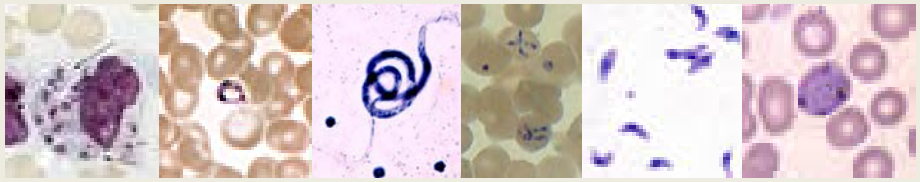
ISBT Working Party on Transfusion-Transmitted Infectious Diseases

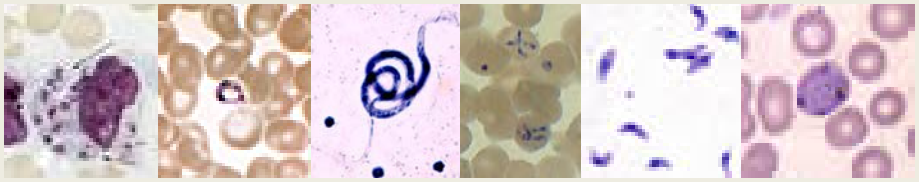
Annual Meeting
Saturday, 3rd September 2016
Dubai, UAE

Overview of the Subgroup on Parasites



Organizational Structure

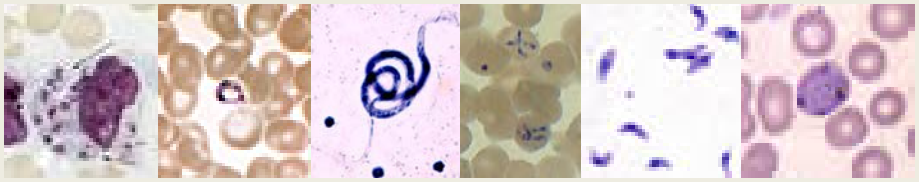
- leadership changes
  - concerns about co-located coordinators expressed by Executive Committee
  - Hira Nakhasi stepped down as co-coordinator
  - replaced with Evan Bloch and Silvano Wendel
- adhered to scheduled quarterly conference calls
  - November 2015; February, May & August 2016
  - documented 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 *Babesiosis*		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
Endemic Countries			
	Honduras	No data	1 year
	S. Africa	<1	3 years
	Mexico	NA	No
	Guatemala	NA	?
	Ghana	NA	No
	Brazil	<1	30 days, 1 year
Non-Endemic Countries			
Selective Testing	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
Deferral	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%		
Males	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.):

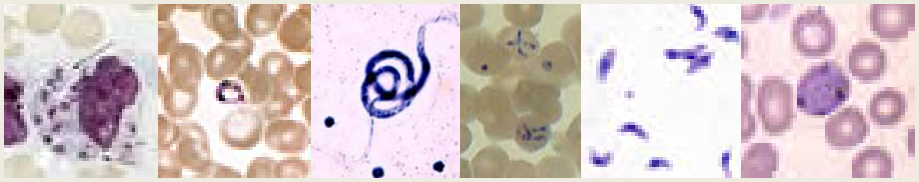
Chagas

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*

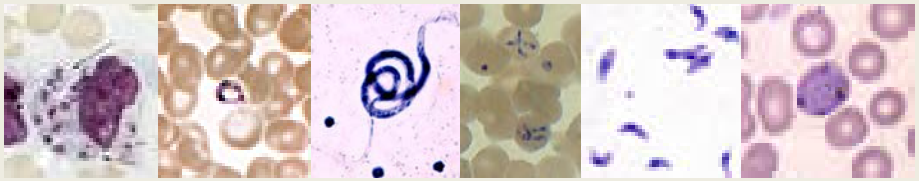
- project funded by the WPTTID
- investigators:
  - Evan M. Bloch: Johns Hopkins University School of Medicine
  - Hua Shan: Stanford University School of Medicine
  - Miao He, Yu Liu & Jingxing Wang: Institute of Blood Transfusion, Chinese Academy of Medical Sciences (Chengdu, China)
  - Laura Tonnetti, 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

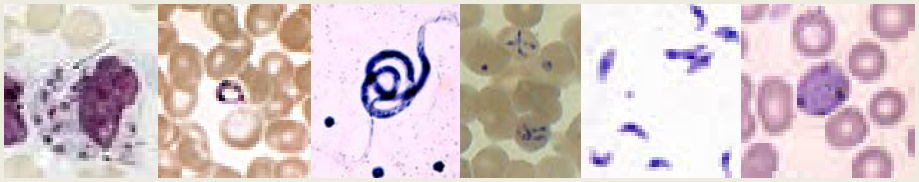
"Malaria Policy and Risk Based Decision Making Framework"

- 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)