HUNGARIAN NATIONAL BLOOD TRANSFUSION SERVICE
The HNBTS has three main missions

- **BLOOD DONATION**
  „GIVING IS GOOD“

The Hungarian National Blood Transfusion Service (HNBTS) serves as the national centralized provider of blood component products to the hospital sector in Hungary and is responsible for strategic planning, management, training and advisory activities in health policy decision making for the field of preparative and clinical transfusiology.

- **ORGAN COORDINATION OFFICE**
  „TRANSPLANTS SAVE LIVES“

The Organ Coordination Office (OCO) is responsible for all Hungarian organ and tissue procurement coordination from the cadaver donor report through the end of retrieval, in accordance with Governmental Decree 323/2006 (XII.23) by operating three levels of the transplant donor coordination network (national, regional and hospital coordinators). The HNBTS serves as contracting partner in the Eurotransplant preliminary cooperation agreement.

- **HUNGARIAN STEM CELL DONOR REGISTRY**
  „THE ONE AMONG MILLIONS“

The Hungarian Stem Cell Donor Registry (HSCDR), the former Hungarian Bone Marrow Donor Registry, hosted by the HNBTS inks clinical care to worldwide stem cell networks of unrelated donor registries (BMDW and WMDA). The HSCDR is responsible for finding an unrelated donor for Hungarian patients who need stem cell transplantation, and offers donor search for international patients among the 6300 Hungarian registered volunteer stem cell donors.
BLOOD DONATION
„GIVING IS GOOD”

The HNBTS serves as the national provider of blood component products to the hospital sector in Hungary. It was founded in 2000 based on 64 individual hospital blood-units. The aim of the centralization was to ensure strict quality assurance and standardised quality management. We work according to EU directives (2004/33/EC, 2002/98/EC, 2005/60/EC, 2005/62/EC), the principles of GMP (since 2001) and other best practice operation procedures.

There is a standardised donor register based on a uniform IT system since 2008 that ensures the safety blood supply in the whole country. At present the clinics of the four universities and the 19 county hospitals are able to link to the trace line module of our system. The reason behind the trace line is to collect the details of the transfusion events at a real time on-line and electronic basis instead of traditional paper based methods.

In the headquarters the dispatch department monitors the stocks and coordinates the transportation of the blood products among the blood establishments and the local blood banks. Our service has been involved in the following EU co-founded projects (DOMAIN, SOP, Optimal Blood Use, EUBIS, CATIE).

Our task in the blood field is five-fold:

- planning, organisation, coordination, operation and control of preparative and clinical transfusiology and the preparation of blood component products for hospitals,
- strategic collaboration with the Hungarian Red Cross on the care and sustaining of the voluntary, non-remunerated, whole-blood donor-pool since early 1959,
- quality control of the national stocks, supply and distribution, coordination of the related communication, logistics, transportation and information systems and networks,
- education of technical staff, (post)graduate training for medical and non-medical health professionals, specialists in cooperation with medical universities in transfusiology,
- preparation of guidelines and standards, advisory and consultancy for legal and financial health policy decision-making.
ORGAN COORDINATION OFFICE (OCO)
„TRANSPLANTS SAVE LIVES”

The Organ Coordination Office began its activities on 1 January 2007 as a new department under the control of the Deputy Director of HNBTS. The director of OCO is responsible for operational management. The Office centrally coordinates all Hungarian organ procurement processes, therefore establishing and operating three levels of donor-transplant coordination.

Five national coordinators work on the first level in the central office to receive all donor reports from all Hungarian hospitals at a toll-free number. They maintain contact between the donor hospital and all other involved parties, and perform coordination from the donor report through organ procurement.

Six regional clinical coordinators work on the second level in transplant centers, continuing coordination after the procurement through the transplant. The establishment of hospital coordination has just started involving currently 8 hospitals, and we plan to reach 45 collaborating hospitals within the next 3 years, with the support of the Ministry of Human Resources.

The OCO represents Hungary in EU co-funded projects (DOPKI, COORENOR, MODE, ACCORD) as associated partner and/or work package leader. The OCO was highly involved in the Hungarian implementation process of the 2010/53/EU directive on standards of quality and safety of human organs intended for transplantation.

The main function of the OCO is to coordinate all Hungarian organ procurements, the Office is open for:
- a 24/7 duty to receive donor reports,
- estimating the suitability of donors and all transplantable organs using the first available information,
- informing the competent transplant centres about the possible donor organ and organizing the organ procurement and transport process.

Other tasks:
- donation promotion program, for example the hospital visit program,
- organization and performance of accredited training programmes for professionals involved in the organ donation process,
- keeping involved hospitals, transplant centres and other health service providers informed,
- educating the public regularly through the mass media.

Activity in 2011:
- 234 organ donor reports,
- 131 actual cadaver donors (41% MOD rate),
- 349 procured organs intended for transplant,
- 269 organ transplantation (all procured lungs were transplanted in Vienna according to existing twinning and 47 more from living donors),
- 2,66 procured and 2,33 utilized organs/donor,
- 58 donor hospitals,
- 6 transplant centers,
- 2 HLA tissue typing laboratories (within the HNBTS).
HUNGARIAN STEM CELL DONOR REGISTRY (HSCDR)
„THE ONE AMONG MILLIONS”

Stem cell transplantation is a promising therapy in case of malignant diseases, inherited disorders, immune-deficient states. The best solution would be a HLA identical sibling donor. Transplantation with the stem cells of a well-matched unrelated donor (MUD) can reach comparable success. The HSCDR serves as the nation’s hub for searching MUDs. The Hungarian stem cell registry started its activity in 1991. In 1992 it has become a partner of the international donor association and since then the registry has been providing data for the international database. The HSCDR was highly involved in the Hungarian implementation process of the 2004/23/EC directive on setting standards of quality and safety for the donation, procurement, testing, processing, preservation, storage, and distribution of human tissues and cells.

Our task is:
- Recruitment of volunteer stem cell donors in cooperation with the HNBTS regional and local centres,
- Coordination of HLA typing of donors in cooperation with the HLA typing laboratories (Budapest, Debrecen),
- Maintenance of the national donor database,
- Organization of the further typing and blood sample procurement for confirmatory typing,
- Performing donor search for Hungarian patients in the Hungarian and international registries and searching donors in HSCDR database for international patients,
- Cooperation with the Hungarian transplant centres and other registries, coordination of donor work-up request,
- Organization accredited training courses for professionals involved in stem cell donation and transplantation.

Recent activities:
- Implementation of the Prometheus software,
- Preparation of settlement of the EMDIS electronic search engine to make donor search faster and safer,
- Development of electronic public communication.

Activity balance (1999-2011):
- >6300 active donors, HLA-ABDR typed donors >50% (with DNA technique: >20%),
- >380 MUD HSCT, 14 donations by Hungarian donors (12 donation for 11 Hungarian patients, 2 donations for patients in Greece and US).

MUD HSCT in Hungary 1990 – 2011 (N: 384)

Distribution of stem cell donations for Hungarian patients by donor countries 1990 – 2011:

272: Germany • 25: USA • 18: UK • 10: France • 9: Italy • 8: Hungary • 6: Spain, Belgium • 5: The Netherlands, Czech Republic • 3: Israel, Cyprus • 1: Poland, Argentina, Australia, Finland, Canada, Austria, Portugal, Norway
HNBTS: facts & figures

ORGANIZATION

Number of employees: ~1300
- Medical staff: ~100
- Non-medical (university degree): ~100
- Non-medical health professionals: ~800
- Administration, technical staff: ~300

Blood provision network: 23
- Regional centres: 5 (in Region’s capital)
- Local banks: 23 (in County’s capital)

ACTIVITY

Full-blood collection:
- Donation: ~42-43 / 1,000 inhabitants
- ~270,000 donors, ~420,000 units / year
- Donors’ female / male ratio: 40% / 60%
- First-time donors: 60,000 / year
- Excluded donors: 60,000 / year (14%)

Location of collection (% of total units):
- Mobile teams: 80%, centres: 20%

Screening tests for full-blood:
- Obligatory: HBsAg, a-HCV, a-HIV 1-2, syphilis
- Non-obligatory: a-HBc (first-time donors)

Stocks:
- Red blood cell: 5,000 – 10,000 units

Examinations for clinical transfusiology:
- ~600,000 samples / year

Blood components for transfusion (unit/year):
- Red blood cell: ~400,000

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