

1. Purpose.

This document describes the functionality and operation of the webservice provided by ETRL.

The service is a SOAP based webservice and performs calculations based on the HLA types of a panel of donors. The chance to receive an organ and the percentage panel reactivity antibody on basis of the reactivity with the actual Eurotransplant donor population can be requested.

2. Parameters, functions and response.

The web service offers these functions:

- Calculate vPRA.
- Calculate the chance to receive an organ via different kind of blood group rules
- Calculate the chance to receive a kidney via the AM program

2.1 Parameters request.

There are two distinct parameters.

The **antigens** (sUnacceptables, sAcceptables en sTyping) is a string with the different HLA antigens divided by a space, comma or both. For example: : 'A*01:01 A3 B15 B62 B63 Bw4 Bw6 Cw3 Cw7 DR6 DR13 DR52 DQ1 DQ5 DQ6 DPB1*01:01 DQA1*03:01'.

The other parameter is the **blood group**. This string always needs to be provided in case of chance of receiving an organ calculations and can have the values 'A', 'B', 'AB' or 'O'.

2.2 vPRA function.

Here, the percentages panel reactivity antibody are calculated, taking into account the unacceptable antigens for 11 loci as entered in string **sUnacceptables**. The program counts the number of donors who don't have any of the entered unacceptable antigens.

2.3 FreqABOCompatible, FreqABOETCompatible, FreqABOIdentical.

These functions calculate the chance to receive an organ, taking into account the unacceptable antigens for 11 loci as entered in string **sUnacceptables** and the blood group **ABO**. The program counts the number of donors according to the ABO rules, who also don't have any of the entered nonacceptable antigens.

2.3 Function FrequencyAM.

This function calculates the chance to receive a kidney within the AM program, taking into account the typing in **sTyping**, the acceptable antigens in **sAcceptables** and the blood group in **ABO**. Only the splits of A-, B- en DR antigens are used. Broads and other antigens will be ignored. For the blood type, the search will be for donors with a compatible blood group.

2.4 Response.

The response is equal for all functions and consists of a frequency, the number of matches, the panel size, the and possibly an error response. The response is also available as a class, ETRLResponse.

For example:

```
<ETRLResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-  
instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://ETRL.O  
RG/">  
  
    <Frequency>28.580</Frequency>  
    <Matches> 2858</Matches>  
    <PanelSize>10000</PanelSize>  
    <Version>4.0</Version>  
    <ErrorMessage/>  
  
</ETRLResponse>
```

3 URL.

The URL is <https://www.etril.org/calculator4.0/calculator4.0.asmx>.

4 Contact.

For technical questions, feedback or to obtain a valid username / password combination, please contact:

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