VIA MEDICA

PRACA POGLĄDOWA

Hematologia
2016, tom 7, nr 3, 173–216
DOI: 10.5603/Hem.2016.0017

ISSN 2081–0768

Institute of Hematology and Transfusion Medicine — a novel approach of combining comprehensiveness, coordination, innovation and pro-quality measures for improving diagnosis, treatment, patient care, and the advancement of medical science

Instytut Hematologii i Transfuzjologii — nowatorskie rozwiązania polegające na kompleksowości, koordynacji, innowacyjności i jakości w celu poprawy diagnostyki i leczenia, komfortu chorego i postępu w medycynie

Krzysztof Warzocha, Przemysław Juszczyński, Ewa Lech-Marańda, Magdalena Łętowska, Witold Kmiotek, Beata Lichocka, Piotr Hołownia

Institute of Hematology and Transfusion Medicine, Warsaw, Poland

Abstract

Like in all European countries, Poland has witnessed a continuing rise in healthcare services needed for treating hematological disease. Not only have morbidity rates increased in myeloid and lymphoid malignancies but, in parallel, a dynamic development of diagnostic methods and therapeutic treatments has occurred in recent times. The Institute of Hematology and Transfusion Medicine constitutes a reference centre in Poland committed to delivering scientific-clinical excellence where it undertakes scientific studies and translational research in hematology, transfusion medicine and related disciplines along with providing healthcare services in such fields. This is a modern medical centre focused on coordinating and integrating treatment using new medical technologies. A multidisciplinary strategy to medicine ensures that all necessary specialists are engaged in disease diagnoses and also for defining disease progression stages together with actual treatment, subsequent rehabilitation and follow-up monitoring. By adopting this comprehensive approach, optimal therapeutic solutions are thereby achieved; patients receive coordinated medical healthcare, which above all else, results in faster and more effective treatments. In order to achieve such aims, it is vital that all diagnostic and medical units collaborate, including with those from other medical centres whenever added specialist treatment is required. In addition to standard diagnostics and treatment, the Institute provides highly specialised and innovative treatments that are molecularly targeted, as well as the opportunity of participating in international clinical trials, where innovative and experimental therapies are used on patients with myeloid and lymphoid malignancies. Such trials have enabled the Institute to apply modern immunological and genetic technologies to diagnoses-treatment. Performing such procedures requires a complex and multidisciplinary approach, not just for ensuring correct diagnoses, but for also assessing prognostic-predictive disease markers, making the diagnoses early, preventing complications,

Address for correspondence: Krzysztof Warzocha, Hematology Department, Institute of Hematology and Transfusion Medicine, Indira Gandhi Street 14, 02–776 Warsaw, Poland; e-mail: warzocha@ihit.waw.pl

selecting appropriate donor-recipients for hematopoietic cell transplants and evaluating the extent of remission. In collaboration with other national centres and those abroad, the Institute is also engaged in complex and coordinated programmes devoted to preserving women's fertility for those suffering from cancer and who are treated with chemo/radio-therapy. Over recent years, the Institute has invested in furnishing individual laboratories with the latest equipment and specialised instrumentation. Because of its highly specialist staff, the wide experience of hematopathologists and the supporting teams of biologists and biotechnologists, the Institute has at its disposition the vital 'know-how' thereby allowing developments from scientific studies to become successfully implemented and commercialised. The dynamic rise in this area has driven the creation of innovative products under the National Smart Specialisation initiative; this giving the Institute a competitive advantage in developing new medical technologies, at both country and international levels.

Key word: hematology, comprehensiveness, coordination, innovation, quality, patient

Hematologia 2016; 7, 3: 173–216

Streszczenie

W Polsce, podobnie jak w innych krajach europejskich, obserwuje się ciągły wzrost zapotrzebowania na świadczenia zdrowotne w zakresie chorób krwi. Na to zjawisko składa się nie tylko obserwowana od kilkudziesięciu lat zwiększona zapadalność na nowotwory układów krwiotwórczego i chłonnego, ale również dynamiczny rozwój metod diagnostycznych i leczniczych, jaki się dokonał w ostatnim czasie. Instytut Hematologii i Transfuzjologii jest referencyjną jednostką naukowo-kliniczną prowadzącą badania naukowe i translacyjne w dziedzinie hematologii, transfuzjologii i dyscyplin pokrewnych oraz udziela świadczeń medycznych w tym zakresie. Instytut to nowoczesny ośrodek krajowy, w którym stawia się na skoordynowane leczenie i nowe technologie medyczne. W działalności medycznej personel kieruje się zasadą wielospecjalistycznego podejścia, co oznacza udział wszystkich niezbędnych specjalistów na etapie rozpoznawania i określania zaawansowania choroby, a także leczenia i prowadzenia rehabilitacji oraz obserwacji po leczeniu. Kompleksowe postępowanie zapewnia możliwość uzyskania najlepszych wyników terapii. Skoordynowana opieka medyczna, jaką swoim Pacjentom oferuje Instytut, przekłada się przede wszystkim na szybszy i lepszy efekt medyczny. Dla osiągnięcia tego celu ważne są interoperacyjność i autentyczna współpraca między poszczególnymi jednostkami diagnostycznymi i medycznymi, a także innymi ośrodkami prowadzącymi leczenie specjalistyczne. Oprócz standardowych metod diagnostyki i leczenia Instytut oferuje możliwość wysokospecjalistycznego i nowatorskiego leczenia celowanego molekularnie, a także uczestnictwo w międzynarodowych badaniach klinicznych z zastosowaniem nowatorskich i eksperymentalnych sposobów leczenia chorych na nowotwory układów krwiotwórczego i chłonnego. Prowadzone przez Instytut badania naukowe zaowocowały możliwością stosowania nowoczesnych technik immunologicznych i genetycznych we wszystkich wymagających takich technologii procesach diagnostyczno-leczniczych. Procesy te są zadaniem złożonym i interdyscyplinarnym; dotyczą nie tylko prawidłowego rozpoznania choroby, ale również oceny markerów prognostyczno-predykcyjnych, wczesnej diagnostyki i prewencji powikłań, doboru dawców i biorców przeszczepów komórek krwiotwórczych, a także oceny głębokości remisji. We współpracy z innymi podmiotami w kraju i za granicą Instytut uczestniczy w programie kompleksowego i skoordynowanego zachowania rozrodczości u kobiet chorych na nowotwory poddawanych chemio- i radioterapii. Przez ostatnie lata Instytut prowadził działania inwestycyjne, które pozwoliły wyposażyć poszczególne pracownie w innowacyjną aparaturę i specjalistyczne urządzenia. Dzięki specjalistycznym zasobom kadrowym, doświadczeniu hematopatologów oraz wspierającemu ich zespołowi biologów i biotechnologów Instytut dysponuje niezbędnym know-how do skutecznego wdrażania i komercjalizacji wyników badań naukowych. Dynamiczny rozwój tej dziedziny działalności prowadzi do powstawania innowacyjnych produktów tworzonych w ramach Krajowych Inteligentnych Specjalizacji. Taka sytuacja

buduje przewagę konkurencyjną Instytutu w zakresie innowacyjnych technologii medycznych — nie tylko na poziomie krajowym, ale też na arenie międzynarodowej.

Słowa kluczowe: hematologia, kompleksowość, koordynacja, innowacyjność jakość, pacjent

Hematologia 2016; 7, 3: 173–216

Introduction

The Institute of Hematology and Transfusion Medicine became operational under the following legislation; Act of 30th April 2010 concerning 'Research Institutes' (Journal of Laws 2016, No. 371 as amended), Act of 30th April 2010 concerning 'Provisions for introducing laws reforming the education system' (Journal of Laws 2010, No. 620 as amended), Act of 15th April 15th April 2011 concerning 'Therapeutic activities' (Journal of Laws 2015, No. 618 as amended), Act of August 22nd 1997 concerning 'Public Blood Service' (Journal of Laws 2014, No. 332 as amended), the Council of Ministers Regulation of 2nd June 1951 'On founding the Institute of Hematology' (Journal of Laws 1951, No. 35, item 268) and the Ordinance of the Minister of Health and Welfare of 28th February 1992 on 'Changing the name of the Institute of Hematology'. The Minister of Health bears responsibility for the Institute's operation.

The Institute of Hematology and Transfusion Medicine is a state organisation and a legal entity. It is registered in the District Court for Warsaw Capital City at the XIII Department of Economics at the National Court Registry under No. 0000119139, as well as in the Registry of Entities Carrying Out Medical Activities under the Governor of the Mazovian Region (Registry No: 000000018630). The Institute is authorised to use the round seal with the emblem of the Republic of Poland positioned in the middle with the inscription 'Institute of Hematology and Transfusion' around the rim.

The Institute of Hematology and Transfusion Medicine is also authorised to award PhD (Doctorate) as well as Habilitation degrees and, on the basis of separate regulations, professorships.

The executive authorities/ruling body of the Institute is the Director and the Science Council. The Director manages the Institute with the aid of his deputies representing the following areas: research, therapeutics, transfusion medicine, administration and economics-finance together with the Department managers and those holding autonomous posts. The Science Council operates as an opinion giving and advisory authority/body according to the Institute's statutes, along with being responsible for staff development in science and technology.

Departmental organisation

In accordance with the 2016 amended statutes and regulations governing the Institute of Hematology and Transfusion Medicine, the Therapeutics Division consists of 5 clinics: Hematology, Hemostatic Disorders and Internal Medicine, Hematopoietic Cell Transplant, General Surgery, Oncology, Metabolism and Vascular Surgery. In addition there are the Anesthesiology and Intensive Care Unit, the Operating Theatre and Daily Care Unit. These are supported by the Specialist Medical Clinic, Admissions and the Pharmacy.

The Institute of Hematology and Transfusion Medicine also has 8 science departments of research and diagnostic laboratory units comprising of Transfusion Medicine, Diagnostic Hematology, Hemostatics and Metabolic Disease, Immunological Hematology and Transfusion Medicine, Immunogenetics, Virology, Radiology and Experimental Hematology.

In addition, there are many auxiliary units providing support and services intended to uphold the operation of the aforementioned departments and clinics, consisting of branches, sections, the library and autonomous posts (Figure 1).

Staff

The total number of staff are currently 665 persons, that include 88 doctors and 209 nurses. There are 43 scientists of whom 9 are full professors (with a habilitation degree), 23 are Senior Lecturers and 5 are Junior Lecturers (Figure 2).

The longest serving staff member was Professor Koscielak, who was first employed in 1951 as a volunteer, after which he became Scientific Secretary and Director of the Biochemistry Department for several dozen years. He was then subsequently appointed deputy Institute Director for Research until his retirement in 2007. Ms Marianne Jonska MSc is the longest serving staff member who started in 1965 as an accountant, then became

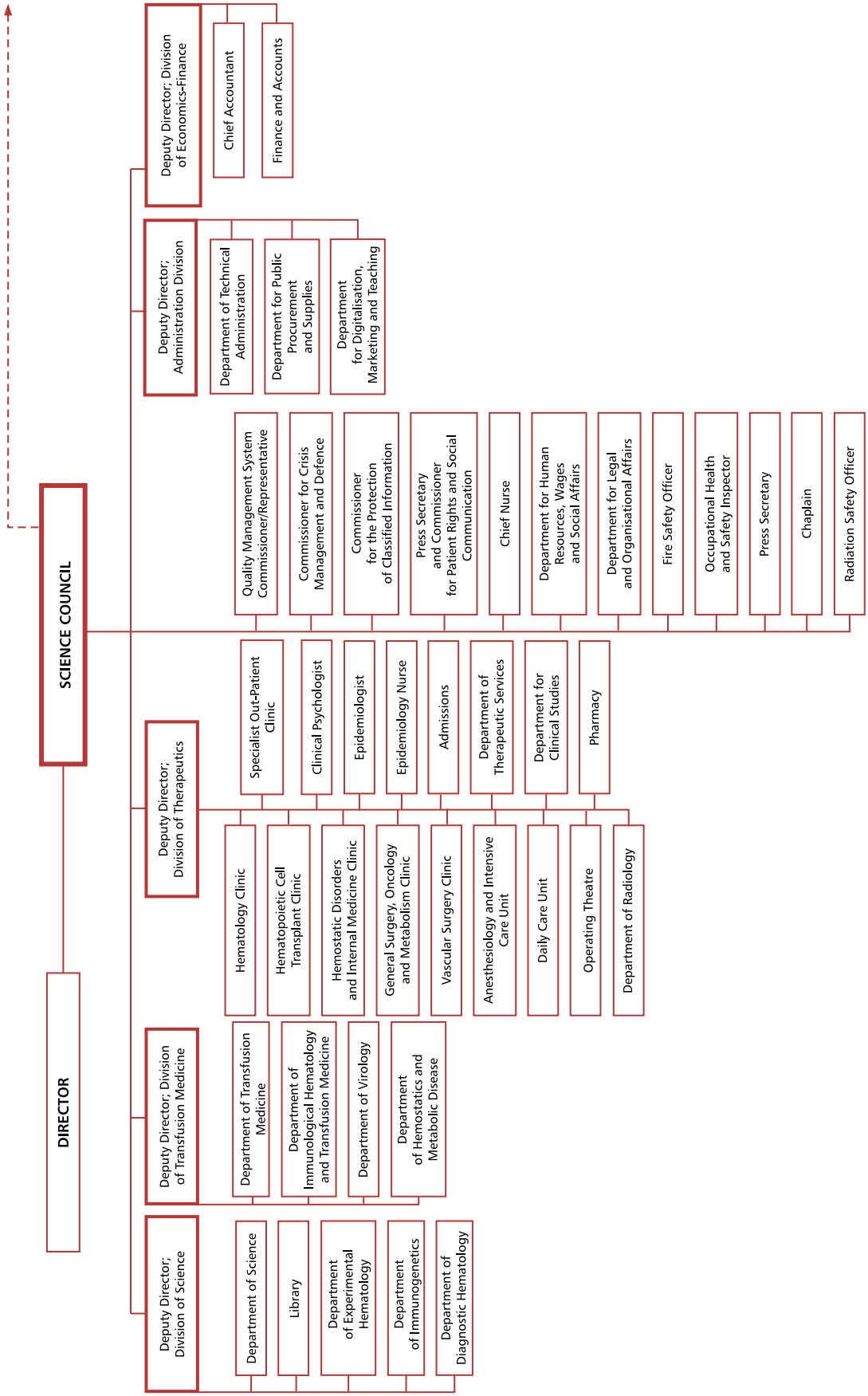


Figure 1. Organisational Structure of the Institute of Haematology and Transfusion Medicine

Figure 2. The 65th anniversary of the Institute of Hematology and Transfusion Medicine — a group photo of staff

Chief Accountant Assistant (1985) until she was made Chief Accountant and Vice Director for Economics-Finances; 2003–2016.

Mission statement

The mission of the Institute of Hematology and Transfusion Medicine is to deliver highly specialised healthcare services and undertake research and development to further scientific progress in the fields of hematology, transfusion medicine and associated disciplines; all the while ensuring safe and patient-friendly conditions for both patients and staff.

From 2008, the Institute is accredited with certification for the Integrated Quality Management System, Environmental Management and Management of Occupational Health and Safety according to respectively ISO 9001, ISO 14001 and OHSAS 18001 standards. On the 11th May 2015, the Minister of Health awarded an accreditation certificate to the Institute confirming that all operations are directly targeted at patient safety, staff and institute visitors, as well as fulfilling the requirements of healthcare standards for in-patients. Preparing for this accreditation took place under the 'Safe Hospital — Safe Patient' scheme managed by Centre for Quality Control and Patient Safety.

For the last 5 years, the Institute of Hematology and Transfusion Medicine has achieved a very high placing in the all-Poland 'Safe Hospital' rankings managed by the 'Rzeczpospolita' ('The Republic'; one of the main broadsheet newspapers in Poland). In 2015, the Institute once again came first in the Mazovian province amongst all healthcare providers within the region and achieved second place throughout Poland in the category of 'Single Specialisation Treatment Hospitals'.

Diagnostics and therapeutics

In 2015, the Institute of Hematology and Transfusion Medicine signed 7 contracts with the National Health-Funding authority (NFZ) from the Mazovian region for providing public health care services valued at 123,237,962.18 PLN. This covered 13,583 hospitalisations at the Institute's clinics and departments as well as 48,921 out-patient consultations, which in all involved performing 916,707 diagnostic tests.

Within the last years, there has been a continuous rise in income derived from the statutory obligations required of the Institute, above all else due to delivering single-specialisation medical services, undertaking clinical studies and scientific projects including those backed up by grant funding; both at national and international levels. Such funding sources also includes partnerships with industry and the private sector, where the focus is mainly on specialist studies, assessments and in providing expertise. Keeping a healthy financial status not only has enabled financial solvency to be maintained, with an absence of any binding commitments, but also to have generated a financial surplus in 2015. This has allowed the Institute to apply for external investment funding, particularly from operational programmes funded by the EU during 2014–2020. Efforts are now under way to obtain funding for a Research and Diagnostics

building at the Ursynow site which can accommodate thuse units and departments currently housed at the 5 Chocimska Street site.

Research

The outcomes of research performed at the Institute of Hematology and Transfusion Medicine consist of numerous scientific papers published as well as reports and posters presented at scientific conferences and congresses; both at home and abroad. In the last 5 years, 524 scientific papers have been published in journals, with a total impact factor (IF) of 1069 with 2613 citations and a Hirsch Index of 19, along with 19 monographs in text books and 177 chapters in collective publications. In addition, 1254 abstracts have been published from home and international conferences and congresses consisting of either oral or poster presentations. Research project funding has also been secured from 12 national grants and 5 UE ones.

Institute staff actively undertake research managed by the Polish Adult Leukemia Group, the Polish Group for Lymphoma Research, the Polish Myeloma Group and the Polish Hemostasis Group as well as being involved on their management committees. Together with the Polish Society for Hematology and Transfusion Medicine, the Institute has been publishing, since 1970, a periodical 'Acta Haematologica Polonica', a quarterly 'Journal of Transfusion Medicine' since 2008 (Editor-In-Chief; M. Letowska) and from 2010 another quarterly 'Hematologia' (Editor-In-Chief; K. Warzocha). For many years the versatile and creative endeavours in science undertaken by the Institute's staff has been rated very highly by the 'Evaluation Committee' from the Ministry of Science and Higher Education, which since its inception in 2010, has awarded the institute with a Grade A rating.

Teaching

For over many years the Institute's staff have jointly edited journals and monographs for diagnostic-therapeutic recommendations for blood disease, oncology and transfusion medicine; both clinical and laboratory. Amongst others, they have been jointly responsible for preparing the following: 'Diagnostic and Therapeutic recommendations for cancer' (eds. M. Krzakowski and K. Warzocha, Via Medica, Gdansk 2013), 'Clinical Oncology' (eds. M. Krzakowski, P. Potemski, K. Warzocha, P. Wysocki, Via Medica, Gdansk 2015), 'Hematologia' (eds. T. Robak and K. Warzocha, Via Medica, Gdansk 2016) and 'Medical principles of blood collection, its separation and issuing binding instructions to units engaged in providing blood services to the public' (ed. M. Letowska, IHT, Warsaw, 2011 and 2014).

An important task of the Institute is to organise scientific conferences and teaching courses, often in association with other centres. For the last 10 years the Institute has been the patron of an all-Poland conference after the ASH meetings (American Society of Hematology); this being a review of the most important research studies presented at ASH. Furthermore, since 7 years, the institute has also been a patron of the national conference for the aforementioned 'Hematalogia' educational journal as well for a cycle of regional meetings entitled 'Hematology and Hemostatics'.

In 2013, a Hematology and Transfusion Medicine Clinic was created, within the institutes structure, for the Postgraduate Medical Education Centre under the directorship of Professor Ewa Lech-Maranda to provide, as the name implies, post-graduate education for doctors specialising in hematology and clinical transfusion. The institute is also a teaching and training centre for doctors specialising in internal medicine, transplantology and also for laboratory diagnosticians specialising in laboratory transfusion medicine and medical hematology.

DIRECTORATE

Director
Professor of Medicine
Christopher Warzocha MD, DSc
Secretary: Ms Anna Scibor
Tel: +48 22 34 96 176
Fax: +48 22 34 96 178
e-mail: sekihit@.waw.pl

Deputy Director; Division of Science
Professor of Medicine
Przemyslaw Juszczynski MD, DSc
Secretary: Ms Monica Milczarek-Szpak MSc
Tel: +48 22 34 96 305
Fax: +48 22 34 96 237
e-mail: mmilczarekszpak@ihit.waw.pl

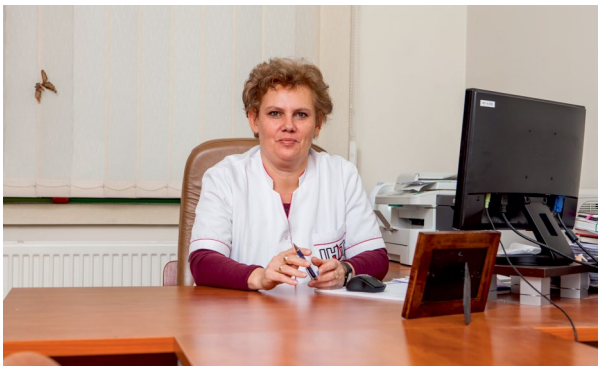
Deputy Director; Division of Therapeutics
Professor of Medicine Eva Lech-Maranda MD, DSc
Secretary: Ms Ilona Lesiak
Tel: +48 22 34 96 527
Fax: +48 22 34 96 361
e-mail: lecznictwo@ihit.waw.pl

Deputy Director; Division of Transfusion Medicine
Professor of Medicine
Magdelena Letowska MD, DSc
Secretary: Ms Janet Mioduszewska
Tel: +48 22 34 96 371
Fax: +48 22 34 96 372
e-mail: bloodorg@ihit.waw.pl

Deputy Director; Administration Division
Mr Vitold Kmiotek MSc
Secretary: Ms Edith Berska
Tel: +48 22 34 96 177
Fax: +48 22 34 96 178
e-mail: eberska@ihit.waw.pl

Deputy Director; Division of Economics-Finance
Ms Beatrice Lichocka MSc
Secretary: Ms Danuta Stachowska
Tel: +48 22 34 96 187
Fax: +48 22 34 96 188
e-mail: blichocka@ihit.waw.pl

Chief Nurse



Ms Barbara Wlodarczyk MSc
Tel: +48 22 34 96 242, +48 22 34 96 244
Fax: +48 22 34 96 243
e-mail: barbaraw@ihit.waw.pl

ADMINISTRATION

Department of Science

Head: Ms Yvonne Niebudek (Engr)
Tel: +48 22 34 96 233, +48 22 34 96 236
Fax: +48 22 34 96 237
e-mail: hematol@ihit.waw.pl

Department for Clinical Studies

Head: Ms Margaret Makowska MSc
Tel: +48 22 34 96 454
Fax: +48 22 34 96 335

Library

Head: Ms Eva Gierula-Uchmanska
Tel: +48 22 34 96 486, +48 22 34 96 489
e-mail: bibloteka@ihit.waw.pl

Department of Therapeutic Services

Head: Ms Dorothy Lecka MSc
Tel: +48 22 34 96 217, +48 22 34 96 466, +48 22 34 96 219
Fax: +48 22 34 96 218
e-mail: dol@ihit.waw.pl

Department for Human Resources, Wages and Social Affairs

Head: Ms Margaret Mitek MSc
Tel: +48 22 34 96 183, +48 22 34 96 186, +48 22 34 96 199
e-mail: kadry@ihit.waw.pl

Department for Public Procurement and Supplies

Head: Ms Christine Sobczak
Tel: +48 22 34 96 222, +48 22 34 96 225, +48 22 34 96 226, +48 22 34 96 620
e-mail: ksobczak@ihit.waw.pl

Finance and Accounts Department

Chief Accountant:
Ms Ursula Pawlak MSc
Tel: +48 22 34 96 103
Fax: +48 22 34 96 189
e-mail: upawlak@ihit.waw.pl

Department of Technical Administration

Head:
Ms Margaret Zajaczkowska
Tel: +48 22 34 96 214,
+48 22 34 96 215
Fax: +48 22 34 96 213
e-mail: mzajaczkowska@ihit.waw.pl

Commissioner for the Protection of Classified Information & Commissioner for Crisis Management and Defence

Mr George Sedzik MSc
Tel: +48 22 34 96 600 132

Press Secretary and Commissioner for Patient Rights and Social Communication

Professor of Medicine (MD, MSc) Richard Poglod
Tel: +48 22 34 96 556
Fax: +48 22 34 96 373
e-mail: rpoglod@ihit.waw.pl

Quality Management System Commissioner/Representative

Ms Monica Bialas MSc
Tel: +48 22 34 96 252
e-mail: mbialas@ihit.waw.pl

Occupational Health and Safety Inspector

Ms Evelina Kalun
Tel: +48 22 34 96 604
e-mail: bhp@ihit.waw.pl

Fire Safety Officer

Mr Christopher Swidwa
Tel: +48 22 34 96 604

Department for Legal and Organisational Affairs

Ms Sophie Kalinska MSc
Tel: +48 22 34 96 240
e-mail: zkalinska@ihit.waw.pl

Chaplain

The Reverend Dr Martin Lyzniak
Mobile: +48 603 446 676, +48 605 521 566

HEMATOLOGY CLINIC

Head: Professor of Medicine
Christopher Warzocha MD, DSc
Deputy: Professor of Medicine
Eva Lech-Maranda MD, DSc
Professors of Medicine:
Joanna Gora-Tybor MD, DSc and Christopher Jamroziak MD, DSc
Senior Lecturers: Doctor of Medicine Eva Mendek-Czajkowska and Doctor of Medicine Ilona Seferynska
Doctors: Dr Joanna Barankiewicz, Dr Bozena-Catherine Budziszewska MD, Dr Monica Chelstowska, Dr Anna Ejduk, Dr Alexandra Golos MD, Dr Margaret Jarzembowska, Dr Agnes Kolkowska-Lesniak, Dr Agnes Konska, Dr Kinga Kos-Zakrzewska, Dr Beatrice Kwasniak Beata, Dr Violetta Makowska, Dr Agatha Malenda MD, Dr Martha Maliszewska, Dr Bart Pula MD, Dr Anna Paczek, Dr Elizabeth Patkowska, Dr Joanna Sawczuk-Chabin, Dr Ursula Walczak, Dr Joanna Wasilewska and Dr Eva Zaczek
Ward nurse: Ms Marzana Milczarek
Secretary's office: Ms Barbara Kalinowska MSc (Engr) and Ms Catherine Kozdeba

The tasks of the Hematology Clinic include providing diagnostics, treatment and out-patient healthcare for patients suffering from diseases of the haematopoietic and lymphatic system. The clinic consists of: the Diagnostic Hematology ward, the Hematopoietic System Disease Ward, the Lymphatic System Disease Ward, the Intensive Hematology Care Ward and the Hematology Out-Patient Clinic.

The Diagnostic Hematology Ward deals with diagnosing neoplastic and non-neoplastic diseases of the hematopoietic and lymphatic systems together with monitoring treatment efficacy. The Hematopoietic Diseases Ward and the Lymphatic System Disease Ward focus on treating patients with cancers of the hematopoietic and lymphatic systems, as well as in optimising and implementing new diagnostic and therapeutic methods. The Intensive Hematological Care Ward is devoted to treating those patients requiring intensive chemotherapy and adjuvant therapy that includes immune ablation for bone marrow aplasia and mobilising hematopoietic stem cells for transplantation. The Hematology Out-Patient Clinic delivers outpatient healthcare to those under its care.

Research performed at the clinic consists of optimising methods of diagnosis and treating neoplastic and non-neoplastic diseases of the hematopoietic and lymphatic systems. Such studies are undertaken as research projects primarily based on the Polish Adult Leukemia Group, the Polish Group for Lymphoma Research and the Polish Myeloma Group along with taking part in clinical trials, both at home and abroad. Part of the experimental studies are carried out in specialised laboratories at the Departments of Experimental Hematology and Diagnostic Hematology together with collaborative work with other centres both in Poland and abroad.

The clinic provides teaching courses and lectures for physicians specialising in hematology and organises nationwide conferences under the patronage of the institute such as the annual post-ASH conferences, the 'Hematologia' journal conference and holds interactive meetings in onco-hematology for the 'Hematology and Hemostatics' meetings cycle. In collaboration with the Clinic of Hematology and Transfusion Medicine at the Medical Centre for Postgraduate Studies (CMKB), our clinic participates in delivering training courses for doctors specialising in clinical transfusion medicine, hematology, clinical oncology and internal medicine. The clinic possesses the accreditation required for training doctors wishing to specialise in hematology.

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 334, +48 22 34 96 335
e-mail: hemsek@ihit.waw.pl

Diagnostic Hematology Ward

Head:
Dr Bozena-Catherine Budziszewska MD
Medical Team: Dr Kinga Kos-Zakrzewska, Dr Martha Maliszewska, Dr Eva Mendek-Czajkowska MD, Dr Bart Pula MD, Dr Ursula Walczak and Dr Joanna Wasilewska
Secretary's office: Ms Agatha Jarzab, Ms Magdalena Kolaczek, Ms Agnes Tomaszewska MSc
Tel: +48 22 34 96 288
e-mail: ajarzab@ihit.waw.pl

Lymphatic System Disease Ward

Head: Professor of Medicine
Christopher Jamroziak MD, DSc
Medical Team: Dr Joanna Barankiewicz, Dr Monica Chelstowska, Dr Margaret Jarzembowska, Dr Agnes Kolkowska-Lesniak, Dr Agnes Konska, Dr Beatrice Kwasniak and Dr Agatha Malenda MD
Secretary's office: Ms Catherine Zielinska MSc
Tel: +48 22 34 96 483
e-mail: kzielinska@ihit.waw.pl

Hematopoietic System Disease Ward

Head: Professor of Medicine
Joanna Gora-Tybor MD, DSc
Medical Team: Dr Alexander Golos MD, Dr Violetta Makowska, Dr Anna Paczek, Dr Elizabeth Patkowska and Dr Eva Zaczek
Secretary's office: Ms Lydia Michalak
Tel: +48 22 34 96 483
e-mail: lmichalak@ihit.waw.pl

Intensive Hematology Care Ward

Head: Dr Ilona Seferynska MD
Medical Team: Dr Anna Ejduk, and Dr Joanna Sawczuk-Chabin
Secretary's office: Sylvia Kufera
Tel: +48 22 34 96 472
e-mail: skufera@ihit.waw.pl

Hematology Out-Patient Clinic

Head: Dr Monica Dabrowska
Tel: +48 22 34 96 291; Fax: +48 22 34 96 335
e-mail: hemsek@ihit.waw.pl

HEMOSTATIC DISORDERS AND INTERNAL MEDICINE CLINIC

Head: Professor of Medicine George Windyga MD, DSc
Deputy: Dr Anna Buczma
Senior Lecturers: Dr Bernadette Ceglarek MD and Dr Anna Sikorska MD
Doctors: Dr Magdalena Gorska-Kosicka MD, Dr Adel Gwozdowska, Dr Slawomir Jurek, Dr Joanna Sowinska and Dr Robert Wasilewski MD
Ward nurse: Ms Grazyna Grzesikiewicz-Majewska
Secretary's office: Ms Marzanna Rasinska MSc and Ms Alexandra Wysoczyńska

The clinic's team delivers diagnoses, treatment and outpatient healthcare to patients suffering from hemostatic disorders and internal disease, particularly in the accompanying hematopoietic or lymphatic diseases. Research, consultations and teaching are also conducted in these fields.

Therapy is principally focused on treating patients with coagulation disorders by, it should be emphasised, novel procedures unique in Poland. The clinic is also the reference centre in Poland for diagnosing and treating patients with hemophilia and other inherited and acquired bleeding disorders which include rare cases of deficiencies in Factor VII, X, XI, XII and afibrynogenemia. Endoprosthesis implantation treatments are coordinated at the clinic as well as isotopic synovectomy in patients with hemophilic arthropathy. In addition, patients are rehabilitated after surgery. A full diagnosis of congenital thrombophilia and antiphospholipid syndrome are also undertaken at the clinic together with full diagnoses and treatment of exacerbated acute intermittent porphyria; all patients with porphyria receiving appropriate healthcare.

Research at the clinic deals mainly with hemostatic disorders. A central registry of patients is kept in our clinic for those suffering from congenital bleeding disorders from around the whole country as well as patients affected by thrombophilia. This includes patients with genetic defects that make them especially vulnerable to thrombosis, ie. deficiencies in antithrombin, protein C or protein S and hetero-homozygous status in factor V Leiden gene mutation or prothrombin G20210A gene mutation as well as other associated gene defects. The clinic collaborates with centres from abroad and others in Poland, performing research on the underlying genetics of congenital bleeding disorders and on the etiology of venous thromboembolism and ischemic stroke when occurring at a young age. Individual-based training for doctors specialising in hematology and internal medicine is also conducted by our clinic.

The clinic is divided as follows: Hemostatic Disorders Ward, Internal Medicine and Geriatrics Ward, Physiotherapy Clinic, Hemostatic Disorders Clinic and a Out-Patient Clinic for porphyria patients and their families.

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 158, +48 22 34 96 481
e-mail: sekretariatkzh@ihit.waw.pl

HEMATOPOETIC CELL TRANSPLANT CLINIC

Head: Dr Casimir Halaburda MD
Deputy: Dr Agnes Tomaszewska MD
Senior Lecturer:
Dr Barbara Nasilowska-Adamska MD
Junior Lecturer:
Dr Andrew Szczepinski MD
Ward nurse: Ms Margaret Kacprzak
Secretary's office: Ms Ilona Lesiak

The clinical team performs hematopoietic stem cell transplantation; either the patient's own or ones collected from donors derived from the family or unrelated persons. The clinic has a transplantation ward comprising 15 separate patient units equipped with air and overpressure filters. At the clinic, a highly qualified and experienced team of physicians and nurses are responsible for delivering healthcare to patients undergoing transplantation. After this operation, patients previously treated at the Institute continue to receive care at the post-transplantation clinic. Those that were referred from other hematology centres, are sent back there to continue on with their treatment/care.

The clinic is accredited by the Ministry of Health and the European Society for Blood and Marrow Transplantation for collecting and transplanting hematopoietic cells. It also has accreditation that allows training of those doctors wishing to specialise in clinical and hematological transplantology.

The research interests of the clinic are on optimising molecular methods that assess hematopoietic chimerism in the leucocyte fraction of the circulating blood in allogeneic hematopoietic cells recipients. We also assess the impact of ABO incompatibilities between donor and recipients on outcomes of allogeneic transplantation along with investigating immuno-hemolytic complications occurring in such patients. Our research also includes monitoring respiratory system function in patients before and after allogeneic transplantation for early detection of complications associated with transplantation, that includes bronchiolitis obliterans. Another important area of research is to determine the relevance of molecular and genetic factors affecting clinical outcomes in patients with acute myeloid leukemia.

Our clinic also consists of a Clinical Ward and a Post-Transplantation Out-Patient Clinic.

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 360, +48 22 34 96 361
e-mail: transplantacja@ihit.waw.pl

GENERAL SURGERY, ONCOLOGY AND METABOLISM CLINIC

Head of Clinic: Professor of Medicine Andrew Szczepanik MD, DSc
Head of General Surgery Ward: Dr Wojciech Jaskowiak MD
Head of Surgical Oncology and Metabolism Ward: Dr Conrad Pielacinski MD
Doctors: Professor of Medicine Mark Dedecjus MD, DSc, Dr Slawomir Huszcza MD, Dr Andrew Misiak MD, Dr Wojciech Dabrowski, Dr Slawomir Gajda and Dr Michael Kurylowicz
Ward nurse: Ms Agnes Cholewa-Zietek MSc
Secretary's office: Ms Monica Mendza and Ms Eva Zbiciak

The tasks of the Clinic team are diagnosis, surgical treatment and outpatient health care over patients undergoing general surgery, especially when accompanied with disorders of hemostatics and the hematopoietic and lymphatic systems. The clinic also conducts research as well as providing training and consultations in these aforementioned areas.

Surgical treatment of patients with congenital and acquired disorders of coagulation constitutes the main therapeutic area of the clinic. Full scale operations are carried out on patients suffering from the entire range of onco-hematological disease, that include splenectomy, using classical and laparoscopic methods. Other operations undertaken are those regarding abdominal surgery in cases of cancer and non-cancer disease employing again, classical and laparoscopic methods.

Areas of research are focused on surgery; general, cancer and metabolism. Also included is surgery applied to treating patients with congenital hemostatic disorders and portal hypertension along with either preventing the chronic disease thromboembolism from arising or in its treatment. Our clinic team performs studies on the diagnostics and treatment of chronic bleeding from the gastrointestinal tract in patients with hemophilia, von-Willebrand disease, and the use of recombinant activated factor VII for life-threatening bleeding in haemophiliac patients with high levels of factor VIII inhibitor. The clinic also conducts tests on the suitability of performing splenectomy in a variety of hematological and non-hematological diseases, particularly focusing on optimising laparoscopic techniques for excising this organ. Treating non-healing trophic ulcers at various locations is another study area, where silica-gel plates are used to test treatment efficacy. Many centres in Poland collaborate with our clinic, chiefly in training courses regarding hemostatic disorders, surgery and anesthesia.

Our clinic consists of: a General Surgical Ward, a Surgical Oncology and Metabolic Ward, an Endoscopic Unit and a Surgery Out-Patient Clinic.

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 271, +48 22 34 96 470
e-mail: chirurg@ihit.waw.pl

VASCULAR SURGERY CLINIC

Head: Professor of Medicine Peter Szopinski MD, DSc
Deputy: Dr Jack Michalak MD
Head of Surgical Radiology: Dr Jaroslaw Ivanovo MD
Senior Lecturer: Dr Eliza Pleban MD
Junior Lecturer: Dr Adam Wiszniewski MD
Doctors: Dr Martin Janas MD, Dr Radoslaw Bilski, Dr Martin Sitarz, Dr Thomas Dobrowolski and Dr Matthew Stryga
Ward nurse: Ms Ida Kacprzak MSc
Secretary's office: Ms Joanna Kurzynska MSc and Ms Victoria Kowalska MSc

Our clinic started operating in 2009 and provides diagnosis, treatment and outpatient care for vascular surgery patients, as well as consultations within this field. Surgery is performed using all techniques used in vascular surgery that include both classical and the latest intravascular ones; this amounts to 1200 operations annually including about 80 aortic stent-graft implantations. In March 2012, one of the most up-to date hybrid operating rooms in Europe was opened at our clinic which enabled the range of hybrid operations to be extended on the thoracic and abdominal aorta, where surgical techniques are coupled with stent implantation, stent grafting and venous stent implantation.

Research is devoted to evaluating treatment outcomes for patients with aneurysms of the thoracic aorta through using abdominal stent grafting, using bio-prostheses in patients with infection or with a high infection risk of the vascular bridge and evaluating long-term outcomes of angioplasty to leg arteries using a balloon catheter coated with paclitaxel in patients with diabetes.

The Clinic team also provides scientific teaching in collaboration with other scientific research and clinical centres in both Poland and abroad. We organise individual training and regular workshops on vascular surgery to physicians from Poland and abroad as well as for nurses.

The clinic is comprised of: a Vascular Surgery Ward, Surgical Radiology Unit and a Vascular Surgery Out-Patient Clinic.

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 479
Fax: +48 22 34 96 110
e-mail: vascular@ihit.waw.pl

ANESTHESIOLOGY AND INTENSIVE CARE UNIT

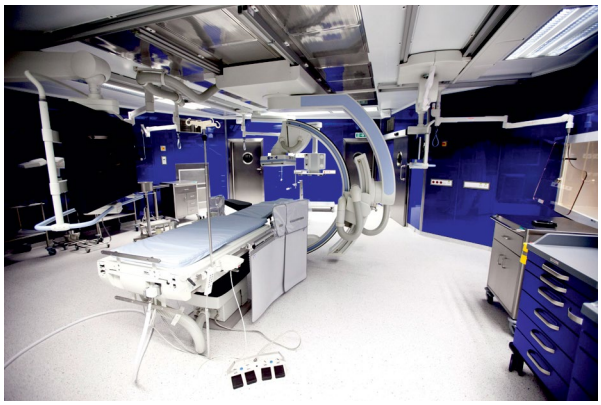
Head: Dr Christopher Przybylski MD
Deputy: Dr Alina Ostas
Doctors: Dr Adam Grabowski, Dr Christopher Juszko, Dr Catherine Krysztopik, Dr Christopher Panek, Dr Monica Pytlewska and Dr Christopher Rusiniak MD
Ward nurse: Ms Barbara Wojcik MSc
Secretary's office: Ms Eleanor Marszal

Our department delivers anesthesiology healthcare for those patients undergoing surgery and for all patients facing direct threats to their lives or those needing monitoring and basic life support. Another task is to provide round the clock intensive care and consultation services at the institute. We perform anesthesia for patients requiring surgical operations because of coagulation disorders, those that are at high risk and complex cases of vascular surgery, which include intravascular procedures. Post-operative care is also directly given to all surgical patients. The department is responsible for ensuring intravenous access in patients being treated with chemotherapy or having undergone hematopoietic stem cell transplantation, as well as other procedures requiring specialised intravenous cannuli to be inserted. In addition, appropriate conditions have been created for conducting renal replacement therapy, plasmapheresis and the ability for stimulating the heart by external or by endocardial means. The Department team also treats pain, particularly when associated with cancer.

The Departments of Anesthesiology and that of Intensive care make up this Unit.

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 474 and +48 22 34 96 409
Fax: +48 22 34 96 462
e-mail: emarszal@ihit.waw.pl

OPERATING THEATRE



Head: Dr Alina Ostas
Ward nurse: Ms Elizabeth Sosnowska

The operating theatre deals with all organisational aspects of surgery performed at the institute. It consists of three air-conditioned operating theatres equipped with laminar air flow filters and a recovery room. Undertaken operations are from the Clinic for General Surgery, Oncology and Metabolism along with Vascular Surgery Clinic. A hybrid operating room was recently opened in 2012 which extended the range of surgical operations and treatments linking intra- and extra-vascular surgery with stent implantation or grafting, that includes the thoracic and abdominal aorta as well as the venous system.

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 426
e-mail: emarszal@ihit.waw.pl

ADMISSIONS

Head: Dr Thomas Szpila
Doctor: Dr Bernadette Ceglarek MD
Ward nurse: Ms Yvonne Redel
Nursing team: Ms Magdalena Janisz, Ms Maria Piotrowska, Ms Elizabeth Mirek, Ms Grazyna Wojciechowska, Ms Dorothy Zembek, Mr Stanley Sas and Ms Beatrice Wisniewska
Orderlies: Ms Barbara Chmielewska and Ms Bozena Nowak
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 146, +48 22 34 96 147
e-mail: izba@ihit.waw.pl

PHARMACY

Head: Ms Ursula Szustkiewicz MSc
Address: 5 Chocimska Street, 00–791 Warsaw
Tel: +48 22 34 96 612
Fax: +48 22 34 96 613
e-mail: apteka@ihit.waw.pl

DAILY CARE UNIT

Treatment delivered by this department is conducted at both institute sites, (ie. at 14 Indira Gandhi Street and 5 Chocimska Street), under those procedures applying to outpatients. Patients are also admitted from clinics at the Institute of Hematology and Transfusion Medicine as well as the Hematology Clinic for providing them with chemotherapy treatment. Another procedure undertaken by the department is support treatment with bisphosphonates and gamma globulin substitution. Furthermore, therapeutic phlebotomies and intravenous iron supplementation are carried out.

Head: Dr Joanna Wlodarska MD
Doctor: Dr Thomas Szpila
Secretary's office: Ms Margaret Olejniczak

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 150
Fax: +48 22 34 96 492
e-mail: old@ihit.waw.pl

Head: Dr Joanna Wlodarska MD
Secretary's office: Ms Martina Piatkowska and Ms Evelina Glowacka

Address: 5 Chocimska Street, 00–791 Warsaw
Tel: +48 22 34 96 628
Fax: +48 22 34 96 619
e-mail: apteka@ihit.waw.pl

EPIDEMIOLOGIST AND EPIDEMIOLOGY NURSE

Doctor of Epidemiology
Martha Wroblewska MD, DSc
Epidemiological nurse: Ms Margaret Giemza MSc
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel/Fax: +48 22 34 96 245
e-mail: mgiemza@ihit.waw.pl

CLINICAL PSYCHOLOGY

Ms Margaret Piatek MSc
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96472
e-mail: mpiatek@ihit.waw.pl

Ms Kinga Bystrek MSc
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 333

SPECIALIST OUT-PATIENT CLINIC

Head of Clinic: Dr Elizabeth Madro MD
Doctors: Dr Izabela Kopec MD, Dr Agnes Luczak, Dr Eva Mendek-Czajkowska MD, Dr Thomas Russjan, Dr Eva Stefanska-Windyga and Dr Hanna Wroblewska-Kozak
Consultant: Professor of Medicine Stanley Maj MD, DSc
Registration manager: Ms Dagmara Malczyk

The clinic provides outpatient advice and consultation concerning the hematopoietic and lymphatic systems together with running diagnostics within diagnostic data and treatment. It also performs diagnostics and treatment of bleeding disorders as well as for pregnant women suffering from hematological disorders, whenever serological incompatibilities arise and for hematological cases of recurrent reproductive failure. Another task of the clinic is to qualify and steer patients for treatment to the Hematology Clinic, to Daily Care Unit, to the Hemostatic Disorders and Internal Medicine Clinic or to primary health care units. The clinic team is also responsible for the healthcare testing of institute staff upon their starting employment and periodically thereafter.

Within the Specialist Out-Patient Clinic are the following departmental clinics: Blood Disease Clinic, Coagulation Disorders Clinic, Hematology Clinic for Pregnant Women, Congenital Anemic Disorders Clinic and Occupational Health Clinic.

Blood Disease Clinic

Head: Dr Elizabeth Madro MD
Doctors: Dr Agnes Luczak and Dr Thomas Russjan
Address: 5 Chocimska Street, 00-791 Warsaw, Building A, first floor
Tel: +48 22 34 96 609 and +48 22 34 96 653
Fax: +48 22 34 96 619

Hematology Clinic for Pregnant Women

Head: Dr Isabella Kopec MD
Address: 5 Chocimska Street, 00–791 Warsaw, Building A, first floor
Tel: +48 22 34 96 609 and +48 22 34 96 653
Fax: +48 22 34 96 619

Coagulation Disorders Clinic

Head: Dr Eva Stefanska-Windyga
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 100 and +48 22 34 96 132

Congenital Anemic Disorders Clinic

Head: Dr Eva Mendek-Czajkowska MD
Address: 14 Indira Gandhi Street, 02-776 Warsaw, Block A, ground floor (Specialist Outpatients)
Tel: +48 22 34 96 129
Fax: +48 22 34 96 459

Occupational Health Clinic

Doctor: Dr Hanna Wroblewska-Kozak
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 34 96 00 ext. 129, 131, 132 and 297
Fax: +48 22 34 96 459

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 609 and +48 22 34 96 653
Fax: +48 22 34 96 619

Address: 5 Chocimska Street, 00–791 Warsaw
Tel: +48 22 34 96 600, ext. 129, 131, 132 and 297
Fax: +48 22 34 96 459
e-mail: przychodnia@ihit.waw.pl

DEPARTMENT OF TRANSFUSION MEDICINE

Head: Professor of Medicine Magdalena Letowska MD, DSc
Deputy: Doctor of Pharmacology Elizabeth Lachert PhD
Professors: Professor of Medicine Richard Poglod MD, DSc
Senior Lecturers: Doctor of Pharmacology Jolanta Antoniewicz-Papis PhD, Doctor of Pharmacology Elizabeth Lachert PhD and Dr Alexander Rosiek MD
Junior Lecturer: Doctor of Pharmacology Jolanta Kubis PhD
Doctors: Dr Lech Rzymkiewicz and Dr Monica Grzegorek
Nurses: Ms Beatrice Wisniewska MSc, Ms Eva Pietrowiak MSc, Ms Milena Prusaczyk MSc, Ms Yvonne Dziarnowska, Ms Bozena Knyt, Ms Monica Matusz, Ms Eva Szczepanska, Ms Marzena Wojcik and Ms Elizabeth Zawirska
Laboratory diagnosticians: Ms Anna Kuziak MSc, Ms Ewa Mik MSc, Ms Caroline Pienko MSc, Ms Eva Potocka MSc and Ms Anna Tomaszewska MSc
Junior assistants: Mr Artur Ejduk MSc, Mr Thomas Jankowski MSc, Ms Martha Gawrys MSc and Ms Agatha Plodzich
Technicians: Ms Margaret Pawlik (Senior technician), Ms Bozena Wasilewska (Senior technician) and Ms Elizabeth Wisniakowska (Senior technician)
Laboratory assistants: Ms Elizabeth Kepka and Ms Marzena Klokocka
Secretary's office: Ms Caroline Milewska MSc, Ms Elizabeth Kowalczyk and Ms Janet Mioduszewska
English Philologist: Ms Christine Dudziak MSc
Senior Clerks: Ms Aleksandra Czajkowska MSc and Ms Martina Romanesque-Pluzanska MSc
Medical Admissions Clerks: Ms Elizabeth Frankowska and Mr Sigismund Karasinski
Senior IT Inspectors: Mr Christopher Sutkowski BEng and Mr Paul Klobukowski

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 371
Fax: +48 22 34 96 372
e-mail: bloodorg@ihit.waw.pl

The department undertakes scientific research and provides medical services in the fields of transfusion medicine and microbiology, along with teaching and consultation services within this remit. Our team also manages the National Registry for Blood Donors of blood, the Bone Marrow Donor Centre and the Stem Cell and Blood Banks. It is responsible for ensuring the safety of blood treatment components and products at the institute.

Under its legal obligations, the department fulfils its statutory duties in the Public Blood Service insomuch as it has full supervision over those public service units so responsible. The department publishes regulations on how blood should be taken from patients, how blood is separated into components for being dispensed, and carries out checks at Blood Donation Centres (CKiK). Tasks also include supervising quality control over blood products obtained at the CKiKs together with being responsible for their registration and for their release (plasma derived concentrates of coagulation factors and anti-D immunoglobulin). Moreover, in collaboration with the Ministry of Health and the National Blood Centre (NCK), the department is involved in legislative work governing blood donation and transfusion; it also takes part in European Community projects in these fields.

At our department, centres for taking blood, bone marrow donation and laboratories for preparing hematopoietic stem cells (HSCs) operate in accordance with Act on Transplantation of Tissues and Organs. The services delivered by the department thereby consist of: harvesting HSCs (both from bone marrow and peripheral blood), preparing them for transplantation and preparing blood samples from the umbilical cord. We also manage the Bone Marrow Donation Centre in collaboration with other institutes departments. Besides preparing 'artificial tears' from autologous serum

for treating patients with dry eye syndrome, which some suffer from when undergoing 'Graft versus Host Disease' (GvHD), we prepare the basic components of autologous fibrin glue and plate gels. Thanks to having modern equipment, the department is able to undertake specialised research in blood donation and transfusion.

Scientific studies are focused on issues when blood is used in treatment (including complications of transfusing blood components; not only in the Institute but also in the whole of Poland), as well as methods of collection, processing, storage, transport and the quality control of blood and its components. Research is undertaken in methods of preparing HSCs for transplantation purposes. Our team is also clinically evaluating the therapeutic uses and hemostatic properties of autologous and allogeneic fibrin glue preparations and plate gels. In addition, work is being done on assessing the quality and safety of enriched blood components stored in solutions, the effect of irradiation and inactivation and other newly introduced blood procedures. Our department closely collaborates with both the Departments of Virology and Immunological Hematology and Transfusion Medicine regarding blood donation and hemotherapy as well as the Department of Immunogenetics on HSC donor issues.

In terms of teaching, our department provides staff training and organises courses in blood transfusion especially for those units engaged in public blood health services and for laboratory diagnosticians specialising within laboratory transfusion medicine. In collaboration with the Hematology and Transfusion Medicine Clinic at the Centre for Postgraduate Education (CMKP), our staff take part in courses for doctors specialising in clinical transfusion medicine, hematology, clinical oncology and internal medicine. The department also conducts training on an individual basis.

The following are sub-divisions of the department: the Laboratory of Clinical Blood Transfusion including the Blood Bank, the Laboratory of Transfusion Medicine including the Hematopoietic Cell Bank, Quality Assurance Laboratory, Blood Service Organisation Unit, Microbiology Laboratory and the Centre for Bone Marrow Donation.

Laboratory of Transfusion Medicine including the Hematopoietic Cell Bank

Head: Doctor of Pharmacology Jolanta Antoniewicz-Papis PhD
Team: Ms Martha Gawrys MSc, Ms Caroline Pienko MSc and Ms Margaret Pawlik (Senior technician)
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 381, +48 22 34 96 388 and +48 22 34 96 389
e-mail: ptlzbkk@ihit.waw.pl

Within the laboratory, a Hematopoietic Cell Bank operates that deals with testing, processing (preparatory procedures and cryopreservation), storage and dispensing HSCs from the bone marrow and peripheral blood as well as allogeneic umbilical cord blood. The Bank has a class A cleanliness rating.

The laboratory is accredited by the Ministry of Health for the acquisition, processing and storage of HSCs awarded for meeting the set legal and quality requirements according to the law on the collection, storage and transplantation of cells, tissues and organs.

Specialist autologous formulations are prepared in the laboratory and used, amongst other things, for treating the 'dry eye syndrome' (by means of 'artificial tears') and treating hemolytic disease in the foetus/newborn whenever blood incompatibilities occur with the mother (concentrates of platelets and erythrocytes).

Our laboratory staff take part in training at the Department on blood donation, hemotherapy and HSC banking intended for transplantation. Many studies have been published in scientific journals and our staff participate in surveillance over Public Blood Service Units.

Laboratory of Clinical Blood Transfusion including the Blood Bank

Head: Professor of Medicine Richard Poglod MD, DSc
Team: Dr Lech Rzymkiewicz, Ms Beatrice Wisniewska MSc (Ward), Ms Eva Pietrowiak MSc and Ms Milena Prusaczyk MSc, Ms Yvonne Dziarnowska, Ms Bozena Knyt, Ms Monica Matusz, Ms Eva Szczepańska, Ms Marzena Wojcik and Ms Elizabeth Zawirska
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 556, +48 22 34 96 533 and +48 22 34 96 569
e-mail: rpoglod@ihit.waw.pl

The laboratory performs plasmapheresis, thrombocyte-apheresis and leukapheresis treatments. It is also a centre for extracting HSC from the circulation provided by unrelated donors and it collaborates with other bone marrow donor centres. The laboratory uses autologous blood and its components to formulate specialist products as well as catering for patient blood and blood component needs for all clinics and departments at the institute. We also give consultations on hemotherapy matters and for blood components and products.

Centre for Bone Marrow Donation

Head: Doctor of Medicine Monica Grzegorek
Team: Ms Aleksandra Czajkowska MSc, Mr Thomas Jankowski MSc and Ms Martina Romanesque-Pluzanska
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 375, +48 22 34 96 376, +48 22 34 96 380, +48 22 34 96 390 and +48 22 34 96 391
e-mail: ods@ihit.waw.pl

Our centre conducts teaching and provides information for promoting HSC donation from unrelated persons. HSC donor recruitment and their investigation are undertaken and the centre takes part in their final qualification, where it is responsible for coordinating donor healthcare after donation. It also takes part in recruitment campaigns for potential bone marrow donors.

Quality Assurance Laboratory

Head: Doctor of Pharmacology Elizabeth Lachert
Team: Doctor of Pharmacology Jolanta Kubis PhD (Specialist in laboratory transfusion medicine), Ms Ewa Potocka MSc, Ms Agata Plodzich (Senior technician), Ms Elizabeth Wisniakowska, Ms Marzena Klokocka and Ms Elizabeth Kowalczyk
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 382, +48 22 34 96 386 and +48 22 34 96 387
e-mail: bloodorg2@ihit.waw.pl

Inspections of blood component quality are carried out at the laboratory from public blood service units and initial batch testing is done on blood derived products.

The laboratory oversees the public blood service organisational units as well as on validating the storage of blood and its components together with refrigerated reagents and test samples. It also performs quality control of blood components stored at the institute's blood bank and analyses the documentation regarding blood derived products according to OCABR control procedures.

As part of its delivered services, the laboratory assesses equipment and disposable devices in terms of their usefulness to CKiKs along with preparing autologous concentrates of fibrinogen and plate gels.

Research is conducted on preparative procedures and storage conditions for blood and its components as well as optimising methods for obtaining both autologous fibrinogen concentrates and plate gels.

The laboratory organises courses for laboratory diagnosticians taking exams on laboratory transfusion medicine and also trains staff from the Department of Transfusion Medicine.

Blood Service Organisation Unit

Head: Ms Anna Tomaszewska MSc
Team: Dr Alexandra Rosiek MD, Ms Christine Dudziak MSc, Mr Christopher Sutkowski (Engr) and Mr Paul Klobukowski

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 377, +48 22 34 96 379, +48 22 34 96 384, +48 22 34 96 401 and +48 22 34 96 482
e-mail: antomaszewska@ihit.waw.pl

The laboratory undertakes an organisational and professional role according to the tasks set out in the Act on Public Blood Service. This consists of managing the National Register of Blood Donors and analysing reported reactions when transfusing blood components and any adverse events. Other tasks include preparing an annual report for the EDQM OMCL Network on the basis of initial batch testing controls.

Microbiology Laboratory

Head: Ms Eva Mik MSc
Team: Ms Anna Kuziak MSc (microbiology in medicine specialist), Ms Bozena Wasilewska (Senior technician) and Ms Elizabeth Kepka
Address: 5 Chocimska Street, 02–776 Warsaw
Tel: +48 22 34 96 616 and +48 22 34 96 641
e-mail: emik@ihit.waw.pl

Our Laboratory performs bacteriological and mycological diagnostics for the clinics and departments of the Institute and for outside bodies. Automated analysers are used for these purposes, (the microbial VITEK 2 Compact), which provides accurate and reproducible measurements. Culturing blood and other body fluids are performed on the automated Bactec 9050 and BactAlert systems, allowing a rapid evaluation of blood samples, when positive, which enables such results to be rapidly relayed to clinicians to which therapy can be suitably directed. Results of laboratory tests that prove positive and any alert pathogens detected are sent to the Nosocomial Control Team and to the Institute departments. The laboratory also prepares and presents the current microbiological status and trends in rising bacterial resistance. It regularly participates in external quality control, 'Polmicro', and possesses accreditation certificates for microbiology testing.

The Laboratory performs microbiological testing on all clinical materials: ie. blood, body fluids, pus, sputum, urine, feces and swabs from the throat, nose and eyes. This covers the following functions:

1) Identification:
   - Gram-negative bacteria from *Enterobacteriaceae* family and non-fermenting *bacilli* species,
   - B-hemolytic *streptococci* groups A, B, C, D, F, G, *pneumococci* and *enterococci*,
   - *Haemophilus bacilli*,
   - *Diplococci inflammation of the meninges*,
   - *Anaerobic microorganisms*.
2) Differentiating coagulase-negative and coagulase-positive *staphylococci* for identifying *staphylococci* species isolated from blood and body fluids.
3) Determining the sensitivity of isolated microorganisms to antibiotics and chemotherapy as recommended by EUCAST and the National Reference Centre for Microbial Methods Susceptibility using: diffusion discs, the automated VITEK system and the E-test (measuring minimum inhibitory concentrations).
4) Elucidating the mechanisms of resistance:
   - methicillin-resistant *staphylococci*,
   - glycopeptides resistant *staphylococci* and *enterococci*,
   - ESBL production by Gram-negative *bacilli*,
   - cAMP production by Gram-negative *bacilli*,
   - MBL production by Gram-negative *bacilli*,
   - KPC production Gram-negative *bacilli*,
   - OXA-48 production by Gram-negative *bacilli*.

DEPARTMENT OF DIAGNOSTIC HEMATOLOGY

Head: Professor of Medicine Monica Prochorec-Sobieszek MD, DSc
Senior Lecturers: Dr Ursula Podstawka MD, Dr Anna Szumera-Cieckiewicz MD and Dr Patrick Gorniak
Doctors: Dr Olga Szymanska-Giemza
Laboratory diagnosticians: Doctor of Biology Ursula Bany-Laszewicz PhD, Dr Catherine Borg MD, Dr Yvonne Solarska MD, Dre Jolanta Wozniak MD, Ms Agnes Gajewska MSc, Ms Danuta Gwozdz MSc, Ms Barbara Kruk MSc, Ms Agnes Krzywdzinska MSc, Ms Evelina Franecka MSc, Ms Hanna Weasel-Makuch MSc, Ms Eva Migal MSc and Ms Grayna Nowak MSc
Biologists: Ms Alexandra Bluszcz MSc (Engr.), Ms Edith Derezinska MSc, Ms Bozena Rawska MSc and Doctor of Biolog. Magdalena Wojtas
Technicians: Ms Barbara Bielecka (Senior technician), Ms Agatha Bielinska (Engr), Ms Yvonne Kania (Engr), Ms Renata Miąsko, MSc (Engr), Ms Monica Okla (Senior technician), Mr Robert Zietek (Senior technician) and Ms Halina Wicher (Senior technician)
Secretary's office: Ms Yvonne Sosnowska
Consultant: Professor of Medicine Maria Kraj MD, DSc

Scientific research and healthcare services are conducted within this department on the pathogenesis and diagnosis of hematopoietic and lymphatic system diseases as well as teaching and consultation in these areas. The department performs comprehensive and multidisciplinary diagnostics and monitoring of patients treated for diseases of the hematopoietic and lymphatic systems according to guidelines and national standards from international scientific societies, working groups, the World Health Organization and the European LeukemiaNet. Diagnostic tasks for the Department are carried out in close collaboration with other departmental laboratories and institute

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 296 and +48 22 34 96 495
Fax: +48 22 34 96 494
e-mail: diaghem@ihit.waw.pl

clinics; tests include cytological, cytochemical and cytoenzymatic ones as well as measuring cytofluorometric, and molecular cytogenetic markers. Also residual disease testing for leukemias and lymphomas are undertaken using flow cytometry and molecular methods.

Research at the department is concerned with its diagnostic-service activities on optimising methods of patient diagnoses and in monitoring treatment efficacy for those suffering from cancer to the hematopoietic and lymphatic systems as well as investigating the mechanisms of their pathogenesis and identifying rational therapeutic targets for such diseases. Other tasks include the banking and archiving of tissues and cells along with isolated biological material for research. The department closely collaborates in studies with clinics and departments of the Institute and with the Department of Experimental Hematology.

Our department consists of: the Analytical Medical Laboratory, an Immunophenotyping, laboratory, a Cytogenetics Laboratory, a Laboratory of Molecular Biology and a Laboratory of Pathology.

Analytical Medical Laboratory

Head: Ms Eva Migal MSc
Team: Ms Danuta Gwozdz MSc (laboratory diagnostician), Dr Barbara Kruk MD (laboratory diagnostician), Ms Eliza Zaremba MSc (specialist in medical laboratory diagnostics), Ms Barbara Bielecka (Senior Technician in medical analysis) and Ms Halina Wicher (Senior technician in medical analysis)

The Laboratory carries out hematological disease testing of hematopoietic and lymphatic systems that include:

- Cyto-morphological assessment of peripheral blood smears and bone marrow.
- Measurement of alkaline phosphatase activity in granulocytes and the circulation (peripheral blood).
- Measurement of the activity of tartarated resistant acid phosphatase.
- Measurement of nonspecific esterase activity.
- Measurement of peroxidase activity.
- Sudan-Black B staining.
- Periodic Acid Schiff (PAS) reaction.
- Detecting sideroblasts ringed sideroblasts in bone marrow samples.
- Measuring platelets in circulating blood smears.
- Serum and urine immunofixation.
- Measuring serum IgA, IgM, IGD and IgE concentrations.
- Measuring serum β_2-microglobulin concentrations.
- Measuring free κ and λ chains in serum.

Two types of biological material are sent to our laboratory for analyses; blood and the bone marrow. Depending on the tests, blood should originally be sampled into EDTA tubes or be ready for making blood smears or preparing bone marrow preparations. The following tests are done:

- Cytology tests on circulation blood (whole blood or smears).
- Cytology tests on bone marrow (two unstained bone marrow smears fully labelled with the patient's details and sampling date).
- Measuring alkaline phosphatase activity in granulocytes (whole blood/unstained blood smears).
- Measuring sideroblasts (2 unstained bone marrow smears).
- Cytochemical and cyto-enzymatic tests (4–6 unstained blood or bone marrow samples).

For many years our laboratory has taken part in External Quality Control programmes regarding microscopic testing on circulating blood smears and those obtained from the bone marrow (EQA-hem).

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 162
e-mail: pak@ihit.waw.pl

Laboratory for Immunophenotyping

Head: Dr Jolanta Wozniak MD
Team: Ms Evelina Franecka MSc, Ms Agnes Krzywdzinska MsC and Dr Ursula Podstawka MD
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 164, +48 22 34 96 166 and +48 22 34 96 167
e-mail: cytometr@ihit.waw.pl

The laboratory performs surface and cytoplasmic antigen testing on blood and bone marrow cells for patients suffering from diseases of the hematopoietic and lymphatic systems by using flow-cytometry methods. The analytical instruments are a Becton-Dickinson Cano flow cytometer (with 8 colours) based on a protocol described either in the literature or in specialist research Polish or International guidelines as well as in-house experience gained from over 20 years. Reference values are those of cell immunophenotypes and the distribution of a subpopulation of leucocytes measured in the blood and bone marrows of healthy donors or from regenerated bone marrows post-chemotherapy.

Tests for defining the leukocyte immunophenotype are multi-colourimetric flow-cytometry ones aiming to:

- Determine the phenotype of cancer cells in both acute myeloid and acute lymphoblastic leukemias and to establish the aberrant phenotypes using 'empty spaces' flow cytometry.
- Determining the phenotype of lymphatic system cancer cells.
- Cytometric analyses of the bone marrow in acute myeloid leukemia (AML) and myeloproliferative cancers.
- Treatment monitoring, assessing residual disease of the hematopoietic and lymphatic systems.
- Assessing sub-population leukocyte degradation in test material.
- Assessing profiles of basic sub-populations of lymphocytes by proportion and absolute counts of lymphocytes T, B, NK and T-lymphocyte helpers and suppressor cells.
- Defining NK cell sub-populations in Lyme disease (CD57+).
- Determining the proportion and life-span of CD34+ cells (apheresis products, bone marrow).
- The test material comprising of:
- Peripheral blood, bone marrow aspirate taken in EDTA.
- Cerebrospinal fluid, BAL, thin-needle biopsied material, other bodily fluids and exudates sampled into sterile polypropylene tubes without anti-coagulants.
- Lymph nodes — kept in physiological saline at 37°C.

Cytogenetic Laboratory

Head: Doctor of Biology Ursula Bany-Laszewicz PhD
Team: Ms Alexandra Bluszcz MSc (Engr), Ms Agnes Gajewska MSc and Mr Robert Zietek (Senior technician)
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel; +48 22 34 96 173 and +48 22 34 96 593
e-mail: genetyka@ihit.waw.pl

The laboratory performs cytogenetic tests on myeloid and lymphoid neoplasms. Chromosome analyses are undertaken by classical banding methods of classical cytogenetics (GTG) and fluorescent in situ hybridization (FISH). Karyotyping is also performed by high resolution banding which constitutes the basic post-natal diagnostic testing for specific diseases and clinical syndromes that arise from chromosomal aberrations. The laboratory is equipped with microscopes, with an automated facility for seeking metaphases along

with a computerised system for registration, data calculation and documenting the karyotyping and FISH results. The laboratory is fully compliant with quality control standards regarding the operation of a medical diagnostic laboratory and in the interpretation and authorisation of test results; according to Journal of Laws 2006, No. 61, position 435 issued by the Polish Minister of Health.

Our testing procedures are also in accordance with recommendations and guidelines of specialist international scientific groupings and/or with protocols available from the scientific literature.

Molecular Biology Laboratory

Head: Dr Patrick Gorniak MD
Team: Dr Yvonne Solarska MD, Doctor of Biology Magdelena Wojtas PhD, Ms Hanna Makuch-Lasica MSc, Ms Grazyna Nowak MSc and Ms Ywonne Kania (Technician)
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 170, +48 22 34 96 171 and +48 22 34 96 594
e-mail: molbiol@ihit.waw.pl

Both qualitative and quantitative measurements are performed in this laboratory using molecular biology methods which allow to identify changes in structural DNA and the expression of those genes involved in the pathogenesis of hematological diseases. Monitoring minimal of residual disease entails using the TaqMan technique for RQ-PCR according to international protocols laid down in the 'Europe against Cancer' study as well as ELN guidelines. Our laboratory takes part in Polish and European projects dedicated to standardising molecular biology techniques.

Laboratory for Pathomorphology

Head: Professor of Medicine Monica Prochorec-Sobieszek MD, DSc
Team: Dr Anna Szumera-Cieckiewicz MD, Dr Olga Szymanska-Giemza, Ms Edith Derezinska MSc, Ms Bozena Rawska MSc, Ms Agatha Bielinska (Engr), Ms Renata Miasko MSc (Engr) and Ms Monika Okla (Senior Technician)
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 456 and +48 22 34 96 457
e-mail: patomorfologia@ihit.waw.pl

The laboratory conducts both research and delivers diagnostic services on the pathogenesis of diseases arsing from the hematopoietic and lymphatic systems. Both complex and multi-disciplinary diagnostics and treatment monitoring are performed in patients suffering from hematopoietic and lymphatic system disease according to national and international standards and guidelines put forward by scientific societies and working groups that include the WHO and ELN.

Our laboratory is rated as a Grade III Reference Centre in hematopathology. Performing microscope sectioning, staining and mounting cover slips is fully automated which permits complete standardisation of sample preparation procedures to be achieved. The laboratory possesses accreditation from the Polish Society of Pathologists regarding immuno-histological analyses and it regularly takes part in external quality control schemes for immuno-histochemical staining. Furthermore, it fulfils the role of a consultation centre for the whole of Poland regarding hematopathology, particularly focused on the histopathological and immuno-histochemical diagnoses of myeloid and lymphoid malignancies. The laboratory also provides courses for clinicians and pathologists.

The full range of tests undertaken at our laboratory are as follows:

- Histopathology on trepanned biopsies with 1 bone block/preparation.
- Histopathology on surgical material with 1 bone block/preparation.
- Final assessment by a specialist hematopathologist and issuing the result — trepanned biopsy, lymph nodes.
- Final assessment by a specialist hematopathologist and issuing the result — surgical material.
- A histopathological consultation on received specimens.
- Histochemical Giemsa Staining (one step).
- Histochemical Gomori's staining (one step).
- Histochemical Mucicarmine staining (one step).
- Histochemical PAS staining (one step).
- Histochemical Mycobacteria staining (one step).
- Histochemical Congo Red staining (one step).
- Histochemical Perls staining (one step).
- Histochemical Grocott staining (one step)
- Histochemical Alcian-PAS staining (one step).
- Histochemical AZAN trichrome staining (one step).
- Immunohistochemical antibody staining (one step).
- Manual immunohistochemical antibody staining (one step).
- One step block slicing and basic H & E staining.
- Paraffin block slicing for genetic testing.

DEPARMENT OF HEMOSTATICS AND METABOLIC DISEASE

Head: Professor of Medicine George Windyga MD, DSc
Professor: Professor of Medicine Ksenia Bykowska MD, DSc
Laboratory Diagnosticians: Ms Beatrice Baran MSc, Ms Anna Bucko MSc, Dr Agnes Lipniacka MD, Ms Magdalena Marchewka MSc and Dr Edith Odnoczko MD
Medical Analysts: Ms Evelina Ejchman-Pac MSc
Technicians: Ms Renata Bajszczak (Technician), Ms Irene Kaminska (Senior Technician), Ms Anna Moszczynska (Technician), Ms Anna Rurka (Senior Technician) and Ms Anna Slawinska (Senior Technician)
Laboratory Assistants: Mr Czeslaw Gladczuk, Ms Catherine Lenart and Ms Christine Ozimek

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 157 and +48 695 336 420
e-mail: jwindyga@ihit.waw.pl

The department conducts scientific research and provides healthcare services as well as teaching and consultation for specialist clinics and other clinics both inside and outside the institute dealing with hemostasis and porphyria. Laboratory tests are undertaken for diagnoses and monitoring patient treatment of congenital and acquired hemostasis disease: hemophilia A and B, von Willebrand disease, and other rare bleeding disorders (eg. factor VII deficiency, XI, XIII), trombocytopathy, and thrombophilia. Besides routine hemostasis testing, other specific tests are performed to measure the activities of various coagulation factors, antigens and von Willebrand factor multimers along with detecting and measuring endogenous coagulation inhibitors. Platelet function tests are also done and measurements of metallo-protease activity and its ADAMTS13 inhibitor, together with global thrombosis testing: by clot thromboelastometry

(ROTEM Delta®) and the TGA Technoclone® test of thrombin generation. In addition, the department delivers molecular diagnoses of: thrombophilia (detecting Leiden Factor V gene mutations, detecting G20210A prothrombin gene mutations, analysing the SERPINC1 gene sequence (antithrombin deficiency) and bleeding disorders such as hemophilia A (detecting inversion mutations [INV1 and INV22] and F8 gene sequence analysis), hemophilia B (F9 gene sequence analysis), von Willebrand disease (VWF gene sequence analysis) and factor XI deficiency (F11 gene sequence analysis).

In Poland, the department is the only diagnostics and research centre dealing with porphyria diseases insomuch where it provides highly specialised medical services for all porphyria typing and differentiation during the symptomatic disease phase. The laboratory tests family members suffering from porphyria to identify asymptomatic carriers of the defective gene. It also manages the national database covering porphyria patients and their families as well as a constantly updated registry of safe or harmful drugs regarding porphyria.

The departmental laboratories periodically undergo external quality control assessment as part of the following schemes: The Centre for Research Quality Diagnostics Laboratory, ECAT Foundation for External Quality Control of Diagnostic Assays and Tests with a Focus on Thrombosis and Hemostasis along with the European Porphyria Network (EPNET) EQAS.

The Department contains a Hemostasis Laboratory, a von-Willebrand Disease Laboratory and a Porphyria Laboratory.

Hemostasis Laboratory

Head: Ms Beatrice Baran MSc
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 161 and +48 22 34 96 548

Von Willebrand Laboratory

Head: Professor of Medicine Ksenia Bykowska MD, DSc
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 160 and +48 22 34 96 543

The following tests are performed:

1) Biochemical and immuno-enzymatic.
2) Platelet aggregation and function.
3) Genetic testing on peripheral blood samples taken in EDTA. DNA is manually isolated by an affinity column based method. For identifying chosen point mutations, PCR is used in conjunction with restriction fragment length polymorphism (PCR-RFLP).

Porphyria Laboratory

Head: Dr Agnes Lipniacka MD
Address: 5 Chocimska Street, Building B,
00–791 Warsaw
Tel: +48 22 34 96 617 and +48 22 34 96 635

The tasks of the Laboratory include: diagnosing patients suspected of deteriorating or an attack of porphyria, determining porphyria type in those already confirmed, diagnosing the family of porphyria patients to establish defective gene carriers, check-ups on porphyria patients, issuing Sick Cards to patients with symptomatic/asymptomatic porphyria, keeping a list of safe drugs for treating porphyria, registering patients in a database, research on porphyria, providing teaching/training on porphyria to all those interested, collaborating with other European centres working on porphyria and collaborating with other organisational units within the institute regarding research and healthcare services.

DEPARTMENT OF IMMUNOLOGICAL HEMATOLOGY AND TRANSFUSION MEDICINE

Head: Professor of Medicine Eva Brojer MD, DSc
Consultant: Professor of Medicine Christine Maslanka MD, DSc
Assistant Professors: Doctor of Natural Sciences Catherine Guz MD, DSc, Doctor of Natural Sciences Agnes Orzinska PhD and Dr Margaret Uhrynowska MD
Laboratory diagnosticians: Ms Pamela Bartoszewicz MSc, Ms Justine Bednarz MSc, Ms Eva Golaszewska MSc, Ms Edith Klimczak-Jajor MSc, Ms Patricia Lopacz MSc, Ms Hanna Lopienska MSc, Ms Anna Myslinska MSc, Ms Maria Nowaczek-Migas MSc, Ms Agnes Kowalska MSc, Ms Justine Pastuszek MSc, Ms Anna Kiszlo MSc, Ms Monica Pelc-Klopotowska MSc, Ms Hanna Pyl MSc, Ms Joanna Skulimowska MSc, Justyna Spychalska MSc, Ms Agnes Gierszon MSc, Ms Hedwig Sak-Budzisz (Tech Engr), Ms Evelina Sokol MSc and Ms Magdalena Pilat MSc
Biologists: Ms Anna Head MSc, Ms Magdalena Krzemieniowska MSc, Ms Caterine Kuzior MSc, Ms Magdalena Michalik MSc and Ms Justine Smolarczyk-Wodzinska MSc
Technicians: Ms Eva Dudnikow (Senior technician), Ms Beatrice Sierocka (Senior technician), Ms Halina Nasiegniewska (Senior technician) and Ms Anna Plizak (Technician)
Laboratory assistant: Ms Margaret Tratkiewicz
Secretary's office: Ms Catherine Stachurska

Address: 5 Chocimska Street, Building B, 00–791 Warsaw
Tel: +48 22 34 96 663 and +48 605 267 600
Fax: +48 22 34 96 611
e-mail: sekimmunologia@ihit.waw.pl

The department performs diagnostics, research, teaching and provides its expertise in immunology, hematology and transfusion medicine. Our aims are

to develop and introduce test methods for assuring the safe transfusion of blood and its components, performing advanced diagnostics for allo- and auto-blood cell antigen immunisation and studies on congenital and acquired hemolytic anemia as well as chimerism. Other important tasks of the department are supervising research on immunology related transfusion medicine at organisational units of the Public Blood Service. Assessment programmes and audits are conducted in Centre for Blood Donation and Blood Therapies (CKiK) laboratories and in hospitals performing pre-transfusion testing and those on foetal-maternal incompatibilities. According to the agreement with the Polish Centre for Research and Certification, the department tests *in vitro* diagnostic reagents used for immunology and transfusion medicine as well as issuing its expert opinion for allowing their use. The department also tests scientific equipment/apparatus in these areas.

All department laboratories take part in international external Quality Control schemes (UQ NEQAS, INSTAND e.V. and ISBT).

Research interests of the department are concerned with applying the department's diagnostics and expert capabilities to the immunology of red cells, platelets and granulocytes as well as to the immunopathology of pregnancy, chimerism testing after hematopoietic stem cell transplantation and diagnostics of congenital and acquired hemolytic anemia and dyserythropoietic anemia.

The department conducts numerous training courses and lectures for diagnosticians specialising in laboratory transfusion medicine, for doctors specialising in hematology and clinical transfusion medicine and to gynecologists, obstetricians and neonatologists.

The Department consists of: Laboratory of Erythrocyte Immunology, Laboratory of Leukocytes and Platelet Immunology, Laboratory for Immunopathology of Pregnancy, Laboratory for Genetic-Dependent Anemia, Laboratory for Blood Grouping and Compatibility and the Laboratory for Blood Cell Genetics and Chimerism.

Laboratory of Erythrocyte Immunology

Head: Ms Monica Pelc-Klopotowska MSc
Team: Ms Justine Bednarz MSc, Ms Hanna Lopienska MSc and Ms Agnes Kowalska MSc
Address: 5 Chocimska Street, 00–791 Warsaw
Tel: +48 22 34 96 669 and +48 22 34 96 651
e-mail: mpelc@ihit.waw.pl

Within immunological-based transfusion medicine, a full range of diagnostic testing is performed including consultative-tests in CKiK laboratories, whenever self-antibodies arise which need to be defined in patients or pregnant women. These tests use blood sample bank information on rare antigens and serum samples containing antibodies with unique specificities (SCARF). Integrated within this process is access to international databases of donors with unique antigens which thus permit such blood to become available for transfusion. Diagnostic tests are also done in cases of autoimmune hemolytic anemia for serological diagnoses of weak antigenic types, particularly the ABO and Rh systems, together with diagnosing post-transfusion hemolytic reactions.

The actual tests that our laboratory performs are as follows:

1) Serological tests on anemic auto-/allo-hemolytic status post-transfusion of blood components.
2) Serological tests in recipients prior- and post--to hematopoietic stem cells transplantation.
3) Identifying allo-antibodies against erythrocytes, including both highly and rarely occurring antigens.
4) Determining phenotypes or weak antigen types in recipient or donor blood.
5) Serological features of weak antigen variants.
6) Moreover, the laboratory verifies EC–authorised procedures, in which the notified body investigates and then certifies that the product submitted for medical diagnostic *in vitro* testing meets its intended requirement as reagents to be used in immunology and transfusion medicine. For undertaking such tests, the Institute was distinguished by the notifying body ie. The Polish Centre for Testing and Certification.

The laboratory investigates, assesses and issues opinions on automated and semi-automated systems for blood group testing, for detecting immune system antibodies and for measuring the anti-D antibody in the therapeutic anti-D immunoglobulin product (Anti-Gamma D 50 and Anti-Gamma D 150). The National Programme for External Quality Assessment is also managed and run by our laboratory.

Laboratory of Leukocytes and Platelet Immunology

Head: Ms Patricia Lopacz MSc
Team: Ms Anna Glowka MSc, Ms Agnes Gierszon MSc, Ms Hedwig Sak-Budzisz (Engr, Senior Technician), Ms Halina Nasiegniewska, Ms Beatrice Sierocka (Senior technician), Ms Evelina Sokol MSc and Ms Magdalena Pilate MSc
Address: 5 Chocimska Street, 00–791 Warsaw
Tel: +48 22 34 96 947, +48 22 34 96 615 and +48 22 34 96 675
e-mail: plopacz@ihit.waw.pl

This is the only laboratory in Poland that performs highly specialised diagnostic tests as follows:

- Maternal-foetal incompatibilities of platelet antigens.
- Auto/allo- immunological thrombocytopenia.
- Heparin-dependent thrombocytopenia.
- Pseudotrombocytopenia.
- Platelet membrane glycoprotein deficiency (Glanzmann's thrombasthenia, the team Bernard-Soulier syndrome).
- Phenotyping the HPA-1 antigen (risk assessment on maternal-foetal antigen incompatibility with non-HPA-1a);
- Immuno-complications in transfused platelet concentrates.
- Anti-HLA class I and II antibodies (complement binding and non-binding capacity).
- Selection of platelet donors according to leukocyte-platelet compatibility for immunised patients.
- Primary and secondary granulocytopenia.
- Non-hemolytic contraindications post-transfusion including transfusion-related acute lung injury (TRALI).
- Reticulocyte blood count.

In addition, the laboratory provides consultation for all tests performed and takes part in organising external quality control schemes for CKiK as well as undertaking scientific research.

Laboratory for Immunopathology of Pregnancy

Head: Dr Margaret Uhrynowska MD
Team: Ms Magdalena Michalik MSc, Ms Pamela Bartoszewicz MSc and Ms Anna Plizak
Address: 5 Chocimska Street, 00–791 Warsaw
Tel: +48 22 34 96 668 and +48 22 34 96 671
e-mail: muhrynowska@ihit.waw.pl

The laboratory performs serological screening and diagnostics for all pregnant women (RhD-negative and RhD-positive) to establish whether maternal-foetal compatibility exists or not regarding erythrocytes. Such tests should be carried out in duplicate in all pregnant women at up to 10 weeks

and at 27–32 weeks as well as 21–26 weeks in those RhD-negative. They are vital for diagnosing incompatibilities and for selecting which blood type should be transfused to the mother/child if such a need should arise. Whenever antibodies are detected to many antigens or those universally present in the population, then their specificities to transfused blood is required with the aim of finding a suitable donor. Upon detecting such antibodies, then the CKiK is notified so that a particular blood can be secured.

Collaborative work is undertaken with the Laboratory for Blood Cell Genetics and Chimerism for non-invasive genotyping of foetal antigens so as to exclude any risk of hemolytic disease, when there are no foetal antigens present to which the mother's antibodies can react with. Our laboratory also collaborates with the Laboratory of Erythrocyte Immunology where antibodies are tested against universally occurring antigens.

Screening is also conducted for HPA-1a platelet antigens which play the dominant role in maternal-foetal incompatibilities regarding platelets.

Laboratory for Genetic-Dependent Anemia

Head: Dr Margaret Uhrynowska MD
Team: Ms Eva Golaszewska MSc, Ms Edith Klimczak-Jajor MSc, Ms Anna Myslinska MSc, Ms Hanna Pyl MSc and Ms Justine Spychalska MSc

Address: 5 Chocimska Street, 00–791 Warszawa
Tel: +48 22 34 96 668, +48 22 34 96 677, +48 22 34 96 658, +48 22 34 96 673 and +48 22 34 96 679
e-mail: muhrynowska@ihit.waw.pl

The Laboratory carries out unique diagnostic tests on hereditary spherocytosis, hemoglobinopthies, thalassemia, paroxysmal nocturnal hemoglobinuria and congenital dyserythropoietic anemia. Testing is also performed for maternal-fetal transplacental leakage and on material derived from cordocentesis by flow cytometry.

Laboratory for Blood Grouping and Compatibility

Head: Ms Beatrice Wojciechowska MSc
Team: Ms Catherine Kuzior MSc, Ms Justine Pastuszek MSc and Ms Eva Dudnikow (Senior technician)

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 383, +48 22 34 96 404 and +48 22 34 96 570
e-mail: bwojciechowska@ihit.waw.pl

The laboratory carries out all pre-transfusion tests, that includes blood typing, histocompatibility tests, matching blood for recipients for allo-antibodies and/or auto-antibodies, detecting and identifying immune antibodies and in determing erythrocyte phenotype.

Laboratory for Blood Cell Genetics and Chimerism

Head: Doctor of Biology Catherine Guz PhD
Team: Ms Agnes Orzinska PhD, Ms Justine Smolarczyk-Wodzynska MSc, Ms Magdalena Krzemieniowska MSc, Ms Anna Kiszlo MSc, Ms Joanna Skulimowska MSc and Ms Sylvia Purchla-Szepiola MSc
Address: 5 Chocimska Street, Building B, 00–957 Warsaw
Tel: +48 22 34 96 630, +48 22 34 96 637 and +48 22 34 96 649
e-mail: kguz@ihit.waw.pl

Highly specialised tests, unique in Poland, are undertaken in this laboratory for genotyping blood cell antigens and chimerism testing, post-transplantation. The former concerns antigens from platelets, erythrocytes and granulocytes and are conducted in cases of maternal/foetal incompatibilities or in assessing auto-/allo-immunisation in patients. When considering genetic testing of erythrocyte antigens, the importance of non-invasive prenatal molecular diagnostics should be especially stressed for antigens RhD, c, E, and F from the foetus as detected in the plasma of pregnant woman in the foetal DNA. The actual tests carried out in our laboratory are:

1) Genetic diagnostics on maternal-foetal incompatibilities regarding platelet antigens granulocytes and erythrocytes:
   - Foetal RHD gene genotyping from maternal blood is performed for qualifying those suited for immuno-prophylaxis during pregnancy. Non-invasive foetal *RHD* gene genotyping is done for qualifying whenever RhD immuno-prophylaxis is required in cases of maternal-foetal incompatibility in RhD negative women between 12th and 27th week of pregnancy (ideally between 21st and 26th weeks) and whenever immune antibodies anti-D are lacking in the 12th and/or 20th weeks of pregnancy. In cases when the foetus is *RHD*-positive, the ultimate criterion governing whether immunoglobulin anti-D is given in the 29th–30th week of pregnancy is if anti-D antibodies are absent — and also in the 28th week (recommended time of administration).
   - *RHD* genotyping and/or of *RHCE**c*C*E foetal alleles is undertaken from the mother's blood using anti-D, anti-C, anti-C or anti-E antibodies. Non-invasive foetal diagnostics using maternal blood containing antibodies to red blood cells is recommended in the second trimester (from the 15th–16th weeks of pregnancy). This avoids any invasive methods for determining foetal blood type with negative genotyping outcome.
   - The genotype of foetal antigens in amniotic fluid is determined. Tests are recommended for those women with antibodies present and are undergoing amniocentesis, including those with other clinical indications or through a less invasive method of obtaining foetal material than cordocentesis.
   - Determining antigenic incompatibilities which are based on maternal and paternal genotyping or that of the mother and fetus/newborn. Such tests are performed on platelet antigens and granulocytes, whenever fetal/newborn-maternal allo-immune thrombocytopenia or granulocytopenia in newborns are suspected, as methods for establishing antibody specificities through detecting/excluding the antigenic incompatibilities of parents or those of the mother and child in the most significant HPA/HNA systems (human platelet/ human neutrophil antigens).
2) Genotyping erythrocyte antigens after allo-HSCT/allo-transfusion thereby facilitating the measurement of antibodies and for identifying allo-antibodies in patients with:
   - Whenever any difficulties arising from the erythrocyte phenotype are found after multi-transfusions or allo-HSCT (arising < 3 months).
   - In the presence of auto-/allo-antibodies found amongst those suffering from autoimmune hemolytic anemia.
   - Suspected antibodies to universal/rare antigens are found.

- Anomalous serotyping results for D and ABO variants.

3) Genotyping HPAs. Tests that enable the specificities of anti-HPA antibodies to be determined in patients with thrombocytopenia dyscrasia, immunity to transfused platelets or with thrombocytopenia post-allo-HSCT. Identifying the HPA genotype also enables KKP-compatible HPA donors to be found.
4) Genotyping HNAs. Tests that facilitate the identification of anti-HNA antibodies in patients where the TRALI syndrome is suspected, those with neutropenia post-allo-HSCT and organ transplant rejection patients (including the kidneys regarding HNA-3 antigens).
5) Genotyping HPAs, HNAs and selected erythrocyte blood types for blood donors. This offer is directed to the CKiK so that a blood donor registry can be established for HPA, HNA and other chosen erythrocyte antigens.
6) Investigating chimerism post-allo-HSCT: determining the STR marker genotype in donors and recipients before HSC transplantation and measuring the genotype proportions in donors (proportion of donor STR markers vs recipient STR markers) in the blood or bone marrow of recipients, post-allo-HSCT.
7) Measuring genetic mutations in hemoglobinopathies in order to establish the genetic basis of α and β-thalassemia.

DEPARTMENT OF IMMUNOGENETICS

Head: Professor of Medicine Jack Nowak MD, DSc
Deputy: Dr Ursula Szlendak MD
Laboratory diagnosticians: Ms Joanna Dziopa MSc, Mr Slawomir Gwozdowicz MSc, Ms Elizabeth Graczyk-Pol MSc, Ms Agnes Malinowska MSc, Ms Anna Marosz-Rudnicka MSc, Ms Renata Mika-Witkowska MSc, Ms Klaudia Nestorowicz MSc, Ms Daria Pawliczak MSc, Ms Martha Rogatko-Koros MSc, Ms Agnes Witkowska MSc and Ms Emily Wojciechowska MSc
Secretary's office: Ms Agnes Gawron

The department provides healthcare and scientific services on immunogenetic typing of donors and recipients regarding HSC transplantation as well as providing training and consultations in this field. Within such procedures, the department manages immunogenetic selection of unrelated, family and haploidentical HSC donors for allogeneic transplantation. The department searches for donors in country-based and international registries where it sets the strategy for choosing a family or unrelated donors and performs HLA and KIR genotyping together with providing advice on optimal immunogenetic selection of family or unrelated donors.

Scientific activities are focused on preparing immunogenetic standards for selecting donors, genetic testing methodology and population genetic testing regarding HLA during and at the start of illness. Another important area of investigation are on the pathogenesis of paroxysmal nocturnal hemoglobinuria.

The Department conducts both under and post-graduate training on HLA study methodologies and co-organises internships specialising in laboratory immunological medicine and transplantology. Training on an individual basis are also provided to those specialising in hematology,

Address: 5 Chocimska Street, 00–791 Warszawa
Tel: +48 22 34 96 648 and +48 602 290 529
Fax: +48 22 34 96 606
e-mail: szpik@ihit.waw.pl

transplantology, transfusion medicine, analytical medicine, laboratory hematology medicine, immunological medicine and medical genetics.

The Department comprises of a Laboratory of Tissue Histocompatibility and a Laboratory for Hematopoietic Cell Donor Selection.

Laboratory of Tissue Histocompatibility

Head: Ms Renata Mika-Witkowska MSc
Address: 5 Chocimska Street, 00–957 Warszawa
Tel: +48 22 34 96 672 and +48 22 34 96 659

Antigen tests performed in the Laboratory are as follows: HLA and KIR histocompatibility antigens by PCR-SSP (sequence specific primers) and PCR-SSO Luminex® (sequence specific oligonucleotide probes). The test material is blood sampled in EDTA; in 4 or 10 ml volumes.

Laboratory for Hematopoietic Cell Donor Selection

Head: Ms Claudia Nestorowicz MSc
Address: 5 Chocimska Street, 00–957 Warszawa
Tel: +48 22 34 96 623

Duties of the laboratory are in selecting unrelated HSC donors for allogeneic transplantation. Seeking for such donors is performed in country-based or international registries. In cases where histocompatibility is incomplete, the laboratory will propose an optimal unrelated candidate that is partially histocompatible or a haploidentical one from the family. To fulfil such aims the laboratory performs additional tests such as KIR or HLA-DPB1 genotyping. These tests may require immunogenetic expertise in choosing an optimal HSC donor. Tests carried out by the laboratory are as follows:

1) KIR genotyping in HSC donors and transplant recipients as well as expertise for measuring KIR B haplotype content and for predicting donor NK cell licensing under new HLA conditions of the recipient. The test can be used in HSC transplant cases where the donor is partially matched in terms of HLA class I or haploidentical. The test permits precise assessment of a wide variety of KIR B haplotypes and functional HLA-KIR receptor-ligand pairs in donors, along with changes in these pairs which occur in the recipient, post-transplantation. The test also allows a donor to be selected with a higher anti-cancer potential of the NK cells, not only through determining the KIR B haplotype content, but above all else by predicting changes in the donor NK cell licensing within the new HLA conditions in the recipient. In order to pick the best donor, then as aforementioned, expertise is needed. The aim of the test and expert opinion thus improves the chances of eradicating cancers in the recipients treated by HSC transplantation.
2) Genotyping HLA DPB1 with high resolution. Introducing additional typing of the HLA (DPB1) locus enables the histocompatibility of the donor-recipient pair to be so established. This becomes especially important when donors are only partially histocompatible regarding HLA or being haploidentical. In such cases of HSC transplantation, the presence of anti-HLA antibodies are significant (anti-HLA-DP or multispecific). Choosing a donor in respect of HLA-DPB1 can prevent a transplant rejection in those recipients immunised.

DEPARTMENT OF VIROLOGY

Head: Professor of Medicine Peter Grabarczyk MD, DSc
Laboratory diagnosticians: Mr Paul Brylka MSc, Ms Alexandra Kalinska MSc , Ms Anette Kopacz MSc, Ms Dorothy Kubicka-Russel MSc, Mr Gregory Liszewski MSc, Ms Eva Nocen MSc, Ms Anna Potepa MSc, Ms Joanna Sierzega MSc, Ms Eva Sulkowska MSc, Ms Justine Sledz and Ms Pauline Zwolinska MSc
Biologists: Ms Anna Chrzanowska
Laboratory assistant: Ms Sophie Grzywacz
Secretary's office: Ms Catherine Tkachuk

The Department of Virology undertakes research studies and provides healthcare services, training and consultation in the field of medical virology; particularly in the diagnosis and epidemiology of those viruses vital for ensuring blood transfusion safety, including hepatitis virus A (HAV), B (HBV), hepatitis C virus (HCV) virus, acquired immune deficiency syndrome (HIV-1/2), parvovirus B19 (B19V), cytomegalovirus (CMV), Epstein-Barr virus (EBV) and BK virus (BKV). Infections also diagnosed are human leukemia virus-induced T-cell (HTLV I / II) as well as non-viral ones such as syphilis and toxoplasmosis.

Verification and complementing tests are performed for all CKiK centres and the department acts as a reference centre on blood-borne viral infections. Tests are also conducted on newly emerging infectious agents, for instance hepatitis E (HEV) and the West Nile virus (WNV).

Research is focused on diagnostics that include improving methods for detection/verification/infection diagnosis in donors as well as analysing epidemiological data and studying blood-borne viral polymorphism. These studies include introducing and improving detection methods, monitoring algorithms for virally infected patients, distinguishing between latent and active viral forms and assessing the efficacy of anti-viral therapy. Research is also undertaken on the epidemiology of molecular virology which include identifying 'escape mutants' and their modes of transmission.

The Department conducts lectures as part of courses for laboratory diagnosticians specialising in transfusion medicine as well as for physicians specialising in clinical and hematological transfusion medicine. Also provided are teaching courses and training for CKiK directors and consultants at regional (Voivodeship) levels in transfusion medicine.

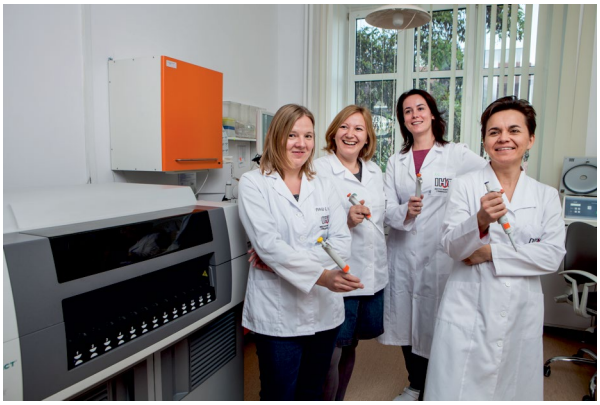
The Department comprises of a Laboratory for Verification Testing, Clinical Virology Laboratory and a Laboratory for Quality Control and Analysis.

Address: 5 Chocimska Street, 00–957 Warszawa
Tel: +48 22 34 96 640
Fax: +48 22 34 96 603
e-mail: zakladwirusologii@ihit.waw.pl

Laboratory for Verification Testing

Head: Ms Eva Sulkowska MSc
Team: Ms Anna Chrzanowska MSc, Ms Eva Nocen MSc and Ms Justine Sledz MSc
Address: 5 Chocimska Street, 00–957 Warsaw
Tel: +48 22 34 96 662
Fax: +48 22 34 96 603
e-mail: esulkowska@ihit.waw.pl

Clinical Virology Laboratory



Head: Ms Alexandra Kalinska MSc
Team: Ms Paula Brylka MSc, Ms Anette Klimczak-Plichta MSc, Ms Anna Potępa MSc, Ms Joanna Sierzega MSc and Ms Pauline Zwolinska MSc
Address: 5 Chocimska Street, 00–957 Warsaw
Tel: +48 22 34 96 644
Fax: +48 22 34 96 603
e-mail: akalinska@ihit.waw.pl

Laboratory for Quality Control and Analysis

Head: Ms Anette Kopacz MSc
Team: Ms Dorothy Kubicka-Russel MSc and Mr Gregory Liszewski MSc
Address: 5 Chocimska Street, 00–957 Warsaw
Tel: +48 22 34 96 646
Fax: +48 22 34 96 603
e-mail: akopacz@ihit.waw.pl

The laboratory evaluates instrumentation, methods and tests for infectious agents regarding monitoring studies for blood donor suitability. Epidemiological testing is performed on detection rates of viral infections, (HBV, HCV and HIV), in donors of blood and its components. Virological tests are also carried out on those donors and patients in whom infection has been detected, where amongst other things, the infection phase and the prevalence of polymorphisms in the aforementioned viruses is determined for Poland.

Sample panels are prepared for the purposes of validation and quality control testing regarding introduced methods to measure transmitted infectious agents in blood taken from CKiK units. The laboratory analyses and assesses the panel test results so obtained.

DEPARTMENT OF RADIOLOGY

Head: Professor of Medicine Andrew Cieszanowski MD, DSc
Doctors: Dr Andrew Juszynski MD, Dr Jack Proniewski, Dr George Wojtowicz and Dr Janina Zulewska
Technicians: Mr Alexander Cieslak (Senior technician), Ms Margaret Czajkowska (Senior technician), Ms Gabriella Michalowska (Senior technician). Ms Christine Wisniewska (Senior technician) and Mr Camille Wegrzycki (Technician)
Secretary's office: Ms Elizabeth Dlutek
Registration: Mr Andrew Markowicz
Nurses: Ms Hedwig Siwiec and Ms Hanna Ziemczyk

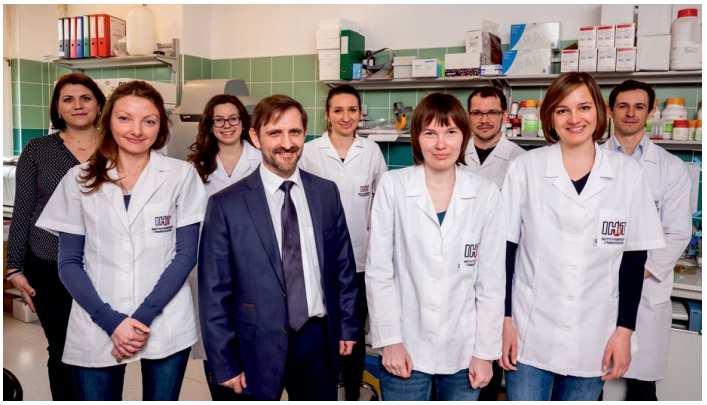
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 450
e-mail: edlutek@ihit.waw.pl

The department delivers healthcare services and performs scientific studies in the radiological fields of diagnostics and surgery, where it also provides teaching/training and consultation within these areas. It has a diverse, modern infrastructure and equipment thereby allowing radiology diagnostics and research to be conducted. All equipment is digitalised and fully computerised so enabling the electronic archiving of all testing performed.

Diagnostic radiological imaging techniques, computed tomography (CT) and ultrasonography (USG; ultrasound) is carried out together with CT angiography, venography and Doppler ultrasound.

The Department consists of a Laboratory for General Radiology and Ultrasound and a Computer Tomography Unit.

Department of Experimental Hematology



Head: **Professor of Medicine Przemyslaw Juszczynski MD, DSc**
Deputy Head: Doctor of Biology Matthew Szydlowski PhD
Senior Lecturers: Doctor of Biology Emily Bialopiotrowicz PhD, Dr Patrick Gorniak MD, Doctor of Biology Eva Jablonska PhD and Dr Anna Polak MD
Biologists: Ms Monica Noyszewska-Kania MSc and Ms Caroline Piechna MSc
Alumni: Dr Thomas Sewastianik and Dr Przemyslaw Kiliszek
Secretary's office: Ms Monika Milczarek-Starling MSc

The Department of Experimental Hematology arose in 2016 when the Laboratory of Hematology at the Department of Experimental Diagnostic Hematology became transformed into an independent organisational unit. The appointed tasks and staff of this new department constitute an enlargement and continuation of those started in 2011. Creating this new unit and its staff recruitment were made possible by the institute's investment funding and grants obtained in 2011 from the Foundation for Polish Science (FNP) as well as the National Science Centre (NCN).

From its inception, the department has undertaken research into the pathogenesis of myeloid and lymphoid malignancies. In particular taking into account the molecular heterogeneity of B-cell lymphomas and their growth determinants along with identifying rational targets for therapy. The main thrust of these studies are on the molecular mechanisms of transmitting B-cell receptor signals in diffuse large B-cell lymphomas and in identifying optimal therapeutic strategies leading to signal blocking and arresting its anti-apoptotic action.

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 517, +48 22 34 96 518 and +48 22 34 96 305
e-mail: pjuszczynski@ihit.waw.pl

Another area of research concerns the molecular mechanisms underlying the oncogenic activity of PIM kinases and defining thereby potential therapeutic targets for their inhibitors. The laboratory also conducts research on cellular resistance in acute lymphoblastic leukaemia to chemotherapeutics and targeted pharmacological methods that sensitise blasts to conventional cytotoxic drugs. Study outcomes have been published in journals of high repute and have made a considerable impact to the field as demonstrated by numerous citations and both national and international awards for our team members.

The laboratory makes use of a wide spectrum of techniques in molecular biology, biochemistry and bioinformatics for its research that is focused on in-depth functional verification posed by scientific questions and hypotheses. In this work our department closely collaborates with the Haematology Clinic and the Department of Diagnostic Haematology. A key resource in the infrastructure dedicated to research is the Laboratory for Digital Pathology ('Cyfralab'); http://www.cyfrowelaboratorium.ihit.waw.pl. This constitutes an integrated system of research equipment/instrumentation that enables, *inter alia*, the construction of multiblock automated staining, the acquisition and analysis of digital images and micro-laser dissection; this infrastructure being complemented by an IT system that integrates each functional module as well as including a digital library of images and a tissue bank of fresh and fixed samples.

Most of the departmental research is undertaken thanks to grant funding from the FNP, the NCN and the National Research and Development Centre (NCBiR). As of 2015, the departmental team conducts research under the Strategmed I and II projects designed to develop and implement innovative targeted therapies in myeloid and lymphoid malignancies.

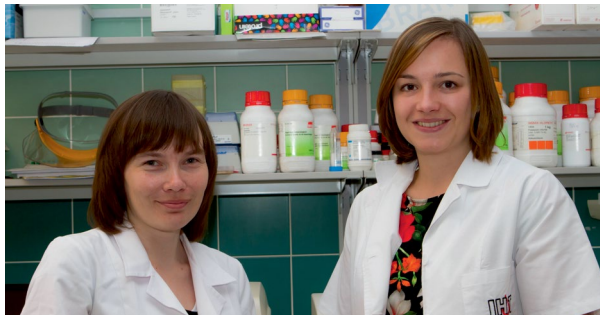
The Department consists of the following laboratories: Lymphoid Malignancies, Myeloid Malignancies, Cancer Immunology and Genetics and Computational Biology.

Laboratory for Lymphoid Malignancies

Head: Mr Matthew Szydlowski PhD
Team: Dr Anna Polak
Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 517, +48 22 34 96 518 and
+48 22 34 96 305
e-mail: mszydlowski@ihit.waw.pl

The mechanisms of B-cell tumour pathogenesis and identifying their therapeutic targets form the bulk of this laboratory's work. Studies are focused firstly on the mechanisms of B-cell receptor signal transmission and its effectors and secondly on the role of PIM kinases in such tumours. Further research is also performed on the mechanisms of drug resistance in acute lymphoblastic leukaemia and profiling the characteristics of clonogenic cell populations.

Laboratory for Myeloid Malignancies



Head: Ms Emily Bialopiotrowicz PhD
Team: Monica Noyszewska-Kania MSc

Address: 14 Indira Gandhi Street, 02–776 Warszawa
Tel: +48 22 34 96 517, +48 22 34 96 518 and
+48 22 34 96 305
e-mail: ebialopiotrowicz@ihit.waw.pl

The laboratory seeks for new epigenetic and metabolic mechanisms occurring in tumours of the hematopoietic system, which can be targeted by inhibitors and thereby potentially constituting a novel therapeutic strategy. In addition, the mechanisms for determining the potential of self-renewal in leukemic stem cells are investigated.

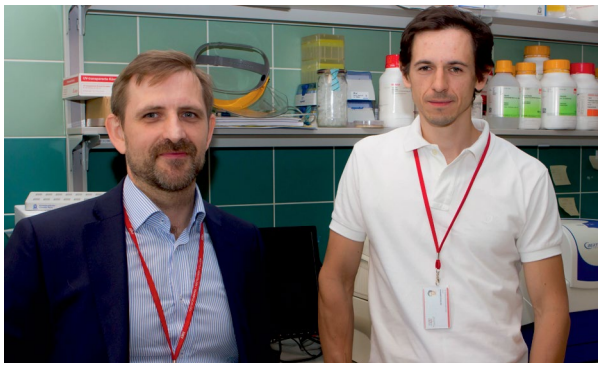
Laboratory for Cancer Immunology

Head: Ms Eva Jablonska PhD
Team: Ms Caroline Piechna MSc

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 517, +48 22 34 96 518 and
+48 22 34 96 305
e-mail: ejablonska@ihit.waw.pl

The laboratory develops new strategies for immunotherapy in myeloid and lymphoid neoplasms. These studies are carried out within a wide multi-centre collaboration of the Strategmed program. The laboratory also works with other institute laboratories, the Haematology Clinic and the Department of Diagnostic Haematology regarding immunological techniques used for studies on tumours of the hematopoietic and lymphatic systems.

Laboratory for Genetics and Computational Biology



Head: Mr Patrick Gorniak PhD

Address: 14 Indira Gandhi Street, 02–776 Warsaw
Tel: +48 22 34 96 517, +48 22 34 96 518 and
+48 22 34 96 305
e-mail: pgorniak@ihit.waw.pl

This laboratory collaborates with other institute laboratories concerning bioinformatic techniques and large scale study analyses required for ongoing research projects. It also provides research facilities for developing and validating new diagnostic tests that use techniques based on genetics and molecular biology.