

**Unsere wichtigsten Forschungsleistungen im Jahr 2021.** Das Jahr 2021 war - wie für uns Alle – leider wieder geprägt durch die Corona-Pandemie. Trotz dieser Einschränkungen gelang es uns wichtige Forschungsarbeiten abzuschließen und neue zu initiieren:

**Implantologie:** Mit einer der RWTH-Strategie gemäßen interfakultären und internationalen Studie haben wir Keramik (in seiner Funktion als Implantatmaterial) mit künstlichem Zahnschmelz zunächst biologisiert und dann durch Einlagerung von Silber-Nanopartikel anti-infektiv funktionalisiert (Goldschmidt et al. 2021).

**Kariologie/Streptokokken:** Wir konnten Methoden entwickeln um zu beweisen, dass sich die Gesamtaktivität der Karieserreger in Läsionen („Löchern“) tatsächlich erhöht, wobei das säurebildende Schlüsselenzym (Laktat-Dehydrogenase) interessanterweise nur kurzfristig nach Zuckerimpuls aktiviert wird (Walther et al. 2021). In einer internationalen Arbeitsgruppe (Brasilien, Schweiz, Deutschland) gelang es uns die kariesprotektive Wirkung pflanzlicher Extrakte des brasilianischen Urwaldes zu quantifizieren (Braga et al. 2021). Durch umfangreiche Genomanalysen konnte Dr. Abdelbary und unser Biologie-Masterrand Gerrit Willms ein einzelnes semi-konserviertes Gen (*coaE*) bei Streptokokken identifizieren, mit dem es gelingt die Salivarius- Gruppe der Streptokokken (*S. salivarius*, *S. vestibularis*, *S. thermophilus*) taxonomisch exakt aufzuschlüsseln. Dies kann man zur Typisierung von nützlichen und schädlichen Streptokokken einsetzen (Abdelbary et al. 2021). Im Newsletter *Hamburger Expertenkreis Mikrobiom* haben wir Möglichkeiten diskutiert opportunistische Pathogene in der Mundhöhle zu reduzieren (Conrads 2021). In unserem fakultätsgeförderten START-Projekt „*STREPTORANTES – Within-patient evolution and adaptation of oral streptococci in the intestinal habitat*“ (Dr. Abdelbary) sind wir ebenfalls deutlich vorangekommen.

**Parodontitis/Anaerobier:** Bei der Behandlung der Parodontitis können probiotische Bakterien hilfreich sein. Wir haben erstmals neue Kombinationen von oralen Probiotika in ihrer inhibierenden Wirkung auf Parodontitis-Erreger *in-vitro* untersucht und neue Erkenntnisse zu optimalen Kombinationen von Pro- (Laktobazillen, Streptokokken) und Präbiotika (Glyzerin, Vitamin B12) gewonnen (Jansen et al. 2021). *Porphyromonas gingivalis* ist der bedeutendste Pathobiont bei der Parodontitis. Wir legen gerade zu diesem Keim die Welt größte Stamm – und Genomdaten-Sammlung an. In einer ersten Publikation zu diesem IZKF- (Interdisziplinäres Zentrum für klinische Forschung) geförderten Projekt konnten wir die globale antimikrobielle Empfindlichkeit und das Resistenzgen-Repertoire des Erregers erfassen (Conrads et al. 2021). Einen kleinen Beitrag haben wir auch zur Bestimmung der antimikrobiellen Aktivität verschiedener Pulverstrahlreinigungen zur Unterstützung der Parodontitis-Therapie geleistet (Wenzler et al. 2021). In der Zeitschrift *Parodontologie* haben wir gemeinsam mit unseren klinischen Kollegen Fakten zusammengetragen, um photochemische Prozesse (Lasereinsatz) in der Parodontitis-Therapie besser zu verstehen und nutzbar zu machen (Böcher et al. 2021).

**Kongress-Beiträge/Sonstiges:** 8th. *Hamburg Expert Meeting Microbiome*, 26.04.2021; 13th. *European Oral Microbiology Workshop* 27.-28.05.2021. 73<sup>rd</sup>. Conference of the DGHM, *German Society for Hygiene and Microbiology*. Zudem wurde durch unsere Klinik (Prof. Braun/Prof. Conrads) der neue Masterstudiengang “M.Sc. Periodontology” an der RWTH International Academy ins Leben gerufen (<https://master-periodontology.com/de/>) und die 24 zu erwartenden Masterarbeiten der Teilnehmer (aus 14 Ländern!) werden auch die Parodontitis-Forschung in Aachen bereichern.

**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. Zybalá, 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 Parodontitistherapie  
Quintessenz Zahnmedizin, Jhg. 72, Ausgabe 04, April 2021.

**Conrads, G.** Orales Mikrobiom: opportunistische Pathogene reduzieren – aber wie?  
Hamburger Expertenkreis Mikrobiom  
Newsletter 03/2013, 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.

---

## 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.

---

### 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

---

### 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.

---

### 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 MHH 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 ldh-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

**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).

**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

#### 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: eomwaarhus2014.au.dk/fileadmin/EOMWAarhus2014/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), spezial 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.

---

**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. Halbwax, 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 *Campylobacterales* 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 metabolome 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 wiggsiae* 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.

**2012 Peer-reviewed publications**

H.-P. Horz, I. Seyfarth, and G. Conrads. 2012. McrA and 16SrRNA gene analysis suggests a novel lineage of Archaea phylogenetically affiliated with Thermoplasmatales in human subgingival plaque. *Anaerobe*. 18: 373--377.

H.-P. Horz, A. Ten Haaf, O. Kessler, S. Said Yekta, I. Seyfarth, M. Hettlich, F. Lampert, T. Küpper, and G. Conrads. 2012. T-RFLP-based differences in oral microbial communities as risk factor for development of oral disease under stress. *Environ. Microbiol Rep*. 4: 390--397.

A. Krüttgen, H.-P. Horz, J. Weber-Heynemann, M. Vucur, C. Trautwein, G. Haase, T. Lüdde and C. Roderburg. 2012. Study on the association of Helicobacter species with viral hepatitis induced hepatocellular carcinoma. *Gut Microbes* Volume 3, Issue 3 May/June 2012 Online: <http://www.landesbioscience.com/journals/gutmicrobes/article/19922/>.

Song, L., P Sudhakar, W. Wang, G. Conrads, A. Brock, J. Sun, I. Wagner-Döbler, A.-P. Zeng.

2012. A genome wide study of two-component signal transduction systems in eight newly sequences mutans streptococci strains. *BMC Genomics*; 13, 128-148, 2012.

**Book chapter**

M. C. Claros 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*; Springer Science+Business Media New York (online: ISBN 1-62703-185-1; print: ISBN 1-62703-184-4), pages 87-206, first release November 2012.

**Meeting abstracts**

H.-P. Horz (V) Application of Unifrac and related bioinformatic tools to assess intra-species diversity within oral microbiomes in an anthropological context. 14th International Symposium on Microbial Ecology (ISME-14), Session CT30; Abstract Book Page 56; 19.08.-24.08.2012 in Copenhagen, Denmark.

H.-P. Horz, I. Seyfarth, G. Conrads, (P) Rarity and diversity of human-associated Archaea revisited - evidence of uncultured organisms related to Thermoplasmatales in human periodontal biofilms. 14th International Symposium on Microbial Ecology (ISME-14), Session PS 18;

Abstract Book Page 118; 19.08.-24.08.2012 in Copenhagen, Denmark.

H.-P. Horz, H. Schilling, O. Kessler, M. Stoneking, J. Li, and G. Conrads, (P) Clonal diversity and geographic signatures of human oral bacterial strains on a world-wide scale.

Jahrestagung der VAAM 2012, Tübingen. In: *Biospektrum, Tagungsband 2012 Abstract HMP010*, page 88.

H.-P Horz, Stoneking, M., Li, J, Kessler, O., Sonanini, A, Schilling, H, and Conrads, G (V).

Geographic signatures of anaerobes to study human-microbe co-migration and co-evolution.

Anaerobe 2012, Anaerobe Society of the Americas. In: Abstract book. 29.06.-01.07.2012 in San Francisco, CA, USA.

H.-P. Horz, T. Küpper, M. Hettlich, A. Ten-Haaf, I. Seyfarth, S. Said Yekta, and G. Conrads, (P)

The risk for developing oral inflammation under stress is possibly predictable by analysing the preformed oral anaerobic flora. Anaerobe 2012, Anaerobe Society of the Americas. In: Abstract book. 29.06.-01.07.2012 in San Francisco, CA, USA.

---

### **2011 Peer-reviewed publications**

H.-P. Horz and G. Conrads. 2011. Methanogenic Archaea and oral infections -- ways to unravel the black box. *J. Oral Microbiol.* 3: doi: 10.3402/jom.v3i0.5940.

R.C. Teixeira, H.-P. Horz, J.H. Damante, G.P. Garlet, C.F. Santos, R.L.M. Nogueira, and G. Conrads. 2011. SH3BP2-encoding exons involved in cherubism are not associated with central giant cell granuloma. *Int. J. Oral Maxillofac. Surg.* 40: 851-855

G. Conrads. Aktuelle Aspekte der Periimplantitis. *ZWR- Das Deutsche Zahnärzteblatt* 2011; 120 (6), 238-247.

### **2011 Meeting abstracts**

H.-P. Horz, M. Stoneking, H. Schilling, A. Sonanini, O. Kessler, and G. Conrads, 2011 (V) The salivary microbiome as an indicator of human-microbe co-evolution.

63. Jahrestagung der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM), Essen. In: *International Journal of Medical Microbiology*. Vol. 301, Abstract PWV03, page 46

H.-P. Horz, T. Küpper, M. Hettlich, A. Ten-Haaf, I. Seyfarth, S. Said Yekta, and G. Conrads, 2011 (P) T-RFLP-based differences in oral microbial communities as risk factor for developing painful oral inflammation under stress.

63. Jahrestagung der Deutschen Gesellschaft für Hygiene und Mikrobiologie (DGHM), Essen. In: *International Journal of Medical Microbiology*. Vol. 301, Abstract PWP04, page 82.

M. Esteves-Oliveira, H. Pollheim, F. Lampert, C.P. Eduardo, G. Conrads, C. Apel (P). Effect of CO<sub>2</sub> laser (10.6 µm) irradiation at 2 J/cm<sup>2</sup> on caries prevention in vivo. 58th. ORCA Congress 2011. 06.-09.07.2011 in Kaunas, Lithuania.

H.-P. Horz and G. Conrads, 2011. (V) The salivary microbiome as an indicator of human-microbe co-evolution. European Oral Microbiology Workshop, Zeist, Netherlands (EOMW 2011, [http://admin.tcman.nl/congresses/congress\\_id=24](http://admin.tcman.nl/congresses/congress_id=24)).

H.-P. Horz and G. Conrads, 2011. (V) Increased risk of oral inflammation and associated bacterial spectrum with travelers in remote regions of the Himalayas. European Oral Microbiology Workshop, Zeist, Netherlands (EOMW 2011, [http://admin.tcman.nl/congresses/congress\\_id=24](http://admin.tcman.nl/congresses/congress_id=24)).

---