

# GENEALOGY DATABASE ENTRY

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Black, Joseph

1728 - 1799

DEGREE: MD

DATE: 1754

PLACE: Edinburgh

TEACHER/RESEARCH ADVISOR: Cullen

rediscovered "fixed air" (carbon dioxide) by heating  $\text{MgCO}_3$ ; recognized existence of  $\text{CO}_2$  as a respiration product and showed that  $\text{CO}_2$  would not support combustion or life; invented concepts of latent heat and specific heat; discovered the bicarbonates; one of first to apply quantitative measurements of weights to chemical reactions; first to distinguish heat (an extensive property) from temperature (an intensive property).

FOOTNOTE: Black served as Cullen's assistant at Glasgow for three years (1749-1752) and this was the decisive influence on Black's career. Black transferred in 1752 to the more prestigious Edinburgh University to complete his medical studies under Alexander Monro (senior) and Charles Alston. Although the latter had for several years been investigating the chemistry of lime water, Black's thesis topic was apparently suggested to him by Cullen before he left Glasgow. Black dedicated his thesis to Cullen and said at the time of its publication in 1754, "It is from him I learned my chemistry".

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