Genetic Neologisms

Collective Nouns for the Geneticist

John Massie^{1,2,3}

1. Department of Respiratory Medicine, Royal Children's Hospital
2. Department of Paediatrics, University of Melbourne
3. Murdoch Childrens Research Institute, Melbourne
4. Society for the Advancement of Humour in Medicine

Correspondence

Prof John Massie

Department of Respiratory Medicine

50 Flemington Road

Parkville. 3052. Victoria. Australia

Ph: 0409009465

Fax: 03 9345 9154

john.massie@rch.org.au

"There are known -omes; there are unknown -omes, there are also -omes that we don't know that we don't know."

D Rumsfeld (sort of)

Introduction

New technologies need new words. It was ever thus. The piece of specially shaped wood, pulled behind an ox to dig up the ground, became the plough. Shakespeare invented words when none were available to express his purpose. Txtnghasitsownlanguagedudewith0gramma. Medical technology has advanced so fast, in genetics particularly, that existing language cannot keep up. A whole new lexicon is emerging. These are the "-omes".

In this piece I present some of the known "-omes", that are really a type of collective noun for geneticists, but for which, the average clinician is at a loss to understand. Since everyone loves a

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: [10.1111/jpc.14632](https://doi.org/10.1111/jpc.14632)

good collective noun¹, I have discovered some unknown “-omes” to describe existing technologies. Finally, I have created some “-omes” that are not yet known (“supernewomes”) to be ready for the advancing technologies.

Known “-omes”

Genome - the complete set of genetic material in a cell or organism. This is becoming increasingly easy to determine after the success of the Human Genome Project which ended an unseemly race between the forces of good and the other guy.

Exome - the portion of the genome formed by exons, the sequences of which contain the information required for protein synthesis. For clarity, the exons are in and the introns are out.

Mendeliome - the genes currently known to cause disorders (around 4000) (named for Gregor Medel, who, ironically, being a monk, had no personal experience with human reproduction and had to satisfy himself through long Russian winters with growing peas)

Proteome - the entire complement of proteins that is or can be expressed by a cell, tissue, or organism. This is, the whole point of genes (the **pointeome**)

Metabolome – the total number of metabolites (small molecule chemicals) present within an organism, cell or tissue. Not to be confused with abalome which is the genetic sequence of certain shellfish.

Microbiome - the genetic material of the flora (commensal, symbiotic or pathogenic) found in or on all multicellular organisms. In animal biology, sites have distinctive microorganisms (eg the airway- the **bronchome**, the skin- the **dermatome**, or the gut where it is known colloquially as the “**shitome**”). For reasons that have never yet been explained, there is usually a close match between the right index finger dermatome and the **nosome**.

Connectome- an extensive diagram of neural connections in the brain. A veritable “spaghetti junction” of neural pathways that will take years to untangle but help us understand important things like why sticking a pencil in your ear makes you cough.

Unknown “-omes”

Incidentalome - the genetic variants detected during a genome-wide study that are not related to the condition being studied. In the event that patients really want to know this information the well trained genetic counsellor and geneticist have a vast array of consoling expressions to put out the spot fires that can arise, the **bulldustome**.

Antibiome – not a real “-ome”, but a type of bastard version of the antibiogram, a set of antibiotic susceptibilities that give some information about the sub-species of bacteria being tested. However,

antibiome could be used to describe the range of bacterial gene variants that code for antimicrobial resistance.

IntroMe -is not the entire intronic sequence, but a mobile app that helps you discover and connect with like-minded people nearby (really).² Could be used as a type of Tinder or Grindr for lonely geneticists.

“-omes” that are not yet known

Insuranome – the list of gene mutations that are either disease producing (eg Huntington’s Disease) or disease risk factors (eg diabetes) that preclude taking up life or health insurance. Caveat emptor*.

Sequinome – the genetic material of the oyster that determines the quality of gem produced.

Pseudonome – the genetic material that causes someone to assume another name, or spell their own name in a ridiculous way (but not including the Welsh, who share surprising DNA homology with the rest of us)

Gardenome – the collection of all plant-based genetic material, stored in several sites around the world, to provide botanical security against the possibility of global destruction. Interestingly, the pea-loving Russians have one of these sites.

Mammalome- similar to the gardenome but relating to mammalian species. Will allow recreation of lost species such as woolly mammoths, white rhinoceroses, and potaroos, although, hopefully, not in one animal.

Lupusome- this is a version of the mammalome, but specifically relates to the genetic material of *canis lupus familiaris*. For the right fee, it is said to reliably distinguish from which breeds of dog your mutt descended (just include a photo of said mutt, with payment, so the lupusome can be more reliably discerned using the phenotype provided). The lupusome is curious since human races cannot be determined by genome analysis but somehow dogs can. A clear case of *cauda movit canis*.*

Telephome- set of genes coding for addictive neural pathways within the language centre (ie Broca and Wernicke). Previously thought to be X-linked, but since the turn of the century has been recognised to be autosomal dominant, now universally expressed in millennials. One manufacturer has outrageously applied to patent this set of genes and call it the **Appleome**

Gene-ohm – the resistance put up by geneticists to allow clinicians to use any of these expensive new technologies to help sick people. Correct unit of measurement, gΩ

Some have tried to claim that there exists a **cicerome, a deep intronic sequence that codes for pretentious writers (and lawyers) who quote Latin expressions. It could be a good site to practice with gene editing, neither type would be missed.*

Conclusion

It is an exciting time for our genetic cartographers, mapping a fascinating sequence of guanines, adenines, cytosines and thymines so as to read us like a book. Likewise, it is a brave-new world for our lexicographers who have to keep pace with technology and develop the language to match. Ome-my-gosh, what will they both come up with next?!

References

1. R John Massie. Medical Collective Nouns. Med J Aust 2016; 2016(11): 527-528 (see also the [promotome](#)- the genes encoding narcissism, self-aggrandisement and shameless self-promotion)
2. <https://www.crunchbase.com/organization/introme>.

Genetic Neologisms
Collective Nouns for the Geneticist

John Massie^{1,2,3}

1. Department of Respiratory Medicine, Royal Children's Hospital
2. Department of Paediatrics, University of Melbourne
3. Murdoch Childrens Research Institute, Melbourne
4. Society for the Advancement of Humour in Medicine

Correspondence

Prof John Massie
Department of Respiratory Medicine
50 Flemington Road
Parkville. 3052. Victoria. Australia
Ph: 0409009465
Fax: 03 9345 9154
john.massie@rch.org.au

Minerva Access is the Institutional Repository of The University of Melbourne

Author/s:

Massie, J

Title:

Genetic neologisms: Collective nouns for the geneticist

Date:

2019-12-01

Citation:

Massie, J. (2019). Genetic neologisms: Collective nouns for the geneticist. JOURNAL OF PAEDIATRICS AND CHILD HEALTH, 55 (12), pp.1506-1507. <https://doi.org/10.1111/jpc.14632>.

Persistent Link:

<http://hdl.handle.net/11343/286681>