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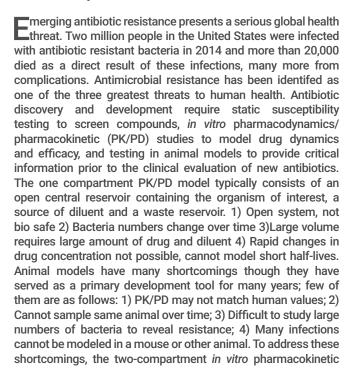
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## The hollow fiber infection model: Principles and practice

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model, the hollow fiber infection model (HFIM) utilizing hollow fiber bioreactors was developed. The advantages of the HFIM are as follows: 1) Closed, bio-safe system; 2) Large number of organism can be tested, revealing resistance; 3) Precisely simulates human PK/PD; 4) Repetitive sampling over time, both drug and organism; 5) Total kill can be determined; 6) Single use, disposable, reproducible; 7) Two drug models can be tested; 8) Can model both dosing curve and elimination curve and; 9) Can look at bacteria in different growth phases and in combination with cells. The clinical utility of the HFIM has been demonstrated and is now endorsed by the EMA. An overview of historic pk/pd models is presented and the utility of the system as it relates to antibiotics and other drugs are discussed.

## **Biography**

John James Stewart Cadwell received his Degree in Pharmacology from the University of Miami in 1981. He spent additional time studying at the University of Nottingham and the National Institute of Medical Research at Mill Hill, U.K. In 2000, he founded FiberCell Systems Inc., a company specializing in the research and supply of hollow fiber bioreactors. He has over 10 publications in the field and three patents relating to hollow fiber systems and is considered a World Expert in the field.

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