DEVELOPMENT OF MOBILE APP FOR ACCESSING REFERENCE DIGITAL MORPHOLOGY IMAGES

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The use of digital morphology in haematology is becoming more commonplace, especially in the context of continuing professional development, training and education. This group has worked extensively in the application of digital morphology both in external quality assurance, and in the training of graduates and postgraduate students.

The need for an easily accessible guide for healthcare scientists and students with little morphology experience was recognised, initially provided online. Access to this guide has been achieved both in the UK and in Africa.

To improve access and deal with changing technology the decision was taken to produce an app.

Images were taken using the Zeiss Axio Imager M1 microscope using x63 oil immersion lens. The App was developed using a framework for the Apple iOS platform.
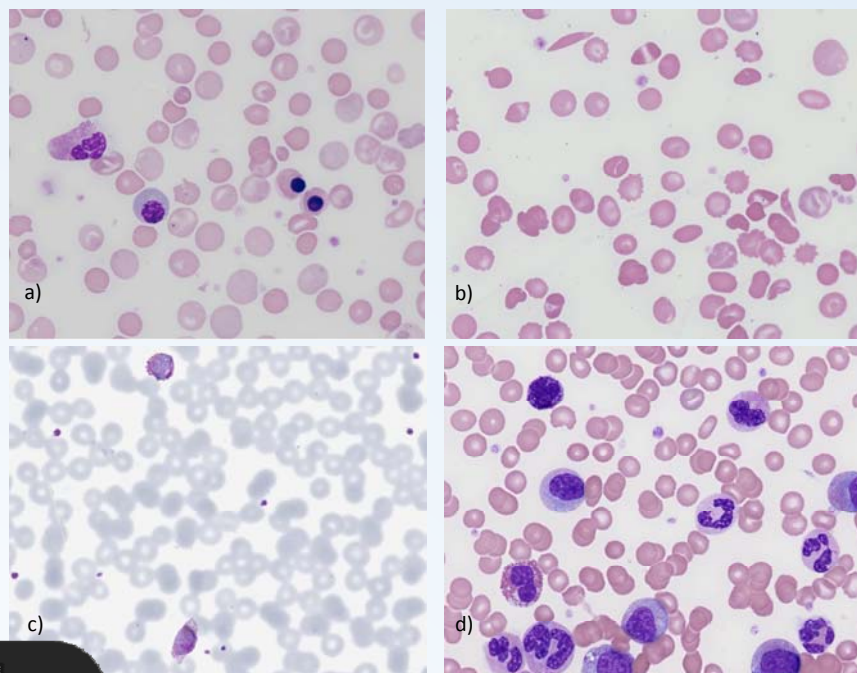

Figure 2: Full microscope field case images, a) β-thalassaemia major, b) Sickle cell anaemia c) P. ovale, d) Chronic granulocytic leukaemia and P. falciparum

Figure 1: Screenshots from the App, a) home page, b) RBC home page, c) Sickle cell page d) Acanthocyte page, e) full screen image

The app aims to improve morphological performance of individuals, when there is a lack of opportunity available for one to one training. Content includes erythrocyte, leucocyte, platelet and parasite morphology, along with laboratory methods (figure 1).

Full screen images equivalent to a microscope field are used to help in identification, especially when other features are also present (figure 2)

After initial trials with postgraduate students, use will be expanded to undergraduate students at Manchester Metropolitan University. The hope is to then make this available UK wide and potentially expand internationally if funding can be secured. Need for a training app has been identified in Africa, where mobile phone internet is better than broadband internet.

The International Council of Standardization in haematology (ICSH) expressed interest in the app, potentially to support the morphology nomenclature project. This App would aim to improve compliance with the recommendation and produce standardisation in wording used for morphological features worldwide.

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