Editors' view

On the waterfront – the breadth and depth of clinical pharmacology

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As a medical student I found most specialties interesting while I was studying them, and contemplated devoting myself to each specialty in turn. But best of all was clinical pharmacology, or as we called it in Scotland 'materia medica', because it covered the waterfront and left no specialty untouched. When I graduated and wondered what to do, there was no contest – the specialty than didn't specialize was the obvious choice; I decided to become a medical longshoreman. As Budd Shulberg wrote in the introduction to the 1988 reissue of his famous novel, '[On the Waterfront] is both an X-ray and a wide-angle lens.' Clinical pharmacology is a wide-angle lens because it covers so many different diseases and illnesses, and an X-ray because it covers them in

depth from individual molecules to individual people and even whole populations. This issue of the *Journal* well illustrates both how wide the lens angle is and how deeply the X-rays penetrate.

The wide-angle lens of clinical pharmacology in this issue of the *Journal* alone covers 15 separate specialties (Table 1). This breadth is both a strength and a weakness. A strength, because of the influence that clinical pharmacology has across the whole of medicine. But also a weakness, because it diffuses the impact of the subject; individual specialists, expert in using the drugs relevant to their own field, do not always appreciate what extra value a clinical pharmacologist can offer them.

Table 1

The breadth of clinical pharmacology: the subjects of the papers in this month's *Journal* and their relevant specialties

Specialty	Subject of the paper of interest (page numbers)
Cardiology	Stroke prevention and atrial fibrillation (798–806); endothelins and skin capillaries (720–5)
Dermatology	Endothelins and skin capillaries (720–5)
Endocrinology	Parathormone in haemodialysis (726–34); adverse effects of bisphosphonates on the gut (813–16)
Gastroenterology	Adverse effects of bisphosphonates on the gut (813–16)
Immunology	Pharmacology of allergic rhinitis (714–19)
Microbiology/Infectious diseases	Renal insufficiency and antifungal drugs (773–84); population pharmacokinetics of pyrimethamine and sulfadoxine (735–41)
Nephrology	Renal insufficiency and antifungal drugs (773–84); parathormone in haemodialysis (726–34)
Neurology	Stroke prevention and atrial fibrillation (798–806); effect of candesartan on taste (807–12);
Oncology	Population pharmacokinetics of cisplatin (756–63); epirubicin pharmacokinetics (764–72)
Pain relief	Population pharmacokinetics of methadone (742–55)
Paediatrics	Population pharmacokinetics of pyrimethamine and sulfadoxine in children (735–41)
Psychology	Debrisoquine hydroxylation in type A and type B personalities (785–89)
Rheumatology	Leflunomide in rheumatoid arthritis (790–7)
Toxicology	Quinine self-poisoning (817)
Medical ethics	The Declaration of Helsinki (695–713)

Figure 1
The depth of clinical pharmacology – from human pharmacology to applied pharmacology

The strength of clinical pharmacology is also evident from the depth of penetration of its X-rays. Figure 1 shows my interpretation of the depth of clinical pharmacology from molecules to populations. It spans human pharmacology (the equivalent of what basic pharmacologists do in animals) to applied pharmacology (what clinicians do). And the different levels cover the gamut of molecules, cells, tissues, organs, whole organisms, and populations. The scope is immense and challenging. And the papers in this issue of the *Journal* alone impressively cover almost the whole spectrum.

A two-dimensional representation of the breadth and depth of the subject, combining the data in Table 1 and Figure 1, would also be possible. This analysis is a preliminary to what I hope will be an analysis of papers published in the *Journal* over a longer period of time.

Meanwhile, whatever your interests, you are likely to find something here to hold your attention. Sit back, relax, and enjoy the stimulating view across the water-front.