

Leaps in genetics

Knowledge is structured in unconsciousness as falling of apples and jerking of lids with the thrust and propulsion of steam was and is a common phenomenon, but these were Newton and George Stephenson who invented Laws of Motion and Steam Engine. In reality, we are unaware of our latent and hidden capabilities. Genius and brilliance is a natural instinct and urge which denotes the philosophical aptitudes and tendencies of the incumbent. It is an ambition and impulse which impels our ideologies to be innovative and inventive in our approach. Peers of science and technology have made incredible achievements and have baffled the world with their wonders and miracles but it was through their innovative sense of intellect and genius. Today they have come out with the most advanced invention of variety of genes which can possibly be instrumental to treat numerous diseases.

Science, reporting usually concentrates on the science not the scientists. Though the minds and the hands behind the research are acknowledged, the real story is the discovery itself and its place in the jigsaw of human understanding. This and the fact that modern scientific investigation tends to be a team effort; has diminished the cult of the celebrity scientist. The human genome project was an exception to this rule.

As dentistry looks ahead, it is natural to try and contemplate the conditions and trends that will shape the profession and the silhouette of overall oral health care. In some instances, advancements and discoveries in one area may overlap crossway to bear on another, helping to broaden our spectrum of understanding for use and application of that innovation or scientific discipline in the context of oral health care.



Since Mendel, we have come a long way, and today we think in terms of human genetic variations that can be represented by single nucleotide polymorphisms at a frequency of one or two per 1 million nucleotides. Also, we are beginning to understand that all human diseases and disorders are genetic and must reflect multiple gene–gene and gene environment interactions. A new *modus operandi* has evolved to help us understand and express the relative burden of risk factor genes in an individual. During the last decade, there has been an amazing progress in identifying genes for specific dental tissues such as enamel, dentin, cementum, periodontal ligament, alveolar bone, oral mucosa, etc.

In addition, Mendelian inherited genetic diseases have been identified and characterized on the basis of gene nucleotide. And as pointed out, saliva as an informative body fluid is being used to discover genetic biomarkers for health and diseases. When it comes to genetics, we can say there has literally been a renaissance of discovery.

A handwritten signature in black ink, appearing to read 'S. G. Damle', written over a horizontal line.

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