trends in antibiotic use and microbial diagnostics in periodontal treatment: comparing surveys of German dentists in a ten-year period.  
**Clinical Oral Investigations**, 20(8), 2203-2210 (2016).

Henne K., A-P Gunesch, C. Walther, H. Meyer-Lückel, **G. Conrads**, and M Esteves-Oliveira  
Analysis of bacterial activity in sound and cariogenic biofilm. A pilot in vivo study  
**Caries research**, 2016 Sep 6;50(5):480-488.

### 2016 Meeting abstracts

E. Lange, B. Melzer-Krick, K. Henne, and **G. Conrads (P)**  
Testing an antioxidants-rich medium to grow oral anaerobes aerobically  
In: Abstract book "2016 Anaerobe Nashville" PII-16 (page 155)  
The 13<sup>th</sup> Biennial Congress of the Anaerobe Society of the Americas (ASA)  
11.07.-14.07.2016 in Nashville, Tennessee, USA

**J. Tyralla, K. Henne, S. Neuss-Stein, and G. Conrads (P and V)**.  
Anti-SM monoclonal antibodies: production and applications  
In Caries Research 2016; 50: page 10; DOI: 10.1159/000445087  
63<sup>th</sup>. ORCA Congress (The European Organisation for Caries Research), session 1:  
Microbiology  
06.-09. 07. 2016 in Athens, Greek.

**F. Hetrodt, J. Lausch, H. Meyer-Lueckel, C. Apel, and G. Conrads (P)**.  
Model parameters for caries initiation adjacent to composite by a *Streptococcus mutans* biofilm  
In Caries Research 2016; 50: page 34; DOI: 10.1159/000445087  
63<sup>th</sup>. ORCA Congress (The European Organisation for Caries Research), session 1:  
Microbiology  
06.-09. 07. 2016 in Athens, Greek.

**Henne, K., Z. Shukoor, H. Meyer-Lückel, G. Conrads, und R.J. Wierichs (P)**  
Pilotstudie zum Effekt von (Alkali-)Metallfluoriden auf das Biofilm-Wachstum von *Streptococcus mutans* und *Lactobacillus paracasei*  
30. Jahrestg. der Deutschen Gesellschaft für Zahnerhaltung (DGZ), 06.-08.10.2016 in Leipzig.

**G. Conrads and H.-P. Horz (V)**  
Relationship between methanogenic archaea and subgingival microbial complexes in human periodontitis.  
The 13<sup>th</sup> Biennial Congress of the Anaerobe Society of the Americas  
11.07.-14.07.2016 in Nashville, Tennessee, USA

**Conrads, G (Invited speaker, faculty member)**  
Molecular genetic methods in diagnostics of anaerobes  
ESCMID Postgraduate Technical Workshop: Anaerobic Bacteria: Next Generation Sequencing Technology meets Anaerobic Diagnostics.  
26.-28.09.2016 at the University Medical Center Groningen (UMCG), The Netherlands

**Conrads, G AND 19 co-authors (invited as reviewer and expert immunology)**  
Working group 4: Age-related effects on oral health, dental caries and periodontal diseases

The boundaries between caries and periodontal diseases  
XIII EFP Workshop jointly by ORCA  
06.-09.11.2016 in Madrid (La Granja), Spain.

**F. Hetrodt, J. Lausch, C. Apel, und G. Conrads (V)**

Untersuchung der Sekundärkaries im Streptococcus-mutans-Biofilmmodell *in vitro*  
48. Jahrestagung des Arbeitskreises Grundlagenforschung in der Zahnmedizin (AfG)  
07.-08.01.2016 in Mainz

**K. Henne, S. Kruth, J. M. Stein, und G. Conrads (V)**

Campylobacter-Spezies Proportionen spiegeln die mikrobielle Gemeinschaft im Verlauf einer Parodontitis  
48. Jahrestagung des Arbeitskreises Grundlagenforschung in der Zahnmedizin (AfG)  
07.-08.01.2016 in Mainz

**S. Falkenstein, J. Stein, k. Henne, and G. Conrads (P).**

Mikrobiologische Diagnostik und Antibiotikaeinsatz in der Parodontitistherapie - eine Umfrage unter deutschen Zahnärzten.  
DG PARO Jahrestagung 2016, 15.-17.09.2016 in Würzburg

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**2015 Peer-reviewed publications**

**Conrads G.** Oral Anaerobes in Health and Disease.  
**Anaerobe.** 2015 Oct;35(Pt A):1-2. (2015).

Horz H.P., N. Robertz, M.E. Vianna, K. Henne, and **G. Conrads.**  
Relationship between methanogenic archaea and subgingival microbial complexes in human periodontitis.  
**Anaerobe.** 2015 Oct;35(Pt A):10-2. (2015).

Henne K., A. Rheinberg, B. Melzer-Krick, and **G. Conrads.**  
Aciduric microbial taxa including Scardovia wiggsiae and Bifidobacterium spp. in caries and caries free subjects.  
**Anaerobe.** 2015 Oct;35(Pt A):60-5. (2015).

E. Könönen, **G. Conrads**, and E. Nagy  
Bacteroides, Porphyromonas, Prevotella, Fusobacteria, and other anaerobic Gram-negative rods  
**Bookchapter in: Manual of Clinical Microbiology**, Edition 11, section II, chapter 54, pages 967-993 (26 Seiten), (June 2015).

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**2015 Meeting abstracts**

**K. Henne, A. Gunesch, M. Esteves-Oliveira, C. Walther, and G. Conrads (P).**

Metabolic activity of selected acidogenic bacteria reflects caries activity

**In:** International Journal of Medical Microbiology.

67. Jahrestg. der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM), 27.-30.09.2015 in Münster.

**K. Henne, S. Barth, M. van der Linden, and G. Conrads (P).**

*Streptococcus tigurinus* – a distinct species or a pathotype of *S. oralis*?

**In:** International Journal of Medical Microbiology.

67. Jahrestg. der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM), Münster, ), 27.-30.09.2015 in Münster.

**Skischus, M**, M. Kather, R. Schröder, P. Kandt, S. Neuss-Stein, A. Pich & **G. Conrads (P)**  
 Nanogels as implant coatings preventing colonization with *Porphyromonas gingivalis*  
 2<sup>nd</sup> International Conference on *Porphyromonas gingivalis* and related species in oral and  
 systemic infections, PgLondon2015  
 23<sup>rd</sup>-25<sup>th</sup>06.2015 in London, UK

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#### 2014 Peer-reviewed publications

Küpper T, M. Hettlich, HP Horz, K. Lechner, C. Scharfenberg, **G. Conrads**, S.S. Yekta, F. Lampert, C. Gore.  
 Dental Problems and Emergencies of Trekkers-Epidemiology and Prevention. Results of the  
 ADEMED Expedition 2008.  
**High Altitude Medicine and Biology** 2014, 15(1), 39-45.

**Henne K**, J. Li, M. Stoneking, O. Kessler, H. Schilling, A. Sonanini, **G. Conrads**, and HP  
 Horz.  
 Global analysis of saliva as a source of bacterial genes for insights into human population  
 structure and migration studies.  
**BMC Evolutionary Biology** 2014, 14:190.

**Henne K**, F. Fuchs, S. Kruth, H.-P. Horz, and **G. Conrads**.  
 Shifts in *Campylobacter* species abundance may reflect general microbial community shifts  
 in periodontitis progression.  
**Journal of Oral Microbiology**. 2014, 6: 25874 (in press).

**Conrads G**, J.J. de Soet, L. Song, K. Henne, H. Sztajer, I. Wagner-Döbler, and A.-P. Zeng.  
 Comparing the cariogenic species *Streptococcus sobrinus* and *S. mutans* on whole genome  
 level.  
**Journal of Oral Microbiology**. 2014, 6: 25875.

#### 2014 Meeting abstracts

**G. Conrads**, Anke Rheinberg, Lifu Song, Wei Wang, Michael Reck, Irene Wagner-Döbler,  
 and An-Ping Zeng (**V**).  
 Comparing *Streptococcus mutans* and *S. sobrinus* on whole-genome level  
**In:** Abstract book of the EOMWAarhus 2014 (abstract No. 12, page 28)\*  
 11. European Oral Microbiology Workshop, 22.-25. May 2014 in Aarhus, Denmark.

**K. Henne**, F. Fuchs, and **G. Conrads (V)**.  
 Abundance shifts of species within the *Campylobacter* genus may display general  
 community shifts in periodontitis progression  
**In:** Abstract book of the EOMWAarhus 2014 (abstract No. 15, page 32)\*  
 11. European Oral Microbiology Workshop, 22.-25. May 2014 in Aarhus, Denmark.

A. Rheinberg, **K. Henne**, B. Melzer-Krick, and **G. Conrads (P)**.  
*Scardovia wiggsiae* and *Bifidobacterium dentium* in caries versus health associated oral  
 biofilm.  
**In:** Abstract book of the EOMWAarhus 2014 (abstract No. 52, page 71)\*  
 11. European Oral Microbiology Workshop, 22.-25. May 2014 in Aarhus, Denmark.

Apel Ch., A. Barg, A. Rheinberg, I. Wagner-Döbler, and **G. Conrads (P)**. Carolacton inhibit  
 biofilm growth of *Streptococcus mutans* and can be incorporated into dental composite  
 materials.  
**In:** Abstract book of the EOMWAarhus 2014 (abstract No. 55, page 74)\*  
 11. European Oral Microbiology Workshop, 22.-25. May 2014 in Aarhus, Denmark.

\*see: [eom aarhus2014.au.dk/fileadmin/EOMW aarhus2014/ABSTRACTS\\_EOMW2014\\_Web.pdf](http://eom aarhus2014.au.dk/fileadmin/EOMW aarhus2014/ABSTRACTS_EOMW2014_Web.pdf)

**K. Henne and Conrads, G (P)**

Clinical significance of oral *Campylobacter*

In: Abstract book (PI-27) of

The 12<sup>th</sup> Biennial Congress of the Anaerobe Society of the Americas

28.06.-01.07.2014 in Chicago, Illinois, USA

S. Latz, **Henne K**, M. Kiesow, M. Stoneking, J. Li, **G. Conrads**, and H.P Horz (**V**).

The oral microbiome as a source of bacterial genes for insights into human population structure.

4<sup>th</sup> Joint Conference of the German Society for Hygiene and Microbiology (DGHM) and the Association for General and Applied Microbiology (VAAM).

In: Biospektrum (ISSN 0947-0867), special edition 2014, abstract PWV02, page 145.

05-08 October 2014 in Dresden, Germany.

**Conrads, G (invited speaker)**

Oral Anaerobes in Health and Disease: 2014 Highlights

The 12<sup>th</sup> Biennial Congress of the Anaerobe Society of the Americas

28.06.-01.07.2014 in Chicago, Illinois, USA

**Conrads, G (Invited speaker)**

Value of molecular genetic methods in diagnostics of anaerobes

ESCMID Postgraduate Technical Workshop: Anaerobic Bacteria: Next Generation

Sequencing Technology meets Anaerobic Diagnostics.

29.-09.-01.10.2014 at the University Medical Center Groningen (UMCG), The Netherlands

Wagner-Döbler, I. and the e.biofilm consortium (incl. **G. Conrads**) (**V**)

Fighting biofilm of streptococci by a new biofilm inhibitor: from bench to dental products

E:bio Statusseminar

22.-23.09.2014 in Berlin

**2014 Book Chapter**

E. Könönen, **G. Conrads**, and E. Nagy

*Bacteroides*, *Porphyromonas*, *Prevotella*, *Fusobacteria*, and other anaerobic Gram-negative rods. In: **Manual of Clinical Microbiology**, Edition 11, Chapter 54, in press.

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**2013 Peer-reviewed publications**

Rheinberg, A., I.J. Swierzy, T.D. Nguyen, H.P. Horz, and **G. Conrads**

Cryptic *Streptococcus mutans* 5.6-kb plasmids encode a toxin-antitoxin system for plasmid stabilization.

**Journal of Oral Microbiology** 2013, **5**: 19729 - <http://dx.doi.org/10.3402/jom.v5i0.19729>.

Song L., W. Wang, **G. Conrads**, A. Rheinberg, M. Reck, I. Wagner-Döbler, A.-P. Zeng.

Genetic variability of mutans streptococci revealed by wide whole-genome sequencing.

**BMC Genomics**, 2013 Jun 28;14:430. doi: 10.1186/1471-2164-14-430.

Song L., W. Wang, **G. Conrads**, A. Rheinberg, M. Reck, I. Wagner-Döbler, A.-P. Zeng.

Correction: Genetic variability of mutans streptococci revealed by wide whole-genome sequencing.

**BMC Genomics**. 2013 Dec 16;14:811. doi: 10.1186/1471-2164-14-811

**Apel Ch.**, A. Barg, A. Rheinberg, **G. Conrads**, I. Wagner-Döbler.

Dental composite materials containing carolacton inhibit biofilm growth of *Streptococcus mutans*.

**Dental Materials**, 2013 Nov;29(11):1188-99. doi: 10.1016/j.dental.2013.09.005.

Li J, I. Nasidze, D. Quinque, M. Li, **H.P. Horz**, C. André, R. M. Garriga, M. Halbwx, A. Fischer, M. Stoneking.

The saliva microbiome of Pan and Homo

**BMC Microbiol.** 2013 Sep 11;13:204. doi: 10.1186/1471-2180-13-204.

**Henne, K.**, L. Kahlisch, M. G. Höfle, I Brettar

Seasonal dynamics of bacterial community structure and composition in cold and hot drinking water derived from surface water reservoirs.

**Water Res.** 2013 Oct 1;47(15):5614-30. doi: 10.1016/j.watres.2013.06.034. Epub 2013 Jun 29.

### 2013 Meeting abstracts

**Apel Ch.**, A. Barg, **A. Rheinberg**, **G. Conrads**, I. Wagner-Döbler (**P**).

Carolacton incorporated into dental composite materials inhibits biofilm of *Streptococcus mutans*.

In : Caries Research 2013; 47; 433-531.

60<sup>th</sup>. ORCA Congress (The European Organisation for Caries Research), session 1:

Microbiology

03.-06. 07. 2013 in Liverpool, UK.

**K. Henne**, **S. Latz**, H. Schilling, M. Stoneking, J. Li, **G. Conrads**, and **H.-P. Horz (V)**.

Comparative analysis of intra-species diversity within oral microbiomes and its potential for studying human migration patterns.

In: International Journal of Medical Microbiology. Vol. 303S1, Abstract PWV06, page 99.

65. Jahrestg. der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM), Rostock, 2013.

**K. M. Mikos**, **K. Henne**, **F. M. Fuchs**, **H.-P. Horz**, and **G. Conrads (P)**.

Approach for the detection of hitherto overlooked *Campylobacteriales* exemplified by oral specimens.

In: International Journal of Medical Microbiology. Vol. 303S1, Abstract DVP09, page 8.

65. Jahrestg. der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM), Rostock, 2013. **Gewinner des DGHM/DGI Posterpreises 2013.**

**A. Rheinberg**, L. Song, W. Wang, M. Reck, I. Wagner-Döbler, A.-P. Zeng, **G. Conrads (P)**.

Key differences in the metabolom between *Streptococcus mutans* and *S. sobrinus* as determined by whole-genome comparison of multiple strains.

In: International Journal of Medical Microbiology. Vol. 303S1, Abstract MPP01, page 49.

65. Jahrestg. der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM), Rostock, 2013.

**S. Latz**, **K. Henne**, **M. J. Kiesow**, M. Stoneking, J. Li, **G. Conrads**, and **H.-P. Horz (P)**.

Deep barcode amplicon sequencing of the glucosyltransferase gene *gtfP* reveals a geographic signature and the world wide diversity of *Streptococcus sanguinis*.

In: International Journal of Medical Microbiology. Vol. 303S1, Abstract PWP03, page 95.

65. Jahrestg. der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM), Rostock, 2013.

**A. Rheinberg**, **I. J. Swierzy**, **T. D. Nguyen**, **H.-P. Horz**, and **G. Conrads (P)**.



*Streptococcus mutans* 5.6kb plasmids encode a Toxin-Antitoxin system for plasmid stabilization and possibly enhancing fitness.

**In:** International Journal of Medical Microbiology. Vol. 303S1, Abstract PWP06, page 96. 65. Jahrestg. der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM), Rostock, 2013.

**A. Rheinberg, K. Henne, H. Meyer-Lückel, and G. Conrads (P).**

Detection of *Scardovia wiggisiae* and *Bifidobacterium dentium* in caries lesions – a pilot study.

**In:** International Journal of Medical Microbiology. Vol. 303S1, Abstract PWP07, page 96. 65. Jahrestg. der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM), Rostock, 2013.

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