

SIGASCOT – GOTS FELLOWSHIP 2009

Destinations of the Fellowship:

**TORINO
PAVIA
ANCONA
NAPOLI**

The fellows :

**PD. Dr. Philipp Niemeyer, Universität Freiburg,
PhNiemeyer@gmail.de; philipp.niemeyer@uniklinik-
freiburg.de**

Dr. Arndt Schmidt, Sendenhorst, arnd_schmidt@gmx.de

Their oral presentations :

Philipp Niemeyer:

1. Mesenchymal Stem Cells for Regeneration of Bone:
Immunological Aspects and Experiences in an Ovine Critical
Bone Size Defect
2. Autologous Chondrocytes for Treatment of isolated Cartilage
Defects of the Knee: "The Freiburg Experience" from 1995 to
2009
3. High Tibial Osteotomy for Varus Malalignment using an Internal
Plate Fixateur (TomoFix TM) and Computer Navigation

Arndt Schmidt:

1. Suture anchor repair for uncommon tendon avulsion injuries.
2. Risk profile: Olympic wrestling.
3. Shoulder instability in adolescent athletes: how to manage?

OCTOBRE 2009											
SU	MO	TU	WE	TH	FR	SA	SU	MO	TU	WE	TH
4	5	6	7	8	9	10	11	12	13	14	15
TURIN											
			PAVIA								
						ANCONA					
									NAPLES		

SCHEDULE

Turin : October 4-7

Arrival in Turin Sunday October 4th

October 5th-6th guests of Prof. Paolo Rossi – Ospedale Mauriziano Umberto I – Ortopedia

The fellows are welcomed by Dr. Roberto Rossi

They stay at: **ART HOTEL BOSTON**, Via Massena 70 , Tel: 011 500359 - Fax: 011 599358

Wednesday October 7th transfer to Pavia

Pavia: October 7-10

October 8th - 9th guests of Prof. Franco Benazzo – Fondazione IRCCS Policlinico San Matteo – Ortopedia

The fellows are welcomed by Dr. Giacomo Zanon

They stay at: **University College Almo Collegio Borromeo**, Piazza Borromeo, 9 , Tel:0382 395344.

Saturday October 10th transfer to Ancona

Ancona: October 10-13

October 11th- 12th guests of Prof. Antonio Gigante – Università Politecnica delle Marche - Clinica Ortopedica

The fellows are welcomed by Dr. Alberto Busilacchi

albertobusilacchi@yahoo.it . They stay at: Hosted by resident research students .

Tuesday October 13th transfer to Naples

Naples: October 13-16

October 14-15 guests of Prof. Donato Rosa – Università degli Studi di Napoli Federico II- Clinica Ortopedica

The fellows are welcomed by Dr. Giuseppe Di Napoli.

They stay at: **Hotel Costantinopoli 104**, Via Santa Maria di Costantinopoli,104,

Tel: 081 557 1035

Thursday October 15th back to Germany.



Curriculum Vitae

Name: Philipp Niemeyer

Born: 12.7.1975 in Saarbrücken, Germany

Nationality: German

School Education: Sep. 1982 - Juli 1986

Grundschule Hohe-Wacht Saarbrücken

Sep. 1986 – Juli 1992

Ludwigsgymnasium Saarbrücken

Aug. 1992 – Mai 1993

McIntosh High-School Peachtree City, GA (USA)

Mai 1993 – Juli 1995

Ludwigsgymnasium Saarbrücken

Medical Education: Okt. 1995 – April 1999

Universität des Saarlandes in Homburg / Saar (GER)

April 1999 – April 2002

Albert-Ludwig-Universität Freiburg i.Br. (GER)

Examinations: Juli 1995 Graduation

Sept. 1997 Medical Pre-Examination

März 1999 Medical Examination Part I

März 2001 Medical Examination Part II

Mai 2002 Final Medical Examination (Part III)

Hospitations: August -September 2000

Stanford-University, Palo Alto (USA)

Division Stem Cell and Bone Marrow Transplantation (Prof. Dr. K. Blume)

Doctoral Thesis: „Molecular Identification and Characterization of Antigens in Acute

Leukemia“ Prof. Dr. M. Pfreundschuh, Innere Medizin I, Universitätsklinikum

Homburg/Saar, Grade: Magna cum Laude

Habilitation: „Regeneration of Bone using Mesenchymal Stem Cells in Critical Size

Defects of the Sheep Tibia“ finished 23. Juli 2009

Further medica education:

1.6.2002 – 30.11.2003 : Assistent Doctor Heidelberg University Hospital

(Head: Prof. Dr. V. Ewerbeck)

1.12.2003 – 31.8.2008: Assistent Doctor Department of Orthopedic Surgery

and Traumatology Freiburg University Hospital (Head: Prof. Dr. N. P.

Südkamp)

Since 1.9.2008: Facharzt Orthopedic Surgery and Traumatology, Department

of Orthopedic Surgery and Traumatology Freiburg University Hospital (Head:

Prof. Dr. N. P. Südkamp)

5.12.2002: Certificat: Experimental Animal Courses according to FELASA and

GV-SOLAS recommendations

19.10.2003 DEGUM Certificate : Sonogprahy

15.-18.3.2004 AO-Course: Principles of Surgical Fracture Treatment

12.-15.9.2005 Advanced AO-Course Trauma II: Fortschritte und Probleme in der operativen Frakturbehandlung

14.-15.4.2005 Teilnahme am Anwenderworkshop: 3-D-Bildgebung im OP, Unfallklinik Berlin

7.-9.3.2006 Medical Education –Part 1

Modul 1 des Zertifikates Hochschullehre Baden-Württemberg

2.-4.5.2006 Medical Education – Part 2

Modul 2 des Zertifikates Hochschullehre Baden-Württemberg

3.-4.3.2007 ATLS (Advanced Trauma Life Support) Providercourse

5.-7.2.2008: Medical Education - Advanced Cours „Führen, Leiten, Lehren – Mentoring von Doktoranden“

Memberships: since 2005 Gesells. für Orthopädisch-Traumatologische Sportmedizin (GOTS)
since 2006 Deutsche Gesellschaft für Unfallchirurgie (DGU)

Januar – September 2006: Mitarbeit im Grundsatzausschuss der Deutschen Gesellschaft für Unfallchirurgie an der Erstellung des „Weißbuch Schwerletztensversorgung: Empfehlungen zur Struktur, Organisation und Ausstattung der Schwerverletztenversorgung in der Bundesrepublik Deutschland“

Since Januar 2007: Member of the Working group „Arthroscopic Surgery“ of the „Deutschen Gesellschaft für Unfallchirurgie (DGU) „

Reviewer: since 2006 Member of the Editorial Advisory Board of „Current Stem Cell Research and Therapy“

since 2007 Reviewer for “Biomaterials”, “Cell and Tissue Research”, “Arthroscopy”, “American Journal of Sports Medicine”

Awards: 2005 Kurz-Stein-Wissenschaftspreis der Universität Freiburg
„HLA-inkompatible Transplantation mesenchymaler Stammzellen zur Knochenregeneration“

Languages: Englisch (fluent), Französisch

Publications:

1. Original Articles

1a. First Authorships

Niemeyer, P., Tureci, O., Eberle, T., Graf, N., Pfreundschuh, M., Sahin, U. Expression of serologically identified tumor antigens in acute leukemias. *Leuk Res* 2003; 27, 655-60.

Niemeyer, P., Dellling, G., Werner, M., Simank, H.G., Bernd, L. [Telecommunication and telepathology in orthopedic oncology. Possibilities in diagnosis and therapy of primary malignant bone tumors]. *Orthopade* 2003; 32, 949-54.

Niemeyer, P., Krause, U., Punzel, M., Fellenberg, J., Simank, H.G. [Mesenchymal stem cells for tissue engineering of bone: 3D-cultivation and osteogenic differentiation on mineralized collagen]. *Z Orthop Ihre Grenzgeb* 2003; 141, 712-7.

Niemeyer, P., Seckinger, A., Simank, H.G., Kasten, P., Sudkamp, N., Krause, U. [Allogenic transplantation of human mesenchymal stem cells for tissue engineering purposes: an in vitro study]. *Orthopade* 2004; 33, 1346-53.

Niemeyer, P., Krause, U., Fellenberg, J., Kasten, P., Seckinger, A., Ho, A.D., Simank, H.G. Evaluation of mineralized collagen and alpha-tricalcium phosphate as scaffolds for tissue engineering of bone using human mesenchymal stem cells. *Cells Tissues Organs* 2004; 177, 68-78.

Niemeyer, P., Weinberg, A., Schmitt, H., Kreuz, P.C., Ewerbeck, V., Kasten, P. Stress fractures in adolescent competitive athletes with open physis. *Knee Surg Sports Traumatol Arthrosc* 2006; 14, 771-7.

Niemeyer, P., Weinberg, A., Schmitt, H., Kreuz, P.C., Ewerbeck, V., Kasten, P. Stress fractures in the juvenile skeletal system. *Int J Sports Med* 2006; 27, 242-9.

Niemeyer, P., Kasten, P., Simank, H.G., Fellenberg, J., Seckinger, A., Kreuz, P.C., Mehlhorn, A., Sudkamp, N.P., Krause, U. Transplantation of mesenchymal stromal cells on mineralized collagen leads to ectopic matrix synthesis in vivo independently from prior in vitro differentiation. *Cytotherapy* 2006; 8, 354-66.

Niemeyer, P., Kornacker, M., Mehlhorn, A., Seckinger, A., Vohrer, J., Schmal, H., Kasten, P., Eckstein, V., Sudkamp, N.P., Krause, U. Comparison of immunological properties of bone marrow stromal cells and adipose tissue-derived stem cells before and after osteogenic differentiation in vitro. *Tissue Eng* 2007; 13, 111-21.

Niemeyer, P., Steinwachs, M., Erggelet, C., Kreuz, P.C., Kraft, N., Kostler, W., Mehlhorn, A., Sudkamp, N.P. Autologous chondrocyte implantation for the treatment of retropatellar cartilage defects: clinical results referred to defect localisation. *Arch Orthop Trauma Surg* 2007

Niemeyer, P., Kreuz, P.C., Steinwachs, M., Kostler, W., Mehlhorn, A., Kraft, N., Sudkamp, N.P.

The "double eye" technique as a modification of autologous chondrocyte implantation for the treatment of retropatellar cartilage defects. *Knee Surg Sports Traumatol Arthrosc* 2007; 15, 1461-8.

Niemeyer, P., Kostler, W., Bley, T., Gobel, H., Brook, C.J., Sudkamp, N.P., Strohm, P.C. Anatomical refixation for acute ruptures of the distal biceps tendon using a novel transcortical refixation system. *Arch Orthop Trauma Surg* 2008; 128, 573-81.

Niemeyer, P., Koestler, W., Kaehny, C., Kreuz, P.C., Brooks, C.J., Strohm, P.C., Helwig, P., Suedkamp, N.P. Two-year results of open-wedge high tibial osteotomy with fixation by medial plate fixator for medial compartment arthritis with varus malalignment of the knee. *Arthroscopy* 2008; 24, 796-804.

Niemeyer, P., Pestka, J.M., Kreuz, P.C., Erggelet, C., Schmal, H., Strohm, P.C., Koestler, W., Suedkamp, N., Steinwachs, M. Characteristic complications following autologous chondrocyte implantation (ACI) for cartilage defects of the knee joint. *Am J Sports Med* 2008; 36, 2091-9

Niemeyer P, Vohrer J, Schmal H, Kasten P, Fellenberg J, Suedkamp NP, Mehlhorn AT. Survival of human mesenchymal stromal cells from bone marrow and adipose tissue after xenogenic transplantation in immunocompetent mice. *Cytotherapy*. 2008;10(8):784-95. PubMed PMID: 18951271.

Niemeyer P, von Heyden J, Köstler W, Südkamp N. Sportaktivitaet nach valgiserender Tibiakopfoesteotomie in Open-Wedge Technik mit einem internen Plattenfixateur (TomoFix TM) *Sport-Orthopaedie - Sport-Traumatologie* 25 (2009), pp. 88-95

Niemeyer P, Schönberger TS, Hahn J, Kasten P, Fellenberg J, Suedkamp N, Mehlhorn AT, Milz S, Pearce S. Xenogenic transplantation of human mesenchymal stem cells in a critical size defect of the sheep tibia for bone regeneration. *Tissue Eng Part A*. 2009 Jul 15. [Epub ahead of print] PubMed PMID: 19604039.

1b Senior Authorships

Hauschild, O., Ghanem, N., Oberst, M., Baumann, T., Kreuz, P.C., Langer, M., Suedkamp, N.P., Niemeyer, P. Evaluation of Singh index for assessment of osteoporosis using digital radiography. *Eur J Radiol* 2008

Kreuz, P.C., Steinwachs, M., Erggelet, C., Lahm, A., Henle, P., Niemeyer, P. Mosaicplasty with autogenous talar autograft for osteochondral lesions of the talus after failed primary arthroscopic management: a prospective study with a 4-year follow-up. *Am J Sports Med* 2006; 34, 55-63.

Kasten, P., Niemeyer, P. Diagnostik von Stressfrakturen bei Jugendlichen. *Sportverletz Sportschaden* 2005; 19, 205-10.

Siepe M, Thomsen AR, Duerkopp N, Krause U, Förster K, Hezel P, Beyersdorf F, Schlensak C, Südkamp NP, Bosse R, Niemeyer P. Human neonatal thymus-derived mesenchymal stromal cells: characterization, differentiation, and immunomodulatory properties. *Tissue Eng Part A*. 2009 Jul;15(7):1787-96. PubMed PMID: 19132892.

1c Co-Authorships

Bernd, L., Sabo, D., Zahlten-Hinguranage, A., Niemeyer, P., Daecke, W., Simank, H.G. [Experiences with vascular pedicled fibula in reconstruction of osseous defects in primary malignant bone tumors]. *Orthopade* 2003; 32, 983-93.

Kasten, P., Luginbuhl, R., Vogel, J., Niemeyer, P., Weiss, S., Van Griensven, M., Krettek, C., Bohner, M., Bosch, U., Tonak, M. [Induction of bone tissue on different matrices: an in vitro and a in vivo pilot study in the SCID mouse]. *Z Orthop Ihre Grenzgeb* 2004; 142, 467-75.

Kreuz, P.C., Remiger, A., Erggelet, C., Hinterwimmer, S., Niemeyer, P., Gächter, A. Isolated and combined tears of the subscapularis tendon. *Am J Sports Med* 2005; 33, 1831-7.

Kasten, P., Vogel, J., Luginbuhl, R., Niemeyer, P., Tonak, M., Lorenz, H., Helbig, L., Weiss, S., Fellenberg, J., Leo, A., Simank, H.G., Richter, W. Ectopic bone formation associated with mesenchymal stem cells in a resorbable calcium deficient hydroxyapatite carrier. *Biomaterials* 2005; 26, 5879-89.

Kreuz, P.C., Erggelet, C., Steinwachs, M.R., Krause, S.J., Lahm, A., Niemeyer, P., Ghanem, N., Uhl, M., Sudkamp, N. Is microfracture of chondral defects in the knee associated with different results in patients aged 40 years or younger? *Arthroscopy* 2006; 22, 1180-6.

Kasten, P., Vogel, J., Luginbuhl, R., Niemeyer, P., Weiss, S., Schneider, S., Kramer, M., Leo, A., Richter, W. Influence of platelet-rich plasma on osteogenic differentiation of mesenchymal stem cells and ectopic bone formation in calcium phosphate ceramics. *Cells Tissues Organs* 2006; 183, 68-79.

Suedkamp, N.P., Angenendt, J., Hecht, H., Nowotny-Behrens, U., Koestler, W., Niemeyer, P., Stark, G.B., Berger, M. Freiburger Arbeitsunfallstudie (FAUST) Teil I: Epidemiologie und Verlauf psychischer Folgestörungen nach Arbeitsunfällen. *Trauma Berufskrankh* 2006; 8, S67-S73

Schmal, H., Niemeyer, P., Roesslein, M., Hartl, D., Loop, T., Sudkamp, N.P., Stark, G.B., Mehlhorn, A.T. Comparison of cellular functionality of human mesenchymal stromal cells and PBMC. *Cytotherapy* 2007; 9, 69-79.

Kreuz, P.C., Lahm, A., Haag, M., Kostler, W., Konrad, G., Zwingmann, J., Hauschild, O., Niemeyer, P., Steinwachs, M. Tibial wedge osteotomy for osteochondral transplantation in talar lesions. *Int J Sports Med* 2008; 29, 584-9.

Mehlhorn, A.T., Niemeyer, P., Kaschte, K., Muller, L., Finkenzeller, G., Hartl, D., Sudkamp, N.P., Schmal, H. Differential effects of BMP-2 and TGF-beta1 on chondrogenic differentiation of adipose derived stem cells. *Cell Prolif* 2007; 40, 809-23.

Helwig, P., Uhl, M., Niemeyer, P., Strohm, P.C., Sudkamp, N.P. [Treatment options for perioperative hemorrhage : Interventional angiography to control bleeding complications after total hip arthroplasty.]. *Orthopade* 2008; 37, 470-474.

Kasten, P., Beyen, I., Niemeyer, P., Luginbuhl, R., Bohner, M., Richter, W. Porosity and pore size of beta-tricalcium phosphate scaffold can influence protein production and osteogenic differentiation of human mesenchymal stem cells: An in vitro and in vivo study. *Acta Biomater* 2008

Schmal, H., Mehlhorn, A.T., Kurze, C., Zwingmann, J., Niemeyer, P., Finkenzeller, G., Dauner, M., Sudkamp, N.P., Kostler, W. [In vitro study on the influence of fibrin in cartilage constructs based on PGA fleece materials.]. *Orthopade* 2008; 37, 424-434.

Kasten, P., Vogel, J., Geiger, F., Niemeyer, P., Luginbuhl, R., Szalay, K. The effect of platelet-rich plasma on healing in critical size long-bone defects. *Biomaterials* published online Jul 9, 2008

Mehlhorn AT, Zwingmann J, Finkenzeller G, Niemeyer P, Dauner M, Stark B, Südkamp NP, Schmal H. Chondrogenesis of adipose-derived adult stem cells in a poly-lactide-co-glycolide scaffold. *Tissue Eng Part A*. 2009 May;15(5):1159-67.

Hauschild O, Konstantinidis L, Strohm PC, Niemeyer P, Suedkamp NP, Helwig P. Reliability of leg alignment using the OrthoPilot system depends on knee position: a cadaveric study. *Knee Surg Sports Traumatol Arthrosc*. 2009 Jun 4. [Epub ahead of print] PubMed PMID: 19495724.

2. Review Articles

Niemeyer, P., Koestler, W., Mueller, C.A., Strohm, P.C., Suedkamp, N.P. Frakturen im fortgeschrittenen Lebensalter. *Medizinisch-Orthopädische Technik* 2004; 124, 17-33.

Niemeyer, P., Krause, U., Kasten, P., Kreuz, P.C., Henle, P., Sudkamp, N.P., Mehlhorn, A. Mesenchymal stem cell-based HLA-independent cell therapy for tissue engineering of bone and cartilage. *Curr Stem Cell Res Ther* 2006; 1, 21-7.

Niemeyer, P., Kreuz, P.C., Steinwachs, M., Sudkamp, N.P. Operative Therapie lokaler Knorpelschäden am Kniegelenk. *Sportverletz Sportschaden* 2007; 21, 41-50.

Niemeyer, P., Mehlhorn, A., Jaeger, M., Kasten, P., Simank, H.G., Krause, U., Sudkamp, N.P. Ersatzteillager Knochenmark – Stammzellen zur Regeneration mesenchymaler Gewebe. *MMW Fortschr Med* 2004; 146, 45.

Niemeyer, P., Mehlhorn, A., Jaeger, M., Kasten, P., Simank, H.G., Krause, U., Sudkamp, N.P. Adulte Mesenchymale Stammzellen zur Regeneration muskuloskeletaler Gewebe. *MMW Fortschr Med* 2004; 146, 107-13.

Niemeyer, P., Sudkamp, N.P. Principles and clinical application of the locking compression plate (LCP). *Acta Chir Orthop Traumatol Cech* 2006; 73, 221-8.

Niemeyer, P., Köstler W., Südkamp N.P. Isolierte und kombinierte Verletzungen des vorderen Kreuzbandes. *Trauma Berufskrankh* 2008; S3: 370-7.

Steinwachs, M.R., Kreuz, P.C., Gohlke-Steinwachs, U., Niemeyer, P. [Current treatment for cartilage damage in the patellofemoral joint.]. *Orthopade* published online Aug 23, 2008

3.. Case Reports and Publication in "Not-Peer-Reviewed Journals"

Niemeyer, P., Mehlhorn, A., Schmal, H., Koestler, W., Südkamp, N.P. Experience in the treatment of complex fractures of the humeral head. *Global Surgery* 2004; 109-112.

Niemeyer, P., Ludwig, K., Werner, M., Bernd, L., Parsch, D. Reconstruction of the pelvic ring using an autologous free nonvascularized fibula graft in a patient with benign fibrous histiocytoma. *World J Surg Oncol* 2004; 2, 38.

Niemeyer, P., Edlich, M., Hauschild, O., Baumann, T., Ghanem, N.A., Strohm, P.C., Sudkamp, N.P. [Clinical, radiological and arthroscopic aspects in nail patella syndrome. Literature review based on an affected family]. *Orthopade* 2006; 35, 197-203.

Freiburg, 5. September 2009

Curriculum vitae

Dr. med. Arnd P. Schmidt

born 11.05.1969 in Münster/Germany

one child, protestant religion



School: 1979–88 Städtisches Gymnasium Paulinum Münster, Abitur

Service: 1988–89 Military service (Mountain infantry, Mittenwald)

University: 1991–93 Justus-Liebig-University Gießen

1993–98 Ruprecht-Karls-University Heidelberg, Ärztliche Prüfung

Licence to practice: 2000 Regierungspräsidium Stuttgart

Graduation: 2007 Ruprecht-Karls-University Heidelberg (magna cum laude) (*Prof. Wentzensen*)

- Intraoperative 3D-imaging in displaced intraarticular calcaneal fractures -

Career:

01.07.1998 – Annastift Hannover, Orthopaedic surgery (*Prof. von Stempel*)

01.04.2000 – Westfal-Klinikum Kusel, Surgery (*Dr. Dobberstein*)

16.10.2000 – Klinikum Darmstadt, Traumatology (*Prof. Brutscher*)

01.05.2001 – Westfal-Klinikum Kusel, Orthopaedic and rheumatic surgery (*Dr. Dinges*)

01.05.2002 – Orthopädische Universitätsklinik Heidelberg (*Prof. Gerner*)

15.09.2003 – St. Elisabeth-Klinik Saarlouis, Orthopaedic surgery and traumatology (*Dr. Kunz*)

01.11.2007 – Orthopädische Universitätsklinik Aachen (*Prof. Niethard*)

01.01.2008 – Assistent medical director

01.01.2008 – St. Josef-Stift Sendenhorst, Spine center (*Dr. Brinkmann*)

01.10.2009 – SHG-Klinikum Merzig, Orthopaedic surgery and sports medicine (*Dr. Johann*)

Board Certification as a specialist: Orthopaedics (10/2005)

Board Certificates: Chiropractic medicine, emergency medicine, naturopathy, physical therapy, sports medicine

Further qualifications:

- Radiation protection (skeletal and emergency diagnostic)
- Acupuncture, MRI, palliative medicine, rehabilitation, travel medicine
- Sonography of infant's hip, musculoskeletal system and abdomen
- AO-Courses (trauma, spine)

Memberships: Ärztekammern Westfalen-Lippe, Saarland

Deutschsprachige Arbeitsgemeinschaft für Arthroskopie (AGA)

Gesellschaft für Orthopädisch-Traumatologische Sportmedizin (GOTS)

International Fellowships: 1994–95 Université Claude Bernard Lyon, Frankreich (ERASMUS)

1998 University of Colorado, Denver, USA (DFA)