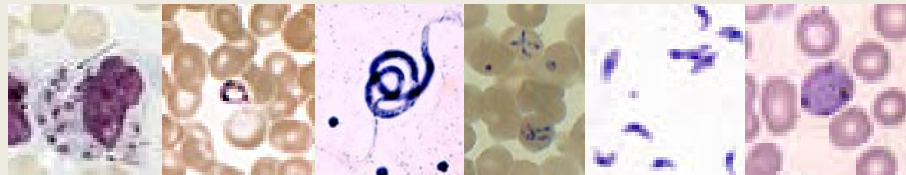


ISBT Working Party on Transfusion-Transmitted Infectious Diseases

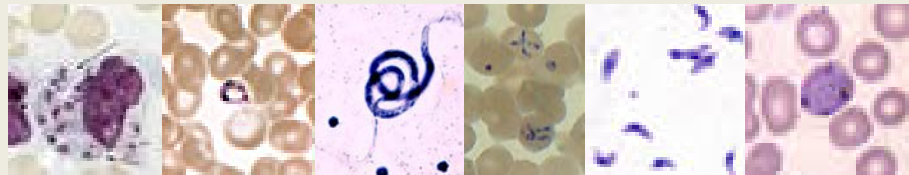
Annual Meeting
Saturday, 3rd September 2016
Dubai, UAE

Overview of the Subgroup on Parasites



Organizational Structure

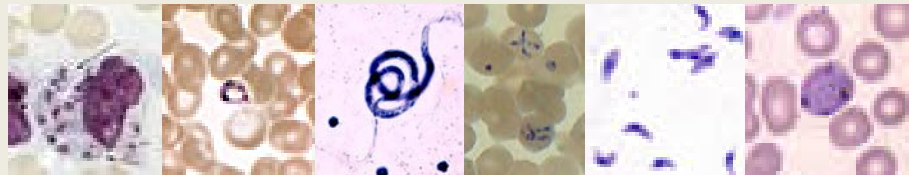
- leadership changes
 - concerns about co-located coordinators expressed by Executive Committee
 - Hira Nakhasi stepped down as co-coordinator
 - replaced with Evan Bloch and Silvano Wendel
- adhered to scheduled quarterly conference calls
 - November 2015; February, May & August 2016
 - documented by minutes
- participation remains constant at 8 to 10 members, with collaborators from other Subgroups
- focused on key parasitic agents:
 - *Plasmodium* sp., *Trypanosoma cruzi*, *Babesia* sp., & *Leishmania* sp.



Current Projects: #1

Parasite Survey/Vox International Forum

- aim: designed to investigate and compare the worldwide historical frequency and risk of transfusion-transmitted parasitic infections and associated mitigation strategies designed to prevent their transmission
- surveys sent to transfusion medicine leaders in ~ 100 countries
- goal: completion and submission of manuscript to Vox Sanguinis as an “International Forum”
- formation of writing group:
 - David Leiby, Evan Bloch, Sheila O’Brien & Silvano Wendel
 - group met regularly to review data and draft sections
 - manuscript to WPTTID Executive Committee in the coming months



Examples of Summary Data:

Babesia

Table 1: Historical Data, Strategies to Reduce the Risk of TT *Babesia* sp. & Perceptions

| | |
|--|--|
| Historical Cases of TT <i>Babesiosis</i> | 163 |
| Number of transfusion associated deaths ascribed to Babesia | 28 |
| Testing Methodologies | AFIA and ELISA (USA Only) |
| Endemic Countries | USA 162 (4.9 annual incidence) Canada 1(<1 annual incidence) |
| Use Risk Factor Questions | Belgium vector Australia Canada New Zealand travel Portugal travel, birth, residency, vector Germany USA |
| Permanent Deferral | Australia Canada Spain New Zealand Croatia Guatemala Brazil Tunisia USA |

Examples of Summary Data (cont.):

Malaria

Table 1 Strategies to reduce risk of malaria in participating countries

| | Country | TTM/yr | Temporary Deferral |
|-------------------------------------|----------------|---------------|---------------------------|
| <u>Endemic Countries</u> | | | |
| | Honduras | No data | 1 year |
| | S. Africa | <1 | 3 years |
| | Mexico | NA | No |
| | Guatemala | NA | ? |
| | Ghana | NA | No |
| | Brazil | <1 | 30 days, 1 year |
| <u>Non-Endemic Countries</u> | | | |
| <i>Selective Testing</i> | | | |
| | Norway | 0 | 1 year |
| | Hong Kong | 0 | 1 year |
| | England/Wales | <1 | 6 month, 3 years |
| | Belgium | 0 | 6 month, 3 years |
| | Australia | <1 | 4 month, 3 years |
| | Spain | NA | 4 months |
| ? | Poland | 0 | 1 year |
| | New Zealand | 0 | 4 months |
| | Denmark | 0 | 6 month, 3 years |
| | Portugal | 0 | 4 month, 3 years |
| | Finland | 0 | 6 month, 3 years |
| | France | <1* | 4 month |
| <i>Deferral</i> | | | |
| | Israel | 0 | 1 year, 3 years |
| | Canada | <1 | 1 year, 3 years |
| ? | Poland | 0 | 1 year |
| | Russia | 0 | 3 years |
| | Croatia | 0 | 3 years |
| | Ireland | 0 | 1 year |
| | Tunisia | <1 | No temp deferral |
| | Germany | NA | 6 months |
| | USA | 2* | 1 year, 3 years |

*1 case in last year of available data

** Some countries have partial plasma/platelet pathogen inactivation

Examples of Summary Data (cont.):

Malaria

Table 3

| | N donations tested | N positive | N equivocal or indeterminate | Discard Rate | N unique donors tested | N unique donors positive |
|--------------------|-----------------------------------|--------------------------------------|---|-------------------------|---------------------------------------|---|
| Norway | 1,809 | 8 | - | - | 1,809 | 8 |
| England | 44,103 | 203 | 325 | 3.39% | | |
| Wales | 1,829 | 6 | 11 | 1.9% | - | - |
| Belgium | 506 | 13 | - | - | 491 | 12 |
| Australia | 116,610 | 2,405 (EIA RN) But ODMA pos | 0 | - | - | - |
| Spain | 12,611 | 12 | 73 | 0.7% | 12,611 | 12 |
| New Zealand | 5,959 | 365 | 10 | 6.3% | 5,835 | 360 |
| France | 183,912 | 1,045 | 2,288 | 1.81% | 144,672 | 1,176 |

Examples of Summary Data (cont.):

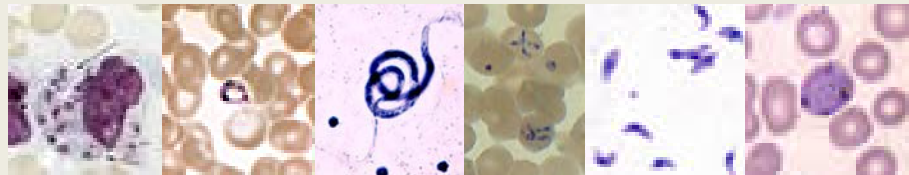
Chagas

| Risk Factor | Yes | No | NA/unknown | |
|---|---|----|------------|--------------|
| Risk Factor ?'s-Chagas | 19 | 4 | 5 | |
| Travel-Chagas | 16 | 5 | 7 | |
| Birthplace-Chagas | 15 | 6 | 7 | |
| Residency in endemic-Chagas | 14 | 7 | 7 | |
| Contact w/vectors-Chagas | 5 | 13 | 10 | |
| Out-right donor deferral-Chagas | 13 | 6 | 9 | |
| Selection of donors for blood screening-Chagas | 9 | 10 | 9 | |
| Temporary donor deferral-length of deferral-Chagas | 4 mo – 2 6 mo – 6 3 yrs – 1 Indefinite - 3 | 4 | 12 | |
| Re-entry criteria after deferral-Chagas | 7 | 8 | 13 | |
| Permanent donor deferral-Chagas | 15 (Australia accepts for plasma fractionation) | 2 | 11 | |
| Current screening efficacious-Chagas | 16 | 2 | 10 | |
| If no testing: if avail, would you use it for donor screening | 3 | 5 | 18 | Possible - 2 |
| Donor-re-entry | 6 | 2 | 20 | |
| Chagas Both | 1 | 1 | 26 | |
| Chagas None | 3 | 0 | 25 | |
| Chagas Pathogen reduc in use | 9 | 11 | 8 | |
| If yes, methods:-Chagas | Intercept – 2 Methylen blue – 1 SD – 4 Pasteurization – 1 Mixed - 2 | 10 | 8 | |
| % methods used-Chagas | 100% - 4 (plasma) 2.5% - 1 (plasma) 4.4% - 1 (plasma) and for 7.71% PLT | 2 | 20 | |

Current Projects: #2

Babesia and the Blood Supply: People's Republic of China

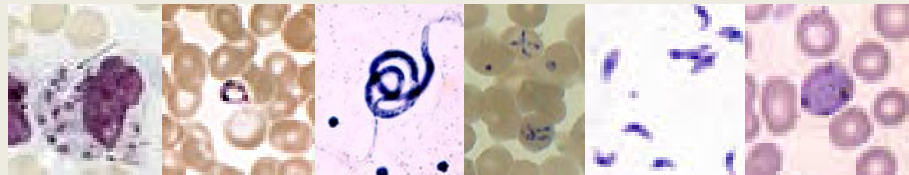
- project funded by the WPTTID
- investigators:
 - Evan M. Bloch: Johns Hopkins University School of Medicine
 - Hua Shan: Stanford University School of Medicine
 - Miao He, Yu Liu & Jingxing Wang: Institute of Blood Transfusion, Chinese Academy of Medical Sciences (Chengdu, China)
 - Laura Tonnetti, American Red Cross
 - David A. Leiby: U.S. Food and Drug Administration
- research questions:
 - What is the seroprevalence of *B. microti* in a sample of Chinese blood donors?
 - What is the rate of *Babesia* parasitemia as evidenced by detectable *Babesia* DNA in a sample of Chinese blood donors?



Current Projects: #3

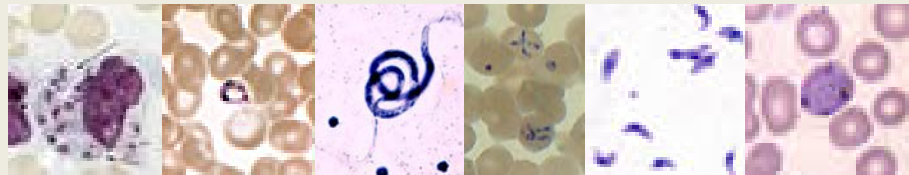
“Malaria Policy and Risk Based Decision Making Framework”

- collaborative study with SRAP Subgroup
- builds off earlier published paper:
 - O'Brien SF, Delage G, Seed CR, Pillonel J, Fabra CC, Davison K, Kitchen A, Steele WR, Leiby DA. The Epidemiology of Imported Malaria and Transfusion Policy in 5 Nonendemic Countries. *Transfusion Medicine Reviews* 2015;29:162-171.
- discussed earlier by Sheila O'Brien
- assessments and considerations for policy based on established framework
 - US, Canada, Australia, France & England



Projects Under Consideration

- establishment of a *Babesia* reference panel to be distributed through WHO
- develop *T. cruzi* survey on epidemiology and mitigation strategies in non-endemic countries
 - compare effectiveness of strategies
 - coordinated with SRAP Subgroup
- develop a repository of *T. cruzi* parasite lineages
 - transmissibility may vary by lineage type
 - initially seeking isolates to expand existing *T. cruzi* repository
 - focus on those isolates implicated in transfusion transmission



Today's Agenda

13:00 - 14:30 – Subgroup on Parasites

- Overview of Subgroup Activities (David Leiby)
- *Babesia* in China: Presentation of Project Proposal (Evan Bloch)
- NAT Strategies for *Babesia* testing – (Jeff Linnen)
- Intercept for preventing transfusion transmitted babesiosis (Adonis Stassinopoulos)
- Update on Mirasol and its role in mitigation of transfusion associated parasitic risk (Heather Pidcoke)
- Is malaria infection and parasitemia affected by blood group? (JP Allain)

