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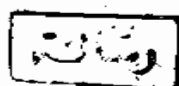
# Alternatives to Allogeneic Blood Transfusion

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Essay

Submitted For Partial Fulfilment  
of the Master Degree in  
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1996





*To  
My Family*

*Aileen*



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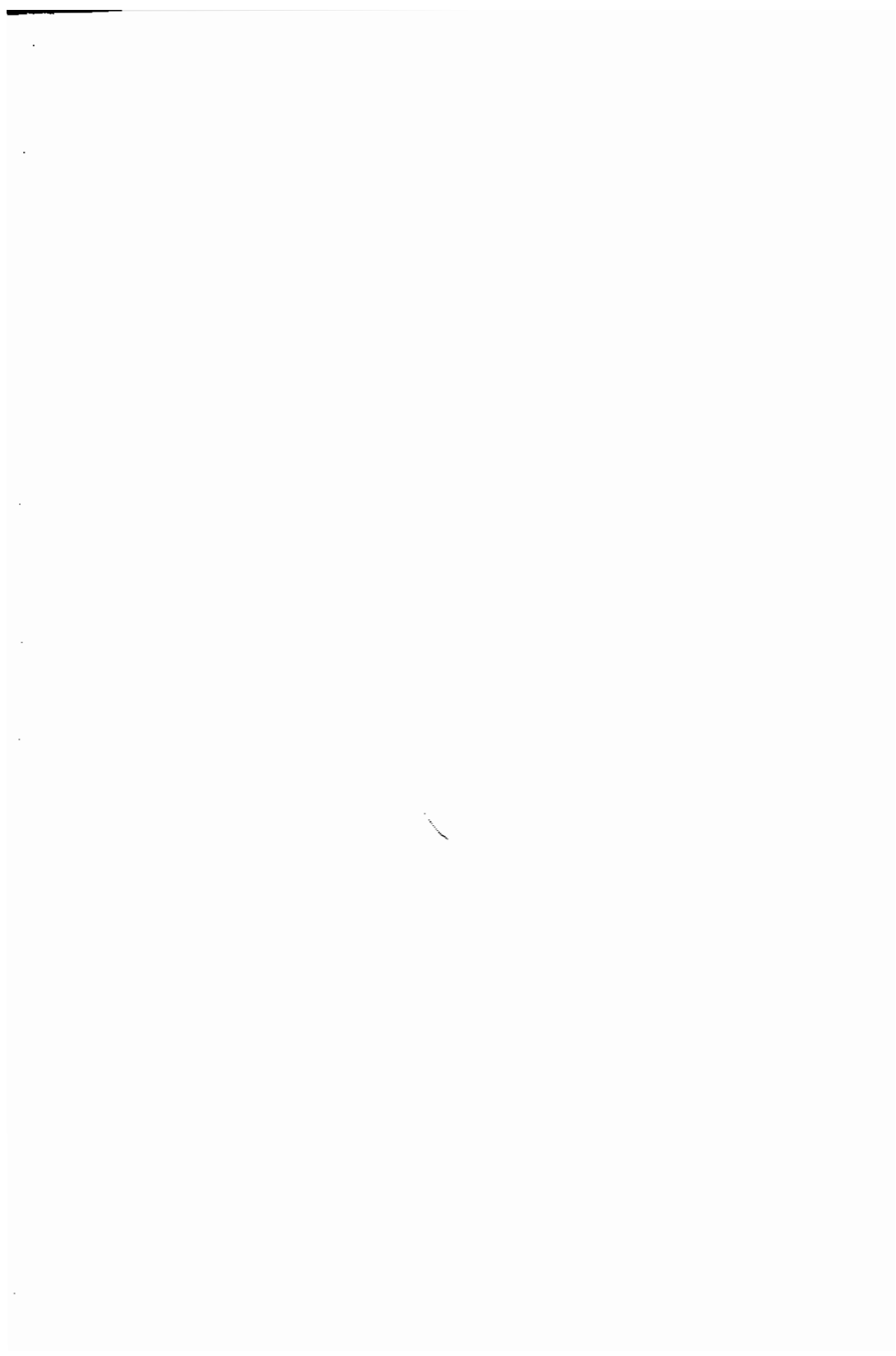


## **List of Abbreviations:**

- ABD : Autologous Blood Donation.
- ABT : Autologous Blood Transfusion.
- DBBF : Bis [3,5-dibromo-salicyl] fumerate.
- DDAVP : Desmopressin-D-arginine vasopressin.
- EACA : Epsilon - aminocaproic acid.
- EPO : Erythropoietin.
- Hb : Hemoglobin
- HD : Preoperative Hemodilution.
- HES : Hyroxyethyl - starch.
- IBS : Intraoperative Blood Salvage.
- NSA : Normal Serum Albumin.
- PABD : Preoperative Autologous Blood Donation.
- PFCs : Perfluorocarbons.
- PLP-Poly Hb : Pyridoxal-5' phosphate polymerized hemoglobin
- rHu EPO : Recombinant Human Erythropoietin.



**INTRODUCTION  
AND  
AIM OF THE WORK**



Blood is a very precious fluid, which in many cases, is a life saving material. However, allogeneic blood transfusion has always been associated with risks, although the nature of these risks has changed over time. Immune-mediated hemolysis, once a much-feared complication, has taken a back seat to concerns about transfusion - transmitted diseases. Although the safety of blood transfusion has been markedly improved by the use of tests to screen donors for an array of infectious illnesses, a risk-free blood supply is an unrealistic goal. Therefore in tandem with efforts to improve the safety of blood, a variety of approaches has been developed to reduce dependence on allogeneic [homologous] blood transfusions. New, more stringent indications for the use of blood in a variety of clinical settings have been proposed. Interest in techniques for collection and use of autologous blood has surfaced. The utility of pharmaceutical alternatives to transfusion is, also, under active investigation. As well as, potential red cell substitutes being an attractive attempt because they would not require cross-matching in emergencies, would not transmit disease, and would have a long storage life [Kruskall, 1994].

The aim of this essay is to introduce alternatives to allogeneic blood transfusion, their characteristics, potential clinical applications as well as, unsolved issues and future prospectives.

