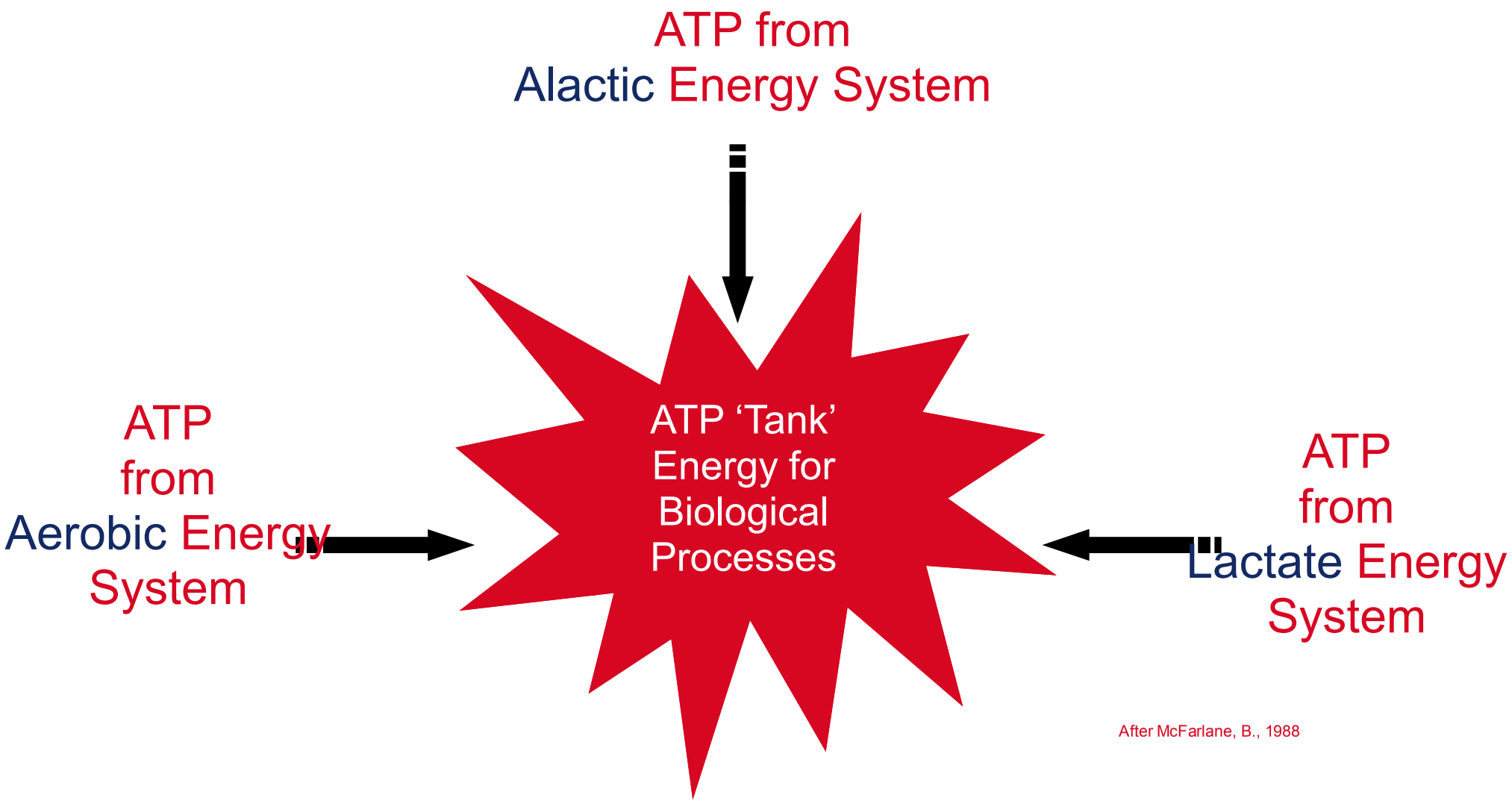
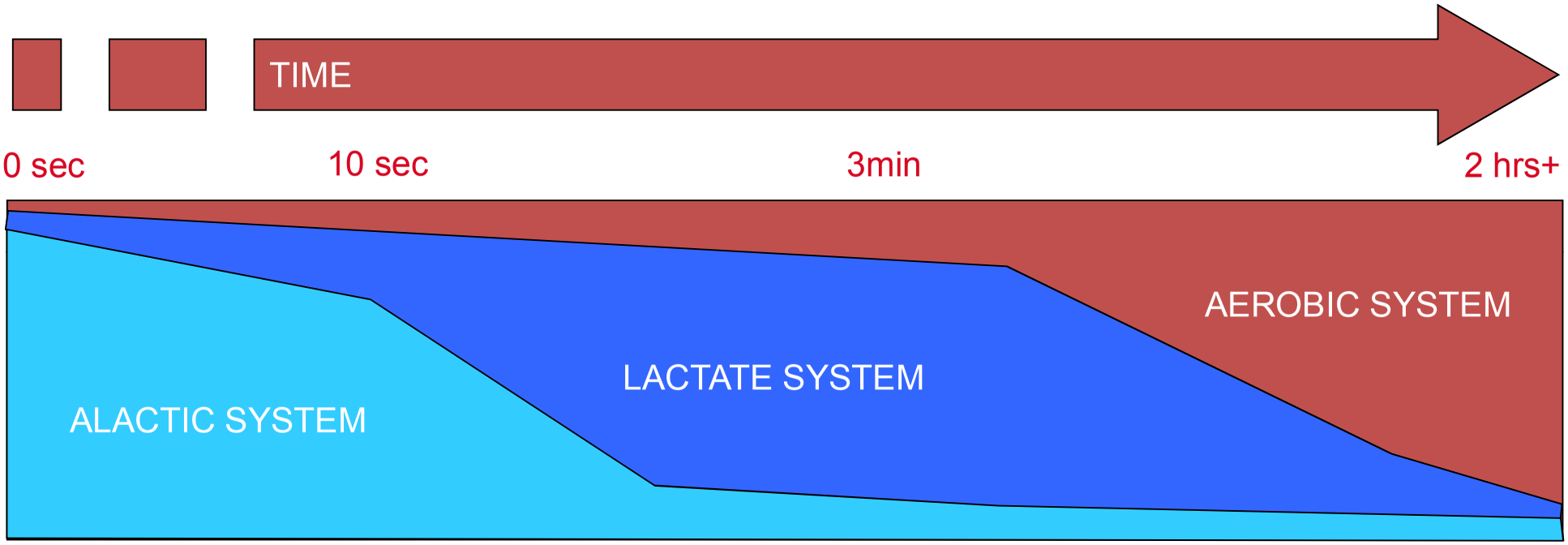
Production of ATP



Characteristics & Limitations of the Energy

Name	Alactic	Lactate	Aerobic
Characteristics	Capable of operating with no oxygen No lactic acid Get' s us going Up to 2-5mins recovery	Capable of operating with no oxygen Produces lactate and acid	Utilises oxygen to generate ATP Keeps us going
Limitations	Only 8-10 seconds of fuel	Availability of fuel and bodies ability to tolerate acidity 1-2mins moderate/high intensity activity	Fuel stores & oxygen supply mechanism

Three Energy Systems



P.J. L. Thompson, 2006

Alactic System

Short, max 10 secs, high intensity, stored start up system

Lactate System

Linking energy system

Aerobic System

Sustained energy system

Development of the Energy Systems

Energy systems do not work independently, so it is important that each system is developed

- Aerobic:
- e.g. steady state endurance training for 20-30 minutes or longer

- Lactate:
- e.g. repetition training, fartlek, circuits

- Alactic:
- e.g. high quality speed and power work (2-8 seconds)
- with enough rest to allow full recovery and replenishment of CP.

Energy System Usage

- The body does not understand distance or repetitions

- It does understand:
- How hard it is working (Intensity and/or Load)
- How long it is working for (Time)

- This dictates the energy system being emphasised.