Scientific, Ethical and Biblical Considerations of Genetic Engineering

It is essential that genetic engineering be considered in a Biblical context. Our attitude towards genetic engineering needs to be consistent with God's Word, which declares most transgenic organisms to be unfit for breeding and unfit for food. As followers of Judaism, Christianity and Islam all accept the Hebrew Bible as truth, these considerations affect a large proportion of the world's population. Many facts will be presented, both scientific and Biblical, that some genetic manipulators would prefer left unsaid.

The article briefly explains many of the underlying methods and assumptions involved in genetic engineering and has a particular emphasis on Biblical teachings. The scientific facts are that genetic engineering is still in its infancy, and our understanding of genetically modified organisms (GMOs) and environmental interactions is so fragmentary that these organisms must not be allowed to live outside of biologically isolated laboratories. The damage caused by the premature release of flawed GMOs will difficult or impossible to undo. If GM foods are forced upon us, those developing, producing and distributing such things must fully bear all the costs of isolating, distributing and labelling caused by their GM products.

Natural Genetics

All living organisms contain genetic material that controls their life processes and reproduction. The genetic material of higher organisms is organised into chromosomes that are present in every living cell. Each chromosome is an enormous molecule of DNA containing many genes as well as huge amounts of DNA whose

function we still do not know. This still mysterious DNA is referred to as linker DNA or sometimes more ignorantly as 'junk' DNA.[1] All DNA carries a four base code that is read in triplets to code for RNA synthesis, amino acid sequences for protein formation, etc. It is a far more elegant and compact system than the one we have devised for use in our electronic computers. The proteins produced via this genetic code control specific inherited traits and biochemical functions. Asexual reproduction occurs when the organism duplicates its own DNA and organelles and splits into two identical copies of the original organism. Sexual reproduction requires the combination of a male and female gamete. This process requires the two gametes to both come from members of the same species, which helps to maintain the many distinct species we have. When the gametes unite, their DNA is combined in an extremely complex and precise manner to initiate production of a new and unique member of what is still the same species. (A species is defined as a group of organisms that can interbreed, but do not or can not normally interbreed with others outside of this group.)

Genetic Modification

A transgenic or genetically modified organism (GMO) contains combined DNA taken from two or more organisms. The new combination is forced to occur in a totally different method from the natural method used in sexual reproduction given above. This results in a new organism that is radically genetically different from any of the originals. In the hands of a genetic manipulator, the DNA being inserted can potentially come from any other

1 2022 Update- It is now known that virtually all, if not all, of an organism's DNA is functional, and is essential in controlling its development from egg or seed to an adult organism, and required to fine-tunes its biochemical balance throughout its lifetime. "Junk DNA" is now an obsolete term, and yet another embarrassment to evolutionists.

organism. An example of this, which has been undertaken, is to insert sections of human DNA into pig DNA. As we will see, creating transgenic mutants shatters the natural reproduction barriers and creates new and distinct problems. Let's look at the four basic categories of genetic combinations, the techniques used to produce these transgenics and then examine what God says about transferring DNA between organisms:

Why Produce New Varieties?

At this point we need to consider why there is any need to produce new varieties of living organisms. Traditionally this meant crossbreeding two similar varieties of one species to produce a slightly different variety of the same species. A common example would be crossing a rust resistant wheat variety with a high-yielding wheat variety. All nations that have substantial agricultural systems have people developing new varieties. The movement of plant and animal diseases into new areas dictates the need for new varieties, as does the need to increase crop yields and acreage and to develop varieties suited to the nation's environment and markets. Thus new varieties with specific disease resistances, tolerance to drought, salinity, waterlogging, heat stress, etc, are needed. It is common for cereal varieties to be superseded after only five years. Animals with superior genetic properties such as faster growth, greater strength, higher milk yield and so on are also useful. These practical needs are supplemented by the horticulturalist's desire to produce plants with the most attractive foliage, most stunning flowers, etc. The need for many of these new varieties is accepted, but the methods used to produce these varieties must be carefully evaluated.

Intra-Breed Transfer: (Class 1)

In this case the DNA of two specimens within a single sub-species (or breed) is combined. This has always been the arena of traditional breeder. Two parents are selected which both have one or more desirable traits. In plants or animals the DNA of these two organisms is combined by natural sexual reproduction. Sexual reproduction involves combining a complete half-set of genetic material (called haploid) from each parent organism to produce a full set of diploid genes in the offspring. Thus natural reproduction can add undesirable traits as well as the desired traits to the new plant or animal. Often several generations of breeding and selection are required before the new organisms will consistently breed true to the desired traits, and the undesirable traits are bred out. This is inconvenient for the breeders, but there are many positive aspects of natural breeding. Unlike genetic engineering, natural reproduction carefully places the genes exactly where they belong in the genome. It also maintains a relatively high level of diversity in the breed's genetic material. This diversity is useful as it often allows some members of the breed to survive when a new challenge decimates susceptible members of the population.

Direct genetic modification offers the potential to add only selected desirable genes to an otherwise excellent specimen, and to have these traits expressed in all the offspring. In theory, none of the undesirable traits need be transferred at the same time. Unlike natural reproduction, the new genes can even be taken from an organism of the same gender as the recipient. This could accelerate the process of developing new animal breeds or plant cultivars, perhaps improving resistance to a particular disease or achieving a higher yield. All the descendants of genetically modified self-pollinating plants, like non-sexually reproducing microorganisms, have exactly the same genes. This means that all members of the new breed would have the same response to environmental challenges. A newly introduced or mutated disease could result in

the total failure of a susceptible breed of genetically engineered (GE) organisms. When this occurs to a widely grown crop, it will cause a massive famine.

One example of this type of intra-breed GMO is high iron rice that is produced by inserting multiple copies of a rice haemoglobin gene back into the same genome. The rice is intended to help reduce iron deficiency induced anaemia.

The genetic manipulation techniques that are being used today do not allow exact control of the transformation process. The current methods of adding genes can be frighteningly random. A common method of inserting genes into higher organisms like plants and animals is the biolistic process, more accurately called shotgun cloning. With this process the DNA of the "new" gene is coated onto tiny gold or tungsten pellets which are shot into the chromosomes of the target cell. The gene usually fails to combine with the target DNA. When it is inserted, the new gene may go into a section of the DNA where it damages coding for essential enzymes, possibly crippling or killing the organism. It may also go into a section of DNA that is inappropriate for the intended gene's role. For example, a gene intended to assist the organism in early growth may instead be inserted into a section of DNA that codes for seed production, thus disrupting seed head growth and not assisting early growth.

An analogy to the gene gun method can be shown in a car engine modification. An equivalent situation would be a mechanic who wanted to use a Mercedes fuel injector on a Ford engine. Normally, a skilled mechanic would remove the Ford injector system and modify the Mercedes injector and the car's fuel control system so it could be fitted onto the motor in the place of the Ford injector. However, our biolistic mechanic would have a different approach. He would leave the Ford injector in place, load the

Mercedes injector into a cannon and fire it at the engine in the general direction of the Ford injector. In theory, if he had enough engines and injectors, one Mercedes injector might finish up being attached to the engine and be usable.

Other techniques involve using agrobacterium or viruses to transfer the gene(s) into the target cell. Agrobacterium tumefaciens contains a tumour inducing (Ti) plasmid that has been modified for use as a gene carrier. Once the plasmid enters the cell, the agrobacterium's restriction enzymes cut the target cell's DNA. Ligases splice the transferred gene(s) into the gap. This process is more specific than shotgun cloning, but the experimenter still has no control over which of the many possible sites the gene will be inserted into. It is likely that none of the possible sites are ideal. These problems are made worse by the fact that none of the techniques we are discussing even attempt to remove the original genes that the manipulators are trying to supersede from the recipient cell. This is currently too difficult to do. Leaving these genes can lead to instability as the organism will have two or more competing processes trying to control some aspect of its metabolism. In our car engine model, this would mean that the mechanic would randomly choose one of the Ford components bolted onto the motor, remove that Ford component, bolt on the Mercedes injector in its place and then attach the Ford component to the other end of the Mercedes injector. Occasionally the engine might still work.

Typically, the screening for the effectiveness of the gene transfer is very basic. An initial check is made to see if the DNA has been inserted anywhere into the recipient DNA. In the case of plants, inserting a modified bacterial gene conferring herbicide or antibiotic resistance (the marker gene) in combination with the gene of interest (GOI) usually does this. The manipulated cells are grown in chemical gels to stimulate them to grow into calluses.

Then a dose of herbicide (or antibiotic) is used to kill off the non-transgenic cells. Further chemical treatments will convert some of the surviving calluses into plants. Later there is a check to see if the new gene is appropriately producing the protein that it codes for in the GMO.

Please note that these concerns about GMO methods apply to all of the various classes of GMOs that we will discuss.

Intra-Species Transfer: (Class 2)

In this case the DNA of two different breeds (or sub-species) within a single species is combined. In plants or animals the DNA of these two different sub-species could also be combined by natural sexual reproduction. In natural breeding this is often called out-crossing or crossbreeding, and is used to introduce new traits into an existing breed. Occasionally out-breeding results in the development of a new breed. An example of this type of out-crossing would be combining two different breeds of modern tetraploid wheat such as a red and a durum wheat.

Closely Related Species Transfer: (Class 3)

In this example, the donor DNA comes from a different species that can not normally fertilise the recipient species or will not produce fertile offspring. This combination can be undertaken by genetic manipulators to add things like the pest resistance gene of a wild barley species to a cultivated barley species. It is possible that these two species may have both descended from one original created kind, and many generations ago their ancestors would have been able to interbreed. Note again that this particular gene combination would not be able to occur and reproduce naturally today. Possibly a similar plant could eventually be developed by naturally breeding from the wild barley alone, selecting for both grain development and retention of the pest resistance gene.

Producing new breeds from these ancient species is a difficult task and it takes many generations of selection to achieve a useful breed. The need for new breeds emphasises the necessity of retaining viable stocks of the ancient breeds that contain more of the variability and unique genetics inherent in the original created kinds.

Unrelated Species Transfer: (Class 4)

Finally, the donor DNA could be taken from totally unrelated organisms that have never been able to interbreed naturally. Some examples actually being grown today are ‘strawberries’ containing “anti-freeze” genes from fish, ‘goats’ containing human insulin genes and ‘corn’ modified with bacterial herbicide-resistance genes. It is utterly impossible for any of these combinations to have ever occurred naturally. Despite the radical techniques of genetic engineering, organisations such as the Victorian Department of Natural Resources and Environment claim that producing transgenics is the same as natural breeding, a claim that is an outright lie. (*Genes Herald New Era*, Primary Focus, Vol 1:1 Pg 3)

Intrabreed GMOs are becoming more common as the transformation success rate increases and as gene manipulators become more sensitive to public concern about unrelated species transgenics. This concern has led to the development of removable marker genes that can be cut out of the genome once it has served its function. Removable marker genes also benefit the genetic engineers as it means the same marker gene can be reinserted again when they wish to make another modification to their mutant organism.

And how does all this fit in with scientific responsibility and with the Bible? Should we be content with all or any of this?

Biblical View of Genetic Manipulation

In Genesis chapter 1 God tells us that He personally created all the various kinds of organisms individually and said that they were to reproduce according to their kind. When He saw that each kind was reproducing according to their own kind, He said that it was good. (Gen 1:11-12, 20-21, 24-25) Most creationists believe that the 'kind' referred to in Genesis was equivalent to our genus or family taxonomy classifications. Each created kind had an enormous range of genetic diversity built into it. Inbreeding groups of descendants from these original kinds selected specific gene combinations resulting in the various clusters of species we see today. These species have generally become genetically separated from each other by inheriting different subsets of their ancestors' genes. The separation has been intensified through reordering of the gene locations within a creature's chromosomes. Such changes in their chromosomes can eventually make the various breeds into incompatible species. Each new species has less information in their genes than their ancestral created kind. Please note that this process is the opposite to an evolutionist's idea of speciation. Evolutionists propose that new species usually contain new, additional information not possessed by their ancestors.

Although God specifically created each kind, He used similar genes for similar functions throughout many kinds. Indeed, the various kinds must share the same biochemical basis in order to survive, as existence on earth requires the recycling of biochemicals from kind to kind. (ie- plants produce food for animals, the animals' waste feeds microorganisms which convert it into nutrients for plants.) John 1:3 tells us that our heavenly Father created all things through His Son, Jesus Christ. This means that

all living things owe their design and existence to God, and are thus to some degree sacred and deserving of our respect and nurturing. Indeed, Genesis 2:15 tells us that God put humanity on earth to tend and care for His garden.

Evolutionary Viewpoint

These facts contrast sharply with the ideas of non-theistic evolutionists, who believe that all living organisms have been derived from one original cell. (ie - evolutionary theory essentially teaches that there is only one kind.) Many people who believe in evolution are unaware that there is no plausible scientific explanation of how that initial cell could have come into existence. Even a 'simple' living cell is phenomenally complex, and decades of research have repeatedly demonstrated that even the most basic of building blocks for such a cell—a short chain of L-amino acids—cannot be synthesised under any suggested pre-life conditions. Evolutionists cannot demonstrate how the massive amounts of precisely coded information embedded in the far more complex genome (ie - all the genes coded for by DNA) of higher organisms could have arisen by random chance. Evolutionary theories are also unable to explain the distinct gaps separating all of the various kinds of organisms. (These gaps are actually predicted by the created kinds theory.) Despite these facts, evolutionists still wish to believe that the genomes of all creatures are constantly evolving. If they were correct, it would mean that the genes of all creatures are subject to massive changes over time. Therefore some evolutionists think there should be no limits set on how far genetic manipulation should be taken. One wonders how these ideas are reconciled with the fossil record, which shows all the various kinds of organisms appearing fully-formed and then persisting with little or no change, often for supposedly many millions of years.

Biblical Guidelines

Conventional breeding clearly shows that God has designed a large degree of flexibility into the genome of each of his kinds. Simply examining the enormous differences between the various breeds of dogs verifies this. At the same time, all these breeds of dogs show that He has also built strict barriers into how far these variations can go. That is, all dog breeds are easily recognisable as dogs. But has He left us with some guidance as to what we should do when we wish to develop breeds? Did God know that eventually we would be able, however crudely, to combine the DNA from various kinds to produce our own Frankenstein creatures?

The answer to both questions is yes. God knows the end from the beginning (Isaiah 46:9-10), and He has left us with such guidance! Let's see what He has to say:

> "You shall keep My statutes. You shall not crossbreed two sorts of animals. You shall not sow your field with two sorts of seed. Nor shall a garment made of two sorts of mixed material come upon you."
> Leviticus 19:19

The Hebrew word translated as sorts in this verse is *kil'ayim*, which means "doubly-separated." This is different from the created kinds of Genesis 1, which uses the word *meem*. Most kinds of animals are so different genetically that they are not able to interbreed. For example, a cat cannot interbreed with a dog. As Lev 19:19 forbids cross-breeding, *kil'ayim* must be equivalent to very closely related species or perhaps subspecies. For example, horses and donkeys, two separate species, but the same kind and genus, are able to interbreed, but in this case produce sterile offspring. Usually only subspecies within the one species are able to interbreed successfully.

Preserving as many breeds as possible maximises biological diversity. For example, particular breeds of horses may have inherited unique genes that could be lost forever if that breed is allowed to die out. This loss of specific breeds, cultivars and species is happening around the world now as a smaller and more uniform range of plants and animals are being grown on ever larger areas. Everyone who has looked at the marvellous variety of living things around us, and considered the even greater number of species already extinct, has some idea of God's love of diversity.

To maintain this diversity, God clearly forbids combining DNA taken from different species. The following passage, referring to growing grapevines from different sorts of grape seed in one vineyard, appears to ban crossing varieties (breeds) within a species. God calls the resultant fruit and seed unholy as the fruit contains crossbred seeds.

> "You shall not sow your vineyard with different sorts of seed, for the yield of the seed which you have sown and the fruit of your vineyard will be unholy."
> Deuteronomy 22:9

As in Leviticus, 'sorts' is translated from *kil'ayim*. These are the only times *kil'ayim* is used in the Bible.

These verses show that organisms combining DNA derived from different species (or possibly sub-species) are unholy (ie-defiled) in God's sight and producing them is a transgression of God's Law. Obviously some types of hybrid plants and animals produced by natural out-crossing techniques are contrary to God's will. There is every reason to believe that the same restrictions apply to genetically engineered organisms. Food derived from

inter-species and unrelated species GMOs is thus also unholy and not fit for consumption by God's standards.

We must wake up and understand what is happening around us. Genetic manipulation experiments are being conducted, right now, to develop the more precise methods of separating, altering and inserting genes which will enable the unrestricted manipulation of the genes of all living organisms, including humans. Scientists have already succeeded in cloning a human using a cow's egg. (*Herald Sun*, Friday, June 18, 1999 pg 3) Genetic modification is seen by some people as accelerated 'evolution' which is controlled and guided by the genetic engineers. The geneticists are claiming that their alterations are for the benefit of all of humanity. In some cases this may indeed be their intention. But too often these changes appear to be for the benefit of the geneticists' careers and for their wealthy employers. Even the farmers rarely benefit. As New Scientist says: "Most American farmers who have turned to genetically engineered crops seem to be getting yields no better than farmers who grow traditional varieties. They also appear to be using similar quantities of pesticides." (Kurt Kleiner, Field of Dreams, *New Scientist*, 10 July, 1999, Pg 14) Third World nations are concerned that most gene tech companies are more interested in stealing their genetic material and patenting it for their own purposes than they are in helping them feed their populations. These concerns are well documented in Luke Anderson's book *Genetic Engineering, Food and the Environment*.

It must be emphasised that once these genetic modifications have been made, they are permanent. The altered creatures will give birth to mutant offspring for all future generations. Every cell of these offspring will contain these adulterated genes. The cost of destroying these modified organisms after they are released to farmers for widespread growth is incalculable. It may often be impossible to eradicate them. Perhaps a hint of the disastrous

consequences of releasing a flawed GMO can be seen in the massive damage which has occurred in Australia due to the release of introduced species such as prickly pear cactus, foxes and cane toads into an inappropriate environment. Indeed, problems have already begun to surface: BT corn pollen is killing off Monarch butterfly caterpillars in the USA, boll weevils have developed resistance to Bt cotton, a superweed has been created in France due to gene transfer from a transgenic sugar beet crop. (Frederic Golden, Of corn and butterflies, *Time*; May 31,1999, pg 58). And this is only the beginning...

Rather than reassuring people about the potential virtues of genetic manipulation, we should be alarmed. Even the techniques being developed for potentially beneficial uses such as gene therapy to correct genetic illnesses can be misused. One misuse would be engineering 'super-children' for the wealthy. We must have extremely well defined and rigorously enforced laws controlling genetic manipulation. Genetic manipulation must be restricted to intrabreed and perhaps also intraspecies combinations, depending on the precise meaning of *kil'ayim*. Bacterial marker genes cannot be present in these GMOs. No manipulated organisms should be allowed to live outside laboratories until our understanding of the organisms involved is complete enough to know exactly what effect the changes will have, both on the GMO itself and also on the rest of the environment it will be released into. The GMOs must have demonstrated over at least five generations (or ten years, whichever is greater) that the changes are stable and do not appear to have latent problems. No releases should be allowed until the transformation techniques used are advanced enough that the genetic scientists have precise control over every aspect of the transformation process. Finally, the developers of the GMO must be able to demonstrate that their GMO can provide a benefit for the common good not available by any other method. All GMOs must be clearly identified as such,

and any foods or other products containing them or derived from them must be clearly labelled. The class of GMO, as detailed in this article, should also be displayed on the label. If we do not insist on these minimum requirements we are risking environmental disasters on an unimaginable scale. Allowing unrestricted genetic manipulation will result in a world filled with organisms that God calls unholy. At this time only the least of these minimal conditions are being met – ie some GMO labelling is being implemented.

Another chilling reality is that these techniques can "... lead to the creation of the ultimate bioweapon in the shape of a synthetic "superbug"." (A Terrifying Power; *New Scientist*, 30 Jan, 1999 pg 10).[2]

If we obey God's commandments, He promises us to bless us:

> "Now it shall come to pass, if you diligently obey the voice of Jehovah your God, to observe carefully all His commandments which I command you today, that Jehovah your God will set you high above all nations of the earth.
>
> "And all these blessings shall come upon you and overtake you, because you obey the voice of Jehovah your God:
>
> "Blessed shall you be in the city, and blessed shall you be in the country.
>
> "Blessed shall be the fruit of your body, the produce of your ground and the increase of your herds,

2 2022 update – there is some evidence that the SARS-CoV-2 virus that is causing our COVID-19 pandemic was deliberately genetically engineered, using the new CRISPR splicing techniques, and likely accidentally released.

> the increase of your cattle and the offspring of your flocks.
>
> Deuteronomy 28:1 to 4

Defying God by producing Class 2 to 4 transgenic organisms will not result in new levels of health and food production. Instead, we will reap God's curse:

> "But it shall come to pass, if you do not obey the voice of Jehovah your God, to observe carefully all His commandments and His statutes which I command you today, that all these curses will come upon you and overtake you:
>
> "Cursed shall you be in the city, and cursed shall you be in the country.
>
> "Cursed shall be your basket and your kneading bowl.
>
> "Cursed shall be the fruit of your body and the produce of your land, the increase of your cattle and the offspring of your flocks.
>
> Deuteronomy 28:15 to 18

From a Biblical perspective, the use of DNA techniques to identify (not alter) genes in conventional breeding programs is permissible. This is already accelerating breeding selection procedures. Permissible genetic modifications might be to repair damaged DNA in the sperm and egg cells of parents who are infertile or have genetic diseases to allow them to have healthy children. The same principle also applies to other species. Such modifications would actually only be reversing the damage accumulating in the originally perfect genes due to random mutations, viral infections and DNA copying errors. Even so, this work should only be considered when precise, totally controllable

manipulation techniques have been developed and the correct DNA sequence and its functions are fully known.

We cannot trust the genetic manipulation industry to be self-regulating. They have shown us that they will push the boundaries of what they do far beyond the limits that common sense and reasonable scientific caution demand. We have already reached the point where 70% of some crops grown in the USA last summer (2000) were genetically engineered (GE) organisms. None of these crops were precisely modified, nor are the results of the modifications thoroughly understood. In fact, we are still only developing a set of agreed tests to decide if a GMO is functioning correctly, both internally and in its broader environment. (Unpalatable Truths, *New Scientist*, 17 April, 1999, pg 18) The British authorities have tacitly acknowledged these problems by only allowing small test plots to be grown for four years to assess possible effect on the crop's immediate environment. (Reap What You Sow, *New Scientist*, 10 July, 1999, pg 18) Even these test plots have created ethical problems:—There is no way to prevent pollen from the field-grown GE crops from blowing into neighbouring non-GE crops and contaminating them. It is not possible to scientifically justify the release of GMOs from biologically isolated laboratories. We probably need at least another decade or two of laboratory research before we can responsibly assess the wisdom of large-scale growth of GMOs even from a non-theistic scientific viewpoint.

Australia's reluctance to release food crop GMOs into its fields has created a positive opportunity for us. We could become a major worldwide supplier of natural, non-GMO organisms and foods to the millions who are concerned about the possible effects of the premature deployment of inaccurately made and poorly tested GMOs. This effect has already begun with a massive international demand for our non-GM canola oil. If Australia does

not allow any GMOs to be grown here, we will avoid the nightmare now facing the USA and Canada. They will have to duplicate their entire crop storage, transport and labelling systems to separate their natural and GMO crops. Avoiding these costs, as well as the premium prices paid for non-GMO foods, gives Australia two huge market advantages over GMO producing nations.

Despite the opposition of the Australian federal government, the Australian and New Zealand health ministers have forced through legislation requiring labelling for GM foods. However, the Australian Centre for Environmental Law remains concerned that the legislation is "unlikely to provide effective protection against potential risks posed by GMOs and GM products" (*The Age*, August 26, 2000, pg 19). The law allows products to contain up to one percent GMO material before they must be labelled as GMO. Surely the only unambiguous threshold level for GM products is zero percent. The cost of product separation and labelling should be born entirely by the developers and distributors of GM foods as they are making these expenses necessary. Transferring these costs to non-GM foods is unethical, as is refusing to segregate and label these products. Despite this, an ANZ Food Standards Update article (*GM Labelling Costs Problem For Poor*; Vol 2 No 15) suggests assisting the GM industry by either not labelling GM foods or requiring concerned consumers to pay for the costs of labelling.

Let us obey God and provide a world for our children which is pure. A world in which dogs are dogs, cats are cats and humans are human. We must act to control the genetic manipulators, otherwise our descendants will inherit a twisted world filled with transgenic microbes, plants and animals which are little more than mutilated versions of each other. God's blessings or cursings; which will we choose?

Bruce G. Armstrong

The author has been a Christian for over fifteen years and his scientific background includes a Bachelor of Applied Science double degree in Food Science and Biotechnology earned in 1996 and a Honours degree in Food Science in 1997. He is currently undertaking a Master's degree involving cereal quality assessment.

CENTRAL HIGHLANDS CHRISTIAN PUBLICATIONS
PO Box 236 Creswick VIC 3363 Australia
Email info@chcpublications.net
Home Page https://chcpublications.net

Some Other Resources Available at https://chcpublications.net/

Publications

The Holy Bible - CHCoG Version - This translation from the original Hebrew and Aramaic is accurate and readable, giving you a clear understanding of how the New and Old Covenants are interlocked and God's message to you.

Everlasting Life is God's Gift - Does the Bible teach that you have everlasting life? If not, how can you receive God's gift of immortality as His child?

What is God's Name? - How can we know what God's Name is and how to Pronounce it? Does the Bible teach us to use God's Name?

Books of Moses - Fact or Fiction Series - Are the miracles recorded in Genesis and Exodus our true history? Do the facts support Special Creation or the Big Bang & Evolution scenarios? What about the Flood, Babel and the Exodus?

The Ten Commandments - What are God's Ten Commandments? How do they guide us in our relationships with God, our family and our neighbours? Shows how obedience to Jehovah's Instructions would result in true civilization.

Sex, God and Families - Pamphlet exposing the dangers of sexual immorality and outlining the benefits of following God's sexual principles.

Eastern Meditation and Jeshua the Messiah - Recounts the experiences of a CHCoG member who became a Christian while practising Eastern Meditation.

God's Calendar and the Sign of Jonah - Shows how God's Calendar reveals that Jeshua (Jesus) truly kept the Sign of Jonah, His proof that He is the Messiah.

The Sabbath in Scripture - Has God's Seventh-day Sabbath been 'done away with'? What does the Sabbath mean, and does God want us to keep it?

Spirit, Soul and Body - Take a deeper look at the Bible's teachings about the composition of human beings and the roles of our soul and spirit.

Jeshua the Messiah: Is He the Son of God or Part of a Trinity? - Explores the relationships between God the Father, our Lord Jeshua, the Holy Spirit and us.

Unclean Animals and Food - What does the Bible teach about unclean animals? Does the New Covenant allow us to eat unclean meat?

Radiocarbon Dating - Shows how changes in normal and radioactive carbon levels can drastically alter radiocarbon dates. Not heavily technical.

Rome's Challenge: Why do Protestants Keep Sunday? - This Roman Catholic article proves there is no scriptural basis for changing the seventh-day Sabbath to Sunday, and shows that the Roman Catholic church made the change.

Software

Calculated Biblical Calendar - Calculates dates of Annual Holy Days, Crucifixion, Flood, Creation: allows you to test the new moon visibility locally.

Radiocarbon Dating - Calculates the effects that changes in the geomagnetic field and radiocarbon/carbon ratios, etc, on radioactive dating.

Free Library

We have a large range of Christian and Creationist literature, CDs and DVDs that are available for borrowing within Australia. Please contact us for our list.