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**Introduction**

Alternatives to traditional ‘wet’ laboratory practical required as increases in student numbers puts pressure on laboratory time and space. At the University of Bristol, our Pharmacology teaching lab accommodates 120 students, but in the current academic year student numbers on one first and one second year BSc Pharmacology unit are 187 and 144 respectively. Due to timetabling constraints we have not been able to run additional laboratory sessions and so have had to develop online-only practicals to replace previous laboratory practicals. All our practicals currently utilise our online dynamic laboratory manual, eBiolabs ([http://www.bristol.ac.uk/ebiolabs/](http://www.bristol.ac.uk/ebiolabs/)) which provides experimental information and pre- and post-lab quizzes, including providing feedback. The new online practical expand the use of eBiolabs to direct student activities including measurement of data traces, generation of graphs and calculation of pharmacological parameters. We have also trialled additional activities to provide feedback and support for these new practicals.

**Units using online practicals**

**Pharmacology 1A** - 9 practicals in total (3 online-only)  
Online practicals on ‘Introduction to Labchart’, ‘Antagonism’ and ‘Autonomic control of the cardiovascular system’.

**Pharmacology 2A** - 9 practicals in total (2 online-only)  
Online practicals on ‘Local anaesthetics’ and ‘Cholinergic modulation of learning and memory’.

**Measurement of local anaesthetic drug effects on the nerve action potentials** – previously a ‘wet’ laboratory practical using frog sciatic nerve. Issues with obtaining tissue for the practical made this a prime candidate for moving to online only.

**Local anaesthetic practical**

This practical is used by Dentistry and Medicine as well as Pharmacology students. For Pharmacology the students access the online material and complete the data analysis and quizzes in their own time.

**Cholinergic modulation of learning**

**Student performance and evaluation**

**Conclusions and Future Plans**

The development of online practicals has allowed us to teach larger cohorts within the timetabling constraints that exist without removing content. Students engaged will with the material and completed the associated quizzes (which are associated with a small contribution to overall unit marks). Feedback has primarily been given to students using our online system. ‘Drop-in’ sessions attracted a small number of students. Video feedback will be trialled in future.

Student marks for the Local Anaesthetic practical increased on previous years, although this analysis is not possible for other practicals which have been substantially changed compared to previous years.

Focus groups will be used to collect more student views on the online practicals; initial evaluation suggests the current online practicals are not as ‘interesting and informative’ as traditional ‘wet’ practicals.