To celebrate Chapeau Geraint’s amazing victory in the lap of France, Thorax dedicates this month’s airwaves to the great sport of road cycling.

LE TOUR
The Tour de France is the world’s premier cycle race and, once again, the winner was somebody with improbably large thighs. Not only is the vastus lateralis crucial for success in ridiculously long cycle races but it can also be a measure of critical illness. Endurance athletes tend to have high levels of functioning mitochondria, in contrast Puthucheary and colleagues demonstrate that patients with critical illness have impaired markers of mitochondrial function and levels decrease over time that was associated with increasing inflammation and impaired anabolic signalling (see page 926). It is interesting to consider that information obtained from the vastus lateralis may be as able to determine recovery from critical illness, as identify the winner of the Tour de France.

MARGINAL GAINS
Team Sky has won numerous cycling Grand Tours and Olympic medals through a philosophy of aggregating marginal gains. One approach to improve endurance is to improve inspiratory muscle strength through inspiratory muscle training (IMT) and this has been tried in both sporting and pathological situations with variable results. In this issue of Thorax, Charususin and colleagues present a randomised controlled trial to investigate whether IMT augments the benefits of pulmonary rehab in COPD (see page 942). Although IMT did improve inspiratory muscle function it did not improve the primary endpoint, 6 min walk test, although there were gains in secondary endpoints including cycling endurance. Maybe this is one for Team Sky, but will it work for COPD? Check out the editorial by Professors Polkey and Ambrosino to find out (see page 900).

THERAPEUTIC USE EXEMPTIONS
Therapeutic Use Exemptions or TUEs are common in the resource rich environment of professional cycling, and they have gained considerable notoriety recently with Sir Bradley Wiggins getting famously caught up in a TUE storm. In Uganda, the effects of the resource limitation are reported quite dramatically! Kirenga and colleagues describe a prospective study of patients with asthma and show that nearly 60% of patients had at least one exacerbation in the first year and nearly a third had three or more exacerbations and 3.7% of patients died (see page 983) Poor asthma control and impaired lung function were unsurprisingly associated with poor outcomes. Maybe Team Sky should pour some of their resource into helping Ugandan patients with asthma? They may not get a winner of the Tour de France but 3.7% pro-cyclists do not die of asthma!

FAIR WEATHER CYCLISTS
For the hardy cyclist, Winter requires woollies, leg and arm warmers, rain jackets, along with thermal gloves and overshoes. Summer not so much, with some tight fitting lycra covering the torso remains the challenge. may be, before the race is run, once again holds the key. The idiom ‘horses for courses’ is well known in sport, and in cycling a sprinter will never win a mountain stage and indeed they usually don’t even try and form a gruppetto just to ensure they make it to the finish. However, the concept understanding difference and personalising medicine is only just making it into the mainstream of respiratory and critical care medicine. Pinder and colleagues use a novel approach to focus treatment in patients with evidence of impaired neutrophil phagocytosis (see page 918). The aim of the study was to determine whether treatment with GM-CSF improved neutrophil phagocytosis in the critically ill. While the primary endpoint of effects on mean neutrophil phagocytosis were not met the proportion of patients with >50% neutrophil phagocytosis did increase. These data suggest that there may be ‘horses’ for GM-CSF ‘courses’ although identifying who they may be, before the race is run, once again remains the challenge.

A HEARTY BREAKFAST
Before a long cycle ride a hearty breakfast is required and our personal recommendation is a nice big bowl of porridge! Some people prefer cheerios but even then they should not be found in the lung (see page 994).

The Triumvirate
Sprinters take the bus
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