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## Inside this issue:

Enantiomers: A Specialist Field Of Pharmacology	2
A Retail Death	4
The Source	5
Dogma	6

## Special points of interest:

- \* Enantiomers, chirality, racemic, big words that are easier to understand than they seem
- \* The demise of Whitcoulls, is there any relevance to the veterinary profession?
- \* Ethical Agents is now firmly entrenched as "The Source", sourcing products from its world wide connections to fill special needs for practitioners.
- \* Have Trackside got it wrong? More and more racing leads to less and less betting!

## A Sad Time

There is no question about the fact that, in this horrific time for Christchurch and its environs, following so soon after the Pike River tragedy, the whole country is feeling the pain.

We are a small nation as well as having an itinerant population thus so many in the north have incredibly strong links with the south.

Even if this were not the case, the New Zealand psyche would dictate that we are all in this together. Apart from a national outpouring of grief the whole country is dedicated to the rebuilding of this vital region.



## Something For All Inside

There is a real mixture of articles in the newsletter many of which are not pharmacologically based but all are of relevance to the veterinary profession.

A comment on racing, more particularly betting

trends, is joined by relevance of the Whitcoulls announcement this month.

A new service line from "The Source" accentuates the need for certain products for specialist indications.

There is also an article on the deceptively complex subject of enantiomers and their relevance to pharmacology.

There certainly are some interesting examples in this field.

## Enantiomers: A New Field Of Specialist Pharmacology

Using words such as enantiomer, chirality or racemic can stop any conversation, however they are not that complicated.

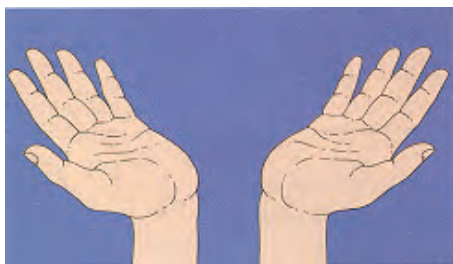
The term chiral in general is used to describe an object that is non-superposable on its mirror image. Human hands are perhaps the most universally recognized example of chirality: The left hand is a non-superposable mirror image of the right hand; no matter how the two hands are oriented, it is impossible for all the major features of both hands to coincide. This difference in symmetry becomes obvious if someone attempts to shake the right hand of a person using his left hand, or if a left-handed glove is placed on a right hand. The term chirality is derived from the Greek word for hand (cheir). It is a mathematical approach to the concept of "handedness".

In chemistry, chirality usually refers to molecules. Two mirror images of a chiral molecule are called enantiomers or optical isomers. Pairs of enantiomers are often designated as "right-" and "left-handed."

**"the R-enantiomer of the pheromone of the fly, *Dacus oleae*, is a sexual lure for males and that the S-enantiomer acts in the same way on females"**

There are two possible molecules (enantiomers or optical isomers), i. e. they have a spatial asymmetry and the mix of these two optical isomers is defined racemic.

Each chemical synthesis of a molecule starting from the raw material produces a mixture of the two enantiomers in the ratio of 1:1. They have the same chemical and physical properties except the abil-



ity to interact with the polarised light and the ability to interact with the other enantiomers (e.g. the tissue receptors for hormonal substances).

The interaction with the polarised light defined their rotatory disposal (Right or Left – Dextrorotatory or Levorotatory) or (+ or -) whereas the interaction with other molecules (receptors, substrates, etc.) is responsible of their action or therapeutic efficacy.

In short the chirality of a drug isomer can decide which receptors it can combine with and so affect whether it has the required therapeutic effect or instead confers side effects by interacting with other receptors in the body.

Examples abound in pharmacy, L-saccharose is not metabolised and it doesn't produce energy leading to its potential utilisation as an artificial sweetener, whereas D-saccharose is metabolised and it produces energy.

The discovery that the R-enantiomer of the pheromone of the fly, *Dacus oleae*, is a sexual lure for males and that the S-enantiomer acts in the same way on females provides indications as to the relation between chirality and the behavioural responses of the society of insects.

This discovery has, in turn, led to the production of much valid information over the last decade, during which there has been close collaboration between chemists and entomologists.

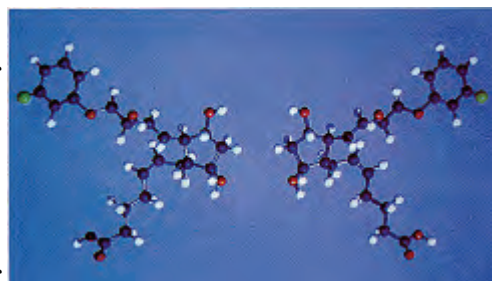
One of the classic cases is that of thalidomide whose D isomer is teratogenic (undesired side effect) and the L isomer is antiemetic (therapeutic benefit).

In some cases (e.g., ibuprofen and thalidomide), the enantiomers are interconverted *in vivo*, but the tragic consequences of the use of thalidomide might have been avoided (at least in theory) had it been laid down, by 1963, that separate tests should be carried out on both enantiomers in the pure state.

However for the vast majority of



drugs, isolating the effective isomer can mean having a drug with therapeutic benefit without the undesired effects, as in the case of L-saccharose above.



In the case of prostaglandin analogues the common side effects are sweating and stomach upsets. This is due to the L isomer activating receptors in the sweat glands and the gut. The desired luteolytic and

(Continued on page 3)

## Enantiomers: A New Field Of Specialist Pharmacology

*(Continued from page 2)*

uterotonic effects of prostaglandins are entirely dependent on the D isomer linking with, and activating, the appropriate receptors.

It is important to realise that naturally released prostaglandins in the body itself are only in the D isomer form, so that only the uterotonic and luteolytic effects are activated by physiological release.

All synthetic prostaglandin analogues, with the exception of cloprostenol, exist only in the racemic

form, i.e. both isomers. In addition most cloprostenol preparations are D/L cloprostenol, which means that they are also racemic.

However Fatro, an Italian company, have been able to produce a product with D cloprostenol only.

This means that this product, named Dalmazin, is more pure than other prostaglandin preparations on the market, requires a smaller dose, targets uterotonic and luteolytic receptors only, leading to a smaller dose with a prolonged action.

In addition, because it does not activate other receptors, the unpleasant side effects of exogenous prostaglandin are non-existent.



## Discretion

Six men were playing poker in O'Leary's apartment when Paddy Murphy loses \$500 on a single hand, clutches his chest and drops dead at the table. Showing respect for their fallen brother, the other five continue playing standing up.

Michael O'Connor looks around and asks, 'Oh, me boys, someone got to tell Paddy's wife..... Who will it be?'

They draw straws. Paul Gallagher picks the short one. They tell him to be discreet, be gentle, don't make a bad situation any worse. 'Discreet??? I'm the most discreet man you'll ever meet. Discretion is me middle name.....Leave it to me.'

Gallagher goes over to Murphy's house and knocks on the door. Mrs. Murphy answers and asks what he wants.

Gallagher declares, 'Your husband just lost \$500, and is afraid to come home.'

'Tell him to drop dead!', says Murphy's wife.....

'I'll go tell him.' says Gallagher.



## An Italian Anniversary

At St. Peter's Catholic Church in Toronto, they have weekly husband's marriage seminars.

At the session last week, the priest asked Giuseppe, who said he was approaching his 50th wedding anniversary, to take a few minutes and share some insight into how he had managed to stay married to the same woman all these years.

Giuseppe replied to the assembled husbands, 'Wella, I've tried to treat

her nicea, spenda da money on her, but besta of all is, I tooka her to Italy for the 25th anniversary!'

The priest responded, 'Giuseppe, you are an amazing inspiration to all the husbands here! Please tell us what you are planning for your wife for your 50th anniversary?'

Giuseppe proudly replied, " I gonna go pick her up."



## A Retail Death

“The news is now public that one of New Zealand’s great retailers is in deep financial trouble. Whitcoulls, once Whitcombe & Tombs, was a cornerstone of this country’s literary life, as both publisher and bookseller, as well as a supplier of stationery to students making their academic way. If its days are genuinely numbered, is the demise of Whitcoulls a sign of deeper problems in the local literary world, or is it evidence that retailing itself is in a period of dramatic change?”

This is the first paragraph of an interesting website article by Keith Stewart in [foodnews.co.nz](http://foodnews.co.nz).

While discussing whether e-commerce is a factor the article goes on to ask whether the decline of the bookshop giant was due to the introduction of Lotto terminals into the stores. The thread moves on to discuss the corresponding lack of service and knowledge by the shop assistants, e.g. “there are now till-cowboys whose book knowledge is minimal, and the range is based entirely on best-selling pulp and special-price lines.”

The author sees a warning for supermarket owners who think they are the only grocery option “catering to sleeping shoppers intent only on buying the cheapest option.”

What he did not refer to was the fact that this giant chain, some years ago, undertook a policy of not supporting New Zealand fiction but flooding the shops with populist overseas writing, to the detriment of the local novelists and so the authors and publishing businesses in this country went into decline.

What are the ramifications for the veterinary industry because the similarities are close, both in the pharmaceutical and retailing areas

of the industry?

In the last few years there have been major mergers worldwide, as well as in New Zealand, of pharmaceutical firms including foreign acquisitions of New Zealand owned enterprises. We already have so many ‘orphan products’ because our market is so small on a world scene and the sales of many products are not deemed to be sufficient to justify the attendant bureaucratic demands and costs of registration.

A sales manager based in Germany or the United States sees little benefit to his figures by the sales of a sporadically used product in little old New Zealand when the company can concentrate on high turnover lines in the much more populous northern hemisphere. One can only see the spend on advertising for herd health treatments such as anthelmintics compared to that for remedies for incontinence or renal disease in small animals. The merging of conglomerates will only accentuate that trend, à la the Whitcoulls scenario.

Also to be considered is the manufacturing industry in New Zealand. Like the publishing industry it is small by world standards but very vibrant. Several individual companies put out some quality products and it is very much in the interests of the profession that this local technology survives and prospers. A great example is the flexibility given by such local industry in the production of Keadione, supplying high quality oral vitamin K<sub>1</sub> to practitioners at a time of huge crisis. The same production line used emulsifying technology to develop Calstart a year earlier providing a starter drench, at an economical price, that did not settle out in suspension.

At practice level we have been seeing for some time the merging of practices into large business concerns. Just as we no longer have the corner dairy or the local bookshop, it is predicted that the day of the small one or two person practice is over.

**“there are now till-cowboys whose book knowledge is minimal, and the range is based entirely on best-selling pulp and special-price lines.”**

While profit and practice viability are major points, the profession also has a duty of care, much more so than a bookshop, and client satisfaction and animal welfare are perceived, by both the profession itself and the public at large, to be of paramount importance.

It was this individual client care that Keith Stewart perceived to be at the heart of the demise of Whitcoulls and it is something that all expanding businesses, including veterinary practices and pharmaceutical companies should be cognisant of.

It is not just individual animal care that is important but also being aware of customer wants and needs. Too many companies, especially the mega-structured corporates, make the mistake of deciding what the customer should have instead of ascertaining what the customer wants and supplying that need.

As the last sentence in the article on [foodnews.co.nz](http://foodnews.co.nz) stated, “The biggest news of the day is that one of the most solid and established of New Zealand’s retail brands is on the verge of failure: subtitled, the bigger they are, the harder they fall.”

## The Source

There are many products that are of great value to Kiwi practitioners but difficult to obtain in this area of the world. We are a long way from the action as far as the pharmaceutical world is concerned and our relatively small market makes it not cost effective for many of these products to be marketed here.



Recent years have seen the demise of valued products like Leo Ear Cleaner and lifesavers such as Vitamin K<sub>1</sub> for dogs and potassium supplementation for cats.

With a web of contacts through several continents Ethical Agents Ltd has grown exponentially over the last decade and, over that period, has been conscious of the need for certain service lines by practices.

In the 90s many companies simply deleted generic lines that were very price competitive and so had low profit margins. By retaining registrations the company soon found itself in a position whereby it had the only injectable antihistamine registered for animals (Antimine) and soon the only injectable acetylpromazine (Acezine).

The arrival of Calol revolutionised milk fever therapy in dairy cattle and is still the treatment of choice

## Confession

A guy goes into the confessional box after years being away from the Church.

There's a fully equipped bar with Guinness on tap. On the shelf of one wall is a dazzling array of the finest cigars and chocolates and

for this niche area. As contacts grew there became a focus on not only retaining such products but also actively sourcing others, many from feedback from veterinarians in clinical practice.

Propalin Syrup has saved many an incontinent dog from euthanasia and others such as Ipakitine and Liver X have been of great assistance in the areas of renal failure and facial eczema.

This is an industry where the only constant is change and EA tentacles have spread across the globe, helped in no small way by the close alliance with Vétoquinol from France, a company that has become a giant in the world veterinary market.

In recent years products added to the range include Epiphen and Epibrom for epilepsy, and last year saw more service lines added including a 60 mg strength pentobarbitone for sedation and the formulation of Keadione, liquid Vitamin K<sub>1</sub>, which satisfied a demand.

Alpha Ear Cleaner, a generic of the defunct Leo Ear Cleaner, and the first such product to be fully registered has taken a while in the coming but that has not diminished the need.

Now another year has started and the programme continues. First cab off the rank is Hypokal, potassium gluconate tablets from a new

the other wall has revealing pictures of a buxom blond. He hears a priest come in:

"Father, forgive me for it's been a very long time since I've been to confession but I must first admit that the confessional box is much

supplier, the Brisbane based Mavlab, with the promise of more to come from this source.

Another new supplier on board is a firm from Italy, Fatro, who have a close relationship with Vétoquinol, one of our oldest acquaintances. The very first product from Fatro is a prostaglandin but not just any prostaglandin. In the exciting new field of pure isomers Fatro have developed Dalmazin, D cloprostenol, a much purer molecule than the normal racemic D/L cloprostenol of other companies and without the attendant side effects, which can be off putting to clients.

While this may seem an impressive list of products that all fill a demand, they do not in themselves generate the turnover required to keep a company competitive and Ethical Agents Ltd appreciate the strong support it receives on the "bread and butter" lines to enable the company to compete and be able to supply the industry with such a service.

The analogy would be that of an instrument supply company that has a warehouse full of odd sized plates and pins etc. It can only afford to do that if its mainstream business is supported. It is no different in the pharmaceutical field.



more inviting than it used to be"

The priest replies, "Get out, you idiot. You're on my side"

# Dogma

Dogma is the established belief or doctrine held by a religion, or by extension by some other group or organization. It is authoritative and not to be disputed, doubted, or diverged from, by the practitioner or believers.

In other words dogma is an article of faith but, while the belief of the time, does not need to necessarily be cast in stone in that many an established thought, in veterinary therapy as well as all other walks of life has been overturned by later knowledge or technology. *"The dogmas of the quiet past are inadequate to the stormy present"* (Abraham Lincoln).

Radical socialism and extreme capitalism are two social systems based on dogma, neither of which worked because they did not take into account human nature.

Probably the greatest example of science disproving dogma was that of Galileo postulating that the earth rotates around the sun, not the other way; a notion that almost cost him his life at the hands of the Inquisition.

It is not quite as severe as that in the racing industry but entrenched dogma is almost as hard to disprove. However, in the light of the parlous state the industry has fallen into in the last few years, more questions should be asked of these supposed articles of faith.

For some years now the suits on big salaries in the ivory towers of Wellington have decided that more is better and thus even more is better still. Hence we have had 'product' in the form of overseas racing thrust more and more on our local Trackside television. A major attraction for the TAB was that this mainly Australian 'product' was free and so cost the industry nothing.

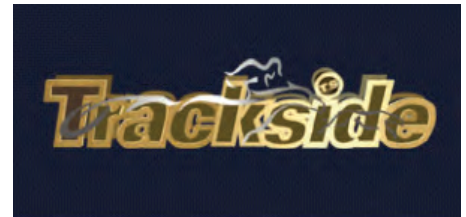
This was always going to be detrimental to the local 'product' but the argument, which soon became entrenched dogma, was that the total take for the day would increase, making the whole enterprise much more profitable and the attendant benefits would be returned to the racing industry ensuring its survival.

Thus the claim was that there would be a much bigger pie to share and so everyone would have a much larger slice of pie.

What club administrators in the smaller clubs soon began to notice was that lead in times to their races were being cut dramatically and this was a major reason for the fall in off-course turnover. This did not go down at HQ, where more people were being recruited on larger salaries, all imbued with the philosophy that their way was the right way.

**"traditionally gambling spend increases in recessionary times"**

It appeared to all in sundry that the racing industry was there to provide jobs for the servants, not the converse by which the servants were supposed to be there for the profitability, or at the very least, the viability of the racing industry.



"More must be better" was the message and those who did not adhere to it were derided as amateur bumpkins with no business knowledge. This approach totally ignored the fact that these so called amateur bumpkins have, for many years, being balancing the books of struggling clubs in a struggling economy and, so far, have kept the game going in the face of considerable adversity.

When dogma is proven wrong it must be challenged and it certainly appears that the current view point of clogging the screens and air waves with more and more 'product' is, at the very least questionable.

Figures taken comparing race days over the last two years show that, not only is the turnover per club decreasing, so is the total take for the day, i.e. the total pie is shrinking instead of growing as it should according to the established dogma.

The figures from the first Saturday in February in 2011 show dramatic differences from those of the corresponding day in 2010 and 2009. *(Continued on page 7)*

	31 Jan 09	6 Feb 10	5 Feb 11
<b>Average time between races</b>	9.1 min	7.6 min	5.4 min
<b>Total # races for day</b>	102	153	168
<b>Total turnover for day</b>	7,928,868	8,289,245	7,055,174
<b>Average turnover per race</b>	77,734	54,178	41,995

## Dogma

(Continued from page 6)

The total number of races broadcast on the day has increased by 65%, which is reflected by the fact that the average time between races in 2009 was 68.5% higher than it is now. This has resulted in a 50% drop in average turnover per race and, more damningly, the total turnover for the day has decreased by nearly one million dollars. That is a massive reduction in the size of the pie in anybody's language.



Nor are these figures to be taken in isolation. Similar decreases have been noted for Thursdays and Fridays but, as the total pools for these days are smaller than for Saturdays, the changes are a little less dramatic, nevertheless the trend is exactly the same.

Other factors may be at play here, the recession is easy to blame but two facts need to be taken into account when one is blaming the recession. The first, which really is dogma rather than fact, is that traditionally gambling spend increases in recessionary times and the second, more telling fact is that the worldwide crash hit rock bottom in October 2008 so that early 2009, the high point of these figures, was at the peak of the recession.

Some may argue that internet betting, not just on racing but other forms such as poker games, are a factor.

That may well be the case but the difference, both in the drop in turnover and the increase in 'product' jam packed onto the airwaves is too dramatic for this to be the sole reason for the decline.

5.4 minutes between races may seem long enough but this is an average time. The talking heads devote a lot of time to major races meaning that the rest of the day is packed into too small a time frame.

In addition the TV screen is cluttered with odds as horses are being filmed before a race so that anyone wishing to pick out his horse's colours has no show of identifying it until the race is well and truly on the way. This leads to apathy which of course leads to lack of betting.

The concept that more and more racing on Trackside leads to an overall increase in the total pool for the day seems to be very flawed. The arguments against this dogma are compelling.

To hold to dogma in the face of contrary evidence is to be dogmatic, which is itself a disparaging term.

## How Is Your Day

There I was sitting at the bar staring at my drink when a large, trouble-making biker steps up next to me, grabs my drink and gulps it down in one swig.

"Well, whatcha gonna do about it?" he says, menacingly, as I burst into tears.

"Come on, man," the biker says, "I didn't think you'd CRY. I can't stand to see a man crying."

"This is the worst day of my life," I say. "I'm a complete failure. I was late to a meeting and my boss fired

me. When I went to the parking lot, I found my car had been stolen and I don't have any insurance. I left my wallet in the cab I took home. I found my old lady in bed with the gardener and then my dog bit me."

"So I came to this bar to work up the courage to put an end to it all, I buy a drink, I drop a capsule in and sit here watching the poison dissolve; then you, you jack-ass, show up and drink the whole thing!"

But enough about me, how's your day going?"








## The Golfing Priest

A guy was getting ready to tee off on the first hole when a second golfer approached and asked if he could join him. The first said that he usually played alone, but agreed to the twosome.

They were even after the first few holes. The second guy said, "We're about evenly matched, how about playing for five bucks a hole?"

The first guy said that he wasn't much for betting, but agreed.

The second guy won the remaining sixteen holes with ease. As they were walking off number eighteen, the second guy was busy counting his \$80.00. He confessed that he was the pro at a neighbouring course and liked to pick on suckers.

The first fellow revealed that he was the Parish Priest. The pro was flustered and apologetic, offering to return the money.

The Priest said, "You won fair and square and I was foolish to bet with you. You keep your winnings."

The pro said, "Is there anything I can do to make it up to you?"

The Priest said, "Well, you could come to Mass on Sunday and make a donation. And, if you want to bring your mother and father along, I'll marry them."