



Internationale Gesellschaft zur Erforschung von Hirntraumata  
International Neurotrauma Research Organization

# Annual Report 2010

Vienna, Austria

April 2011

Internationale Gesellschaft zur Erforschung von Hirntraumata

International Neurotrauma Research Organization

Mölkergasse 4/3, A-1080 Wien, Austria

Tel/Fax: +43-1-4090363

Email: [igeh@igeh.org](mailto:igeh@igeh.org)

[HTTP://WWW.IGEH.ORG/](http://www.igeh.org/)

## CONTENTS

PEOPLE .....	3
Project office .....	4
ACTIVITIES in 2010 .....	6
Projects implemented .....	6
1.    Prehospital Austrian project .....	6
2.    Follow up project .....	8
Project proposal submitted .....	9
Publications developed and submitted .....	9
Educational activities and Conferences .....	10
PLAN FOR 2011 .....	12
Conference participation: .....	12
Projects implemented .....	13
New project proposals .....	13
Publications planned in 2011 .....	14

## PEOPLE

### Board

Dr. Vinzenz Auersperg  
DI. Gobert Auersperg-Trautson  
Mrs. Annie Laurie Auersperg Isham  
Mag. Isabelle Harnoncourt  
Mr. Ralph Isham  
Dr. Lindi Kalnoky  
prof.Dr. Andrew Maas  
Mr. Johannes Orsini-Rosenberg  
Mr. Peter Quinn  
Mrs. Marie-Therese Rutherford

### Financial supervision:

Mrs. Marie Eleonore Orsini-Rosenberg  
Mr. Gobert Auersperg-Trautson

### Board of Directors

Prof. Martin Rusnak, MD, PhD –  
president  
Prof. Walter Mauritz, MD, PhD – vice-  
president

### Executive Director:

Dr. Med. Alexandra Brazinova, PhD,  
MPH

### Researchers

Dr. Marek Majdan, PhD  
Dr. Med. Johannes Leitgeb  
Dr. Lucia Daubnerova, PhD  
Dr. Zuzana Sklenarova, PhD  
DI. Ivan Janciak  
Dr. Med. Valeria Rudel,  
Dr. Med. Patrick Weninger  
Mag. Balasz Zobor  
Mag. Ingrid Wilbacher  
Dr. Med. Annalisa Rosso

### Donors

Neurotrauma Foundation  
Ala and Ralph Isham

### Medical Advisory Board

Prof. Toomas Asser, Prof. of  
Neurosurgery, Univ. of Tartu, Estonia  
Prof. Finn Kamper-Jorgensen, Danish  
Institute of Public Health, Copenhagen,  
Denmark  
Prof. Ramiro Diez Lobato, Prof. of  
Neurosurgery, Madrid, Spain  
Prof. Walter Mauritz, M.D., Prof. of  
Anaesthesiology and Intensive  
Medicine, LB Unfallkrankenhaus,  
Vienna, Austria  
Prof. Franco Servadei, Prof. of  
Neurosurgery, Cesena, Italy  
Prof. Massimo Sceratti, M.D., Associate  
Professor of Neurotraumatology,  
Catholic University, Rome, Italy  
Prof. Beverly C Walters,  
M.D.,M.Sc.,FRCSC, FACS, Brown  
University School of Medicine,  
Providence, Rhode Island, USA  
Prof. Petr Wendsche, M.D., CSc, spinal  
and trauma surgeon, Trauma Hospital,  
Brno, Czech Republic  
Prof. Daniel West, Jr., Professor of  
Health Management, University of  
Scranton, USA  
Prof. David Yates, Prof. of Emergency  
Medicine, Department of Emergency  
Medicine, Salford, UK

## **Project office**

### **Day-to-day management:**

The office of INRO is run by **Sasha Brazinova**. Dr. Alexandra Brazinova is a medical doctor with further education in public health and PhD from Social Medicine. Dr. Brazinova is the Executive Director of INRO. She does administrative management, works on the development of project proposals, coordinates project implementation, writes project reports. Dr. Brazinova is the project coordinator for the Prehospital project that is implemented by INRO in 2008-2012. In her scientific work she focuses on qualitative research and descriptive epidemiology, writes and participates in development of scientific articles. She also teaches at the Department of Public Health of Trnava University as a part time lecturer.

Prof. **Martin Rusnak** is the President of INRO's Board of Directors. He oversees project implementation, development of new project and scientific publications, data analysis. Prof. Rusnak is also the dean of the Faculty of Health Care and Social Work, Trnava University, Slovak Republic (as of February 2010).

Prof. **Walter Mauritz**, the Vicepresident of INRO's Board of Directors, is the chairman of Department of Anaesthesiology at Lorenz Boehler Trauma Hospital in Wien, which is also a teaching facility. Furthermore, Dr. Mauritz is a visiting professor at Trnava University. Prof. Mauritz is the project leader for the Prehospital project that is implemented by INRO in 2008-2012. Prof. Mauritz is scientific and clinical advisor of INRO and he oversees the development of scientific work.

Close academic affiliations of prof. Rusnak, prof. Mauritz and Dr. Brazinova bring students and young scholars interested in brain trauma research into INRO's activities.

**ACTIVE research fellows at IGEH are:**

Dr. **Johannes Leitgeb** is a trauma surgeon at the University Clinic for Emergency medicine, General Hospital Wien (AKH). He has been involved in project activities focused mainly on clinical evaluations of brain trauma treatment data. Currently he is working on his PhD thesis on TBI management and writes and participates in development of scientific articles about INRO research outcomes.

Dr. **Marek Majdan** comes from Trnava University. He has a PhD in Environmental Health and Geographic Information Systems. For INRO he analyzes the data from the ITCP and Prehospital project database, using the powerful statistical tool R software. As of 2010 he will be responsible for data analysis of Prehospital project data. Dr. Majdan also participates in the development of scientific papers and project proposals.

Dr. **Zuzana Sklenarova** teaches at Trnava University. She is responsible for the follow-up of past INRO collaborators project. She participates in the development of scientific papers.

Mag. **Dagmara Mastelova** and Mag. **Veronika Rehorcikova** are doctoral students at Trnava University. They assist with Prehospital project implementation.

DI **Ivan Janciak** is an IT specialist, working at the University of Wien. He developed and maintains the ITCP and the Prehospital project databases for IGEH.

**FORMER (passive) research fellows at INRO are:**

Dr. **Lucia Daubnerova** works as a consultant in public health in the Slovak Republic and abroad and as an INRO team member she participates in the development of scientific papers. She defended her PhD thesis on trauma management at Trnava University in 2010.

Dr. **Ingrid Wilbacher**, who used to work at INRO in 2002 – 2005, works for Austrian Social Insurance Company and finished her PhD thesis at Trnava University in 2009.

Dr. **Annalisa Rosso**, the former INRO team member has left for a UNDP project in Cairo, but keeps in contact.

Dr. **Valeria Rudel**, an anaesthesiologist currently on maternity leave works with INRO on the cooperation with the Russian Association of Anaesthesiologists and Intensivists and on the development of future project proposals.

## ACTIVITIES in 2010

### *Projects implemented*

#### 1. Prehospital Austrian project

The main project we have worked on during the year 2010 was the '**Prehospital Project**' (Project for optimizing early care for patients with severe brain trauma) (Projekt zur Optimierung der Erstversorgung von Patienten mit Schädel-Hirn-Trauma).

This is a project funded by the grant of the Austrian Ministry of Health (BMGFJ) and Worker's insurance fund (AUVA).

The contracts of INRO with both AUVA and BMGFJ to implement this project were signed in October 2008. The whole project is planned for 5 years, starting in 2008 and ending in 2012.

The **summary of the project** is the following:

The project has started in the end of 2008. By the end of March 2010 we have collected data on 450 patients. We have entered and cleaned the data and tried to get all missing information in the period April – September 2010. Long term outcome of patients 6 months after the trauma was collected through phone interviews and entered till October 2010. Data were analysed in October 2010 and presented at conference with the representatives of all participating hospitals in November 2010 in Wien.

After the discussion of the presented data and existing TBI management guidelines at the November 2010 conference, Prehospital and Early Hospital TBI treatment guideline for Austria was prepared. It was agreed with the representatives of all participating centres the hospitals will start using the guideline as of the 1. January 2011. In the period May – November 2011 the second round of data collection will be implemented and the patient data analysed again (2012) to see the difference in patient outcomes.

The project objective is to improve health outcomes of TBI victims by standardizing the treatment, with a special focus on the crucial early phase of the treatment.

The funding for the Prehospital project is over Eur 170 000 from the Ministry of Health and about Eur 100 000 from AUVA. Project is planned for 5 years.

**Project progress:** In 2010 we have implemented the following steps of the project:

Jan. - April, data collected by 16 participating centers

May – September 2010: data were entered into electronic database, cleaned and checked for missing information. Some missing data was retrieved from the hospitals and added into the database.

The entering of the data from the patient documentation into the electronic database was done by personal visit of the project manager to each center and entering the data into the computer at the site, so the center contact person can look up and provide the missing data on the spot.

May – October 2010: Long term outcomes of the patients (status 6 months after the injury) were found out through phone interviews

October 2010: all collected and cleaned data were processed, analyzed with statistical methods and prepared for interpretation.

November 2010: conference with representatives of all participating treatment centers was held in Wien. At the conference, project progress and analysis of collected data was presented and discussed. Existing guidelines for treatment of TBI were presented. In the work groups parts of a country specific guideline for prehospital and early in-hospital TBI treatment was developed, with recommendations based on the collected data analysis.

December 2010: the guideline drafted at the November conference was finalized and distributed to the participating treatment centers

#### Participating hospitals:

1. LKH Amstetten
2. LKH Feldkirch
3. Univ.klinik Graz
4. LK Waldviertel Horn
5. Univ.klinik Innsbruck
6. LKH Klagenfurt
7. AKH Linz
8. LKA Salzburg
9. LK Wiener Neustadt
10. LK St.Pölten
11. KH Schwarzach/Pongau
12. UKH Graz
13. UKH Linz
14. UKH Salzburg
15. UKH Wien XII (Meidling)
16. UKH Wien XX (Lorenz Boehler Unfall Krankenhaus)

## **2. Follow up project**

Apart from the Prehospital project we have been implementing a **project on follow-up of all centers** working with INRO over the past decade. We have developed a questionnaire and we are contacting all treatment facilities that have been involved in INRO activities, to assess their adherence to TBI guidelines over time.



## ***Project proposal submitted***

In 2010 we have developed project proposal for submission to Framework Programme 7 of European Commission. The project is titled Reinforcing cooperation capacities in Quality of Health Care research, it is developed in cooperation with Georgian partners and it focuses at strengthening capacity of Georgian experts in Health Care research, with a pilot project in Traumatic Brain Injury monitoring and analysis. The project is submitted in early 2011.

## ***Publications developed and submitted***

In 2010 we have developed and submitted the following scientific articles:

Brazinova A, Mauritz W, Leitgeb J, Wilbacher I, Majdan M, Janciak I, Rusnak M.: Outcomes of patients with severe traumatic brain injury who have Glasgow Coma Scale scores of 3 or 4 and are over 65 years old. *J Neurotrauma*. 2010 Sep;27(9):1549-55.

Mauritz W, Wilbacher I, Leitgeb J, Majdan M, Janciak I, Brazinova A, Rusnak M: One-year outcome and course of recovery after severe traumatic brain injury. 2010 *Eur J Trauma Emerg Surg*

Mauritz W, Leitgeb J, Brazinova A, Majdan M, Janciak I, Wilbacher I, Rusnak M: Epidemiology and outcome of severe traumatic brain injury in different age cohorts

MajdanM,MauritzW,BrazinovaA,RusnakM,LeitgebJ,JanciakI,WilbacherI:SeverityandoutcomeofTraumaticBrainInjuries(TBI)withdifferentcausesofinjury.BrainInjury-acceptedinNov.2010

## ***Educational activities and Conferences***

**March 2010:** Walter Mauritz, Johannes Leitgeb and Alexandra Brazinova have participated actively at the 8th World Congress on Brain Injury of the International Brain Injury Association in Washington DC, USA. The group has presented one oral presentation and 3 posters:

Johannes Leitgeb, Walter Mauritz, Kathrin Schwameis, Michael Schwameis, Martin Rusnak & Alexandra Brazinova: Factors Influencing Long-Term Outcome of Operatively Treated Patients with Acute Subdural Hematoma. *Brain Injury*, March 2010; 24(3): 1–349

Alexandra Brazinova, Walter Mauritz, Martin Rusnak & Marek Majdan: Outcome of Geriatric Patients with Severe Brain Trauma who have Glasgow Coma Scale Scores <5. *Brain Injury*, March 2010; 24(3): 1–349

Johannes Leitgeb, Walter Mauritz, Katharina Schwameis, Michael Schwameis, Alexandra Brazinova<sup>3</sup> & Martin Rusnak: Factors influencing long-term outcome after epidural hematoma. *Brain Injury*, March 2010; 24(3): 1–349

Marek Majdan, Walter Mauritz, Martin Rusnak, Ingrid Wilbacher, Alexandra Brazinova & Ivan Janciak: Considering the Validity of Two Existing Prediction Models to Predict the Outcome of Patients after Severe TBI in the ITCP Database of the International Neurotrauma Research Organization. *Brain Injury*, March 2010; 24(3): 1–349

**May 2010:** Alexandra Brazinova have participated at the 15th European Multidisciplinary Neurotraumatologica conference in Antalya, Turkey

**June 2010:** Alexandra Brazinova has visited Trauma Register Network (TARN) in Manchester, UK, for the arrangement of future joint projects and publications

**October 2010:** INRO team has participated at the annual conference of Faculty of Health and Social Work of Trnava University in Trnava, Slovak Republic. The following topics were presented:

Rusnak M, Rusnakova V: PATIENT SAFETY POLICIES BASED ON EVIDENCE

Mauritz W: THE IMPORTANCE OF SCORING: PUBLIC HEALTH ASPECTS

Brazinova A, Mauritz W, Rusnak M, Majdan M: THE RESULTS OF THE AUSTRIAN STUDY: PREHOSPITAL AND EARLY HOSPITAL PHASE OF BRAIN TRAUMA MANAGEMENT.

Majdan M, Maurtiz W, Brazinova A, Rusnak M: SEVERITY AND OUTCOME OF TRAUMATIC BRAIN INJURIES WITH DIFFERENT MECHANISM OF INJURY

Dr.Johannes Leitgeb is working on his PhD thesis in the area of Traumatic Brain Injury management at Trnava University, in the Slovak Republic.

## **PLAN FOR 2011**

### **Conference participation:**

**February 2011:** TBI challenge, Wien, Austria.

INRO team will actively participate with the presentations:

W. Mauritz: EARLY MANAGEMENT OF PATIENTS WITH TBI IN AUSTRIA  
M. Rusnak: GUIDELINES FOR MANAGEMENT OF PATIENTS WITH TBI. TBI GUIDELINES: AN OVERVIEW  
A. Brazinova: GUIDELINES FOR EARLY MANAGEMENT OF TBI: PREHOSPITAL AND EARLY IN-HOSPITAL CARE  
J. Leitgeb: GUIDELINES FOR SURGICAL TBI MANAGEMENT  
W. Mauritz: TBI IN-HOSPITAL MANAGEMENT

**April 2011:** Central European Congress of Emergency and Disaster Medicine, Senec, Slovak Republic. INRO team will actively participate with the presentation:  
Brazinova A, Mauritz W, Rusnak M, Majdan M: PREHOSPITAL MANAGEMENT OF PATIENTS WITH SEVERE TBI

**September 2011:** EUSEM conference, Kos, Greece. INRO team will actively participate with presentation of Prehospital project outcomes and call for possible widening of the project to other European countries.

**October 2011:** Trnava University Public Health Forum

INRO team will actively participate with the presentations:

Rusnak M.: OUTCOME RESEARCH  
Mauritz W. : TRAUMA 1970 – 2010 IN AUSTRIA: IMPLICATIONS FOR TRAUMA CARE  
Brazinova A.: BRAIN TRAUMA MANAGEMENT IN AUSTRIA VERSUS SLOVAKIA – TALE OF TWO CITIES  
Leitgeb J.: LONG TERM OUTCOME AFTER SEVERE TBI

## ***Projects implemented***

Our main activity in 2011 is again the **‘Prehospital project’**.

As of 1 January 2011 is the new Austrian Prehospital and Early In-Hospital Guideline for TBI Management implemented in the participating centers.

In the period May – November 2011 data about patient treatment will be collected and analyzed in the end of the year.

## ***New project proposals***

In 2011 we will submit the following project proposals:

FP 7: Reinforcing cooperation capacities in Quality of Health Care research

Logn term outcome of TBI patients in Austria

Leonardo: Prehospital and early in-hospital treatment of TBI in Europe (submission Feb 2012)

## ***Publications planned in 2011***

Following papers will be finalized and submitted in 2011:

Brazinova A, Mauritz W, Rusnak M, Majdan M, Leitgeb J: Outcomes of TBI victims in Austria vs.Slovakia

Majdan M, Mauritz W, Brazinova A, Rusnak M, Leitgeb J, Janciak I, Wilbacher I: Severity and outcome of Traumatic Brain Injuries (TBI) with different causes of injury. Brain Injury

Leitgeb J, Mauritz W, Brazinova A, Janciak I, Majdan M, Wilbacher I, Rusnak M: Effects of gender on outcomes after traumatic brain injury. Journal of Trauma

Leitgeb J, Mauritz W, Brazinova A, Matula Ch, Majdan M, Wilbacher I, Rusnak M: Outcome of patients with severe brain trauma who were operated either by neurosurgeons or by trauma surgeons

INRO team (Brazinova, Mauritz, Rusnak, Majdan, Sklenarova) is writing a text book on Traumatic Brain Injury – Public Health Perspective for Faculty of Health and Social Work, Trnava, Slovak Republic. The textbook is to be published by the end of 2011.

***THANK YOU FOR YOUR ATTENTION AND FOR THE CONTINUOUS SUPPORT!***