

## Chelwest NNU Thursday Morning

# Journal Club

28/04/22

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### Paper of the Week

#### Is it time for routine probiotic use in UK neonatal units?

Paul Fleming

Archives of Disease in Childhood - Fetal & Neonatal Edition  
Editorial 2022



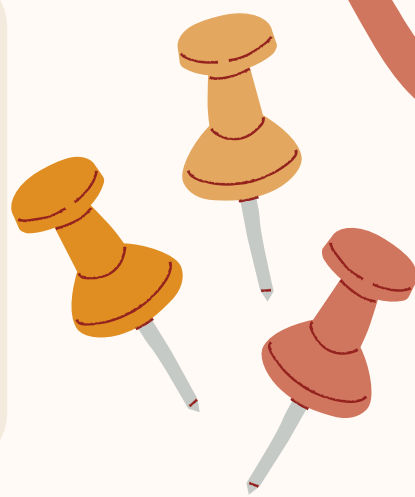
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### Background

"Live" yoghurt prolongs life" - Elie Metchnikoff

#### Criteria for a 'pro-biotic'

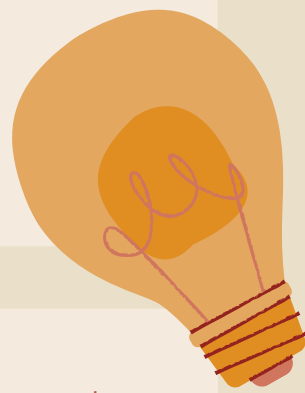
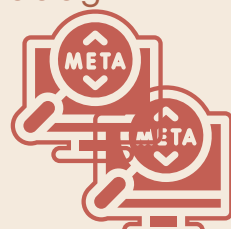
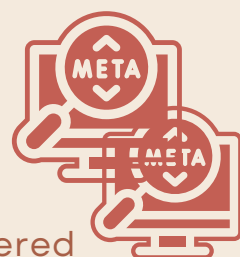
- Non-pathogenic
- Non-toxic
- Remains stable after culture, manipulation & storage
- Survive gastric, biliary & pancreatic digestion
- Able to induce a host response



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### Timeline

- 1992 Benner detected probiotics in stool
- 1993 Millar showed lactobacillus survives passage through gut
- 2003 Dani showed GG reduced UTI (& NEC)
- 2005 - The first RCTs (Chih-Lin & Bin-Nun) showed a statistically significant reduction in NEC (UNDER-POWERED)
- 2013 **PROPREMS** published - double blind placebo controlled RCT. Primary Outcome - sepsis (not powered for NEC.)  
----> Statistically significant for NEC in > 28/40 and >1000g
- 2016 **PIPS** published - RCT of a single strain probiotic  
----> Not associated with a reduction in NEC, sepsis or death
- 2018 Duffield et al survey showed 17% of UK NICUs using probiotics
- 2020 Clarke et al pre/ post implementation study showed reduction in NEC
- 2021 Granger et al pre/post implementation study showed no reduction in NEC



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### Conclusions

- Benefits are unsure but more likely to be present in more mature gestations/ bigger babies
- Harm is minimal but rarely need antibiotics
- Safe pharmaceutical grade products are available
- Large RCTs utilising neonatal networks and clinical collaboration are needed to find the most effective interventions to reduce NEC in the highest risk most preterm babies

### Coming up!

Dr Andrew Desilva presenting on 05/05/22

Any questions/ requests please contact your friendly research fellows at [katie.evans7@nhs.net](mailto:katie.evans7@nhs.net) or [dominic.carr@nhs.net](mailto:dominic.carr@nhs.net)