

1. Curriculum vitae

Personal Details

Name: José Roberto Gonzales
Date and place of birth: 28.02.1966 in San Salvador,
El Salvador
Citizenship: Austrian
Marital status: married
Private address: Wilhelmstraße 24
35392 Giessen, Germany
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Schooling

1970 – 1984 German School, San Salvador, El Salvador
1977 Private School Foundation St. Johann / Gymnasium
Amöneburg, Germany

Study

1986 – 1993 Dentistry
Dental School, University Evangélica, San Salvador, El
Salvador
Title: „Doctor en cirugía dental“/Dentist and Oral Surgeon

Professional career

1993 – 1996 Assistant of the Department of Periodontology at the Dental
School of the University Evangélica, and at a dental office
in San Salvador, El Salvador.
1996 - 1998 Research fellow of the German Academic Exchange Service
(DAAD) at the Department of Periodontology (Director:
Prof. Dr. Jörg Meyle), Dental School, Justus-Liebig-
University, Giessen, Germany
since 1998 Clinical and Research Assistant of the Department of
Periodontology (Director: Prof. Dr. Jörg Meyle), Justus-
Liebig-University, Giessen
2003 German doctoral degree: “Dr. med. dent.” (Master of
Science in Dentistry) at the Justus-Liebig-University,
Giessen
since 2008 Assistant Medical Director of the Department of
Periodontology, Justus-Liebig-University, Giessen
2009 “Habilitation” (PhD), and accreditation as a Senior Lecturer
(Privatdozent) at the Justus-Liebig-University, Giessen
2010 Private dental office “The Munich Dental Center” as
specialist for Periodontology and Implantology

Professional training

2000 - 2001	Specialist in Molecular Biology at the TÜV Academy Pfalz in cooperation with the Association for the Promotion of the Professional Career, Kaiserslautern
since 2005	Specialist in Periodontology by the German Association of Periodontology DGP
2005 - 2006	Research fellow at the Institute of Immunology and Transfusion Medicine (Chair: Prof. Dr. med. G. Bein) at the Justus-Liebig-University, Giessen
since 2009	Accreditation as a Clinical Researcher in clinical studies by the Medical Chamber of Hessen, in association with the Academy of Clinical Studies of the Johann Wolfgang Goethe-University, Frankfurt

Affiliations

1996 –	Dental Association of Hessen
1997 –	German Academy of Periodontology (DGP)
1998 –	International Association of Dental Research (IADR)
1998 –	Continental European Division (IADR)
1999 –	German Dental Association (DGZMK)
1999 –	German Academy of Implantology (DGI)

Prizes for scientific research

1998	First place (first author) for the poster presentation: „Genetische Disposition für marginale Parodontitis – Identifikation eines Genotyps“ at the European Forum of Dentistry, Frankfurt am Main
1999	First place (first author) for the poster presentation: „Einfluss einer Ölspülung auf die lokale Entzündungsreaktion bei adulter Parodontitis“ at the annual session of the German Association of Periodontology, Würzburg
2000	Jaccard Prize (third place, co-author) at the European Federation of Periodontology for the Paper: „Interleukin-4 polymorphisms in early onset periodontitis“, Europerio 3, Geneva
2005	Meridol Prize (first place, co-author). Category: Clinical Studies, Diagnosis and Therapy of Periodontal Diseases: Paper: “A randomized clinical trial comparing enamel matrix derivative and membrane treatment of buccal Class II furcation involvement in mandibular molars. Part I: Study design and results for primary outcomes”, Berlin
2011	Meridol Prize (second place, first author). Category: Clinical Studies, Diagnosis and Therapy of Periodontal Diseases: Paper: “A novel approach to the use of subgingival controlled-release chlorhexidine delivery in

chronic periodontitis: a randomized clinical trial”, Baden
Baden

Scientific cooperations

2000 - 2003	Department of Oral Biological Science, Division of Periodontology (Chief: Prof. Hiromasa Yoshie), Niigata University Graduate school of Medical and Dental Sciences, Japan
since 2000	Department of Odontology, Periodontology and Oral Microbiology (Chief: Anders Johansson, PhD) Umeå University, Sweden
since 2000	Department of Periodontology (Chair: Dr. Roberto Andrade, PhD), University Evangélica, El Salvador
since 2007	Department of Periodontology (Prof. Thomas Kocher), Ernst-Moritz-Arndt-University, Greifswald
since 2008	Department of Maxillofacial Surgery (Chair: Prof. Dr. Dr. H.P. Howaldt), Justus-Liebig-University Giessen
since 2008	Department of Maxillofacial Surgery (Director: Prof. Dr. Dr. A. Neff), University of Marburg
since 2008	Institute of Medical Microbiology (Chair: Prof. Dr. T. Chakraborty), Justus-Liebig-University Giessen
since 2011	St-Petersburg Medical Academy of Postgraduate Studies (Chair: Prof. Elena Leonova), St. Petersburg, Russia

Languages: Spanish
English
German
French

Hobbies: Arts and Sports

2. List of Publications

A. Original Papers

1. Gonzales JR, Groeger S, Bödeker RH, Meyle J.
Expression and secretion levels of Th1 and Th2 cytokines in patients with aggressive periodontitis
Clinical Oral Investigations 2011, accepted for publication.
2. Groeger S, Doman E, Gonzales JR, Chakraborty T, Meyle J.
B7-H1 and B7-DC receptors of oral squamous carcinoma cells are up-regulated by *Porphyromonas gingivalis*.
Immunobiology 2011, Jun 12. [Epub ahead of print].
3. Gonzales JR, Groeger S, Haley G, Bödeker RH, Meyle J.
Production of Interleukin-13 is Influenced by the Interleukin-4 -34TT and -590TT Genotype in Patients with Aggressive Periodontitis.
Scandinavian Journal of Immunology 2011 Feb;73(2):128-34.
4. Ernst FD, Uhr K, Teumer A, Fanghanel J, Schulz S, Noack B, Gonzales J, Reichert S, Eickholz P, Holtfreter B, Meisel P, Linden GJ, Homuth G, Kocher T.
Replication of the association of chromosomal region 9p21.3 with generalized aggressive periodontitis (gAgP) using an independent case-control cohort.
BMC Medical Genetics 2010 Aug 9;11:119.
5. Gonzales JR, Harnack L, Schmitt-Corsito G, Boedeker RH, Domann E, Chakraborty T, Meyle J.
A novel approach to the use of subgingival controlled-release chlorhexidine delivery in chronic periodontitis: a randomized clinical trial.
Journal of Periodontology 2011 Aug;82(8):1131-9..
6. Gonzales JR, Groeger S, Haley G, Bödeker RH, Meyle J.
The interleukin-4 -34TT and -590TT genotype is correlated with increased expression and protein production in aggressive periodontitis.
Molecular Immunology 2010 Jan;47(4):701-5.
7. Harnack L, Bödeker RH, Kurtulus I, Boehm S, Gonzales JR, Meyle J.
Use of platelet-rich plasma in periodontal surgery-a prospective randomised double blind clinical trial.
Clinical Oral Investigations 2009 Jun;13(2):179-87.
8. Gonzales JR, Mann M, Stelzig J, Bödeker RH, Meyle J.
Single-nucleotide polymorphisms in the IL-4 and IL-13 promoter region in aggressive periodontitis.
Journal of Clinical Periodontology 2007 Jun;34(6):473-9.

9. Hoffmann T, Richter S, Meyle J, Gonzales JR, Heinz B, Arjomand M, Sculean A, Reich E, Jepsen K, Jepsen S, Bödeker RH.
A randomized clinical multicentre trial comparing enamel matrix derivative and membrane treatment of buccal class II furcation involvement in mandibular molars. Part III: patient factors and treatment outcome.
Journal of Clinical Periodontology 2006 Aug;33(8):575-83.
10. Richter, S.; Meyle, J.; Jepsen, S.; Heinz, B.; Jepsen, K.; Arjomand, M.; Reich, E.; Gonzales, J.R.; Bödeker, R.H.; Sculean, A.; Hoffmann, T.
Bukkaler Furkationsbefall Grad II unterer Molaren – regenerative Parodontistherapie mit Membran oder Emdogain? – Ergebnisse einer randomisierten klinisch kontrollierten Multicenterstudie
Quintessenz, 57, 389-397, 2006
11. Meyle J, Gonzales JR, Bödeker RH, Hoffmann T, Richter S, Heinz B, Arjomand M, Reich E, Sculean A, Jepsen K, Jepsen S.
A randomized clinical trial comparing enamel matrix derivative and membrane treatment of buccal class II furcation involvement in mandibular molars. Part II: secondary outcomes.
Journal of Periodontology 2004 Sep;75(9):1188-95.
12. Jepsen S, Heinz B, Jepsen K, Arjomand M, Hoffmann T, Richter S, Reich E, Sculean A, Gonzales JR, Bödeker RH, Meyle J.
A randomized clinical trial comparing enamel matrix derivative and membrane treatment of buccal Class II furcation involvement in mandibular molars. Part I: Study design and results for primary outcomes.
Journal of Periodontology 2004 Aug;75(8):1150-60.
13. Gonzales JR, Kobayashi T, Michel J, Mann M, Yoshie H, Meyle J.
Interleukin-4 gene polymorphisms in Japanese and Caucasian patients with aggressive periodontitis.
Journal of Clinical Periodontology 2004 May;31(5):384-9.
14. Pontes CC, Gonzales JR, Novaes AB Jr, Juneor MT, Grisi MF, Michel J, Meyle J, de Souza SL.
Interleukin-4 gene polymorphism and its relation to periodontal disease in a Brazilian population of African heritage.
Journal of Dentistry 2004 Mar;32(3):241-6.
15. Gonzales JR, Michel J, Rodriguez EL, Herrmann JM, Bödeker RH, Meyle J.
Comparison of interleukin-1 genotypes in two populations with aggressive periodontitis.
European Journal of Oral Sciences 2003 Oct;111(5):395-9.
16. Gonzales JR, Michel J, Diete A, Herrmann JM, Bödeker RH, Meyle J.
Analysis of polymorphisms at the interleukin-10 loci in aggressive and chronic periodontitis.

- Journal of Clinical Periodontology*. 2002 Sept;29(9):816-822.
17. Gonzales JR, Herrmann JM, Boedeker RH, Francz PI, Biesalski H, Meyle J.
Concentration of interleukin-1beta and neutrophil elastase activity in gingival crevicular fluid during experimental gingivitis.
Journal of Clinical Periodontology. 2001 Jun;28(6):544-9.
 18. Michel J, Gonzales JR, Wunderlich D, Diете A, Herrmann JM, Meyle J.
Interleukin-4 polymorphisms in early onset periodontitis.
Journal of Clinical Periodontology. 2001 May;28(5):483-8.
 19. Herrmann JM, Gonzales JR, Boedeker RH, Vonholdt J, Meyle J.
Microassay for the detection of elastase activity in the gingival crevice.
Journal of Clinical Periodontology. 2001 Jan;28(1):31-7.
 20. Gonzales, J., Herrmann, J.M., Kleinstеuber, A., Vonholdt, J., Meyle, J.:
Einfluss einer Ölspülung auf die lokale Entzündungsreaktion bei adulter Parodontitis –
Erste Ergebnisse
Deutsche Zahnärztliche Zeitschrift. 54, 499-502, 1999

B. Reviews

1. Gonzales, J.R, Harnack, L. Meyle, J.
Röntgendiagnostik und –techniken in der Parodontologie
Parodontologie, 20(2), 183-190, 2009
2. Harnack, L.; Gonzales, J.R.; Meyle, J.
Die parodontale Infektion und systemische Entzündungsreaktionen
Parodontologie, 18(1), 9-20, 2007
3. Harnack L, Schmitt-Corsitto G, Gonzales JR, Meyle J.
DentalView DV2 Perioscopy System TM: an Endoscopic Method for Exploration and Visualization of Subgingival Depositis.
Perio 2004; 1(3): 277-80.
4. Harnack, L., Gonzales, J., Meyle, J.
Erregerbestimmung mit meridol Paro Diagnostik
Parodontologie, 15, 247-254, 2004
5. Meyle J, Gonzales JR.
Influences of systemic diseases on periodontitis in children and adolescents.
Periodontology 2000. 2001;26:92-112.
6. Gonzales, J.R., Herrmann, J.M., Michel, J., Vonholdt, J., Meyle, J.

Mikrobiologische Diagnostik in der Parodontologie

Parodontologie, 11, 9-15, 2000

7. Herrmann, J.M., Gonzales, J.R., Michel, J., Vonholdt, J., Meyle, J.
Biochemische und immunologische Diagnostik in der Parodontologie
Parodontologie, 11, 103-124, 2000
8. Michel, J., Gonzales, J.R., Herrmann, J.M., Meyle, J.
Molekularbiologische Methoden in der parodontologischen Diagnostik
Parodontologie, 11, 307-313, 2000
9. Gonzales, J., Herrmann, J., Schürmann, A., Vonholdt, J., Meyle, J.:
Elektronische Parodontitisdiagnostik
Parodontologie, 10, 339-355, 1999

C. Book Chapters

1. Gonzales JR, Harnack L, Böhm S, Eickholz P, Meyle J.
Parodontitis als Manifestation systemischer Erkrankungen.
In: Parodontalerkrankungen, Klassifikation und Charakterisierung.
Hrsg. Niklaus P. Lang, Quintessenz Verlags-GmbH, Berlin, 2003.
2. Meyle J, Gonzales JR, Michel J.
Interleukin Polymorphisms in Aggressive Periodontitis.
In: Periodontal Tissue Destruction and Remodelling,
Edt.: Tuncer, Mutlu and Scully, Quintessence Ltd, Turkey, 2003.

D. Case Reports

1. Harnack, L.; Gonzales, J.R.; Meyle, J.
Parodontitis bei IgG2-Subklassenmangel – Ein Fallbericht
Parodontologie, 20, 167-181, 2009
2. Gonzales JR, Rodekirchen H.
Endodontic and periodontal treatment of an external cervical resorption.
Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2007 Jul;104(1).
3. Harnack L, Gonzales JR, Meyle J.
Local Periodontal Therapy with Subgingival Controlled Release of Chlorhexidine
– A Case Report.
Perio 2005; 2(2): 107-116.
4. Harnack, L.; Gonzales, J.R.; Meyle, J.

Lokale Parodontaltherapie mit kontrollierter subgingivaler Freisetzung von Chlorhexidin – Ein Fallbericht

Parodontologie, 16, 119-129, 2005

5. Gonzales JR, Klimek J, Meyle J.
Aesthetic periodontal plastic surgery – a case report.
Perio 2004; 1(3):263-77.
6. Gonzales, J.R., Klimek, J., Meyle, J.
Plastisch-ästhetische Parodontalchirurgie – Ein Fallbericht
Parodontologie, 15, 355-369, 2004

E. Published Abstracts

1. Gonzales JR, Groeger S, Meyle J
Functional analyses of interleukin-4 –34 C→T and –590 C→T promoter polymorphisms in aggressive periodontitis
Journal of Clinical Periodontology 36 Suppl. 9:4, June 2009.
2. Harnack L, Gonzales JR, Bödeker RH, Meyle J
Local application of chx in the treatment of severe generalised chronic periodontitis – clinical effects
Journal of Clinical Periodontology 36 Suppl. 9:100, June 2009.
3. Gonzales JR, Meyle J
Th1/Th2-Zytokin mRNA-Profil bei aggressiver Parodontitis
Parodontologie, 19(3), 337, 2008
4. Herrmann JM, Gonzales JR, Meyle J
Zytoplasmatische Signalübertragung der Granulozyten von Patienten mit Diabetes und Parodontitis
Parodontologie, 19(3), 359, 2008
5. Gonzales JR, Harnack L, Katz N, Meyle J
C-reaktives Protein und hämatologische Charakteristika bei Patienten mit aggressiver Parodontitis
Parodontologie, 18(3), 284, 2007
6. Meyle J, Rathe F, Gonzales JR
IL-1A, IL-1B, IL-4, IL-13 und FcyRIIa- Polymorphismen bei parodontitis-resistenten Probanden
Parodontologie, 18(3), 291, 2007
7. Herrmann JM, Simons ER, van Dyke TE, Gonzales JR, Batista EL, Meyle J
Aktivierung neutrophiler Granulozyten von Patienten mit lokalisierter aggressiver

Parodontitis

Parodontologie, 18(3), 270, 2007

8. Paksoy D, Harnack L, Gonzales JR, Mahabadi J, Schneider D, Meyle J
Vergleich zweier mikrobiologischer Tests zum Nachweis parodontalpathogener Keime
Parodontologie, 18(3), 306, 2007
9. Meyle J, Kurtulus I, Gonzales J.
Use of platelet-rich plasma in periodontal surgery- a prospective randomized double blind clinical trial.
Journal of Clinical Periodontology 33 Suppl. 7:113, June 2006.
10. Gonzales J, Kobayashi T, Meyle J.
Fc-alphaRI and Fc-gammaRIIB gene polymorphisms in Caucasian periodontitis patients.
Journal of Clinical Periodontology 33 Suppl. 7:94, June 2006.
11. Harnack L, Gonzales J, Meyle J.
Local periodontal therapy with subgingival controlled release of chlorhexidine – microbiological effects.
Journal of Clinical Periodontology 33 Suppl. 7:116, June 2006.
12. Harnack L, Gonzales J, Meyle J.
Local periodontal therapy with subgingival controlled release of chlorhexidine – systemic influences.
Journal of Clinical Periodontology 33 Suppl. 7, June 2006.
13. Gonzales JR, Rathe F, Meyle J.
IL-4 and IL-13 Polymorphisms in Periodontitis-Resistant Subjects.
Journal of Dental Research, 84 Spec Iss A, 2005.
14. Harnack L, Gonzales JR, Immenschuh S, Schmidt-Corsitto G, Katz N, Meyle J.
LPS Binding Protein in Patients with Advanced Periodontitis.
Journal of Dental Research, 84 Spec Iss A, 2005.
15. Harnack L, Gonzales JR, Golf S, Katz N, Meyle J.
High sensitivity C-reactive protein in patients with severe chronic periodontitis.
Journal of Dental Research, 84 Spec Iss B (CED), 2005.
16. Gonzales JR, Rathe F, Meyle J.
Interleukin (IL)-4 and IL-13 in periodontitis-resistant subjects.
Journal of Dental Research, 84 Spec Iss B (CED), 2005.
17. Gonzales JR, Rathe F, Meyle J.
Interleukin (IL)-4 und IL-13 Polymorphismen bei parodontitisresistenten Individuen.

- Parodontologie*, 16, 2005.
18. Harnack, L.; Gonzales, J.R.; Meyle, J.
Aggressive Parodontitis bei selektivem IgG2-Subklassenmangel – Ein Fallbericht
Parodontologie, 15, 293-294, 2004
 19. Gonzales JR, Stelzig J, Michel J, Meyle J.
Interleukin-13 polymorphisms in patients with aggressive periodontitis
Journal of Dental Research, 82 Spec Iss B, B-114, 2003.
 20. Harnack L, Gonzales JR, Witzel A, Meyle J.
Risk assessment in Maintenance therapy.
Journal of Dental Research, 82 Spec Iss B, B-363, 2003.
 21. Gonzales JR, Kobayashi T, Meyle J.
IL-4 genotypes in aggressive periodontitis.
Journal of Clinical Periodontology 30 Suppl. 4, June 2003.
 22. Harnack L, Gonzales JR, Bödeker RH, Meyle J.
Risk assessment in periodontal therapy.
Journal of Clinical Periodontology 30 Suppl. 4, June 2003.
 23. Meyle J, Bechtold A, Bödeker RH, Gonzales J.
Retrospective study in implant patients.
Journal of Clinical Periodontology, 30 Suppl. 4, June 2003.
 24. Herrmann JM, Gonzales JR, Egenolf D, Meyle J.
Chemotactic response assayed by elastase activity.
Journal of Clinical Periodontology, 30 Suppl. 4, June 2003.
 25. Kurtulus I, Böhm S, Gonzales JR, Meyle J.
Elastolytic activity in early wound healing.
Journal of Clinical Periodontology, 30 Suppl. 4, June 2003.
 26. Meyle J, Bechtold A, Herrmann J, Gonzales J.
A 5 year retrospective study of Frialit 2 osseointegrated dental implants in patients treated for periodontitis.
Journal of Dental Research, 81, Spec. Issue A, 436, 2002
 27. Herrmann J, Gonzales JR, Meyle J.
Decrease of crevicular elastolytic activity after subgingival irrigation.
Journal of Dental Research, 81, Spec. Issue A, 399, 2002
 28. Meyle J, Michel J, Kothe A, Bödeker RH, Gonzales JR
Comparison of interleukin-4 genotypes in two populations with aggressive

periodontitis.

Journal of Dental Research, 80, Spec. Issue A, 729, 2001

29. Gonzales, J.R., Michel, J., Hockamp, M., Meyle, J.
Interleukin-4 Genotyp bei Patienten mit früh beginnender Parodontitis aus
Mittelamerika
Deutsche Zahnärztliche Zeitschrift, 55 Suppl., 3, 2000
30. Gonzales, J.R., Michel, J., Diете, A., Herrmann, J.M., Vonholdt, J.*, Meyle, J.
Interleukin-10 Polymorphisms in patients with Early Onset- and Adult Periodontitis
Journal of Clinical Periodontology, 27 Suppl., June 2000
31. Gonzales, J.R., Michel, J., Diете, A., Wunderlich, D., Herrmann, J.M., Vonholdt, J.,
Meyle, J.,
Interleukin-4 Genotype in Early Onset Periodontitis
Journal of Clinical Periodontology, 27 Suppl., June 2000
32. Gonzales, J.R., Michel, J., Diете, A., Wunderlich, D., Herrmann, J.M.*, Vonholdt, J.,
Meyle, J.
Interleukin-1 Polymorphisms in patients with Early Onset- and Adult Periodontitis
Journal of Clinical Periodontology, 27 Suppl., June 2000
33. Michel, J., Gonzales, J.R., Herrmann, J.M., Meyle, J.
Glossar der Grundbegriffe für die Praxis
Parodontologie, 11, 387-388, 2000
34. Gonzales, J., Herrmann, J., Kleinsteuber, A., Vonholdt, J., Meyle, J.:
The influence of subgingival irrigation with soy oil on periodontitis
Journal of Dental Research, 78, 430, 1999
35. Herrmann, J., Gonzales, J., Kleinsteuber, A., Vonholdt, J., Meyle, J.:
Elastase activity in gingival crevicular fluid of healthy volunteers
Journal of Dental Research, 78, 511, 1999

3. Scientific Lectures

1. Genetische und Immunologische Aspekte parodontaler Diagnostik und Therapie
Zahnärztlicher Arbeitskreis, Siegen, June 2010
2. Implantate bei Patienten mit Parodontitis – 10 Jahre Erfahrung mit dem Frialit II -
System
Herbsttagung der ARPA Wissenschaftsstiftung, Heidelberg, November 2009
3. Zurück zu den Wurzeln “back to the roots”
öffentliche Antrittsvorlesung, Open Lecture for the Accreditation of the Senior
Lecturer and PhD Title, Giessen, July 2009
4. Functional analyses of interleukin-4 -34 C→T and -590 C→T promoter
polymorphisms in aggressive periodontitis
Europerio 6, Tagung der Europäischen Gesellschaft für Parodontologie, Stockholm,
June 2009
5. Funktionelle Analyse der Interleukin-4 -34 C→T and -590 C→T
Promoterpolymorphismen bei aggressiver Parodontitis
41 Jahrestagung der Arbeitsgemeinschaft für Grundlagenforschung (AfG), Mainz,
January 2009
6. Th1/Th2-Zytokine mRNA Profile bei aggressiver Parodontitis
Jahrestagung der DGP, Nürnberg, September 2008
7. Molecular and cellular mechanisms of Th1/Th2 immunity and susceptibility to
aggressive periodontitis
11th German Meeting on Th1/Th2 research, Marburg, June 2008
8. Genetische Risikofaktoren bei Parodontitis
Wissenschaftlicher Vortrag im Zuge der Besetzung der W3-Professur für
Parodontologie (Nachfolge Frau Prof. Lavin Flores de Jacoby), der Philipps-
Universität Marburg, Marburg, June 2008
9. C-reaktives Protein und hämatologische Charakteristika bei Patienten mit
aggressiver Parodontitis
Jahrestagung der DGP, Bonn, September 2007
10. Ultimos avances científicos y clínicos en Periodoncia
1a. Jornada Internacional de Periodoncia, San Salvador, January 2006
11. Genetische Risikofaktoren bei Parodontitis
1 Workshop der ARPA- Wissenschaftsstiftung, Berlin, April 2004
12. Interleukin-13 polymorphisms in patients with aggressive periodontitis
81st General Session of the IADR, Goteborg, June 2003
13. Emdogain in furcation defects – A clinical study

First International Emdogain Symposium, Copenhagen, June 2002

14. Angeborene Risikofaktoren

Herbsttagung des Zahnärztlichen Vereins zu Frankfurt/M. von 1863 e.V., Frankfurt, September 2000

15. Genetische Risikofaktoren und ihre Bedeutung für Ätiologie und Progression der marginalen Parodontitis

Wissenschaftlicher Nachmittag im Zentrum für Zahn-, Mund- u. Kieferheilkunde im Zusammenhang mit der Einweihung des neuen Forschungslabors der Poliklinik für Parodontologie, Giessen, September 2000

16. Interleukin-4 Genotype in Early Onset Periodontitis

Europerio 3, Tagung der Europäischen Gesellschaft für Parodontologie, Genève, June 2000

17. Molekularbiologische PAR-Diagnostik und ihre Bedeutung

Europäisches Forum 2000, Gemeinschaftstagung der DGZMK, LZKH und DGP, Frankfurt, November 2000

18. Interleukin-4 Genotyp bei Patienten mit früh beginnender Parodontitis aus Mittelamerika

Europäisches Forum 2000, Gemeinschaftstagung der DGZMK, LZKH und DGP, Frankfurt, November 2000

19. Zerstörungsfreie Analyse des Gewebe-Implantat-Interface

Frühjahrstagung der Deutschen Gesellschaft für Implantologie, Hannover, April 2000

20. Effect of local vitamin A administration in experimental gingivitis

7th Meeting of the International Academy of Periodontology, Ljubljana, Slovenia, June 1999

21. Implant surface and therapeutic results in implant dentistry - coherence or coincidence?

International Workshop of Dental Surface Characteristics and Bone Response, Florence, Italy, October 1999

4. Poster presentations

1. Gonzales JR, Groeger S, Meyle J
Analyses of Th-cells activated with *Porphyromonas gingivalis* in aggressive periodontitis
88th General Session & Exhibition of the IADR, Barcelona, July 2010.
2. Harnack L, Gonzales JR, Bödeker RH, Meyle J
Local application of chx in the treatment of severe generalised chronic periodontitis – clinical effects
Europerio 6, Stockholm, June 2009.
3. Herrmann JM, Gonzales JR, Meyle J
Zytoplasmatische Signalübertragung der Granulozyten von Patienten mit Diabetes und Parodontitis
Jahrestagung der DGP, Nürnberg, September 2008
4. Gonzales JR, Harnack L, Haley G, Meyle J
Th1/Th2-Zytokin mRNA-Profil bei aggressiver Parodontitis
Jahrestagung der DGP, Nürnberg, September 2008
5. Gonzales JR, Harnack L, Haley G, Meyle J
Th1/Th2-cytokine mRNA profiles in aggressive periodontitis
PEF IADR, London, September 2008
6. Gonzales JR, Harnack L, Katz N, Meyle J
STAT6 expression by CD4⁺ cells in aggressive periodontitis patients in association with the IL-4 -590 C/T and -34 C/T genotypes
9th European Oral Microbiology Workshop, Helsinki, May 2008
7. Gonzales JR, Harnack L, Katz N, Meyle J
C-reaktives Protein und hämatologische Charakteristika bei Patienten mit aggressiver Parodontitis
Jahrestagung der DGP, Bonn, September 2007
8. Meyle J, Rathe F, Gonzales JR
IL-1A, IL-1B, IL-4, IL-13 und FcyRIIa- Polymorphismen bei parodontitis-resistenten Probanden
Jahrestagung der DGP, Bonn, September 2007
9. Paksoy D, Harnack L, Gonzales JR, Mahabadi J, Schneider D, Meyle J
Vergleich zweier mikrobiologischer Tests zum Nachweis parodontalpathogener Keime
Jahrestagung der DGP, Bonn, September 2007

10. Harnack L, Gonzales J, Schmitt-Corsitto G, Domann E, Meyle J.
Use of chlorhexidine chips in local periodontal therapy – microbiological effects.
3. ARPA Frühjahrsworkshop, Gießen, March-April 2006
11. Gonzales J, Kurtulus I, Bödeker RH, Böhm S, Harnack L, Meyle J.
Randomisierte Doppelblindstudie zur lokalen Wirkung von
Thrombozytenkonzentraten in der Parodontalchirurgie.
3. ARPA Frühjahrsworkshop, Gießen, March-April 2006
12. Meyle J, Kurtulus I, Gonzales J.
Use of platelet-rich plasma in periodontal surgery- a prospective randomized double
blind clinical trial.
Europerio 5, Madrid, June 2006
13. Gonzales J, Kobayashi T, Meyle J.
Fc-alphaRI and Fc-gammaRIIB gene polymorphisms in Caucasian periodontitis
patients.
Europerio 5, Madrid, June 2006
14. Harnack L, Gonzales J, Meyle J.
Local periodontal therapy with subgingival controlled release of chlorhexidine –
systemic influences.
Europerio 5, Madrid, June 2006
15. Harnack, L.; Gonzales, J.R.; Katz N, Meyle, J.
Lipopolysaccharidbindendes Protein bei Patienten mit fortgeschrittener Parodontitis.
Jahrestagung der AFG, Mainz, January 2005
16. Gonzales JR, Rathe F, Meyle J.
IL-4 and IL-13 Polymorphisms in Periodontitis-Resistant Subjects.
83rd General Session & Exhibition of the IADR, Baltimore, March 2005
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Europäisches Forum Zahnmedizin, Frankfurt am Main, November 1997

5. Academic Experience

(Please refer to the annex for the specific names of the topics)

From 1993 to 1996: Lecturer and Tutor in clinical courses in the 6th and 7th clinical semesters, Department of Periodontology, University Evangélica of El Salvador.

Since November 1997: Since the beginning of the scientific and clinical functions as a Scientific Assistant (Wissenschaftlicher Mitarbeiter) in the Department of Periodontology, Dental School, in Giessen, Germany: Coordinator and Tutor in the different clinical courses of the 7th and 10th semesters.

Since 1998: Participation in at least 25% of the lectures of the Department of Periodontology in Giessen.

Since 2005: Chair of the Seminar in Periodontal Therapy in the 7th clinical semester.

A: Curricular Activities

Clinical courses:

Since 1997: Clinical course: Periodontal Therapy II (7th semester), Department of Periodontology, Justus-Liebig-University, Giessen.

Since 2002: Clinical course and surgical training in Periodontology (10th semester), Department of Periodontology, Justus-Liebig-University, Giessen.

Seminars:

Since 2005: Seminar in Periodontal Therapy (7th semester), Department of Periodontology, Justus-Liebig-University, Giessen.

B. Main Lecture

Since 2001: Periodontology II (7th semester), Department of Periodontology, Justus-Liebig-University, Giessen.

C. Other activities

Coordinator of the literature seminar of the Department of Periodontology.

D. Seminars for dental assistants at the Dental Chamber of Hessen (LZKH)

Berufsbegleitende Aufstiegsfortbildung zum/r Zahnmedizinischen Fachassistenten/in, Fortbildungsakademie Zahnmedizin Hessen GmbH, seit 2005.

Fortbildung Zahnmedizinische/r Fachangestellte/r für Chirurgie/Implantologie, Fortbildungsakademie Zahnmedizin Hessen GmbH, seit 2005.

E. Tutor of Doctoral Theses

- Harnack, Lutz: Risikoanalyse bei Patienten mit chronischer Parodontitis in der Erhaltungstherapie (February 2006)
- Rathe, Florian: Analyse von Polymorphismen der Interleukine 1, -4, -13 und des Fcγ-Rezeptors IIa bei Patienten mit aggressiver Parodontitis und einer Gruppe von parodontitisresistenten Probanden (May 2007)
- Wulf, Annette: Der Nachweis zweier Interleukin-10-Genpolymorphismen bei Patienten mit Parodontitis (May 2004)
- Kemper, Dorothee: Einfluss von Polymorphismen des Interleukin-4 Gens auf die Parodontitis (November 2005)
- Witzel, Annette: Risikobestimmung von Patienten mit Parodontitis in einer zahnärztlichen Praxis (October 2007)

6. Scientific expertise

Periodontitis is a multifactorial disease with a complex interplay between pathogens, the host system and environmental factors. Without therapy, it is the most common cause of tooth loss. Today, there is enough evidence that individual genetic and immunological mechanisms are crucial for disease development and progression. This immunogenetic pathogenesis is dominated by the innate and adaptive immune systems. The higher production of pro-inflammatory mediators, cytokines, prostaglandins and matrix-metalloproteinases (i.e. IL-1 β , TNF- α , PGE2 and MMPs) by monocytes and macrophages, but also by lymphocytes, is a key process that regulates and induces the destruction of periodontal tissues. Thus, earlier studies of our group investigated the concentrations of IL-1 β and the activity of neutrophil elastase (EA) in the gingival crevicular fluid in periodontitis and in human experimental gingivitis models. We demonstrated that there was a continuous increase in the concentrations of IL-1 β and EA during 18 days of experimental gingivitis (1).

However, the main aim of my scientific research throughout the years has been to identify genes involved in the innate immune response associated with the different forms of periodontitis and to study their function and involvement in the pathogenesis of periodontitis. Based on the results demonstrating an association of a specific IL-1 genotype with chronic periodontitis, we studied this association in patients with chronic, but also with aggressive periodontitis, in different populations (2;3). Our results demonstrated for the first time a different prevalence between patients with chronic and with aggressive periodontitis in the north European population. Furthermore, we identified differences in the prevalence between north-Europeans and Central-American individuals. In addition, these studies demonstrated that the IL-1 genotype previously associated with chronic periodontitis could not be detected in patients with aggressive periodontitis. These results were confirmed afterwards by different investigators worldwide (3).

Another important cytokine in the pathogenesis of periodontitis is IL-10. We analyzed two specific polymorphisms located in this gene in patients with periodontitis of north-European heritage. (4). No association between the investigated genotypes and disease was found, however, we found a novel link between two alleles in the promoter region of the IL-10 gene: allele A at position -597 and allele T at position -824.

There is considerable evidence that T and B-cells and their cytokines have an important role in the progression of periodontal diseases. In this context, and specifically for the development of the Th2 pathway, IL-4 plays the central role. Mainly, it is responsible for the Th2 differentiation

and the development of the humoral immune response. Different hypothesis on the role of this cytokine in the pathogenesis of periodontitis have been postulated. The results have been controversial. However, we considered the mechanisms that lead to the Th2 development in the progressive periodontal lesion as plausible. For this reason, we tested different hypotheses and investigated first the association of two IL-4 polymorphisms with aggressive periodontitis: a C-T SNP at position -590 and a 70 bp-repeat polymorphism in intron 2 (5;6). 27.8% of the patients showed this specific genotype, while none of the controls carried these variants. By testing these variants in the Japanese population, we showed significant differences between this and the north-European populations. This contributed to the arising evidence showing great differences in the genetic background in different populations worldwide, specially between individuals of Caucasian heritage and Asians (7). In further studies we identified linkage disequilibrium of the polymorphic T allele in the IL-4 promoter at position -34 with the same allele at position -590 in patients with aggressive periodontitis. And finally, we found a significant association of this specific genotype IL-4 -590 T/T and -34 T/T with aggressive periodontitis in individuals of north-European heritage (8).

To date, only few scientists have investigated the functional role of genetic factors and candidate genes in the immunopathogenesis of periodontitis. Recently, we analyzed the functional effects of the IL-4 -590 T/T and -34 T/T genotype in collaboration with the Institute of Clinical Immunology and Transfusion Medicine (Head: Prof. Dr. med. Gregor Bein). We focused on the analysis of the gene expression of IL-4 and IL-13, but also of IL-2, IFN- γ and STAT6 in CD4⁺ cells of patients with aggressive periodontitis that were carriers of the IL-4 genotype. Results were compared with the results of non-carrier patients and controls. In addition, the cytokine production was analyzed in these cells. The results demonstrated that this genotype has a functional effect on T helper cells of patients with aggressive periodontitis, inducing increased expression of IL-4 and increased production of IL-4 and IL-13. These results indicate that T cells of aggressive periodontitis patients with variants in these two key genes of the Th2 pathway may exhibit an unusual cytokine secretion pattern upon stimulation *in vivo*. This point to an impaired T cell function with a Th2-like response (9, paper is in review process).

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