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## A Plymouth Contribution: The development of the Cowpox Vaccine

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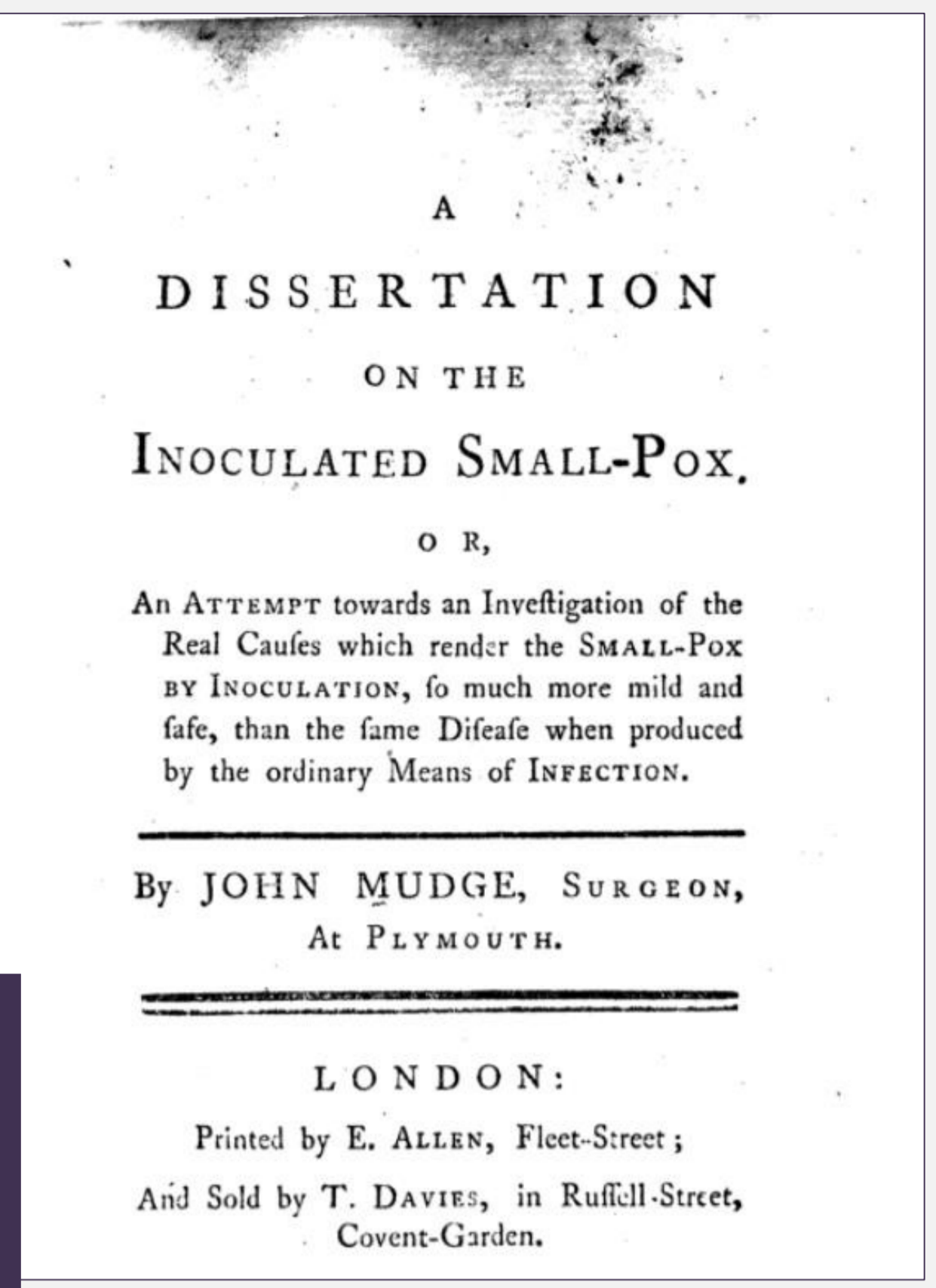
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While Jenner is credited with developing the new vaccination procedure, Mudge was one of the first to write about and advocate the use of cowpox inoculation in his *Dissertation on the Inoculated Smallpox* published in 1777. After 30 years of practising inoculation, Mudge professed never to have lost a single patient. His research concluded that effective inoculation was dependent on age, environment and an individual's constitution. Unfortunately, despite the image below, 'There is certainly a greater loss of inoculation in patients under 2 years'.

**Early Experiments in Plymouth:** Mudge highlights Plympton surgeons Messrs Langworthy and Arscott who inoculated 40 patients in 1776. 30 were 'performed with crude matter from the arm of a young woman, 5 days after she had been inoculated with concocted matter, the remaining 10 used concocted matter from a postule from natural smallpox'. All 40 contracted inflamed smallpox infections on their arms but whereas the 10 suffered 'eruptive fever' from the postules, the 30 in the larger sample did not and the postules on their arms 'simply scabbed off'. These postules were then used to inoculate others with the same fever free result.

## A PLYMOUTH CONTRIBUTION



### Spot the Cow!

This painting shows Edward Jenner vaccinating his young child held by Mrs Jenner while the cow stands outside the window. The maid rolling up her sleeve was probably inoculated using the same instrument. Despite the references to the preventative matter against smallpox being found in 'cowpox' lesions, it in fact derived from a disease of horses known as 'grease' or horsepox hence Jenner's spurious Cowpox.

Jenner called his new procedure 'vaccine inoculation' from the Latin *vacca*, meaning cow. But it was **Plymouth Surgeon Richard Dunning** who coined the term 'Vaccination' in 1803.



**Dr John Mudge, 1795**  
Renown surgeon and physician at Plymouth Hospital. Married 3 times he had 20 children. Well known local acquaintances included Sir Joshua Reynolds and John Smeaton  
Credit: Wellcome Collection. CC BY

**First Signs of Resistance?**  
'Popular information was indeed one great motive for this inquiry; for though the credit of inoculation is now pretty generally established, yet there are still a great number who are not altogether divested of their prejudices against it; and I am not without hope that the following considerations may remove their scruples partly by informing their understandings, and partly by alarming their fears.' (Mudge, Preface)

**Influential Friends**  
Mudge's father was a close friend of Sir Joshua Reynolds became regularly visited Saltram House where he met Samuel – aka Dr –Johnson, painted here by Reynolds. Johnson kept a copy of Mudge's book in his library noting he 'practised with great reputation.' Mudge asked Johnson to be Godfather to his children and possibly gave him the book in exchange.  
*Clifton Society* 21 July 1892\*

