Cover Figure

Labeling of ADAMTS13 protein and markers of ER and cis-Golgi compartments in COS-7 cells. This illustration is taken from the Brief Report by Palla and colleagues on page 289.

Editorials and Perspectives

157 Malarial anemia and STAT6
Kathryn J.H. Robson and David J. Weatherall

Understanding the mechanisms behind malarial anemia should lead to new approaches to the management and treatment of children. In this perspective article Drs. Robson and Weatherall examine the pathophysiology of this condition. See related article on page 195.

160 T-cell acute lymphoblastic leukemia
Sabina Chiaretti and Robin Foà

The T-cell variant accounts for about 15 to 25% of acute lymphoblastic leukemias in children and adults. In this perspective article, Drs. Chiaretti and Foà examine our present understanding of this disorder. See related article on page 224.

163 Changing paradigms in the treatment of multiple myeloma
Joan Bladé and Laura Rosiñol

The outcome of patients with multiple myeloma treated with conventional approaches has been unsatisfactory. In this perspective article, Drs. Bladé and Rosiñol examine the novel therapeutic options and their impact on the survival of these patients. See related paper on page 270.

166 Inherited thrombotic thrombocytopenic purpura
Miriam Galbusera, Marina Noris and Giuseppe Remuzzi

Thrombotic thrombocytopenic purpura is due to germline mutations of the ADAMTS13 gene in about one fifth of patients. In this perspective article Dr. Galbusera and colleagues examine the pathophysiology of this inherited condition. See related article on page 289.

170 Hepatitis C virus and allogeneic stem cell transplantation still matters!
Gérard Socié, Régis Peffault de Latour, and George B. McDonald

The high prevalence of hepatitis C virus infection explains why not negligible proportions of candidates for hematopoietic stem cell transplantation have this infection. In this perspective article, Dr. Socié and colleagues discuss the clinical problems that derive from hepatitis C virus in transplant recipients. See related article on page 249.

Original Articles

Mesenchymal Stem Cells

173 Isolation of functionally distinct mesenchymal stem cell subsets using antibodies against CD56, CD271, and mesenchymal stem cell antigen-1
Venkata Lokesh Battula, Sabrina Treml, Petra M. Bareiss, Friederike Gieseke, Helene Roelofs, Peter de Zwart, Ingo Müller, Bernhard Schewe, Thomas Skutella, Willem E. Fibbe, Lothar Kanz, and Hans-Jörg Bühring

Mesenchymal stem cells are self-renewing cells with the ability to differentiate into osteocytes, chondrocytes and adipocytes. This article describes a subset of mesenchymal stem cells with distinct phenotypic and functional properties.

Hematopoietic Stem Cells

185 Ex vivo expansion of hematopoietic progenitor cells is associated with downregulation of α4 integrin- and CXCR4-mediated engraftment in NOD/SCID β2-microglobulin-null mice
Jacques Foguenne, Ivano Di Stefano, Olivier Giet, Yves Beguin, and André Gothot

This study shows that ex vivo culture of hematopoietic stem cells is associated with downregulation of both α4 and CXCR4-mediated engraftment.

Malarial Anemia

195 STAT6-mediated suppression of erythropoiesis in an experimental model of malarial anemia
Neeta Thawani, Mifong Tam, and Mary M. Stevenson

The findings of this study indicate a STAT6-dependent mechanism involving interleukin-4 in mediating erythropoietic suppression during blood-stage malaria. See related perspective article on page 157.

Chronic Myeloid Leukemia

205 The long-term durability of cytogenetic responses in patients with accelerated phase chronic myeloid leukemia treated with imatinib 600 mg: the GIMEMA CML Working Party experience after a 7-year follow-up
Francesca Palandri, Fausto Castagnetti, Giuliana Alimeni, Nicoletta Testoni, Massimo Breccia, Simona
Luatti, Giovanna Rege-Cambrin, Fabio Stagno, Giorgina Specchia, Bruno Martino, Luciano Levato, Serena Merante, Anna Maria Liberati, Fabrizio Pane, Giuseppe Saglio, Daniele Alberti, Giovanni Martinelli, Michele Baccarani, and Gianantonio Rosti

The findings of this phase 2 multicenter trial indicate that imatinib may induce durable responses in patients with accelerated phase chronic myeloid leukemia.

Acute Myeloid Leukemia

213 Frequent genomic abnormalities in acute myeloid leukemia/myelodysplastic syndrome with normal karyotype
Tadayuki Akagi, Seishi Ogawa, Martin Dugas, Norihiko Kawamata, Go Yamamoto, Yasuhito Nannya, Masashi Sanada, Carl W. Miller, Amanda Yang, Susanne Schmitzer, Torsten Haferlach, Claudia Haferlach, and H. Phillip Koehler

In this study, single-nucleotide polymorphism microarray analysis was employed to identify hidden genomic abnormalities in patients with acute myeloid leukemia. The findings suggest that at least one half of cases with normal karyotype have readily identifiable genomic abnormalities.

Acute Lymphoblastic Leukemia

224 CD56 expression in T-cell acute lymphoblastic leukemia is associated with non-thymic phenotype and resistance to induction therapy but no inferior survival after risk-adapted therapy
Lars Fischer, Nicola Gökbuget, Stefan Schwartz, Thomas Burmeister, Harald Rieder, Monika Brüggemann, Dieter Hoelzer, and Eckhard Thiel

The findings of this study indicate that CD56 is expressed on a subset of adult T-cell acute lymphoblastic leukemia cells with distinct immunophenotypic features and greater resistance to therapy. See related perspective article on page 160.

Hodgkin’s Lymphoma

230 Reduced intensity conditioning allogeneic stem cell transplantation for Hodgkin’s lymphoma: identification of prognostic factors predicting outcome

The findings of this study suggest that for patients with Hodgkin’s lymphoma in whom an autologous transplant is deemed to be at high risk of failing, a reduced intensity conditioning allogeneic stem cell transplantation may represent a more effective therapy.

Stem Cell Transplantation

239 Prevention of pure red cell aplasia after major or bidirectional ABO blood group incompatible hematopoietic stem cell transplantation by pretransplant reduction of host anti-donor isoagglutinins
Georg Stussi, Jörg Halter, Eveline Bucheli, Pietro V. Valli, Lutz Seebach, Jürg Gmur, Alois Gratwohl, Urs Schanz, Jakob R. Fassweg, and Jörg D. Seebach

In this study of a large group of patients who underwent major ABO incompatible hematopoietic stem cell transplantation, it was found that pre-transplant reduction of anti-donor isoagglutinins prevented post-transplant pure red cell aplasia.

Stem Cell Transplantation

249 Impact of hepatitis C virus seropositivity on survival after allogeneic hematopoietic stem cell transplantation for hematologic malignancies

The findings of this study suggest that hepatitis C seropositivity is a significant risk factor for non-relapse mortality after allogeneic stem cell transplantation, even in patients with normal or minimally abnormal liver function tests. See related perspective article on page 170.

Progress in Hematology – Review Article

258 Mesenchymal Stem Cells
Muzlifah A. Haniffa, Matthew P. Collin, Christopher D. Buckley, and Francesco Dazzi

This review article presents the evidence that mesenchymal stem cells and fibroblasts share much more in common than previously recognized.

Decision Making and Problem Solving

264 Myelodysplastic Syndromes
Diagnostic criteria to distinguish hypocellular acute myeloid leukemia from hypocellular myelodysplastic syndromes and aplastic anemia: recommendations for a standardized approach
John M. Bennett and Attilio Orazi
This Decision Making and Problem Solving article reports recommendations for distinguishing hypocellular acute myeloid leukemia from hypocellular myelodysplastic syndromes and aplastic anemia.

**Multiple Myeloma**

270  
Expected long-term survival of patients diagnosed with multiple myeloma in 2006-2010  
Hermann Brenner, Adam Gondos, and Dianne Pulte

The findings of this Decision Making and Problem Solving article suggest that patients diagnosed with multiple myeloma in 2006-2010 are expected to have much higher long-term survival perspectives than suggested by previously available survival statistics.

**Brief Reports**

**Disorders of Iron Metabolism**

276  
Expression of hepcidin and other iron-related genes in type 3 hemochromatosis due to a novel mutation in transferrin receptor-2  
Sara Pelucchi, Raffaella Mariani, Paola Trombini, Sabina Coletti, Matteo Pozzì, Valentina Paolini, Donatella Barisani, and Alberto Piperno

This brief report describes the decreased hepatic and urinary expression of hepcidin in type 3 hemochromatosis.

**Chronic Lymphocytic Leukemia**

280  
Cryptochrome-1 expression: a new prognostic marker in B-cell chronic lymphocytic leukemia  
Eloisa Jantus Lewintre, Cristina Reinoso Martín, Carlos García Ballesteros, David Montaner, Rosa Farràs Rivera, José Ramón Mayans, and Javier García-Conde

This study suggests that cytochrome-1 is a valuable predictor of disease progression in early-stage chronic lymphocytic leukemia.

**Plasmacitoid Dendritic Cell Neoplasms**

285  
Cytoplasmic nucleophosmin is not detected in blastic plasmacytoid dendritic cell neoplasm  
Fabio Facchetti, Stefano A. Pileri, Claudio Agostinelli, Maria Paola Martelli, Marco Paulli, Adriano Venditti, Massimo F Martelli, and Brunangelo Falini

The findings of this study point to cytoplasmic nucleophosmin as a new marker for distinguishing between acute myeloid leukemia associated with NPM1 mutations and blastic plasmacytoid dendritic cell neoplasm.
**Stem Cell Transplantation**

302  HLA-identical umbilical cord blood transplantation from a sibling donor in juvenile myelomonocytic leukemia

Andrica C.H. de Vries, Robbert G.M. Bredius, Arjan C. Lankester, Marko Bierings, Monika Trebo, Petr Sedlacek, Charlotte M. Niemeyer, Marco Zecca, Franco Locatelli, and Marry M. van den Heuvel-Eibrink

**Book Review**

305  Ciril Rozman. El reto asumido
(The challenge accepted)

Mario Cazzolà

**Continuing Medical Education**

Prognostic factors in reduced intensity conditioning allogeneic stem cell transplantation for Hodgkin’s lymphoma

Mesenchymal stem cells and fibroblasts

Diagnostic criteria to distinguish hypocellular acute myeloid leukemia from hypocellular myelodysplastic syndromes and aplastic anemia

CD56 expression in T-cell acute lymphoblastic leukemia