GAPP Newsletter July 2016

Dear GAPP collaborators,

It is 12 months since we last wrote to you and we thought it was time for an update. We have had several important developments in the GAPP project during the past year and are looking forward to seeing things progress over the next few months. We have an updated GAPP website:-http://www.birmingham.ac.uk/research/activity/cardiovascular-sciences/research/platelet-group/platelet-gapp/index.aspx

Participant recruitment update

- We have recently extended the GAPP study until December 2018 based on obtaining further funding to support the study and have increased our target to 900 participants; however we will soon extend this to 1000 participants since we have already reached 888 participants.
- In addition we have recently added Our Lady's Children's Hospital in Dublin as a new approved centre onto the study and are beginning to test patients from this centre.

We continue to accept patients who meet the study criteria (see website) and are currently trialling a new system for platelet phenotyping based on remote testing (Haematology centres from Lincoln, Manchester and Nottingham) which was previously published by our colleagues ("**Evaluation of a whole blood remote platelet function test for the diagnosis of mild bleeding disorders**." (Dovlatova N, *et al. J Thromb Haemost* 2014**;** DOI 10.1111/JTH.12555).

- We aim to screen out a lot of the "no platelet defect" patients which we are increasingly seeing and then to offer a full lumiaggregometry screen to patients with a proven platelet defect.

- The genetic investigation of patients with suspected **inherited thrombocytopenia** recruited into the GAPP study (funded by a BHF project grant) is progressing well and we are continuing to identify potential disease causing genes using **whole exome DNA sequencing** and we have developed a **targeted panel of genes** to expedite the gene identification process with high genetic variant detection rates. Many of you will shortly receive patient reports based on these findings but please continue to send these patients to us.

Publications

- We have had several manuscripts published since we last wrote to you. The papers were entitled:-

"*SLFN14* mutations underlie thrombocytopenia with excessive bleeding and platelet secretion defects." (Fletcher SJ, *et al. Journal Clin Invest 2015;* 125 (9), 3600-05).

"Novel mutations in RASGRP2 encoding for CalDAG-GEFI abrogate Rap1 activation causing platelet dysfunction." (Lozano ML, *et al. Blood 2016; in press). This publication resulted from a sabbatical in the Birmingham lab undertaken by Dr Jose Rivera from the University of Murcia, Spain.*

"Whole exome sequencing identifies genetic variants in inherited thrombocytopenia with secondary qualitative function defects." (Johnson B, *et al. Haematologica* 2016**;** *in press*).

All primary publications have "on behalf of the GAPP collaborative" included in their authorship listing.

- We have also recently published 2 invited reviews:-
- Maclachlan A, Watson SP, Morgan NV (2016) **Inherited Platelet Disorders: Insight from Platelet Genomics using Next Generation Sequencing.** *Platelets* doi:10.1080/09537104.2016.1195492.

Johnson B, Fletcher SJ, Morgan NV (2016) **Inherited thrombocytopenia: Novel insights into megakaryocyte maturation, proplatelet formation and platelet lifespan.** *Platelets* doi:10.3109/09537104.2016.1148806.

- Please direct all queries to **Dr Neil Morgan**, n.v.morgan@bham.ac.uk who coordinates patient referrals and testing.

Finally we would like to thank you all very much for your ongoing support of the project. Please remember to contact us if you have any questions. We wish you all a great summer!

Best wishes

Neil Morgan on behalf of the GAPP collaborative

Dr Neil Morgan, Chief Investigator - **Principal Investigators:** Prof Steve Watson, Dr Martina Daly (Sheffield), Dr Paul Harrison and Dr Gillian Lowe.