

# Buchan and Ledebor Clin Micro Rev 2014



## Emerging Technologies for the Clinical Microbiology Laboratory

**Blake W. Buchan, Nathan A. Ledebor**

Department of Pathology, Medical College of Wisconsin, Milwaukee, Wisconsin, USA

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# Why has the adoption of molecular methods in diagnostic microbiology so slow

Pallen and Loman *Genome Medicine* 2011, 3:53  
<http://genomemedicine.com/content/3/8/53>



## MUSINGS

Are diagnostic and public health bacteriology ready to become branches of genomic medicine?

At last, it seems that genomics has come up with a game-changer, a killer app, a disruptive technology that even those long wedded to the Gram stain and the agar plate can no longer ignore. Does this mean we are on the brink of a revolution in diagnostic and public health microbiology, in which high-throughput sequencing usurps the traditional 'M, C & S', or will the discipline's innate conservatism stand firm for decades to come?

# Inate conservatism?

- Rapid adoption of MALDI-TOF,
  - high capital cost, low running cost
- Wrong test/wrong price
  - 40 enteric pathogens £50
  - Detect *Candida* direct from blood £200
  - ID from positive Blood cultures £100-200

# Nice test, shame about the price

- Single target
  - Cepheid £20-50 - TB, MRSA, C diff, CRO
- Syndromic (£100-200)
  - Curetis Varyo – resp, orthorpaedic
  - BioFire FilmArray (BioM) – Ebola, resp, GI, BC, panels
- Everything
  - Abbott Iridica £150-200
- User friendly NGS
  - Illumina MiSeq → BioMerieux
  - Pathogenica ( BiolInnovations)