Mission and Challenge

"The goal of the Gen-3 Engineering Research Center (ERC) Program is to create a culture that links scientific discovery to technological innovation through transformational engineered systems, research and education.

This will advance technology and produce engineers who will become the innovators of tomorrow impacting the global economy with transformational thought processes"

To achieve the above goals, all Gen-3 ERCs will have a key feature:

- **Partnerships with foreign universities to add value in research, education and economic development**
- **Questions to be addressed:**
  - *How will this be achieved and implemented?*
  - *What types of activity and NSF funding can be covered by the term "add value" to address the mission at hand?*

Background- MHH Involvement

- Dr. Witte was contacted by the ERC team upon the recommendation of the NSF-Site Visit Team due to MHH leading activities
- Dr. Witte`s Team is a recognized leader in biodegradable metals and associated technologies
- The synergy was quite obvious due to many complementary technology and research activities between the ERC-RMB and Dr. Witte`s Team
- Dr. Witte was inducted as the Global Site Coordinator of the ERC-RMB
- ERC and Dr. Witte thought that ERC activities in Hannover could be financed through the ERC funding, BUT
  - No NSF money can be sub-contracted outside the USA
  - No supplemental NSF funds to jump start the activities
  - Crisis => US university budget is limited

Possible Solutions

1. Program for "international affairs" under the ERC directorate

2. Supplement for initiating international collaborations for each ERC

3. Creating NSF-ERC-Satellite for each ERC in an appropriate region to initiate activities; e.g

- **organize and lead partners to bilaterally funded projects**
- **Provide avenues to initiate seed grants for mutual activities**
- **Initiate connectivity with industries for translational research**

4. Possible answers to jump start these:

– **Initial activities can operate on a cost-reimbursement basis by the parent ERCs (see details on next slide)**

– **NSF-ERC-Satellite can be further financed by cost matching from foreign partner institutions**

Possible Solutions - Continued

For our ERC-RMB-EU satellite we are proposing the following:

This can become the initial model to move us forward.

- For MHH relationship and connectivity, we are proposing to create an expense line fund in the parent NCAT-ERC-RMB account.
- NSF allows
  - expenses for foreign scientists and students coming from foreign partners to conduct research in the USA and this fund will be used for that purpose
  - expenses of ERC personnel and students visiting global partners for research and education
- In addition, when USA scientists, faculty and students visit Hannover, all the expenses related to conducting research (materials, supplies, special equipment usage, building experiments and mini biostages, other experimentation as required, etc) will be charged to this account established at the parent ERC.
- As part of the MoU, we will be requesting Hannover Medical School to expend their funds during the visits of USA researchers. MHH will get reimbursed similar to cost reimbursement, a standard practice in US institutions. (A gesture of goodwill and collaboration, a critical element for the global success of Generation 3 ERCs like ours)

NSF-ERC-EU Satellite in MHH (Germany)

- represents the NSF and the ERC and its members in MHH (Germany)
- connects actively members of the NSF-ERC with potential researchers (vice versa) and industries (e.g: Biotronik)
- screens bilateral funding opportunities from various organizations
- builds up a data base of researcher and its research/education interest
- regular email-newsletter for all ERC members and adjunct researcher/institutions
- organizes regular symposia/"partnering workshops" with participants from the ERC and interested researchers on topics which are currently promoted for funding by various organizations (also representatives of these funding organizations will be invited to help submitting mutual proposals)
- leverages and organizse student and researcher exchange between ERC and the interested institutions
- organize videoconference based meetings and courses for ERC researchers and students

NSF-ERC for Revolutionizing Metallic Biomaterials

Rooms for NSF-ERC-Satellite Supported by MHH

http://erc.ncat.edu

Annastift
Kompetenz und Nächstenliebe
Diakoniekrankenhaus Annastift gGmbH
Ein Unternehmen der Diakonischen Dienste Hannover

MHH Medizinische Hochschule Hannover
Orthopädische Klinik und Poliklinik

Orthopädische Klinik der MHH im Annastift gGmbH • Anna-von-Borriesstr. 1–7 • 30625 Hannover

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- Wirbelsäule, Neurochirurgie/-orthopädie: Dr. med. Dorothea Daentzer
- Endoprothetik, Fuß, Rheuma, Tumor: Prof. Dr. med. Christina Stukenborg-Colsman
- Hüfte, Kinder, Endoprothetik: Priv. Doz. Dr. med. Gabriela von Lewinski

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Internet www.orthopaedie-mhh.de

Ihr Zeichen	Ihre Nachricht vom	Unser Zeichen	Datum
			27.01.2009

Dear Dr. Witte,

I am pleased to learn that the fantastic idea of an "European NSF—ERC Satellit" is becoming reality and furthermore, I am proud that it will get its base in Hannover Medical School.

To give this satellite a successful start, the Orthopaedic Department of the Hannover Medical School will provide 50% of the personal costs for a multilingual assistant to run the office in the "European NSF-ERC Satellit".

I hope, that many interdisciplinary cooperation, projects and personal friendships will be born from this cooperation center.

Sincerely,

Prof. H. Windhagen
Director of Orthopaedic Department

320 - 09 / 2007

Geschäftsführer	HRB 200 559	Zertifiziert nach	Telefon Zentrale	Mitglied im Diakonischen Werk der Ev.-luth. Landeskirche Hannovers e.V.
Dr. Utz Wewel	Amtsgericht Hannover	Qualitätsnorm DIN EN ISO 9001:2000	0511 5354-0	
Pastor Dr. Ralf Selbach, PD Dr. med. Frank Gossé, Pastor Michael Hartlieb, Sabine Mischer, Dieter Landmann	Steuer-Nr. 25/206/48184	Sitz der Gesellschaft Hannover	Internet www.annastift.de	

MHH Medizinische Hochschule Hannover
CrossBIT
Verbundinstitut für Biokompatibilität und Implantatimmunologie in der Medizintechnik
Prof. Dr. A. Haverich
Prof. Dr. H. Windhagen

MHH/CrossBIT · Prof. Dr. med. A. Haverich · Feodor-Lynen-Straße 31 · 30625 Hannover

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30625 Hannover

Ihr Zeichen	Ihre Nachricht vom	Mein Zeichen	
		lie	5. Februar 2009

Dear Dr. Witte,

I am delighted to hear that the idea of an "European NSF—ERC Satellit" of the Engineering Research Center "Revolutionizing Metallic Biomaterials" is now supported by the National Science Foundation.

The CrossBIT will support the nucleation of this transatlantic cooperation by providing your requested 3 offices and one videoconference room to give the "NSF-ERC Satellit" a base to operate and strengthen the international bonds.

Sincerely,

M.W. Elff
General Manager of CrossBIT

UNIVERSITY OF Cincinnati

Medizinische Hochschule Hannover

EDMONDS COMMUNITY COLLEGE
Every Step of the Way...

GTCC
Guilford Technical Community College

Needs and Accomplished Tasks

1. 3 office rooms, 1 videoconference room
   CrossBIT (MHH) will provided facility (valued at 20,000 € per year)
2. one full-time multilingual assistant to run the office

   50% of the costs will be covered by the Orthopaedic Dept. of the MHH (30,000 € per year)
3. office furniture, computer, printer, fax, telephone, beamer, videoconference system
4. money for consumables (paper, telephone cost, printer ink, etc)
5. money for special events (catering, room rent, printing costs for flyer, etc)
6. 25% of the working time of the Global Site Coordinator of the ERC

   MHH has agreed on cost-sharing 25% of the working time of Dr. Witte
7. account at MHH for the NSF-ERC-EU-Satellite under Jag Sankar`s supervision

   to create an account with Dr. Witte as only executive person at MHH has been authorized (this fund will be cost reimbursed upon spending)

First Global Partners

CrossBIT

(MHH)

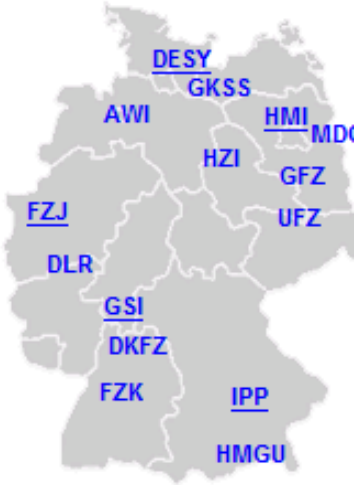
http://www.crossbit.eu/
http://mh-hannover.de

Leibniz Universität Hannover

http://www.uni-hannover.de/

GKSS FORSCHUNGSZENTRUM in der HELMHOLTZ-GEMEINSCHAFT

Helmholtz Centres



Deutsche Forschungsgemeinschaft DFG

Centre de Recherche Public Gabriel Lippmann

www.lippmann.lu/

rebirth From Regenerative Biology to Reconstructive Therapy centre for regenerative medicine

http://www.rebirth-hannover.de/

http://www.exzellenz-initiative.de/hannover-regenerative-biology-reconstructive-therapy

http://www.gkss.de/institute/materials_research/structure/magic/index.html.en