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## President's Column



*We are once again at the beginning of the New Year to take stock of our activities for the year 2010 and to deliberate and take decisions that could benefit all members of CVA throughout the Commonwealth. The CVA is a major stakeholder of the veterinary profession and our decisions are most likely to affect not only within the Commonwealth but also affect the global veterinary profession.*

*As always indicated in most of my addresses, my role as the President is to coordinate activities of this noble association and ensure that the CVA continues to fulfill its objectives of promoting the veterinary profession within the Commonwealth and beyond.*

*The CVA has achieved many successes during the last few years, however, may I state here that the CVA is still confronted with many challenges. Our members count on us for many of our projects which are being implemented in the developing countries of Asia and Africa. Climatic change and natural disasters, unequal distribution of wealth and world economic downturn have brought about much hardship to many member countries and these issues are the ones which need immediate and particular attention.*

*In addition to our projects other programmes such as the Continuing Professional Development Programme, Regional Conferences, Workshops, Book And Journal Programme have all come to stay, The CVA through prudent actions taken by previous members of the Executive has become a house hold name among veterinarians especially within the Commonwealth. We must endeavour to sustain these achievements and improve on them.*

*The Year 2011 is the **Year Of The Veterinarian** and the Veterinary profession will be celebrating this throughout the world. Many programmes and conferences are scheduled during this year and it is our pride that the first such international conference is our own **5th Pan Commonwealth Veterinary Conference** which is going to be held in Accra, Ghana from the 21st to 25th March.*

*The Ghana Veterinary Medical Association, under the dynamic leadership of its President Dr. Darkwa and his team of dedicated office bearers, is working round the clock to ensure this conference is a great success. I am also proud and privileged to host this conference in my own country as President of CVA. This conference is the 5th in the series of conferences which CVA have been held during the past and has attracted many international organizations such as OIE, WHO, FAO, WSPA, WVA, CIWF, etc to it. The Conference will be inaugurated by*

## PRESIDENT'S COLUMN

Dr. Bernard Vallat, Director General of OIE.

I warmly welcome all of you to this 5th Pan Commonwealth Veterinary Conference - I do hope that it proves to be a meaningful experience for each of you and that you also enjoy our traditional Ghanaian hospitality.

On behalf of the Executive Committee of the Commonwealth Veterinary Association I wish all, including our cherished sponsors, a **Happy 2011 New Year**.

January 2011

**Richard Suu-Ire**  
President



### 5th Pan Commonwealth Veterinary Conference 21 - 25 March 2011 at Accra, Ghana, West Africa

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## Factors Influencing Adoption Of Dairy Goats In Meru County, Kenya: Prospects And Constraints

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### Abstract

Improving milk production through crossbreeding of local goats with exotic breeds has increasingly become important in developing countries. Although, the dairy goat technology has been promoted in the central Kenyan highlands for more than a decade, very little documentation has been done on the uptake of the technology. A household survey was conducted among 260 randomly sampled smallholder farmers and a Probit model used to explain the influence of socio-economic and demographic characteristics, agro-ecological conditions, technological and use aspects, and external support services on the probability of adoption. Results showed that these factors are important in determining farmers' adoption decision.

**Key words:** Dairy goats, adoption, technology uptake, Kenya

### Introduction

Livestock development projects have a potential to contribute to poverty reduction through increased farm incomes. They often act as catalysts that enable farm households to join the market economy and subsequently achieve a decent standard of living (ILRI, 2007). In the greater part of East Africa, keeping of dairy cattle by smallholder farm families is viewed by governments and development agencies as a means of increasing accessibility to high quality nutrients, and as a source of cash income to purchase other foods Dairy cattle projects involve high costs, and this leads to exclusion of resource-poor households from participating in dairy cattle husbandry (Bachmann, 2005, Staal *et al.*, 1997.). Rapid population growth has resulted in further land subdivision, additionally exacerbated

inadequacy of arable land that is much needed for the production of both food crops and fodder for dairy cattle.

The dairy goats are regarded as part of the solutions to the problems of maximization of land use due to their compatibility with smallholder farming systems in high potential areas (Ahuya, *et al.*, 2005). Due to their small size, the dairy goats' feed requirement is low compared to that of dairy cows. They also occupy a small area and produce enough milk for the average family, and hence have been nicknamed the "poor man's cow" (Saif *et al.*, 2004). According to Ahuya *et al.* (2005), goats have a short reproductive cycle and high incidence of multiple births. They thrive in virtually all climatic zones and under any production system (Smith and Sherman, 1994). Increasing productivity of local goats through crossbreeding with exotic breeds is increasingly being viewed as one of the ways of improving incomes and levels of animal protein among rural communities (Shavulimo, 1989; Peacock, 2008).

Economists and sociologists have made extensive contributions to the literature on adoption and diffusion of technological innovations in agriculture (Feder *et al.*, 1985; Rogers, 1995; Adesina and Chianu, 2002). The earlier focus of most studies however was on adoption of improved crop varieties and it is not until recently that attention has shifted to the adoption of new livestock management practices (Doss, 2006).. For instance in Kenya most of the livestock studies, with the exception of Baltenweck and Staal (2000), Staal *et al.*, (2002) and Makhoha (2005), dwell on livestock production systems, diseases and management practices. In the Central Kenyan highlands, the initiative to promote dairy goats was taken up in the 1980s and 1990s by the German Technical Cooperation (GTZ), Food and Agricultural Research Management in Africa (FARM-

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## GENERAL ARTICLES

Africa), in collaboration with local partners including the Kenya Agricultural Research Institute (KARI), Ministry of Agriculture (MoA) and Ministry of Livestock and Fisheries Development (MoLFD). The main aim of this initiative was to improve the income of the poor farmers in the region. This resulted in the introduction of pure exotic dairy goat breeds and crosses of German Alpine, Toggenburg, Anglo-Nubian and Saanen. However, as is often the case with many development programmes in the developing world, the uptake of these dairy goat breeds and their crosses has been experiencing reduced external support after withdrawal of donor funding (Peacock, 2008). Reasons cited for this trend include government agents and policy makers' lack of understanding of factors favoring dairy goat adoption and the absence of vital data on characterization and documentation of performance of breeds (FARM-Africa, 2006). While the latter problem is now being tackled through group-based or community based recording schemes (Ahuya et al., 2005), the former has not been addressed. The lack of understanding of what kind of farmers can potentially adopt dairy goats and/or which factors can enhance adoption has largely contributed to the patchy and ineffective attempts by governments to promote this sector and especially after withdrawal of foreign development partners (Peacock, 2008).

In an attempt to address this problem, this case study examines the determinants of dairy goat adoption in Meru Central and Meru South Districts in Kenya which is one of the areas where FARM-Africa was involved in the promotion of dairy goats in 1996-2004. It hypothesizes the adoption of the dairy goat technology is influenced by, among other factors, socioeconomic and demographic characteristics of farmers, technological and use aspects of dairy goats, support services, and environmental factors. It is expected that an understanding of the importance of these factors will guide targeting of farmers and regions, and prioritization for enhanced uptake of dairy goat technology even after withdrawal of foreign aid.

### Conceptual Background

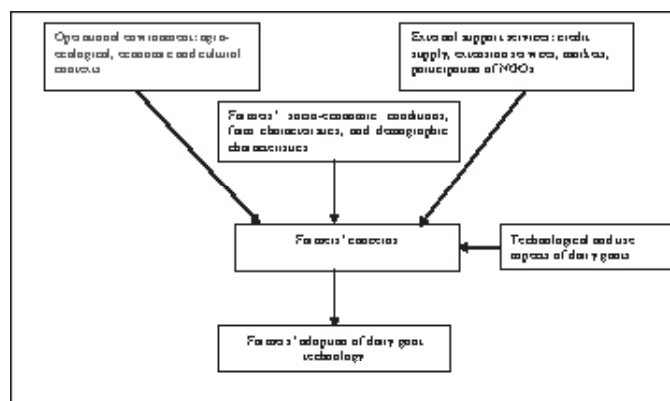
Past studies on adoption of technologies provide useful insights on household socio-economic characteristics, resource attributes, institutional factors, and level of adoption as some of the factors that influence the probability. In particular farmers' demographic and socio-economic characteristics have widely been shown to influence adoption of agricultural technologies in different developing countries (Feder et al., 1985; Adesina and Chianu, 2002).

Besides the effect of socio-economic factors, smallholder farmers have been shown to be rational

and risk averse, and will only adopt technologies that meet their multiple concerns (Ellis, 1983). At the same time they will be constrained by the prevailing environmental factors such as the agro-ecological aspects, regional economic and cultural contexts, policy and governance factors such as access to government extension services and credit services, and assistance from development agencies involved in promotion of agricultural activities (Rogers, 1995; Wale et al., 2005). (Fig 1.)

In reference to dairy goat technology, the technological concerns refer to dairy goats' responses to inputs such as feeds, management (husbandry) practices, in order to produce the expected outputs in a given farming system, while the use attributes denote the performance of a particular dairy goat breed for the purpose of utilizing it and its product in multiple ways such as sale of milk and kids and production of manure. The environmental factors are represented by rainfall, temperatures, pests and diseases and soil types which not only determine the agro-ecological zones (AEZ) favorable for dairy goat's production but also have a direct influence on production of fodder crops.

The various broad factors that influence farmers' concerns and adoption of dairy goat technology can be conceptualized as shown in Figure 1. It is hypothesized that characteristics of farmers' operational environment, external support services, and demographic, socio-economic and farm characteristics affect farmers' concerns and therefore the outcome of dairy goat adoption in the research area. It is depicted that farmers will only adopt the dairy goat technology if their concerns or interests are met. However these concerns are the outcome of the interaction of farmers' contextual socio-economic and demographic characteristics (e.g., age, farm size, family structure and gender, resource endowment, risk aversion, market opportunities, etc.), technological and use attributes (e.g. fodder, previous



experience and use of the products), and several environment factors in the region where they live (Rogers, 1995; Batz et al., 1999; Adesina and Chianu, 2000; Fernandez-Cornejo and McBride, 2002; Wale et al, 2005). Ultimately, farmers' decisions to adopt dairy goat technology will determine its enhanced uptake in the research area.

There are other specific hypotheses that can be developed to test the relevance of the socio-economic and demographic as well as environmental factors. However since there are no adoption studies on exotic goat breeds in Kenya, most of these can only be generated from the above framework and literature on adoption of dairy cattle or indigenous dairy goats (e.g., Baltenweck and Staal, 2000; Staal et al., 2002). On the other hand, hypotheses to test the influence of technological aspects of the dairy goat technology can be based on Rogers' model (1995).

## The Empirical Model and Hypotheses

### Empirical Model

This study is based on the random utility theorem (Gujarati, 2003) which postulates that consumers (in this case farmers) will choose or adopt a technology which can maximize their utility. The decision to adopt a technology or not is a binary decision which can be represented as a qualitative variable whose range is actually limited since it can only take on two values (adopt or not adopt). An adopter in this study is defined as any farmer who had a pure dairy breed, a cross-breed or had a pregnant local goat which had been inseminated or served by a dairy breed buck at the time of the study. Thus adoption at the farm level describes the realization of farmers' decision to apply a new technology in the production process (Rogers, 1995).

Adoption decisions are usually analyzed using binary choice models (Ayuk, 1996). The binary models make use of the assumption that the farmer is faced with a choice between two alternatives; to adopt or not adopt a technology and that the choice made depends on attributes or characteristics described in this study.. Thus in the presence of a new technology, the farmer is faced with the decision to adopt ( $Y=1$ ) or not adopt ( $Y=0$ )

$$Y = \beta_i X_i + \varepsilon \quad \dots \text{Equation-1}$$

Where, Y is the adoption decision,  $X_i$  represents the regressors and  $\beta_i$  is coefficients of the repressors.  $\varepsilon$  is the random term (assumed to be identically, independently and normally distributed with  $\mu = 0$  and variance  $\sigma^2$ ).

The decision of the  $i^{\text{th}}$  farmer to adopt dairy goat

technology depends on an unobservable utility index  $I_i$  (also known as a latent variable), that is determined by one or more explanatory variables in such a way that the larger the value of the index  $I_i$ , the greater the probability of a farmer adopting the technology (Gujarati, 2003). The index  $I_i$  is thus expressed as:

$$X_i = \beta_0 + \beta_i X_i \quad \dots \text{Equation-2}$$

Where  $X_i$  are the set of independent variables?

It is assumed that there is a critical or threshold level of the index  $I_i$  such that if

$I_i > I_i^*$ , the farmer will adopt ( $Y=1$ ), otherwise if

$I_i < I_i^*$ , the farmer will not adopt ( $Y=0$ ).

Therefore, assuming normality, the probability that can be computed:

$$P_i = P(Y=1/X) = P(I_i \geq I_i^*) = P(Z_i \leq \beta_0 + \beta_i X_i) = F(\beta_0 + \beta_i X_i) \quad \dots \text{Equation 3}$$

where  $P(Y=1/X)$  means the probability that a farmer will adopt the technology given the values of the explanatory variables where  $Z_i$  is the standard normal variable, i.e.  $Z \sim N(0, \sigma^2)$

### Description of variables and hypotheses

As explained above, the explanatory variables (independent variables) used in this study include demographic characteristics, socioeconomic and farm (farming) characteristics, technological and use aspects, external support factors and environment factors. Their definitions and hypotheses are presented in Table 1. The dependent variable is DGADOPT (adoption of dairy goat technology). It is coded 1 if a household has any pure, cross-bred or a pregnant local goat inseminated by a dairy breed, and 0 if otherwise.

The rationale for selection of the above variables has been explained in the conceptual framework . Here-below, we only provide more information for a number of variables that need clarification as to why they were included in the model.

The number of local groups that the households belong to (GROUP\_NO), is included in the model as a proxy for social capital. This factor has extensively been shown to enhance adoption of technologies in many developing countries (Grootaert, 2002). Notably, dairy goats were introduced in the research area through a group approach

whereby farmers were requested to form dairy goats associations in order to access the exotic germplasm. We do not however include these associations in the variable (GROUP\_NO) since joining them implied adopting dairy goats.

The FODDER\_IN variable and EXPERIENCE in keeping local goats are proxies for the readiness of the farmers to use the technology. Indigenous fodder is normally grown in the research area as shrubs and trees to prevent soil erosion and to mark hedges and boundaries. Since dairy goats are usually zero-grazed, it is expected that farmers with such fodder trees will easily take up the technology as they have less feed problems. Likewise, farmers with extensive experience of rearing goats are expected to adopt dairy breeds without major difficulties.

Just like the EXTENSION and CREDIT variables, the MRKDIST factor is regarded as an external support service since it is the responsibility of the government to create markets through construction of roads and other infrastructures. Access to these support services is expected

to positively influence adoption of dairy goats.

The DAIRYCOW factor is an indicator of favorable environmental factors for exotic dairy goat production just like the AEZ. Most areas in the Kenyan highlands where dairy cattle perform well are located in the Upper Midland and Highland agro-ecological zones where there are cool temperatures that the exotic dairy goat breeds are used to, though these are not any close to the temperate conditions in Europe. We therefore expect dairy goats to do well in areas with dairy cattle. However farmers with dairy cattle might also fail to adopt dairy goats because they are used for comparatively higher returns from cow milk and milk products. It is therefore difficult to predict the sign of this variable.

The empirical model derived from the variables in Table 1 is:

$$ADOPT\_DG = \beta_0 + \beta_1 GENDER + \hat{\alpha}_2 DEPEND\_RA + \beta_3 HHEDU + \beta_4 GROUP\_NO + \beta_5 FARMSIZE + \beta_6 LABOR\_TYP + \beta_7 FODDER\_IN + \beta_8 EXPERIENCE + \beta_9$$

**Table 1: Definition of Explanatory Variables**

Variable	Definition	Hypothesis
<i>Demographic characteristics</i>		
GENDER	Sex of the household head (1=Male, 0=Female)	+
DEPEND_RA	Percent of household members below 14 years	+
<i>Socio-economic and farm characteristics</i>		
HHEDU	Educational level of the household head in years	+
GROUPS_NO	Number of formal and informal groups the household belongs to	+
FARMSIZE	Total farm size in acres	-
LABOR_TYP	Main type of labor used in the farm (0=Hired, 1=Family)	+
<i>Technology level and use aspects</i>		
FODDER_IN	Whether the household grows indigenous fodder (1=Yes, 0=No)	+
EXPERIENCE	Number of years the household has been keeping local goat	+
MILK_CONS	Whether the household can consume goat milk if it is available (1=Yes, 0=No)	+
<i>Support services</i>		
EXTENSION	Whether the household has been in contact with extension agents in the last one year (1=Yes, 0=No)	+
MRKDIST	Distance to the nearest market in Km.	+
CREDIT	Whether the household has been able to access formal credit in the last one year (1=Yes, 0=No)	+
<i>Environmental factors</i>		
AEZ	Agro-ecological zone of the area (1=Upper Midland Zone, 0=Lower Midland Zone)	+
DAIRYCOW	Whether the household has dairy cattle (1=Yes, 0=No)	+/-



$$\text{MILK\_CONS} + \beta_{10} \text{EXTENSION} + \beta_{11} \text{MRKDIST} + \beta_{12} \text{CREDIT} + \beta_{13} \text{AEZ} + \beta_{14} \text{DAIRYCOW} + \varepsilon \dots \text{Equation-4}$$

Equation 4 was analyzed using a probit model. The independent variables were assumed to have a normal distribution hence the Maximum Likelihood Estimation procedure (Gujarati, 2003) was used in the estimation of their coefficients.

### Description of the Study Area

The study was conducted in Central and South Districts of Meru County which are located in the central Kenyan highlands. The central Kenyan highlands are on the slopes of Mount Kenya within the administrative boundaries of the Eastern and Central Regions. The two study sites are similar in many aspects including agro-ecological conditions, farming systems, population densities, cultural and economic activities. They were selected for this study because they had largest populations of dairy goats kept by smallholder farmers in all parts of Central Kenya region

Meru Central district lies to the North East of Mt. Kenya. It borders Laikipia to the West, Nyeri to the South West, Meru South district to the South, Tharaka to the East, Meru North to the North. It has an estimated total area of 3012 km<sup>2</sup> of which 2710 km<sup>2</sup> is arable land. Annual rainfall ranges between 500-2600mm while the altitude ranges from 600m a.s.l. in the lower semi-arid areas to 5200 m a.s.l. on Mt. Kenya (DAO, 2007). Meru South district occupies the eastern slopes of Mt. Kenya. It borders Embu to the South, Meru Central to the North West, Mbeere to the South East and Tharaka to the East. It covers an area of 1092.9 km<sup>2</sup> of which 360 km<sup>2</sup> is part of Mt. Kenya National Park and 185 km<sup>2</sup> is non-arable land. The mean temperatures range between 14° - 20°C, the annual rainfall ranges between 1250 mm to 2500 mm, while the altitude ranges from 500 m to 5199 m above sea level Kenya (MoLFD, 2006).

The two districts cover a wide range of agro-ecological zones from the Tropical Alpine Zone (TA) to Lower Midland Zones (LM) (Jaetzold & Schmidt, 1983) thus making it possible to experiment the favorable areas for dairy goat production. Dairy goats kept by farmers in the region are either crosses or pure breeds. The cross-bred goats comprise of either 50% or 75% Toggenburg genetic material (50% and 75% crosses respectively). Farmers obtain the 50% cross as a result of inseminating a local breed doe by a pure dairy breed buck. The resultant 50% female offspring (doe) is further inseminated by a pure dairy breed buck, raising its dairy genetic make-up to 75%. The 75% does are then crossed with 75% bucks to avoid raising the dairy genetic composition higher. This ensures that the traits from the local

goat breeds (which include disease resistance and better adaptability to the local climatic conditions as compared to the pure dairy breeds) are not fully eroded.

The human population density in the two districts is high ranging from 450 to 700 persons per km<sup>2</sup> in some areas (Kariuki and Place, 2005). As a result, the area is characterized by small land sizes due to frequent land fragmentation. The area is characterized by complex farming systems dominated by perennial cash crops, food crops and livestock. The main cash crops produced for the export market are tea, horticulture, and coffee. Milk is sold locally to earn cash income but it is important for domestic use. The subsistence sector is dominated by the production of maize and beans

### Data Collection Procedures

The study utilized primary data collected between June – July 2007. Two divisions in each of the study districts were purposively selected, the criterion being those with the highest populations of dairy goats. The selection of these divisions was also guided by key informant interviews which were conducted with the Ministry of Livestock & Fisheries Department (MoLFD), Farm Africa and Meru Dairy Goat Breeders Association and focus group discussions held with opinion leaders, contact farmers and farmer groups. From each division, two locations were then randomly selected. From these, 260 smallholder households were selected using the random walk sampling method. With this method every fifth household on the right and left hand side (alternately) of all the roads in the villages was randomly selected. A total 126 households were drawn from Meru Central while Meru South provided 134 households. This sampling technique was applied since it was not possible to obtain sampling frames of dairy goat adopters and non-adopters in the area. The sampled households were interviewed using a semi-structured questionnaire, and data on household, farm and livestock characteristics were collected.

Data coding, entry and cleaning was done with SPSS software. Descriptive statistics which included frequencies and cross-tabulations were generated with SPSS and used to characterize farmers' socioeconomic characteristics and practices. An econometric probit model was run using LIMDEP statistical software and used to identify the influence of various factors on the probability of adoption of dairy goats.

## Results and discussion

### Descriptive statistics of the sample households

The means and standard deviations of the dependent and explanatory variables are shown in Table 2. The sample households comprised of 46% adopters and 54% non-adopters. Farming is the main occupation of majority (68%) of the households while 19% of them are salaried workers. Majority of the sample households (86.5%) are male-headed with the mean age of the household heads being 50 years. Ninety percent of the household heads have at least basic education with the mean number of years of formal education being 7 years. The average household size is 4.5. More than half of the households (54%) have no title deed to their land due to frequent informal subdivisions. Majority of the households (74%) are married and living together with their spouses while the rest comprise of those married but with one of the spouses living away, single, separated/divorced and widowed.

### Adoption of dairy goats

Forty six percent of all farmers in the sample had adopted dairy goats while 47% of them had not. A small number of households (7%) had abandoned the dairy goat technology. This latter group is lumped together with the non-adopters in the analysis of the determinants of adoption. In Meru Central district, 47.5% and 45.5% were non-adopters and adopters respectively while in Meru South district, the

two categories comprised of 47% and 46% respectively. In each of the districts, 7% of the households had abandoned the technology. Thus the two districts had similar trends of adoption of dairy goats.

Majority of the farmers (83%) in the two districts kept cross breeds while 17% had pure breeds of Toggenburg. In terms of genetic composition, farmers' herds comprised of different categories as shown in Table 3. When independent t-tests were conducted it was found that the compositions of farmers' herds in Meru Central and Meru South districts were not significantly different ( $P < 0.05$ ). The 50% cross, 75% cross and combinations of 50% cross and 75% cross were the three most important combinations in both districts. This is attributed to the method of acquisition of dairy goats. Instead of farmers buying pure breeds they were required to upgrade their local breeds by inseminating with imported pure dairy goat bucks. The later adopters could also purchase crosses from the early adopters who had upgraded their local breeds. The survey showed that majority of the farmers in both districts (89% and 96% in Meru Central and Meru South respectively) had acquired their dairy goats through these two methods. The rest of the farmers kept pure goat breeds in what was being termed as 'breeding farms'.

The stocking rate ranged from 1 to 15 cross-bred and/or pure breed goats per household. Majority (77%) of the adopters had a range of 1-3 dairy goats, with a mean of 2.91 and 2.69 dairy goats per household in Meru Central and Meru South districts respectively.

### Engendered adoption decision

The survey data showed that the decision to adopt dairy goats was made by men in 56% of the households, and women in 36% of the households, while in 8% of the households it was a decision undertaken jointly by the husband and the wife. This result implies that although women were actively participating in decision-making on adoption of the dairy goat technology, men played a more important role. However, the results are different when adoption stages - early and late - are considered separately. For the early adopters (1995 – 1999), more women (61.5%) than men (38.5%) influenced the decision to adopt dairy goats while for the late adopters (2000 – 2007), more men (58%) than women (32%) influenced the adoption decision. For the late adopters 10% of the households made the decision jointly unlike in the early adoption stage where there were no joint decisions. This implies that men may not have initially viewed dairy goats as an important income generating enterprise. However, with increased demand for kids and goat milk in the later years men changed this view so as to capture the highly visible benefits of rearing dairy goats.

**Table 2: Descriptive statistics of the dependent and explanatory variables**

Variable	Mean	Std. Deviation
ADOPT_D01	0.46	0.50
<b>Demographic characteristics</b>		
GENDER	0.57	0.54
DEPEND_RA	28.32	22.61
<b>Socio-economic/farm characteristics</b>		
HHHEAD	7.40	4.10
GROUPS_MO	0.44	0.66
FARM_SIZE	3.02	2.23
LABOR_TYP	0.34	0.48
<b>Technological and usage aspects</b>		
FOODER_TM	0.57	0.48
EXPERIENCE	8.98	12.4
MILK_CONS	0.88	0.32
<b>Agent service</b>		
EXTENSION	0.28	0.45
MRCDIST	2.83	2.10
CREDIT	0.12	0.32
<b>Environmental factors</b>		
AGE	0.65	0.48
DAILYCOW	0.61	0.49
Source: Own Data		

**Table 3: Composition of dairy goat heads adopted by the farmers**

Description of goat type	Number of Goats		
	Mixed Central (n=56)	Mixed South (n=51)	Total (n=107)
50% mixed only	12	16	28 (26%)
75% mixed only	16	8	24 (22%)
Pure bred only	5	3	8 (7%)
50% mixed + 75% mixed	23	14	37 (35%)
50% mixed + Pure	0	1	1 (1%)
75% mixed + Pure	0	6	6 (6%)
50% mixed + 75% mixed + Pure	0	3	3 (3%)

Source: own data

highly significant at less than 0.001%. The Psuedo R<sup>2</sup> is 31% which is within the range allowed with the kind data being analyzed in this study (Mbata 1997; Greene, 2003). The other model statistics are presented at the bottom of Table 5.

The probit model results show that except for social capital and AEZ variables all the other factors had the hypothesized signs. The coefficients of social capital and AEZ are however not significant and thus would not make sense to discuss them further.

**Adoption of dairy goats across wealth categories**

Three broad wealth categories (rich, middle and poor) were defined during focus group discussions with local leaders and farmers. Several wealth indicators such as major assets, type of housing, type of crop management, type of labour used, quantity of produce realized, and transport and communication facilities were used to categorize the households in the study area into the three wealth categories. Dairy goats were adopted across all wealth categories as shown in Table 4.

A higher proportion (52%) of farmers in the rich and middle wealth categories than in the poor category (29%) had adopted dairy goats. This may be due to the relatively high costs associated with acquiring insemination from exotic bucks since the variation in the study area. These results seem to contradict the popular belief that dairy goats are kept by the relatively poor farmers and are therefore referred to as the ‘poor man’s cow’ (Saif et al., 2004). However this is not the case since the dairy goat’s nickname ‘poor man’s cow’ refers to the fact that the poor are not able to keep dairy cattle (not dairy goats) due to the high costs involved. Nevertheless, it is important to note that in all the categories more farmers keep dairy cattle than dairy goats (Table 4), probably because the dairy goat technology is still new in the study area. Those in the rich category are particularly able to adopt dairy goats as well as dairy cattle as compared to the other wealth categories since they have a higher purchasing power that enables them to access appropriate insemination services, feeds, drugs and other inputs required for these enterprises.

**Factors influencing dairy goat adoption**

The results of the probit model are presented in Table 5. The model correctly predicted 79% of the responses and the Chi-square value (111.10) is

Among the demographic characteristics the dependence ratio (DEPEND\_RA) shows a significant influence on farmers’ likelihood to adopt dairy goat farming. The positive coefficient of this factor indicates that households with larger numbers of children are more likely to adopt the dairy goats than those with smaller numbers. Since having more children in the research area implies being relatively poor, this factor supports the hypothesis that goats are pro-poor animals (Saif et al., 2004) and could play a role in alleviating poverty. The relationship between the goats and the relatively poor is also supported by the significant and negative coefficient of FARMSIZE in the socio-economic and farm characteristics category. This factor indicates that households with smaller farms have a higher propensity to adopt dairy goats than those with larger ones. As the relatively poor people also have smaller farms in the study area, this factor is also a proxy for poverty that lends support to Saif et al (2004).

The only other significant variable that has significant influence on adoption among socio-economic and farm characteristics is the level of education of the household head (HHHEDU). This factor positively increases the likelihood of adoption. This might be the case since more educated households are likely to understand the dairy goat husbandry techniques which are taught to farmers before they decide

**Table 4: Adoption of dairy goats across wealth categories**

Wealth category of the household	Proportion of Goats (%)		
	Sample distribution	Adoption of dairy goats in this wealth category	Keepers of dairy cattle in this wealth category
Rich	16	32	28
Middle	56	32	60
Poor	28	29	47

**Table 5: Probit results - factors influencing adoption of dairy goats**

Variable	Coeff.	Std. Error	t-ratio
Constant	-2.172***	0.541	-4.012
<b>Demographic characteristics</b>			
GENDER	0.274	0.295	0.925
DEPEND_RA	0.009**	0.004	1.907
<b>Socio-economic and farm characteristics</b>			
HHHEAD	0.032	0.0264	1.445
GROUPS_NO	-0.176	0.153	-1.147
FARM_SIZE	-0.076	0.051	-1.494
LABOR_TYP	0.285	0.216	1.325
<b>Technological and use aspects</b>			
FODDER_IN	1.342***	0.199	6.735
EXPERIENCE	0.069***	0.014	5.018
MLK_CONS	0.399	0.330	1.249
<b>Support services</b>			
EXTENSION	0.411**	0.219	1.879
MARKDIST	0.037	0.046	0.802
CREDIT	0.002	0.020	0.112
<b>Environmental factors</b>			
AEZ	-0.152	0.247	-0.617
DAIRYCOOP	-0.025	0.225	-0.109
Log likelihood function - 124.74			
Restricted log likelihood - 179.29			
Chi-squared - 111.10***			
Pseudo R <sup>2</sup> - 0.3092			
No. of observations - 260			
*, ** and *** - significant at 10%, 5% and 1% levels respectively			

to take up the technology.

Among the technology and use factors, availability of indigenous fodder species in the farms (FODDER\_IN) and the number of years the household had reared local goat breeds (EXPERIENCE) emerged as key variables that significantly and positively influenced the probability of dairy goat adoption. The importance of indigenous fodder as demonstrated by the probit results is also supported by the qualitative data collected during the survey. Farmers were of the view that unlike the local goats which could feed on many types of vegetations in the farms, the exotic dairy ones are adapted to feeds such as leaves and twigs of indigenous fodder trees. Hence farmers who have these indigenous fodder species growing in their farms are more likely to adopt dairy goats because they already have one input (fodder) readily available. Indigenous fodder grown by the farmers included *Lantana camara* (27% of respondents), *Seppium ellipticum* (26%), *Croton macrostachyus* (16%) and *Ficus thonningii* (15%). The significant coefficient of EXPERIENCE of keeping local goats had also the expected

positive influence on the probability of adoption. This is an indication that this kind of experience provided farmers with some technology and use aspects of the dairy goats.

In the category of support services only access to EXTENSION services showed a significant influence on the likelihood of dairy goat adoption. As expected availability of general extension services positively influenced adoption since farmers had a chance to gather information on dairy goats when visited by extension personnel. Availability and accessibility of this information and knowledge on dairy goat technology might have contributed to enhanced adoption since farmers were able to reduce risks and also transaction costs associated with such an adoption process.

### Conclusions and Policy Implications

This study made an attempt to estimate empirically factors that influence farmers' uptake of exotic dairy goat technology. The need of this research is justified by the fact that only about 50% of the farmers in the study area had adopted the technology, implying that there is still a good part of the local farmers to be convinced of keeping exotic dairy goats. The factors generated can therefore assist in prioritizing technology awareness campaigns and targeting farmers who are likely to adopt the exotic goats in the future. For instance future awareness campaigns on the importance of dairy goats are likely to yield better adoption results if they target households with relatively smaller farms and those with higher numbers of children. Such households are also likely to be among the relatively poor ones in the study area.

Education was also found to be an important factor which favors dairy goat technology uptake. This implies that adoption of dairy goats is compatible with policies promoting education in the study area. Thus, more farmers are likely to benefit from this technology if policy makers continue to enhance education programmes. Another factor that could also support adoption of dairy goats is the promotion of planting of indigenous fodder trees and/or targeting farmers

who already have this type of fodder. Similarly, targeting farmers with longer experience in keeping local goats is likely to favor adoption of the exotic dairy breeds and their crosses. However, it is important to note that enhancement of production of indigenous fodder trees may not be so important in the short term since these trees usually take at least 3 years to grow.

This study has also shown that the role of extension services in enhancing adoption of dairy goats cannot be underrated. Thus government extension programmes in the study area could be enhanced to accelerate adoption of the exotic dairy goats. As extension officers go to farmers with a package of messages for different enterprises, enhancement of this factor is likely to benefit agricultural production as a whole even as it increases the likelihood of dairy goat technology uptake.

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### Tobacco plants may be new incubator for vaccines for flu – or bio-terrorism

A \$21-million-dollar infusion from the U.S. Defense Department's research arm will help a Canadian company set up a manufacturing plant to incubate flu vaccine in tobacco leaves. Medicago Inc., a Quebec City-based biotech firm, is setting up an 85,000-square-foot facility in Durham, N.C., to manufacture 10 million doses of flu vaccine a month using their new technology. A five-week-old Australian tobacco plant, which does not have nicotine in it, is put in a solution that is full of a bacteria that carries a genetic code for the DNA for the vaccine. The leaves and solution are put in a steel tank and a vacuum is created. The plants then absorb the information that is carried in the solution. But it's not just the battle against influenza that concerns the United States' Defense Advanced Research Projects Agency, prompting it to fund work at Medicago. One of the things that the Quebec firm's technology could be used for is vaccines or antidotes for biological terrorism or warfare. Meanwhile, Medicago's Quebec plant is completing clinical trials on an avian flu vaccine also made using tobacco plants.

~ Toronto Star, Tuesday 17 August 2010

## Serum Cystatin-C As A Marker For Renal Dysfunction And Its Correlation With Creatinine And Blood Urea Nitrogen (BUN)

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### Abstract

The present study on early detection of renal dysfunction in dogs was carried out with the objective of detecting early renal damage by estimating serum cystatin-C. A total of 80 dogs were investigated. Group I (n=10) consisted of healthy animals, Group II (n=60) consisted of suspected cases of renal failure and non-azotemic based on creatinine values (<1.4 mg/dl) and Group III (n=10) consisted of renal failure cases. Cystatin-C was measured by sandwich ELISA technique by using Canine cystatin-C kit. Creatinine and BUN was measured by Artos® biochemical semi auto analyzer using commercially available kits Cystatin-C values in G I, G II and G III were  $815 \pm 23$  ng/ml,  $984 \pm 84$  ng/ml and  $4461 \pm 1122$  ng/ml respectively. Significant difference ( $P \leq 0.05$ ) in cystatin-C levels was observed between G III and G I. However, Out of 60 suspected cases 21 cases showed elevation in cystatin-C level (1008-2941 ng/ml) similar to G III cases. There was a significant positive correlation between cystatin-C and creatinine ( $r=0.72$ ,  $P \leq 0.05$ ). There was a significant positive correlation between cystatin-C and BUN ( $r=0.68$ ,  $P \leq 0.05$ ). Elevation of cystatin-C can be attributed to severity of damage in the kidney and thus cystatin-C can be used as a reliable tool for ascertaining degree of damage and also progression of the disease.

**Key Words:** cystatin-C, renal damage

### Introduction

Renal failure is characterized by decline of glomerular filtration rate. Serum creatinine and urea concentrations are widely used biochemical parameters for rapid estimation of glomerular filtration rate. The levels of BUN and creatinine start to rise only after 75 per cent of the nephrons are damaged. (Haller, 2002).

Endogenous marker of GFR are more advantageous in a clinical setting than clearance studies in that no injection is required, and only single sample is needed. This simplifies the procedure for the clinician, patient and laboratory. Low molecular weight (< 30 kD) serum proteins like  $\beta_2$ -microglobulin, retinol binding protein,  $\alpha$ -microglobulin and cystatin-C have been proposed as more sensitive and specific endogenous markers for GFR than creatinine (

Jung and Jung, 1995; Filler et al., 1997). Studies in human patients have shown that, except for cystatin-C, the serum concentrations of these low molecular weight proteins are influenced by non renal factors such as inflammation, liver disease and malignancy (Finney et al., 1997).

Cystatin-C fulfils many criteria of an ideal GFR marker because in the kidney cystatin-C is freely filtered through glomerulus, reabsorbed and catabolized in the proximal tubules without any tubular secretion (Randers and Erlandsen, 1999; Antognoni et al., 2005). Cystatin-C is completely reabsorbed in the proximal tubular cells, so urine concentration is typically low (Grubb and Lofberg, 1985) and unaltered by diseases of the proximal tubules (Herget-Rosenthal et al., 2000). Hence cystatin-C quantification has been done to evaluate the kidney function in this study and also to ascertain the utility of cystatin-C as a marker for renal disease.

### Materials and Methods

The present study was carried out on 80 dogs of different breeds; gender and age and were classified into three groups. Group-I (n=10) consisted of 10 healthy animals. Group-II (n=60) consisted of 60 suspected cases of renal failure. Group-III (n=10) consisted of 10 renal failure cases. Cases were selected based on history, physical examination, hematology, biochemistry and urine analysis.

Blood was collected with and without EDTA in vacutainers. Serum was separated and used for estimation of blood biochemical parameters immediately. Remaining serum was stored at  $-20^\circ\text{C}$  until estimation of cystatin-C. Blood collected with EDTA was used for various hematological studies immediately after collection. Urine sample was collected using sterile catheter into sterile vials and were processed. Cystatin-C was measured by sandwich ELISA technique by using Canine cystatin-C kit. (Canine cystatin - C kit Catalog No. CSB-E 13070c Cusabio Biotech Co., Ltd. Wuhan, Hubei province 430223, P.R. China). Creatinine and BUN was measured by Artos® biochemical semi auto analyzer using commercially available kits.

Statistical analysis was performed using one way analysis of variance and Tukey's multiple comparison test

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and correlation analysis by using Graph pad prism software.

### Results and Discussion

The mean  $\pm$  SE values of cystatin-C, creatinine and blood urea nitrogen in Group I, Group II and Group III dogs are summarized in Table 1. There was significant difference ( $P \leq 0.05$ ) in creatinine and BUN values between Group I and Group III. These findings are similar to the observations made by Grauer and Lane, 1995a and Haller, 2002.

The mean  $\pm$  SE of cystatin-C in Group I animals was  $815 \pm 52$  ng/ml and ranged between 393-920 ng/ml, which is in agreement with the findings of earlier workers, Gonul et al. (2004), Hartman et al. (2007). The mean  $\pm$  SE of cystatin-C in Group II animals was  $984 \pm 84$  ng/ml and ranged between 118 - 2941 ng/ml. The mean  $\pm$  SE of cystatin-C in Group III animals was found to be  $4461 \pm 1122$  ng/ml and ranged between 1271-12607 ng/ml. There was significant difference ( $P \leq 0.05$ ) in mean cystatin-C values between Group III and Group I. There was no significant difference ( $P \leq 0.05$ ) in mean between Group I and Group II and this is in agreement with the findings of Almy et al. (2002), Gonul et al. (2004) and Hartmann et al. (2007). However, of the 60 cases 21 cases showed elevation in cystatin-C level (1008- 2941 ng/ml) similar to renal failure cases as compared to control dogs. Thus it can be construed that cystatin-C can be used as a marker for detection of early renal dysfunction in dogs.

The correlation of cystatin-C with creatinine is depicted in Fig 1. There was a significant positive correlation between cystatin-C and creatinine ( $r=0.72$ ,  $P \leq 0.05$ ). The correlation of cystatin-C with BUN is depicted in Fig 2. There was a significant positive correlation between cystatin-C and BUN ( $r=0.68$ ,  $P \leq 0.05$ ). These findings are in agreement with the earlier workers Antogni et al. (2005) and Wehner et al. (2008). (Table 1).

### Conclusion

The present study results indicate that, endogenous low molecular weight protein cystatin-C could serve as a practical way to rapidly detect renal failure. This endogenous marker of GFR is more advantageous because it is simple, more accurate and reliable tool for evaluating GFR in small animal practice. Since there was a significant positive correlation between cystatin-C with creatinine and BUN, elevation of cystatin-C can be attributed to severity of damage and thus cystatin-C can be used as a reliable tool for

	Group I (n=10)	Group II (n=60)	Group III (n=10)	F-ratio
Cystatin-C (ng/ml)	$815 \pm 23^a$	$984 \pm 84^a$	$4461 \pm 1122^b$	30****
Creatinine (mg/dl)	$0.84 \pm 0.064^a$	$0.9853 \pm 0.038^a$	$3.978 \pm 0.47^b$	119.9****
BUN(mg/dl)	$13.78 \pm 1.91^a$	$16.39 \pm 1.37^a$	$63.72 \pm 7.8^b$	61.62****

\*\*\*\* Significant at 5 % level ( $P \leq 0.05$ )  
Common superscript Row - ab  
differences bearing in y and common superscript in a row do not differ significantly with each other

Fig.1. Correlation of cystatin-C with creatinine (n=80)

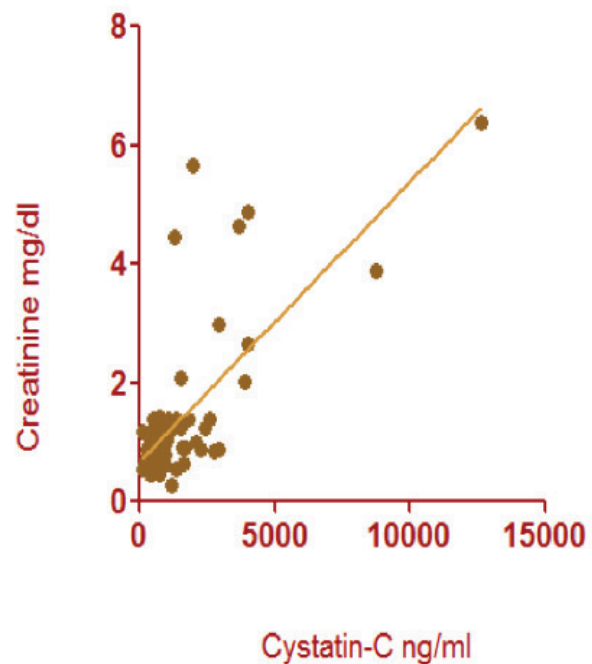
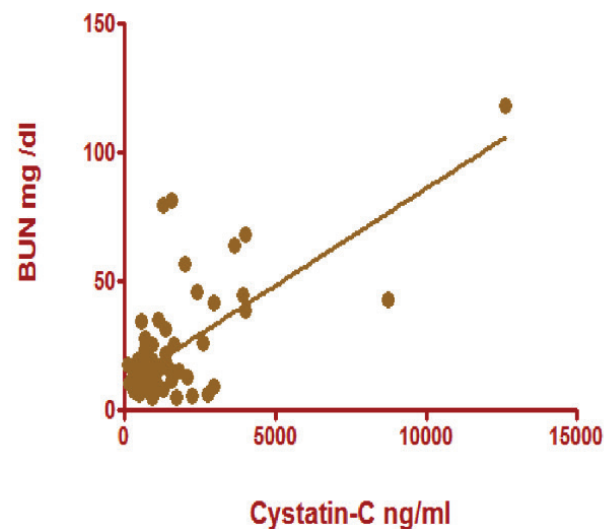


Fig. 2. Correlation of cystatin-C with BUN (n=80)





ascertaining degree of damage and also progression of the disease. Further work is necessary to assess the sensitivity and specificity of serum cystatin-C concentration with respect to various degrees of renal functional impairment in dogs. The limitation for this test is that since ELISA kits are used for a group of samples, it can delay the laboratory diagnosis of renal failure cases, since tests have to be run in a group of sample.

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### OIE publishes Atlas of Transboundary Animal Diseases

The World Organisation for Animal Health (OIE) has published the *Atlas of Transboundary Animal Diseases*.

The *Atlas of Transboundary Animal Diseases* is intended to assist Veterinary Service field staffs involved in animal disease surveillance and diagnostics in identifying important transboundary diseases of livestock. The focus of this publication is on key images of clinical signs and post mortem lesions associated with 29 OIE notifiable animal diseases supplemented by basic disease information from the OIE technical disease cards.

## The Effect Of Antigen Retrieval And Incubation Methods On The Immunodetection Of *Mannheimia hemolytica* In Archived Caprine Lung Tissues

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### Abstract

The diagnosis of infectious agent requires collection of high quality clinical and post mortem materials and with inefficient transport systems, the need for a technique that use archival formalin fixed samples for diagnosis is paramount. This study looked into the possible effect of two retrieval system and three methods of incubation on the immunodetection of MH antigen. Lung samples from experiment involving 15 goats inoculated with 1 ml of pure culture of a 4 hour log phase  $1.0 \times 10^9$  CFU of MH serotype A2, and five goats served as controls. Nine lung tissues from each group were used for each retrieving method and these were later subdivided into three equal sets that were incubated at room temperature for five hours, 4°C for twenty four hours and 37°C for one hour, all the slides were counterstained using Haematoxylin to compare the effectiveness and intensity of immunostaining. The detection of MH antigen were more prominent and distinct in the microwave and citrate treated than that of the enzymic treatment. All the incubation methods used detected the MH antigens with the most prominent and well distinct immunolocalisation observed in the slides incubated at 4°C for 24 hours than that of 37°C for one hour. The background staining in the room temperature 26°C slightly affect the distinctiveness of the detected MH antigen. This study corroborated that extended storage of specimens in neutral buffered formalin has no deleterious effect on MH antigens. Neither the storage period nor the enzymatic digestion as used in this study affected the demonstration of MH antigens. This result suggests that the MH antibodies used recognized epitopes that were resistant to formalin fixation and subsequent tissue processing. Incubation under the room temperature and 4°C best suit a developing economy.

### Introduction

The diagnosis of infectious agent requires collection of high quality clinical and post mortem materials with the

appropriate shipping in a cold chain system probably from distant places to the laboratory. In a tropical climate with inefficient transport systems as it exists in most developing countries, these requirement are very difficult to achieve. Hence the need for the adoption of a technique which can use archival formalin fixed samples for diagnosis.

Immunohistochemical techniques which uses fixed samples for the diagnosis of infectious and neoplastic processes could be handy. From the inception of its description, efforts had been on the modification of its applications and methodology to suit the prevailing conditions in an environment. Some of the problems associated with the technique include limited number of monoclonal antibodies available for diagnostic purposes in animal species, high cost and inavailability of reagents in most developing nations. The inability to revert structural changes on proteins produced by fixation in formalin is a critical aspect of the continuous use of the technique (Ramos-Vera, 2005). To effectively overcome some of these problems, hyperimmune serum against some infections has been successfully used (Yenner et al., 2009), other fixation methods apart from formalin that preserve antigenicity of tissues have also been developed but the acceptability is still poor.

In the last couple of years, methods to revert changes produced by fixatives have been developed. Enzymatic digestion or treatment with chaotropic substances or detergents and heat treatment was used for this unmasking process (Ramos-Vera and Beissenherz, 2000).

Extensive studies of optimal antigen retrieval conditions in IHC for human tissues have been reported (Gown et al., 1993, Leong and Milios, 1993, Taylor et al., 1996). There had been fewer reports comparing the effectiveness of different antigen retrieval conditions, the possible effect of type of incubation, and length of tissue storage on the

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quality of immunostaining (White et al., 1998), especially in respect of *Mannheimia hemolytica* (Mutoloki et al., 2002). This investigation is reporting the observations with the immunohistochemical detection of MH antigen in archival formalin fixed, paraffin-embedded tissue sections with the use of two retrieval system and three methods of incubation with a view adopting the appropriate methodology that best suit a developing economy.

## Materials and Methods

### Tissues

Lung samples from previous experiments involving 15 goats, aged 6 months, that were inoculated with 1 ml of pure culture of a 4 hour log phase  $1.0 \times 10^9$  CFU of MH serotype A2, and five goats served as controls. The details of the experiments had been described elsewhere (Emikpe et al., 2010)

Nine lung tissues from each group were used for each retrieving method and these were later subdivided into three equal sets that were incubated at room temperature for five hours, 4°C for twenty four hours and 37°C for one hour, all the slides were counterstained using Haematoxylin to compare the effectiveness and intensity of immunostaining. Tissues were embedded in paraffin by standard procedures.

Standardization of the immunohistochemical method for the antibody included 3 different slide treatments: no pretreatment, pretreatment with trypsin for 5 min at room temperature according to manufacturer's instructions, and pretreatment with microwave treatment for ten minutes while the slides were immersed in an antigen retrieval solution containing citrate buffer, pH 6.1. For this third treatment, the microwave was allowed to heat the antigen retrieval solution for five minutes, then the slides were completely immersed in the antigen retrieval solution and steamed for 5 min. The temperature of the antigen retrieval buffer at the end of the steaming process was 90-95.8°C. Treated slides were cooled at room temperature for 20 min.

The entire immunohistochemical procedure, except for antigen retrieval with microwave steam heat, the method of incubation of primary and secondary antibodies was by incubation at 37°C for one hour, 24 hours at 4°C and at room temperature for 5 hours.

The sequence of the standard immunohistochemical procedure was deparaffination and hydration of slides, microwave steam heat with citrate or trypsin treatment, endogenous peroxidase blocking with 0.3%  $H_2O_2$ , incubation

of primary antibody, secondary antibody, DAB and counter stain with haematoxylin and eosin.

Comparison of the immunohistochemical results with all 3 pretreatments was done using a subjective grading system for the intensity of the specific reaction and the presence of nonspecific background for each antibody as described by Mutoloki et al. (2002).

## Results

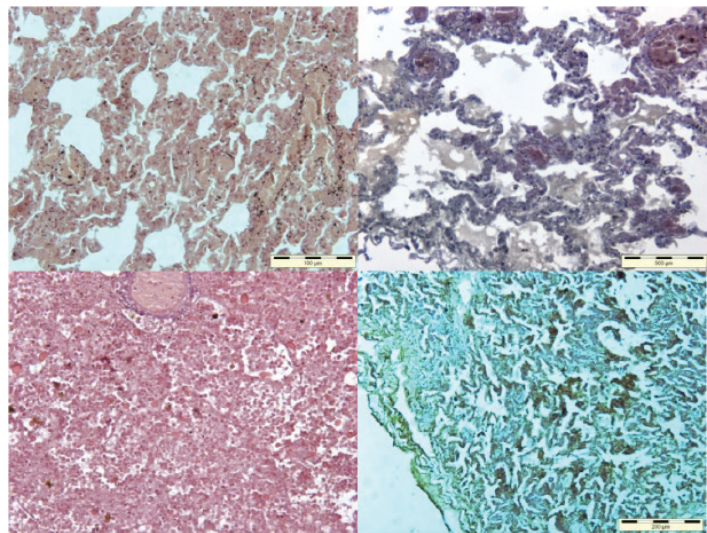
The detection of MH antigen were more prominent and distinct in the microwave and citrate treated than that of the enzymic treatment.

### Effect of pretreatment on the distribution and intensity of the MH antigen

Enzymic treatment      Microwave and citrate treated

### Effect of type of incubation process on the distribution and intensity of the MH antigen

All the incubation methods adopted detected the MH antigens, however, the most prominent and well distinct immunolocalisation was observed in the slides incubated at 4°C for 24 hours than that of 37°C for one hour. The background staining in the room temperature 26°C slightly affect the distinctiveness of the detected MH antigen.



4°C

26°C

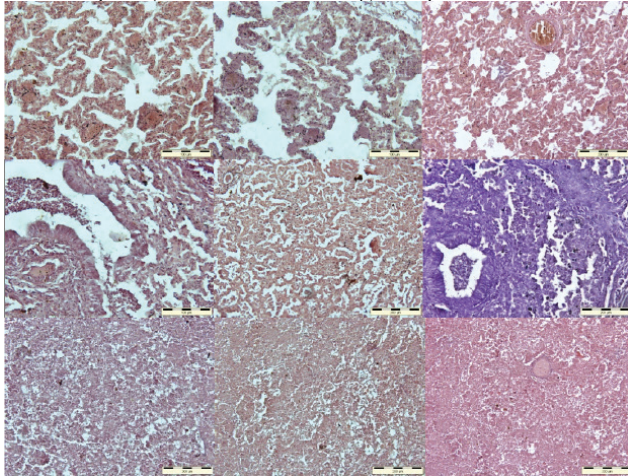
37°C

## Discussion

This is the probably the first time a comprehensive

## GENERAL ARTICLES

study regarding optimization of immunohistochemical methods using two different antigen retrieval methods and different method of incubation on the formalin-fixed, paraffin-embedded caprine lung tissues for the detection of *Mannheimia haemolytica* (MH) antigens in Nigeria. The detection of MH antigen in archival tissue that had been stored for 4 years as used in this study corroborated earlier reports, that extended storage of specimens in neutral



buffered formalin has no deleterious effect on antigens especially MH antigens (Mutoloki et al., 2002). Although unbuffered formalin however, can cause loss in antigenicity after extended storage (Montero, 2003), neither the storage period nor the enzymatic digestion as used in this study affected the demonstration of MH antigens. This result suggests that the MH antibodies used recognized epitopes that were resistant to formalin fixation and subsequent tissue processing (Montero, 2003).

Although the changes in the epitopes produced by formalin fixation can be reversed using antigen retrieval methods, the two methods adopted in this study, tissue digestion with proteolytic enzymes and heat-induced antigen retrieval were found to be effective with distinct features with microwave heat induced antigen retrieval. Although the exact mechanism of antigen retrieval by enzymes is unclear, but it is believed that the enzymes nonspecifically cleave bonds formed by proteins and fixative (Leong and Leong 2007), and this effect is dependent on temperature and length of digestion. Since not all antigens benefit from proteolytic digestion some show deleterious effects with loss of staining (Leong and Leong 2007).

The distinctiveness observed with microwave irradiation of deparaffinized- rehydrated sections in 10 mmol citrate buffer at pH 6.0 corroborated the report of Leong and Milios, (1993) that the method produced, with few exceptions,

increased intensity and extent of immunostaining of a range of tissue antigens. The efficacy of the heat induced antigen retrieval is probably because the transfer of energy disrupts the protein-protein crosslinks (Leong and Leong 2007). In addition, the chelation or precipitation of tissue-bound calcium ions and other divalent cations might also be involved in the antigen retrieval mechanism using heat and a buffer.

The fact that the 4°C was most effective could be related to the length of incubation and the humid environment created by the temperature. In subsequent studies it was found that there is a correlation between temperature of heating and heating time: the lower the temperature, the longer the time needed to obtain a given intensity. The heat-induced retrieval method is much easier to control and is a simpler procedure to handle where electricity is constant while in a developing economy like ours the incubation methods using the room and fridge is achievable, hence their use will be preferred as it best suit a developing economy.

## Acknowledgements

The authors thank Messrs Augustine, Nwagbara, Mpama, Pn Latifah and Jamilah for their technical assistance. The financial support was provided by The John D. and Catherine T. MacArthur foundation overseas grant given to BO Emikpe to process the samples in Histopathology laboratory, Department of pathology and microbiology, Fakulti Perubatan Veterinar, Universiti Putra Malaysia, Malaysia.

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### Prevention of cancer: wonder drug aspirin continues to amaze

For thousands of years aspirin has been humanity's wonder drug. Extracts from the willow tree have been used for pain relief in folk medicine since the time of the ancient Greeks. By 1897 a synthetic derivative (acetyl salicylic acid) of the plant's active ingredient (salicin) was created. This allowed aspirin to become the most widely used medicine in the world.

Peter Rothwell at the John Radcliffe Hospital in Oxford and his colleagues looked at deaths due to cancers during and after randomised trials of daily aspirin. The trials had actually been started to look at how useful aspirin was for preventing heart attacks and strokes. Nevertheless, the data from the 25,570 patients enrolled in eight trials was also revealing about cancer. In trials lasting between four and eight years, the patients who had been given aspirin were 21% less likely to die from cancer than those who had been given a placebo. These results were based on 674 cancer deaths, so are unlikely to represent the kind of statistical oddity that can beset studies on cancer risks that sometimes create headlines.

The study revealed that the effect takes time to accrue,

so aspirin must be taken over a long period. The latent period for improving oesophageal, pancreatic, brain and lung cancer was about five years of aspirin taking on a daily basis. For stomach and colorectal cancer the effects took ten years and for prostate cancer about 15 years. The means by which aspirin prevents cancer is not well understood. It is believed that it inhibits an enzyme that promotes cell proliferation in tumours. The researchers also found that small daily doses of aspirin were enough, and that taking more than 75mg conferred no additional benefits.

Aspirin is a highly cost-effective treatment: taking it for five to ten years easily beats initiatives to screen for breast and prostate cancers. To put it another way, ask yourself what a pharmaceuticals firm might charge for a drug that would reduce the chance of death by cancer by 20%—and then note that 100 days' supply of low-dose aspirin can cost less than a dollar. By anyone's measure, that is a bargain.

~ The Economist, Thursday 9 December 2010



# Abstracts

## Comparing differential gene expression in the brains of aggressive and non-aggressive dogs

Aggressive behaviour in dogs is an animal welfare issue, and studying the genetics of adverse behaviour may provide valuable information for breeding programmes and aid in the development of treatments for behavioural problems. This study examined differences in gene expression in different regions of the canine brain and between aggressive and non-aggressive dogs. Brain tissue samples were taken from 11 dogs euthanased due to aggressive behaviour and from nine non-aggressive dogs euthanased for other reasons. Tissue samples were taken from four regions of the brain reported to be involved in emotional response: the frontal cortex, parietal cortex, hypothalamus and amygdala. Subtraction hybridization was used in two initial screens to identify differently expressed gene products. The amygdala of an aggressive dog was compared with that of a non-aggressive dog, and the amygdala of the same aggressive dog was compared with a pooled sample from the frontal cortices of both aggressive and non-aggressive dogs. A total of 83 genes were identified as being up-regulated: nine genes were selected for further investigation in all 20 dogs and all brain regions by quantitative real-time PCR analysis. A significant association was found between the aggressive phenotype and two of the nine genes tested, LBE2V2 and ZNF227. Eight of the genes tested showed significant differences in gene expression between the four regions of the brain, while five of the genes were up-regulated in male compared with female dogs. The authors state that, although the LBE2V2 and ZNF227 genes have no known function in regulation of aggressive behaviour the study contributes to preliminary data on differential gene expression in the canine brain.

**J. VÅGE, T. B. BONSDORFF, E. ARNET, A. TVERDAL, F. LINGAAS (2010).** Comparing differential gene expression in the brains of aggressive and non-aggressive dogs. *BMC Veterinary Research*, **6**: 34.

## Assessment of mycotic rhinosinusitis in dogs

Mycotic rhinosinusitis is a relatively uncommon cause of chronic nasal disease in dogs, but treatment remains a challenge. This retrospective study reviewed the response to first treatment in dogs with mycotic rhinosinusitis to commonly used techniques. Medical records of dogs treated for mycotic rhinosinusitis between 1998 and 2008 were obtained from the clinical databases of six veterinary referral centres in Australia. The first treatment outcome was evaluated, and historical and clinic pathological findings were reviewed to assess their impact on treatment. Eighty-five dogs were included in the study. Ten dogs were treated with a five-minute clotrimazole soak followed by administration of clotrimazole cream, 45 dogs had been treated with a one-hour non-invasive clotrimazole soak via tubes inserted into the external nares, 26 dogs, had frontal sinus trephination for temporary catheter placement and a one-hour soak with either clotrimazole (24 dogs) or enilconazole

(two dogs). There was no significant difference in the outcome of first treatment between these treatment groups. Four dogs had received modified treatment protocols or other topical treatments. Outcome of first treatment was successful in 39 of 85 dogs (45.8 per cent). Initial treatment success was associated with a younger age (56.3 versus 75.8 months), and was 2.7 times more likely in dogs with unilateral disease. Adjunctive therapy with systemic antifungal agents was associated with treatment failure. Fifty-nine dogs (69.4 per cent) responded successfully to multiple treatments. The authors note that reasons for first treatment failure are likely multifactorial in origin, making it difficult to predict those dogs that are likely to have a better prognosis, regardless of treatment type.

**M. SHARMAN, A. PAUL, D. DAVIES, B. MACKAY, G. SWINNEY, V. BARRS, A. ARTEAGA, I. D. ROBERTSON, C. MANSFIELD (2010).** Assessment of mycotic rhinosinusitis in dogs. *J Small Animal Practice*, **51**: 423-427.

## Anaesthetic complications in diabetic dogs undergoing phacoemulsification cataract surgery

Cataract formation is one of the most frequent complications associated with diabetes melitus in dogs; diabetic dogs therefore constitute a significant proportion of dogs undergoing phacoemulsification cataract surgery. This retrospective study compared the incidence of anaesthetic complications in diabetic and non-diabetic dogs undergoing this procedure under general anaesthesia. Medical and anaesthetic records of all dogs undergoing phacoemulsification cataract surgery at a specialist veterinary practice were reviewed between 2005 and 2008. The anaesthetic technique, including all drugs administered in the perioperative period, was recorded. Physiological parameters were measured at five-minute intervals throughout anaesthesia. Any anaesthetic complications were recorded, including hypotension (none/mild v moderate/severe), bradycardia and hyperthermia; where hypotension was present, the method of and response to treatment was recorded. In diabetic dogs, the incidence of severe hyperglycaemia was also assessed. Sixty-six diabetic and 64 non-diabetic dogs were included in the study. Anaesthetic complications occurred in significantly more diabetic dogs (39 [59 per cent] dogs) than non-diabetic dogs (22 [33 per cent] dogs). The most common complication in all dogs was hypotension, which occurred in 47 (71 per cent) diabetic and 40 (63 per cent) non-diabetic dogs. The incidence of moderate severe hypotension was significantly higher in diabetic dogs. Twenty-nine (44 per cent) diabetic dogs had at least one episode of severe hyperglycaemia during anaesthesia. The authors conclude that diabetic dogs undergoing phacoemulsification cataract surgery are more likely to suffer from moderate or severe hypotension than non-diabetic dogs. They add that this may be explained by hypovolaemia secondary to hyperglycaemia and the resultant osmotic diuresis.

**J.A.C OLIVER, L. CLARK, F. CORLETT, D.J. GOULD (2010).** Anaesthetic complications in diabetic dogs undergoing phacoemulsification cataract surgery. *Veterinary Ophthalmology*, **13**: 244-250.

## Rabies Eradication Programme gets underway in Bali

An island-wide programme to vaccinate nearly 400,000 dogs against rabies has begun in Bali. The government of Bali has authorised the programme, which is seen as an essential first step towards eradicating rabies from the island by 2012.

Until 2008, Bali was considered to be free of rabies. In December that year the Indonesian authorities notified the World Organisation for Animal Health (OIE) of an outbreak among dogs on the island.

The first phase of the vaccination programme is being funded by the World Society for the Protection of Animals (WSPA), which is working closely with the Bali Animal Welfare Association, the Bali government and the Indonesian central government. A pilot vaccination scheme carried out earlier this year in two of Bali's regencies was successful and now that the full programme has been approved, trained animal handlers will inoculate dogs in the remaining seven regencies. AusAID, the Australian government agency responsible for managing Australia's overseas aid programme, has donated 370,000 doses of dog vaccine to the programme, and drugs for human post-exposure treatment have been contributed by the Bali government and Indonesian central government.

The programme has been designed by WSPA in close consultation with the Bali government. The government will



resume ownership of the programme, and take on the responsibility for managing and resourcing the scheme, at the end of the first phase. It is hoped that this will ensure that the critical immunity threshold, which requires at least 70 per cent of the canine population on Bali to be vaccinated, will be maintained.

Speaking at the signing of the agreement authorising the vaccination programme, the Governor of Bali said: 'The Balinese community live in harmony with their animals and did not want to see them killed, but we did not have a choice in our fight against rabies—thanks to the international community, we now have a humane alternative for protecting our people and our animals?'

Mike Bake chief executive officer of WSPA, added: 'By choosing to eradicate rabies through a dedicated vaccination effort, Bali is taking the most effective route to protecting the health of its citizens, as well as the thousands of tourists who visit the island every year.'

'With this campaign, Bali is set to take centre stage and demonstrate a perfect model for rabies control to other countries where rabies continues to be a challenge?'

### New UN report says rural women face increasing inequality

A new United Nations interagency report on the gender dimension of agricultural work says women still benefit less than men from rural employment and face new challenges due to the current economic and food crises.

The report says some of the factors that may push women into a disadvantaged economic position are: employment (occupation and task), segmentation (women are disproportionately employed in low-quality jobs), the gender gap in earnings, and fewer hours

of paid work but overall larger work burdens.

Women need access to education, training, credit, markets, technical assistance and labour protection. They need equal, secure access to land and other assets. And they need 'social capital', including the ability to participate equally with men in farmers' organizations.

~ FAO Media Release

## From the profession's gender balance to public health

The increasing proportion of women in the veterinary profession is more a result of a loss of interest in the profession by men rather than an increased interest by women. So said Muriel Surdez, a sociologist from Fribourg University, who was a guest speaker at the general assembly of the UEVI held on June 9, before the general assembly of the full FVE.



Her comments were based on a study of 'feminisation' of the veterinary profession that she had carried out for the Swiss Veterinary Society Before 2000. there were no gender-based statistics available for Switzerland. However the past decade had shown that there was a decline in the number of men applying to enter veterinary studies while the number of women applying remained stable.

Among the findings of the Swiss study was that, on entering the profession, women quoted a love of animals as the main motivation while men tended to refer to their familiarity with animals and give more pragmatic reasons. It also found that task sharing between veterinary couples often led to a traditional split. with men taking on large animals, surgery and practice management and women preferring internal medicine, vaccination consultations and stock ordering.

Professor Surdez pointed out that a similar gender shift was being observed in the medical field, where women chose - or were expected to choose - the softer, more 'caring' disciplines such as dermatology or paediatrics.

She also noted that, where traditionally male veterinarians had been assisted by their non-professional spouses, women could not rely on their husbands in the same way This meant that 'a pillar of the veterinary profession' previously taken for granted was no longer available.

Professor Surdez suggested that professional organisations should identify their objective in order to formulate a long- term strategy for the profession did they want to increase the percentage of male undergraduates,

or did they want to increase the number of veterinarians interested in production animals ?

~ Veterinary Record, Sep 18, 2010

## Global clampdown on illegal wildlife trade

The UK's contribution to a second Interpol- led global operation to clamp down on wildlife crime has been hailed a success by wildlife minister Richard Benyon.

Operation Ramp, which ran throughout September and October, targeted the illegal trade of reptiles and amphibians, including turtles, crocodiles, lizards, frogs and snakes, and follows the success of Operation Tram in February this year which focused on the trade of traditional medicines containing wildlife products (VR, March 27, 2010, vol 166, p 380).

The latest operation involved police officers, customs staff and wildlife enforcement authorities in 51 countries, resulting in a number of arrests and the seizure of thousands of animals and illicit products worth more than €25 million.

The UK Border Agency (UKBA) completed 64 inspections involving over 40,000 animals at Heathrow Gatwick and Manchester airports. Elsewhere in the UK, 556 reptile traders, importers and exporters, reptile shows and breeders were visited by the police, the National Wildlife Crime Unit (NWCU) and Animal Health's Wildlife Licensing and Registration Service.

Efforts in the UK were focused on the illegal possession and trade of tortoise species, which had been highlighted as a priority under the Convention on International Trade in Endangered Species.

~ Veterinary Record, Nov 13, 2010

*Man is the only creature that consumes without producing. He does not give milk, he does not lay eggs, he is too weak to pull the plough, he cannot run fast enough to catch rabbits. Yet he is lord of all the animals.*

~ George Orwell



## 'Women as Agents of Change' is the Commonwealth Theme for 2011

The Commonwealth Secretariat is working to give women and girls the opportunity to become the agents of change we need. Various projects such as rural support programmes network in Pakistan to help boost the income of women from the north, south-east and Thar Desert regions of Pakistan, a programme to train midwife educators in East and Southern Africa and South and South-East Asia, in partnership with NGO OneWorld Action, the Secretariat has conducted research to provide a gender analysis on the implementation of trade liberalization policies in Jamaica, Mozambique and Tanzania have been funded by the Secretariat.

Staff from organisations and associations in the Commonwealth family are invited to nominate women who have made a difference to the lives of others as 'Agents of Change' via the online application form: <http://www.surveymonkey.com/s/CWagentsofchange>

Information on the rules and nomination criteria can be found on the online form. The contest closes on Commonwealth Day, 14 March 2011.

'The Commonwealth's Most Inspiring Agents of Change', as chosen from the nominations by a judging panel, will be featured in a publication.

### 14th Commonwealth Lecture

The Commonwealth Foundation is honoured to announce the 14th Commonwealth Lecture will be delivered by Mrs Sonia Gandhi, President, Indian National Congress and Chairperson, United Progressive Alliance on 17 March 2011 at London, UK.

Celebrating this year's Commonwealth Day theme, Mrs Gandhi will be speaking on 'Women as Agents of Change' and considering how the role of women in society can have a positive impact on social, economic and political progress with Commonwealth countries.



The Commonwealth Lecture is organised by the Commonwealth Foundation in partnership with the Commonwealth Secretariat, the Cambridge Commonwealth Trust, the Commonwealth Parliamentary Association, the Royal Commonwealth Society and the Royal Over-Seas League.

### Rabies continues to kill in Africa and Asia

Numerous fatal human cases of rabies, particularly affecting children, occur every day in Africa and Asia, for example in Indonesia and the Philippines. The increase in human cases is linked to the proliferation of roaming dogs. Control of the stray dog population makes a significant contribution to preventing human rabies cases. The OIE has adopted and published international standards on this matter and recommends their application worldwide. Great hope is put on the development of oral vaccines for stray dogs which will avoid the logistic and economic challenges of catching and vaccinating dogs parenterally. The OIE urges international companies involved in the development of dog rabies vaccines to speed up research for the production of efficient oral vaccines at a reasonable cost.

Dr Vallat adds: "even if a small share of the funds that have been dedicated to treating people for bites was invested in management of the rabies situation in wild, stray and pet animals it would have dramatic impact on reducing human cases worldwide."

~ OIE Media Release, 9 August 2010



## New CVA Associate Members

Compassion in World Farming (CIWF), World Society for Protection of Animals (WSPA) and Mayhew International have joined the CVA as Associate Members. This followed the visit of the Secretary, CVA last year to London where he met Dr Philip Lymbery, Executive Director of CIWF, Dr Mike Baker, the Director General of WSPA and Mr Chris Sainsbury of Mayhew International and requested them to join the CVA.

## 5th Pan Commonwealth Veterinary Conference Organising Committee Meeting, Accra, Ghana

Dr Bob McCracken, Programme Director, CVA, Dr Olatunji Nasir, Regional Representative CVA-West Africa Region and Dr S Abdul Rahman, Secretary CVA visited Accra from 20-22 January 2011 and had discussion with Members of the GVMA. The first meeting was held on 21 January 2011 and was attended by Dr. Richard Suu-Ire, President, CVA, Dr Bob McCracken, Programme Director CVA, Dr Olatunji Nasir, Regional Representative West African Region, Dr S Abdul Rahman, Secretary, CVA, K.B. Darkwa, President, GVMA and Dr. K.M. Aryee, Secretary, GVMA and CVA Council Member. Other GVMA members present were, Dr. Fenteng Danso, Dr. Osei A. Bonsu, Dr. William Amanfu, Dr. Mrs. F. Gyang- Toninga and Mrs. Herietta Abayie. Mrs. Naa Korkoi Essah, a Journalist and Mr Naresh Gokuldas, sponsorer also attended.

During the three days of stay the team visited the Conference hotels Novotel and Alisa and the Accra International Conference Centre, the venue of the Conference. The members also had the discussions with Mr Naresh Gokuldas, one of the sponsorer of the Conference and Mrs Adelaide Pinto, the Events Manager.

## CVA Projects - Overview

The Commonwealth Veterinary Association projects funded by the Commonwealth Foundation are planned and executed not only to cater to the immediate area or location but to serve as models for possible implementation throughout the Commonwealth, the philosophy of the projects being capacity building of veterinarians, farmers, especially women farmers and others in the developing countries of the world. During 2010, the following projects were completed.

### **A Rural Community Rabies Project to Demonstrate the Effectiveness of Combined and Coordinated Medical and Veterinary Intervention of Rabies Control in West Africa (Ghana, Nigeria, Uganda and Tanzania)**

In association with the National Associations of Ghana, Nigeria, Uganda and Tanzania, the CVA implemented the project involving sensitisation of public on rabies and vaccination of cats and dogs.

In Nigeria posters and pamphlets highlighting the information of rabies and its control were distributed to all District Town Councils, Trading Centres and Sub-County Headquarters. Talks about dangers of rabies and its preventions were given by the faculty of the department of veterinary services to dog owners and community leaders

prior to vaccination.

A total of 870 dogs were vaccinated in the sub-counties of Lwanda (126), Lwamaggwa (251), Kasaali (271), Kalisizo (66), Nabigasa (100) and the Kyotera Town Council (62) in Uganda, Iringa in Tanzania, suburban-Koforidua in Ghana and Bauchi and Oyo states of Nigeria.

Standardized teaching modules on transmission of Rabies as a disease, how it is transmitted, what constitutes an exposure, how to prevent rabies once an exposure has



*Dr. Mubiru demonstrates how to "dress up" for vaccination exercise*



*Dog being vaccinated*



*Restraining a dog for vaccination*

occurred, how to prevent rabies in dogs, the importance of vaccinating dogs to prevent rabies, how vaccinating community dogs can reduce the number of dog bites as well as reduce the incidence of rabies disease as well as reporting of rabies associated incidences have been developed.

Training the trainers has been conducted to animal health and public health experts and two volunteers in one pilot village.

Teaching the village population using the developed teaching module, the village population has been educated on rabies through the village subdivision meetings where volunteers from the village has been involved.

A standard Surveillance Method of collecting data on of incidence of dog bites from medical health centres and on animal rabies cases from animal health facilities veterinary in the pilot village has been established.

Similarly the project was implemented in the Ghana, Tanzania and Uganda.

### **Afghanistan becomes an Associate Member of CVA**

At the Meeting of the CVA Officers held in London on 29 September 2010, the representation of Afghanistan Veterinary Association (AVA) seeking Associate Membership of CVA was approved. Dr Sayed Safi Gul, President, AVA has been nominated as the CVA Councillor from Afghanistan.



## Poverty Alleviation of Women Poultry Farmers of the Indian sub-continent to include Pakistan and India

### a. Pakistan

The CVA implemented the poultry project in villages of Jia Bagga outside Lahore. Women poultry farmers were selected for training at Lahore Veterinary College, Lahore wherein three-batches of 15 women were trained in poultry rearing using minimum facilities normally available in the villages. After the training, free day-old-chicks and feed was distributed to groups of five-women to start a small-community poultry unit. Results after six-months have shown keen interest among the women poultry farmers and the broiler chicks have had a substantial growth and are ready for market. The women will continue to get support for this project by a voluntary women's organisation Bunyad who also contributed to the programme. Continuous healthcare for the poultry units will be provided free-of-cost by the Department of Lahore Veterinary Services.

### b. India



*A beneficiary at her house*



*A beneficiary family with chicks*

In collaboration with Sadhana, Bhubaneswar, an NGO working with women farmers in the villages of Balipatna, under Balipatna block of Khurda district, women poultry farmers were trained in small scale poultry rearing. In this programme, women from Self Help Groups (SHGs) of Balipatna village were targeted. The training was provided by the veterinarians of the Department of Veterinary Services and after the training chicks were distributed to the women farmers. Fifty chicks were provided to 18 SHGs. The members committed to take care of poultry farming properly so that they can earn good money to develop their living condition. They also agreed to multiply their farming through this support and can increase their size of farming in future for a better livelihood.

Once the women are trained, it will help improve the economic conditions and therefore the livelihoods of the villagers. A more skilled and knowledgeable group of women producers in each location will contribute to greater sustainability and also serve as role models for other groups.

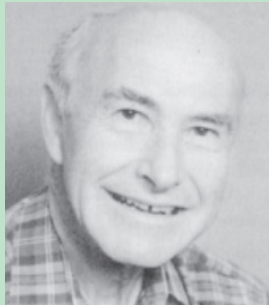


*Women poultry farmers at Training camp*



*Beneficiaries family with the chicks*

# Book & Journal Programme



Dr. J.B. Derbyshire

The CVA Book Programme is coordinated from the Ontario Veterinary College at the University of Guelph by Dr. Brian Derbyshire, assisted by Mr. Jim Brett, the College Librarian

A depot is also maintained in Wodonga, Vic Australia by Dr. Jeff Cave, Regional Representative, Australia / Oceania

**CONTACTS:**

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Dr. Jeff Cave

Book & Journal Programme

The CVA Book Programme is coordinated from the Ontario Veterinary College at the University of Guelph by Dr. Brian Derbyshire, assisted by Dr. Barry Burtis, and by Dr. Jeff Cave in Australia. Books are donated by veterinarians in Canada, Australia and New Zealand, all of whom are thanked for their generosity, without which the programme would not exist. They are available for distribution free of charge to graduate veterinarians, but not undergraduate veterinary students, in CVA member countries in good standing. Priority is given to requests from institutional libraries, such as veterinary schools and veterinary associations, and requests from individuals are met as funds permit. Postgraduate students are encouraged to submit their requests through the librarian at their institution, to ensure that the books will be widely available. Because of budgetary constraints and steeply rising mailing costs, the number of books which can be shipped is normally restricted to up to 30 titles for institutions, and up to 5 titles for individual veterinarians in any one year. Individual veterinarians are encouraged to share their books with colleagues in their area if possible.

Requests for books should indicate the required subject areas and/or preferred titles where possible, and they should include the mailing address to which the books should be sent. The latter should be abbreviated as much as possible in order that it may be accommodated in the limited space provided on the customs declaration. It is suggested that those wishing to submit a request should first obtain a copy of the current inventories of books available by contacting, preferably by e-mail, either Dr. Derbyshire or Dr. Cave (see above for contact information). Shipments are made by surface mail, and may take several months to reach their destination. The recipients are requested to acknowledge the safe arrival of the books.

During the period January - December 2010, 222 books were sent from Guelph to 8 Commonwealth countries as follows: Ghana (63 books), The Gambia (54 books), Nigeria (49 books), Pakistan (29 books), India (10 books), Tanzania (7 books), Trinidad & Tobago (5 books) and Uganda (5 books). From Australia, 109 books were sent to 11 countries as follows: East Timor (46 books), Pakistan (33 books), Tanzania (9 books), Ghana (4 books), Uganda (4 books), Kenya (3 books), Mozambique (3 books), Zambia (3 books), Papua New Guinea (2 books), Zimbabwe (2 books), and South Africa (36kg of journals).

The current inventory at Guelph comprises over 500 titles, and the Australian depot, including sub-depots in New Zealand and Western Australia close to 200 titles. Multiple copies of many titles are held. Most of the books were published during the last 20 years; older texts, for which more recent editions are available, are discarded each year. While most areas of veterinary medicine are covered, particularly by the Australian depot, the increasing emphasis on companion animal medicine and surgery in Canada has led to a preponderance of titles in these areas in the Guelph depot, and fewer titles in large animal medicine and surgery, and in public health. The stock of books at Guelph is replenished periodically through the cooperation of the Ontario Veterinary Medical Association by their generous collection of donated books at their annual conference.

January 2011

**J.B. DERBYSHIRE**  
Coordinator  
CVA Book Programme

## The Fund

This fund has been established by the Commonwealth Veterinary Association (CVA) in conjunction with the Commonwealth Foundation to honour the contributions made by Mr. John Anderson and Dr. L.P.E. Choquette in establishing and promoting the activities of the Commonwealth Veterinary Association.

Financial support to match the funds contributed by the Commonwealth Veterinary Association and the several national and local veterinary associations throughout the Commonwealth may be provided by the Commonwealth Foundation.

### 1. Purpose

Its purpose is to provide financial assistance to:

1. Veterinarians who are members in good standing of their respective national associations to undertake short term study visits to schools, institutions or to undertake short term study courses in veterinary medicine, animal production or related areas in other Commonwealth countries.
2. Animal Health Assistants recommended by the appropriate CVA Council Member and Regional Representative, to undergo further short-term training at a school or institution in another Commonwealth country.

It is expected that such visits will promote professional and para-professional contacts and provide grantees with new knowledge and expertise in their respective fields of interest. Study proposals which will directly benefit the rural poor and disadvantaged will receive sympathetic consideration. All proposals will be expected to describe how they will benefit the home institution, veterinary organization and community. The visit is also expected to result in a broadening of cultural experience and horizons and to promote Commonwealth understanding.

### 2. Guidelines

1. Grants will be limited to persons with field experience and not holding senior positions.
2. The awards are not normally available for University academic or research staff.
3. Preference will be given to related regions with 'south-south' movements being encouraged. In exceptional cases, visits to institutions outside the regions qualifying under south-south arrangement will be considered as long as the cost of the visit does not exceed the allocated fund award (Aus \$ 3000). In exceptional circumstances and where approved by the President grantees may receive training in a non-Commonwealth country within that Region.
4. The study period should be preferably between 2-3 weeks.
5. Awards will normally be distributed equally amongst Regions, however, on occasion, the President may authorize additional awards to a particular Region in any one year.
6. The study visits will be financed at a maximum of Aus \$ 3000 including a prepaid air ticket for the least expensive and most direct route.

7. Grants are provided only for periods of concentrated study or training on a particular topic or activity and cannot be made for attendance at conferences, meetings etc., nor to underwrite a tour of visits to a number of institutions.
8. A report must be submitted to the Secretary CVA within three months of the completion of the study visit. At the completion of the study visit, the participant must receive a letter of release, which should clearly indicate duration of stay, and satisfactory completion of course. The letter should also confirm that at the time of departure, the participants have not left any debts unsettled. This requirement must be conveyed by the Regional Representative or Programme Director to the host institution before arrival of participant.
9. It will be necessary for the host institution to agree to assist in arranging suitable accommodation etc. affordable by the applicant.
10. Grantees will be expected to give one or two lectures at the host institution or veterinary association on aspects of animal health and production activities in their home country. These lectures should emphasize how their studies in the host country will benefit the rural poor and disadvantaged as well as their impact upon the environment.
11. These lectures and the discussions of topics, both professional and social, with the staff of the host institution or veterinary association will serve to further the aims and objectives of the Commonwealth Veterinary Association.

### 3. Applications

- i) There is a set Study Application Form/Application. Forms are available from the CVA Secretary, or through the CVA Website.
- ii) Applications should be submitted to the appropriate Regional Representative for processing, at least 6 months prior to the proposal visit.
- iii) The applicants should provide the following:
  - a) A complete curriculum vitae to the Regional Representative
  - b) Two passport size photographs
  - c) A letter of acceptance from the person who will supervise the study program in the host country
  - d) Evidence that the study has the support of his/her home institution or national association

### 4. Administration

- i) The Study Application Form with supporting documents must be sent to the appropriate Regional Representative
- ii) The Regional Representative will review the application and make a recommendation to the Secretary, CVA.
- iii) The Secretary, CVA will make a recommendation to the CVA President, who will make the final decision.
- iv) The Secretary, CVA will then inform the Regional Representative who will inform the candidate.

**Last date of submission of request to Council Members/Reg. Rep. is 30<sup>th</sup> Oct. 2011. RRs to submit their recommendations before 30<sup>th</sup> Nov. 2011 to the Secretary, CVA.**



## Asia

### Floods in Pakistan

Pakistan was devastated by floods in July 2010 following heavy monsoon rains in the Khyber Pakhtunkhwa, Sindh, Punjab and Balochistan regions and affected the Indus River basin. An estimated 264,000 cattle heads have perished and 4,736,000 hit by disease. The livestock sector has suffered losses of five to six billion rupees and hundreds of thousands of people associated with the sector have lost their jobs. Many animals died because people had to leave them behind when they were rescued. In good times, people build up herds and in bad times, they sell livestock to generate cash. The main priority was to get feed to the animals that have survived. However, much of the traditional animal feed - like straw and grass - has been lost in the floods.

Pakistan Animal Welfare Society (PAWS) organised a relief mission to Thatta and Makli. Collaborating with the

World Wildlife Foundation (WWF) and the EDO Agriculture and Livestock, Thatta, along with a team of veterinarians from Karachi Animal Hospital, veterinary students from Baqai and volunteers, embarked on their mission joined by The Brooke Hospital for Animals and the Pakistan Hindu Council's veterinarians. The CVA provided logistic support to the efforts through its Asian Regional Representative in Pakistan Dr. Ramzee and his team of volunteers.

Just how important livestock is to the rural population can be gauged by the fact that many of the interior's flood affectees spent their entire lives' earnings on transporting them to safe ground along with their families when the waters surged. "They paid truck drivers up to Rs 40,000 – 70,000 to move them and their cattle to secure places," says Mahera Omar, co-founder PAWS (Pakistan Animal Welfare Society). "And



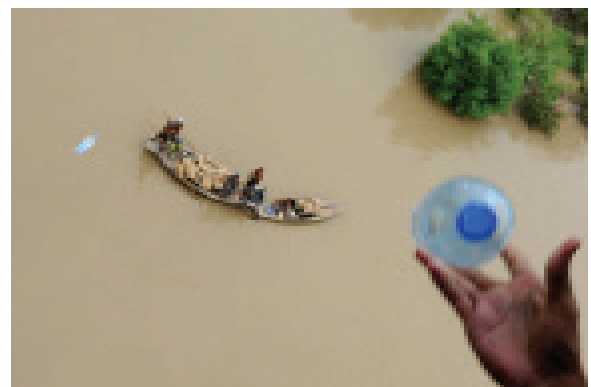
*A man marooned by flood waters, alongside his livestock.*



*A man tries to save his sick cattle in Pakistan after the floods.*



*Villagers wade through flood waters with their livestock while looking for higher grounds in Sukkur, Pakistan.*



*An aerial view from a army rescue helicopter shows personnel distributing water to flood-affected residents in Ghousepur, Sukkur.*



**PAWS Members**

*L-R: Mahera Omar and Maheen Zia, co-founders of PAWS, Mashood Ahmed, Mohammad Saifullah and Suroop Chand, Baqai veterinary students, Dr. Zulfiqar Haider Otho, Director Karachi Animal Hospital, Volunteers Francis Liaquat Khushi, Veterinarian Dr. Shalla Hayat, and volunteers Emmanuel Liaquat Khushi, Benjamin Khushi and Viyay Arif Massieh*



*Dr. Shalla Hayat preparing to give the goat an injection*



*A donkey cart pulls a load of animal fodder for the displaced livestock in the area*



*This buffalo's injury is about 8 months old. Its owners had made sure there were no maggots on the wound*



*80% of the flood affected population relies on agriculture and animals for their livelihoods.*



*An aerial view of a man and his animals surrounded by floodwater in Taunsa near Multan, Pakistan*



those who couldn't afford the exorbitant fares sent the women and children ahead on vehicles while they [the men] followed on foot with the animals. This extremely strenuous process of migration took its toll on the animals, and most of the younger ones died on the way."

Others have fallen victim to disease. "These animals are not used to standing in the heat, and they are getting sick because of malnutrition, no access to water and the stress of travel," says Omar. To provide some respite to the animals – and by extension their concerned owners – PAWS organised a relief mission to Thatta and Makli. Collaborating with the WWF (World Wildlife Foundation) and the EDO Agriculture and Livestock, Thatta, co-founders Maheen Zia and Mahera Omar, along with a team of veterinarians from Karachi Animal Hospital, veterinary students from Baqai and volunteers, embarked on their first mission. Taking with them basic first-aid supplies and medicines, PAWS treated 20 injured animals to the delight of their owners, who had all but lost hope of their survival. Citizens and private groups are providing this different type of relief effort, but it is one that has critical long-term benefits.

The first trip by PAWS was followed by a second one soon after. This time, PAWS was joined by the Brooke Hospital for animals and the Pakistan Hindu Council's veterinarians. "After our first trip we learnt that the animals needed things like vitamin C drips, so we took them with us the second time

around," says Omar. That was just part of the requirements. PAWS also identified the need, on an emergency basis, for fodder, shelter and veterinary treatment (vaccinations) for the animals. After the rains came again, Omar contends, some greenery began to sprout around the area, and those residing in the Makli graveyard took their animals to graze at these spots. However, they were driven back to their temporary abodes if they were found too near the fields owned by landlords, who did not want the cattle crossing over and grazing on their crops.

Another organisation which provided relief to animals was Brooke Hospital, an international organisation dedicated to the welfare of horses, donkeys and mules – animals used for labour. Brooke has been operating in Pakistan since 1991, and they launched an urgent appeal to the international community for aid for the animals affected by the floods. Brooke was assisted in its flood drive by Khyber Pakhtunkhwa government operatives and its partners, and by the Sarhad Support Programme in Sindh. The services provided by Brooke ranged from administering vaccinations and treatment to animals, providing them fodder and clean water.

~ PAWS Report

### Podium Finish for Team NECC at 36 K 1000 INRC (Indian National Rally Championship) Bangalore 2010, India

Dr Dharendra Kumar (Driver, Team NECC), and Capt. Dr Ravi Raidurg (Co-Driver, Team NECC), both veterinarians by profession participated in "Karnataka - 36 K 1000 Rally", a contender event for FIA Asia Pacific Rally Championship (APRC) and Round 4 of the SPEED FMSCI Indian National Rally Championship 2010 which was held from 3 - 5 Dec 2010 at Bangalore and finished second in Rally Star cup category earning eight INRC points.

For the first time in the country that a team comprising of vets have earned a podium finish in an INRC event in motorsports in India. Incidentally, both Dr Dharendra Kumar and Capt. Dr Ravi Raidurg are alumni of 1991 batch from Veterinary College, Bangalore, India.

Dr Dharendra Kumar (Driver, Team NECC) is a Poultry Consultant in Chandigarh and has a private practice. Capt. Dr Ravi Raidurg (Co-Driver, Team NECC), Assistant Professor (an ex-Army Veterinarian) teaches Veterinary Surgery and Radiology in Veterinary College, Shimoga, Karnataka, India.



Dr Dharendra Kumar



Dr Ravi Raidurg



# Australasia Oceania

## The Feral Professor wins prize for Communication

Feral animals can raise controversy at the drop of a fox scat. But one of this year's Eureka prize winners has excelled himself at tackling the big issues and bringing them onto the public agenda.



Professor Tony Peacock, CEO of the Invasive Animals Cooperative Research Centre, is passionate about getting the message across about the impact of pest animals on our ecosystems. He has won this year's Eureka Prize for Promoting Understanding of Science in recognition of his commitment to science outreach and encouraging community appreciation of science.

A report released last year by the Invasive Animals CRC reveals the economic impact of rabbits, wild dogs, mice, foxes and feral pigs and pest birds is estimated at over \$740 million per year.

"The figure is just the tip of the iceberg. It doesn't consider the environmental nor social costs of invasive animals. We haven't attempted to estimate the costs on our fragile biodiversity by putting a dollar figure on our precious native species that are killed by animals like foxes or cats," he said.

Passionate about the need to minimise the impact of

pest animals on Australia's biodiversity, he devotes great time and energy, professionally and personally, to raising public awareness of this issue.

To get his message across, Professor Peacock utilises media appearances, an online blog called Feral Thoughts ([www.feral.typepad.com](http://www.feral.typepad.com)) and social media networks such as Twitter. He is also a regular on the speakers' circuit, where he addresses community and business groups, and has been active in lobbying against the entry of the next wave of invasive animals into Australia.

~ Aus Vet J, Vol.88, No. 10, 2010

## NZVA Branch Summit

### NZVA President's Award 2010: Paul Hughes

The citation for the NZVA President's Award for 2010, read by Stuart Bruère, was presented to Paul Hughes, of Taihape Veterinary Services. The core of Hughes' working life is rural practice, but he has developed a strong interest in research.



Taihape Veterinary Services, which Hughes joined after graduating in 1979, covers about 16,000 square kilometres and services predominantly sheep, beef cattle and deer farms. In such a large farming district there are also many working sheep dogs.

It was sheep dogs that provided the subject of Hughes' first paper - "Multifocal Retinitis in New Zealand Sheep Dogs" published in the American Journal of Veterinary Pathology in 1987. This important work identified the true cause of regular cases of blindness in working dogs throughout New Zealand - the migration of *Toxocara canis* larvae to the eye.

He has also published on hip dysplasia in working dogs, nematode parasitism and emerging drench resistance, *Brucella ovis* blood testing and intradermal tuberculosis tests, among other topics, and has addressed countless conferences and field days. Hughes is a director of the recently formed Centre for Service and Working Dog Health at Massey University. In 2002, he received the Australian College of Veterinary Scientists Medal for outstanding

contribution to veterinary services in Australasia; the Alan Baldry Shepherd's Crook from the Society of Sheep and Beef Veterinarians; and the Agvax Veterinary Achievement Award.

### NZVA Outstanding Service Award: Nick Twyford

A small animal veterinarian, Twyford has been with Franklin Veterinary Services since 1982 (he graduated in 1979). In 1986, he became a director, and also became a member of the Australian College of Veterinary Scientists, being examined in canine medicine. He has also led the joint Government working party reviewing the Code of Professional Conduct.



Twyford has been involved with nearly 500 investigations and said veterinarians as a whole do their best in what are often difficult and trying circumstances. In closing, he quoted Sergeant Phil Esterhaus of the classic 1980s cop show Hill Street Blues: "Hey... let's be careful out there!"

~ VetScript, October 2010

### Andrea Murray joins NZVA Board

Dr Andrea Murray, Business Manager, Biosecurity, Asure Quality Limited, has joined the NZVA Board. She fills the vacancy left by Dr John Maclachlan, immediate Past President of the NZVA Board, who has stepped down.

While working on a variety of issues, including animal welfare, Tb control and exotic diseases, Murray stayed with MAF through various changes, from MAF Quality Management to the state-owned enterprise AgriQuality, followed by the merger with Asure to become the AsureQuality we know today. Murray's journey has also seen her gain a Master of Veterinary Public Health Management from the University of Sydney Faculty of Veterinary Science.



~ VetScript, October 2010

## Australia's Veterinary linac the first few years

In 1958 an Austrian veterinarian, Alois Pommer, published his results of irradiating dog tumours. Forty nine years later, Australia's first high energy radiation therapy unit dedicated to treating animals is commissioned. That was about three years ago. Radiation therapy in animals has come a long way since the early days and more effective fractionation protocols, three dimensional treatment planning, three dimensional conformal radiation and stereotactic radiation therapy are ways that tumour killing doses can be delivered while minimising normal tissue injury. This is an overview of the first few years and a summary of our results.



The linac is at Brisbane Veterinary Specialist Centre (BVSC) and the radiation service is managed by a team of technicians, radiation therapists, our own board certified radiation oncologist (Valerie Poirier) and a group of radiation physicists. It is a conventional six megavolt linear accelerator with variable electron capability. This means it has the capability of producing photons to treat deep seated tumours (such as brain and intranasal tumours) sparing the superficial acute responding tissue such as skin. The electron beam capability allows the treatment of superficial tumours sparing deep structures because the dose-depth curve for electrons has a very useful steep shoulder and drop off. Quality assurance parameters are maintained at tolerances of 1% and there is strict compliance to all the stringent radiation health requirements.

Access to a high energy radiation therapy with a board certified radiation oncologist has provided Australian veterinarians the infrastructure and resources to save limbs, choose less invasive surgical options, and provide treatments for some cancer types not previously able to be treated.

~ Aus Vet J, Vol.88 No.10, 2010

## Making the most of Compulsory CPD

Many veterinarians already regularly polish and upgrade their skills and knowledge. From 1 April 2011, the Veterinary Council of New Zealand (VCNZ) is making such continuing professional development (CPD) compulsory.

There seems to be little, at first glance, that should be controversial about compulsory CPD: most veterinarians already engage in life-long learning, keeping their skills up to date; most equivalent professions in New Zealand already have similar compulsory regimes; and CPD is compulsory for veterinarians in many other countries.



system - again, a minimum of 60 points over three years - but divides CPD activities into three broad areas: formal continuing veterinary education (CVE), collegial activity and self-directed learning.

“It will be a Council decision - Council might want to send a very strong message to the profession on particular aspects of practice, for example the guideline on inductions. Gazetting gives the Code, and any standards set out in gazetted guidelines, extra weight but still allows for future changes to be actioned easily without recourse to the

parliamentary process.”

As the review nears its end, much of the hard work and wrangling has already been done. Once the code passes through the final consultative phase, it will be set to offer the standards under which veterinarians operate. The ethical and legal environment envisaged aims to be transparent and understandable, so that members of the profession and their clients alike will have a clear idea of what is to be delivered on the one hand and what can be expected on the other.

~ VetScript, November, 2010

### The situation now

One of the VCNZ's primary responsibilities is to protect the public from substandard veterinary practice - as the VCNZ guidelines say, the public has a right to expect registered veterinarians providing professional services do so in a competent and contemporary manner.

According to VCNZ CEO, Janet Eden, the profession has, for about the last 10 years, required veterinarians to provide a record of their continuing professional development as part of their annual practising certificate (APC) application. Though CPD is not yet compulsory, it is compulsory to provide a record - even a nil record. This has led many vets to think that CPD itself is already compulsory. “It was a good way to get people thinking about it, knowing they had to declare at the end of the year what they'd been doing to maintain their skills.”

In terms of making the move to a compulsory framework, Eden notes that it was a submission to the VCNZ from the NZVA - that CPD should be a mandatory component of ongoing registration - that got the ball rolling. The VCNZ then set up a working party, which includes representatives from the VCNZ, NZVA, Ministry of Agriculture and Forestry, New Zealand Food Safety Authority, and the Institute of Veterinary Animal and Biomedical Sciences at Massey University. This group, working to terms of reference set by the VCNZ, developed a new framework in the document Continuing Professional Development for Veterinarians, which was released in August this year. The document explained the framework and asked how veterinarians and their employers felt about it.

The new framework proposes to maintain the points

### New CVA Councillor Singapore

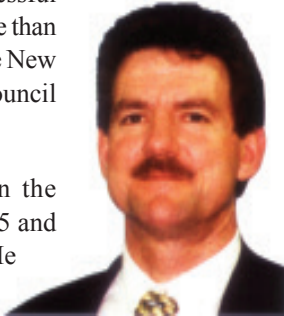
Dr. Lee See Yang has been appointed as the new CVA Councillor of Singapore. Dr Yang graduated with a Bachelor of Veterinary Science (Honours) from the University of Sydney in 2007. Upon graduation, Dr. Lee joined Companion Animal Surgery in Singapore as a Veterinary Surgeon. His special interests include small animal internal medicine, veterinary Chinese herbal medicine and emergency medicine. Prior to his veterinary degree, Dr. Lee also obtained a Bachelor of Business in Business Administration (Distinction) from RMIT and a specialist diploma in Molecular Biotechnology from Ngee Ann Polytechnic. Currently, he is the Honorary Secretary of the Singapore Veterinary Association and is pursuing an IVAS certified course on Veterinary Herbal Medicine.

## Two veterinarians receive Assisi Awards

The award is presented to individuals who have contributed to the welfare of animals in New Zealand or internationally. Named in honour of St Francis of Assisi, the Patron Saint of Animals, the award is an acknowledgement by the Council of the achievements of those whose goals echo the principles of excellence in animal welfare.

Nominations are welcomed from all sectors of the community and are open to all except existing members of the Council.

**Ross Blanks** has run a successful practice in Christchurch, for more than 25 years. He was President of the New Zealand Companion Animal Council (NZCAC) in 2004 and 2005.



Blanks was also active in the NZVA, joining its board in 1995 and becoming President in 1997. He tackled the dangerous dog issue and was attributed with the expression "address the deed, not the breed". He was passionate about the introduction of the microchip.

**Virginia Williams** is New Zealand's foremost representative in animal ethics. She earned her Bachelor of Veterinary Science diploma from Massey University in 1971, was awarded a diploma in professional ethics by Auckland University in 2000 and obtained membership in 2001 of the Australian College of Veterinary Scientists.



She has recently been appointed Chair of the National Animal Ethics Advisory Committee and an ex-officio member of the National Animal Welfare Advisory Committee. She was a Council Member of the Auckland SPCA and a member of the NZCAC, and principle author of the Code of Welfare for Cats.

~ VetScript, December, 2010

## New Councillor for Australia

Dr Jeff Cave is the new CVA Councillor for Australia. He replaces Dr Colin Cargill.



Dr Cave has served as CVA Councillor Australia earlier also from 2003-05 and as Regional Representative, Australasia/Oceania from 2005-08. Jeff also manages the Australian component of the CVA book program in conjunction with Dr Brian Derbyshire of Canada.

Jeff graduated with BVMS(Hons) from Murdoch University, Perth, in 1988. Immediately after graduation he worked for two years in mixed practice in the Adelaide Hills before travelling extensively throughout Eastern and Southern Africa. Following this, Jeff completed a course work M.Sc in Tropical Veterinary Science at James Cook University of North Queensland.

Jeff then worked for two years in Vanimo, Papua New Guinea with the Department of Agriculture and Livestock as part of the Australian Volunteers Abroad Program. Following this, Jeff worked for three years in the Cook Islands with the Ministry of Agriculture once again as part of the Australian Volunteers Abroad program. During his time in the Cook Islands, Jeff was CVA Councillor for the Cook Islands.

For the past six years Jeff has been District Veterinary Officer in Wodonga, Victoria, Australia with the Department of Primary Industries. Jeff is also a member of the Australian College of Veterinary Scientists epidemiology chapter.

### Improving vaccines for African horse sickness

DEFRA has signed a contract with the Institute for Animal Health at Pirbright to begin a three-year project with the aim of developing a safer and more effective vaccine against African horse sickness (AHS). AHS kills up to 90 per cent of the horses it infects and is endemic in sub-Saharan Africa. There is growing concern that it will reach the UK as global warming provides more favourable conditions for *Culicoides* species midges, which transmit the disease. The current vaccine is live and can return to virulence in some cases.

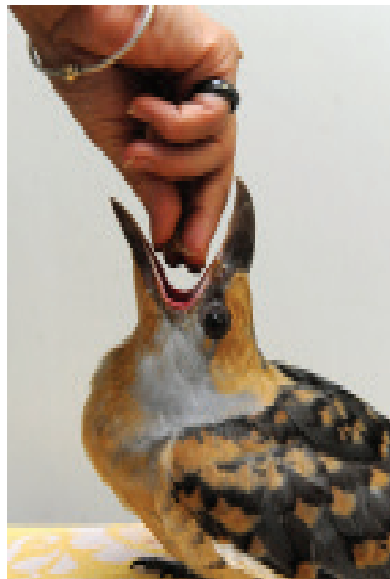
~ Veterinary Record

# Floods in Australia

In the past two weeks, the worst flooding in Queensland’s recent history has taken 10 lives, inundated 40 communities, caused an estimated \$9 billion loss to export revenue and cost the country at least \$5 billion in damages. And as the rain slowed down in some areas, residents of flood-stricken zones found themselves with yet another predicament: they were not the only ones scrambling to get on dry land.

In Rockhampton, a town of 77,000 on the Queensland coast, crocodiles, brown snakes and taipans, another, less common snake species in the area, have been emerging from the murky floodwaters, looking for shelter from their now underwater habitats and endangering residents and emergency workers. Staff at the Rockhampton airport have compared the watery runway there to a wildlife park. Safety officer Kevin Lucas told the Australian that he had killed around 40 snakes at the airport, one of which he likened to the Loch Ness Monster. “They’re everywhere,” he said. “They’ve all been washed down the system and this is where they’ve ended up.”

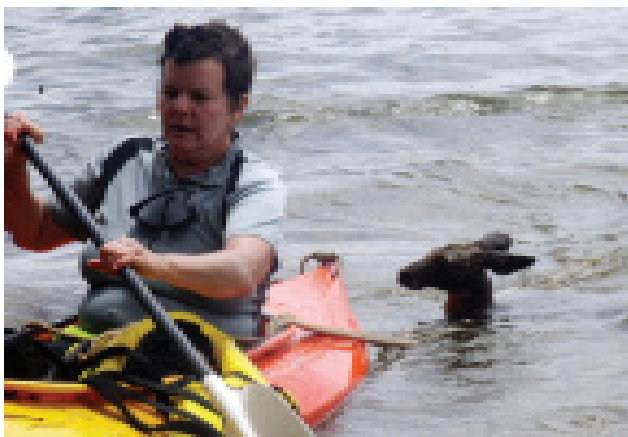
The recent floods in Australia, the country’s worst in the past 50 years, have affected not only humans but also wild animals, which are being rescued by both environmental organizations and locals.



*A cuckoo chick at the Lone Pine Koala Sanctuary*



*A wallaby stands on a large round hay bale, trapped by rising flood waters*



*Victim use a kayak and a rope to tow a kangaroo through floodwaters*



*Victim use ferries a boatload of kangaroos through floodwaters*

## Canada Caribbean

### Doug Roberts Becomes 62nd National President of the Canadian Veterinary Medical Association

Douglas A. Roberts, BSc, DVM, has been appointed the 62nd national president of the Canadian Veterinary Medical Association (CVMA). Dr. Roberts succeeds Dr. Julie de Moissac, whose term as President officially came to an end during the CVMA's annual Convention in Calgary in July 2010.



Dr. Roberts has been a companion animal veterinarian at Cornwallis Veterinarians Ltd in Kentville, Nova Scotia for the better part of the past 25 years and has been an owner/shareholder of Cornwallis Veterinarians Ltd for the past 20 years. He is the 2nd veterinarian from Cornwallis Veterinarians to become a CVMA President. Dr. Emmerson North (deceased), one of the founding partners of Cornwallis Veterinarians Ltd, was CVMA President in 1963-64.

Born and raised in Dresden, Ontario, Dr. Roberts has lived in Port Williams, Nova Scotia for the past 21 years with his wife and their 5 children.

Dr. Roberts graduated from the University of Guelph in 1980 with a BSc and obtained his DVM in 1984 from the Ontario Veterinary College at the same university.

Dr. Roberts was President of the Nova Scotia Veterinary Medical Association in 1994 and has been the Nova Scotia representative on the CVMA Council since 2001. He is a member of the CVMA's National Issues Committee, and currently represents the CVMA on the Atlantic Veterinary College Advisory Council. Dr. Roberts was also a member of the Nova Scotia Rabies Advisory Working Group.

~ CVJ, Vol.51 August 2010

### Atlantic Provinces Veterinary Conference 2010

The 2010 Atlantic Provinces Veterinary Conference (APVC) was held April 23-25, 2010 at the Halifax Marriott Harbourfront Hotel in Halifax, Nova Scotia. Attendance continues to grow with delegates coming primarily from the Atlantic provinces, and increasingly more from other provinces and some from the United States. Industry was well represented and continues to financially support all facets of the Conference so that the APVC continues to live up to its motto as "The best CE value in Canada." Industry representatives said they appreciated the staggered refreshment and lunch breaks, and the receptions at the conclusion of each day's lectures gave them lots of time to discuss products and services with delegates. An added bonus this year was the excellent television coverage on "Live at Five," interviewing several APVC speakers.



The scientific program for veterinarians and technicians included lectures on dermatology, cardiology soft tissue surgery, oncology, and wet labs on radiological interpretation and urinalysis. In addition, there were presentations on various management practices including human resources, conflict resolution, practice rips and clinic-client relationships.

It was fitting that the in-coming CVMA President, Dr. Doug Roberts, being from Nova Scotia, brought greetings from the CVMA, as did dean Don Reynolds from the Atlantic Veterinary College.

APVC is chaired by Dr. Ernie Prowse with help from a group of volunteers (Dr. Bert Stevenson, Dr. Kelly McInnis, Dr. Don Rushton, Peter Ainslie, Dr. Jack Cameron), industry representative Steve Myette, and their spouses. Former Committee member Dr. Steve Noonan received an engraved plaque for his contributions.

## 2010 CVMA Convention, Calgary, Alberta

The Canadian Veterinary Medical Association (CVMA) partnered with the Canadian Association of Animal Health Technologists and Technicians (CAAHTT) and, for the first time, with the Alberta Association of Animal Health Technologists (AAAHT) and the Alberta Veterinary Medical Association (AB.VMA) to host the 2010 CVMA Convention at Calgary, Alberta.

### New features of the 2010 Convention

The CVMA Emerging Leaders Program was introduced this year at the CVMA Convention. Participants of the 1-day workshop included 1 to 2 veterinarians from each province. The theme of the workshop, sponsored by Hill's Pet Nutrition Canada, was "The Need to Lead: Recognizing and Realizing your Potential." The event was initiated and chaired by Dr. Melodie Chan and facilitated by Drs. Charles Wayner and Kathleen Ruby. It is intended that the event will continue in future years and help to inspire many emerging leaders from within the veterinary community.

For the first time, the CVMA Business Management Program provided "pre-convention" sessions, featuring topics such as "Lessons from the Recession"; "Using Financial Metrics Wisely"; "Calculating Your Practice Profitability"; and "It's All About Implementation." Under the title "How Much Could 60 minutes Save You," Dr. Frank Richardson and Mr. Darren Osborne provided CVMA

members with free one-on-one consultations offering suggestions for improving business practices.

**Wet Labs:** An unprecedented number of wet labs were offered, among them: Femoral Head Ostectomy Surgery; Urinalysis; Diagnostic Techniques in Veterinary Dermatology; Equine Respiratory Diagnosis; Conformation and Bovine Lameness; Equine/LA Rescue and Emergency Triage; and Field Diagnostic and Necropsy Techniques for Large Animals.

**Interactive Breakfast Sessions:** The continuing education (CE) program was further enhanced by offering 3 interactive breakfast sessions on: "Get to the Heart of the Matter A New Approach to Heart Disease in Cats and Dogs"; "Light Years Ahead Class IV Laser Therapy"; and "Avian Exotic Husbandry."

### Annual General Meeting (AGM) and Awards Ceremony

More than 200 members and guests attended the CVMA's 62nd AGM, chaired by the CVMA President, Dr. Julie de Moissac. Guests at this event included:

- o Dr. Brian Evans, Executive Vice-President, Chief Veterinary Officer, Canadian Food Inspection Agency



*CVMA Council*

*Back Row L-R: Drs Jim Berry, Ronald Dunphy, Nicole Gallant, Mike Sheridan, Jim Fairles, Mark Lang, Lisa Miller, Jean Gauvin  
Front Row L-R: Ms Holly Spring, Mr Jost am Rhyn, Drs Julie de Moissac, Doug Roberts, Diane Frank, Lloyd Keddie, Deborah Haines, John Drake  
and Ms Ariane Bornais*



- o Dr. Tjeerd Jorna, President, World Veterinary Association
- o Dr. Larry Corry, President, American Veterinary Medical Association
- o Dr. Ron DeHaven, Executive Vice-President, American Veterinary Medical Association
- o Dr. Robert McCracken, Director of Programmes, Commonwealth Veterinary Association
- o Dr. Gerald Hauer, Chief Veterinary Officer, Government of Alberta.

Dr. Jim Berry, Executive Member  
 Dr. Julie de Moissac, Immediate Past-President  
 Mr. Jost am Rhyh, Executive Director  
 (Ex-Officio)

Dr. Conrad L'Ecuyer retired as treasurer, having served the CVMA in this position over the past 10 years. Council appointed Dr. Barry Stemshorn as the new treasurer. Thanks are offered to Dr. L'Ecuyer for his dedication as treasurer, and for representing the CVMA on many important committees (the National Farmed Animal Health Coalition, the Veterinary Drugs Directorate). Welcome to Dr. Stemshorn; we thank him for agreeing to assist the CVMA in its mandate of serving the profession.

The 2010-2011 CVMA executive members

Dr. Doug Roberts, President  
 Dr. Lloyd Keddie, President-Elect  
 Dr. Jim Fairies, Vice-President

~ CVJ, Vol.51 September 2010

## 26th Biennial Caribbean Veterinary Conference

The 26th Biennial Caribbean Veterinary Conference was held in Ocho Rios, Jamaica from November 3 – 6, 2010, hosted by the Jamaica Veterinary Medical Association (JVMA). It boasted a total of 231 participants from the Caribbean, Central & South America, the USA, Canada and India. Delegates were, overall, very pleased with the event, despite the threat posed by Tropical Storm Tomas, and are looking forward to the 27th Conference which will take place in Trinidad & Tobago in 2012.

Most of the conference was dedicated to academic sessions providing continuing education in the areas of companion animal, food-producing animal (including poultry and fish), equine and marine animal medicine and surgery, veterinary public health and more. These presentations, delivered by speakers from within and outside the region, were of the highest standard, including those given by students of the UWI School of Veterinary Medicine in Trinidad, who were sponsored by that institution to attend.

The JVMA received accreditation from the American Association of Veterinary State Boards (AAVSB) as a provider of Continuing Education (CE) thereby allowing the participating veterinarians to receive internationally recognized CE credits – a first for a CARICOM-based veterinary group.

At the General Meeting of the CbVMA, held on the evening of 5 November 2010, a number of issues were discussed and agreement reached. These included:

- The Ratification of the CbVMA's Constitution.
- Lobbying CARICOM for greater support for regional government veterinarians to attend regional conferences.
- Support for the passage of a CARICOM Bill regulating the practice of Veterinary Medicine throughout the region.
- Support for the implementation of a UWI-SVM-based Caribbean Regional Registration Examination for veterinarians wishing to practice in CARICOM countries.
- Strengthening intra-regional communication among members to bolster the Association's ability to speak with one voice on matters of regional health and trade.
- The selection of the venues for the next two conferences, which will take place in Trinidad & Tobago in 2012 and the Cayman Islands in 2014.
- The election of a new Executive Council with Dr. Curtis Padilla, President of the Trinidad & Tobago Veterinary Association (TTVA) being elected President. Dr. Kanyuira Gikonyo of the Cayman Islands was elected Vice President, with Secretary-Treasurer and Assistant Secretary-Treasurer going to Dr. Karla Georges and Dr. Michelle Mellowes respectively, both of Trinidad & Tobago.

At the closing ceremony on 6 November 2010, two

## CVA REGIONAL NEWS

veterinarians were given awards for services to the region. Dr. Keith Amiel of Jamaica was honoured for services to agriculture and the veterinary profession, while Professor Abiodun Adesiyun, Director of the UWI School of Veterinary Medicine, was honoured for his services to veterinary education.

President-Elect Padilla noted that the TTVA had its work cut out for it to prepare the 2012 conference given the high standard set by Jamaica. He pledged to rise to the occasion and will have the full support of his regional colleagues.

~ Dr Curtis Padilla  
CVA Councillor T&T

### CJVR Editor Wins Award

Last fall, Eva Nagy, editor of the Canadian Journal of Veterinary Research, was nominated for membership in the Hungarian Academy of Sciences (roughly equivalent to the Royal Society of Canada). Nominations are accepted every 3 years. Eva has now been inducted as a new member, representing the Section of Agricultural Sciences. This prestigious recognition identifies a finite number of members and only 22 from a wide range of disciplines are inducted over the 3-year period. Eva was the only female among this group of 22, in addition to being the first and only female veterinarian elected to this group.



Eva, who is a professor in the Department of Pathobiology at the Ontario Veterinary College, University of Guelph, feels this recognition reflects well on the Department, College and University, as she could not have gotten to this point without the institutional support and the talented members of her lab, past and present.

~ CVJ, Vol.51 August 2010

The School of Veterinary Medicine, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana is looking for qualified veterinary specialists to teach DVM students the following courses: **Veterinary Surgery; Veterinary Medicine; Theriogenology; Veterinary Radiology; Veterinary Pathology (General, Special and Clinical).**

Specialists who want to come as visiting lecturers are also welcome. For further details contact: [raphfolitse@yahoo.com](mailto:raphfolitse@yahoo.com)

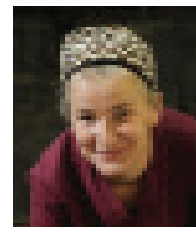
### New CVA Councillor for Trinidad and Tobago

Dr Curtis Padilla has been elected as the new CVA Councillor of Trinidad and Tobago at the 26th Biennial Caribbean Veterinary Conference which was held in Ocho Rios, Jamaica from November 3 – 6, 2010. He replaces Dr John Fernandes who served CVA for more than a decade.



### New CVA Councillor for Belize

The Veterinary Association of Belize at its 19th Annual General Meeting held at the George Price Centre in Belmopan on the 30th September, 2010 elected a new executive to lead the Association forward for the next two years. The new executive is:



President	Dr.
Michael Tewes	
Vice-President	Dr. Henry Canton
Secretary	Dr. Isabelle Paquet-Durand
Treasurer	Dr. Victor Gongora
Member	Dr. Homero Novelo

Dr. Isabelle Paquet-Durand was also elected as CVA Councillor of Belize.

Dr. Isabelle Paquet-Durand is a German trained Veterinarian with a doctorate in parasitology. Dr. Isabelle has dedicated her career to Wildlife Medicine and Conservation in the Americas with an additional research interest in Public Health. She is the Administrator for the Belize Wildlife Conservation Network, a coalition of conservation NGO's. As an academic Dr. Isabelle has trained pre-vet, veterinary and animal science students from around the world and continues to teach with the Institute of Sustainable International Studies (ISIS). While maintaining her faculty position with ISIS, Dr. Isabelle practices wildlife medicine in Belize and travels internationally as a consultant for wildlife

## Scanner creates a stir in Rwanda

Students at the Higher Institute of Agriculture and Animal Husbandry in Rwanda are being shown how to scan cows for pregnancy following the donation of an ultrasound scanner by BCF Technology.

The company was asked by UK veterinary surgeon Stephen Hipkins for help in supporting the work he is involved in at the institute, and, as a result of his request, BCF donated an earlier version of its EasiScan bovine ultrasound scanner.

Mr Hipkins is currently in Rwanda with his wife, Melissa, who is a VSO volunteer in the country. Having been in mixed practice in Rugby since 1973, he sold his interest in the practice in April last year and, after arriving in Rwanda, he secured a short-term position at the institute, teaching bovine surgery and imaging.



Mr Hipkins says that the machine has generated a lot of interest among students and staff at the institute and that there are endless opportunities' to use it as a training aid for pregnancy diagnoses and oestrous detection, and for demonstrating to farm managers the value of early pregnancy and non-pregnancy diagnosis.

When it comes to reproductive management of cattle in Rwanda, he says, 'Identification is half-hearted, oestrous detection is hit and miss, and quite a lot of effort is put into synchronisation of oestrous with indifferent results. Many of the cattle are kept in "herds" of one or two animals, making oestrous detection very difficult. On top of that, there is a policy of artificial insemination, based on a sound argument to improve the genetics of the cattle population, but making them even more dependent on good oestrous detection.

## Concerns grow about PPR in Tanzania

The Food and Agriculture Organization (FAO) is warning that an outbreak of Peptides Petits Ruminants (PPR) that began in Tanzania earlier this year could spread to southern Africa.

The FAO issued its warning following a recent emergency mission to Tanzania. The outbreak threatens over 13.5 million goats and 3.5 million sheep in the country. The FAO's mission recommended that an emergency vaccination programme should be implemented around the disease outbreak in the northern half of Tanzania and that additional vaccination should be considered in the area bordering Malawi, Mozambique and Zambia. It also advised that these countries step up their vigilance for the disease and conduct proactive surveillance.

The FAO notes that PPR occurs in Middle Eastern countries and parts of Central and Southern Asia. In Africa, it has affected the Western, Eastern and Central parts of the continent, but Southern Africa has so far been unaffected.

'If the disease is allowed to spread from Tanzania into the whole of the 15-nation Southern African Development Community

(SADC), it could potentially devastate the livelihoods and food security of millions of small herders and agropastoralists,' the FAO says.

It adds that it is available to help countries monitor the availability of vaccine stocks for emergency vaccination, reinforce their laboratory capacity and strengthen active surveillance in the field. It can also assist in raising awareness of the disease among veterinarians in the field, auxiliary staff, pastoralists and traders.

Sheep and goats are critical to food and income security for pastoral communities? said Juan Lubroth, the FAO's chief veterinary officer 'The presence of the disease directly affects a family's wealth, hence the veterinary services of countries in the region must review their preparedness plans, strengthen border control and improve surveillance. We are at the disposal of SADC in times of need. This may well be one of those times:

~ **Veterinary Record, Nov 20, 2010**

## Kenya Veterinary Association News

A function jointly organized by the Kenya Veterinary Association (KVA) and the Kenya Veterinary Board (KVB) was held to launch their Strategic Plans and give Awards to outstanding veterinarians for excelling in various professional fields.

The event was graced by Hon. Dr. Mohammed Kuti Minister for Livestock Development who was the Guest of Honour.

The following award were presented.

- **Lifetime Achievement Award**, sponsored by KVB, cash award of KShs 50,000, trophy and certificate to **Prof. Mbugua, Susan Wanjiru**, Proprietor St. Austins Vet Clinic, Lavington & Prof of Surgery – FVM, UON.
- **Veterinarian of the Year**, sponsored by Norbrook, cash award of KShs 50,000, trophy and certificate to **Dr. Thuku, Peter Kirori**, Proprietor of Jupiter Veterinary Services, Mathioya District.
- **Veterinary Academia Award**, sponsored by Nerix Pharma, cash award of KShs 30,000, trophy and certificate to **Dr. Mande, John Demesi**, Senior Lecturer – Clinical Studies Department, FVM, University of Nairobi.
- **Veterinary Clinics Award**, sponsored by Lesukut, cash award of KShs 30,000, trophy and certificate to **Drs. Sercombe, John Samuel & Sercombe, Patricia**

**Ann**, Proprietor of Sercombe Vet Clinic, Karen, Nairobi

- **Kenya Veterinary Association (KVA) Award**, sponsored by KVA, cash award of KShs 30,000, trophy and certificate to **Dr. Aseto, Bernard Okinyi**, Regional Business Development Director of Norbrook Africa Subsidiaries
- **Veterinary Pharmaceutical Award**, sponsored by Twiga, cash award of KShs 30,000, trophy and certificate to **Dr. Nakuoh, Carlos Jackson**, Proprietor of Olgarua Agrovvet, Kitenegela
- **Public Service Award**, sponsored by KVA, cash award of KShs 30,000, trophy and certificate to **Dr. Karugu, Daniel K**, Assistant Director Veterinary Services, Vet Labs Kabete
- **Research Award**, sponsored by KVB, cash award of KShs 30,000, trophy and certificate to **Prof. Arimi, Samuel Mutwiri**, Professor of Public Health, PHPT, FVM, University of Nairobi
- **Commendation Certificates** were presented to Dr. Mulala, Feneas Jared, PDVS Western, Dr. Wright, Josephine Mwikali, PDVS Nairobi and Dr. Mwongela, Lawrence Kiambi, DVO for their outstanding contribution to veterinary science.

~ **Dr. Kenneth Wameyo, KVA**

### Rabies in Africa: The fight against it rages on

Of the 55,000 rabies-related deaths in humans per year around the world, 45 per cent of them (or 24,750) occur in Africa. However, most Africans do not know what to do in the event of a dog bite.

Available statistics reveal that children under 15 years of age are the most frequently exposed age group, accounting for almost half of human exposures in canine-rabies infected areas. Many people who are exposed to rabies do not seek medical treatment simply because they are not even aware of the risk of contracting this disease or because they live in rural areas that are too far away from health centres able to provide rabies post-exposure prophylaxis (generally located only in big cities).

In Africa, rabies-related deaths in humans are generally linked to lack of awareness and poverty. Human deaths can be prevented by the timely administration of appropriate

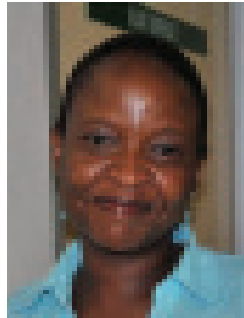
Controlling rabies in Africa is a continental public good. Providing it will not be easy owing to limited resources and lukewarm political will.

Some grassroots approaches are already taking place. For instance, AfroREB, the Africa Rabies Expert Bureau, is a network of medical and veterinary professionals with expertise in rabies.

~ **FAO Media Release, 17 August 2010**

## New CVA Councillor for Botswana

The Botswana Veterinary Association held its 2010 AGM on 2nd November 2010 to discuss pertinent issues affecting the profession including the new Act on the veterinary statutory body that is to come into commencement in the first quarter of 2011. The meeting was well attended with representation from public, private sector and retired colleagues. The association also took opportunity to elect 3 of its members to represent the BVA when the new veterinary statutory body act commences.



The new 2011 BVA Executive committee is as follows:

Michael G. Sento	President
Solomom Ramabu	Vice President
Samantha Kejelepula	Secretary
Mmadi M. Reuben	Treasurer
	(re- elected)
Ditiro Coyne	Additional member
Mark Bing	Additional member
Chandapiwa Marobela-Raborokgwe	CVA Councillor

Dr Chandapiwa Marobela-Raborokgwe has been elected as the new CVA Councillor Botswana and she replaces Dr Neo Mapitse.

## New CVA Councillor for Mauritius

The newly elected office-bearers of Mauritius Veterinary Association for the year 2010-2011 are;

Chairman – Dr. Naraina Poulle  
 Secretary – Dr. Siddick Timol  
 Treasurer – Dr. Sinarain Gya  
 Members –

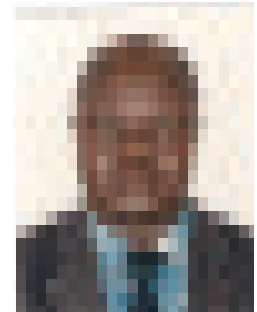
Dr. P. Beeharry  
 Dr. Marie Claire Domaingue



Dr Siddick Timol has been nominated as the CVA Councillor for Mauritius.

## New CVA Councillor for Uganda

The Uganda Veterinary Association Symposium and Annual General Meeting were held successfully on 9 and 10 December 2010 respectively. Highlights of the meetings are:



- The major focus of the symposium discussions was the decentralisation system of governance and its effects on the vet profession and the delivery of vet services.
- Two Central Government Ministers participated in the meeting and are awaiting our resolutions to guide their next steps but more importantly to brief the President who they represented in the meeting.
- Awards for excellence in supporting the veterinary profession and for their contribution in the animal industry in Uganda were presented.
- In the UVA AGM, the following were elected to serve 2-year term:

Dr. Sam G. Okech	President
Dr. Enoch Bigirwa	Vice President
Dr. Sylvia Nalubwama	General Secretary
Dr. Patrick Charlie Okori	Assistant General Secretary
Dr. Emilian B. Ahimbisibwe	Treasurer
Dr. Maureen N. Mayanja	Assistant Treasurer
Dr. Alice Banga	Committee Member
Dr. Stephen Birungi	Committee Member
Dr. Charles Lagu	Committee Member

The Executive Committee of UVA elected Dr. Dominic Mundrugo-ogo Lali as CVA Councillor for Uganda for the next 4 years beginning 1 January 2011.

Dr Dominic is the District Veterinary Officer, Moyo District, Uganda. He graduated with a BVM from Makerere University (MUBS), Kampala in 1993 and MBA from Arusha in 2004. He is currently a PhD Research Student at MUBS. He has wide range of experience both in professional as well as corporate governance.



## West Africa

### Sir Dawda Jawara launches book

H.E. Alhaji Sir Dawda Kairaba Jawara, former President of the Republic of The Gambia, and former President, CVA and currently Patron of CVA, launched a book entitled “KAIRABA” at the Kairaba Beach Hotel.

The book was launched under the distinguished Chief Patronage of H.E. Sheikh Prof Alhaji Dr Yahya A. J. J. Jammeh, President of the Republic of The Gambia and H.E. Olusegun Obasanjo, former President of the Federal Republic of Nigeria, who chaired the occasion.

H.E. Alpha Omar Konare, former President of Mali and former President of the A.U. Commission, H.E. Alhaji Ahmad Tejan Kabbah former President of Sierra Leone, H.E. Ambassador James Victor Gbeho, President of the ECOWAS Commission and H.E. Senator Liyel Imoke, the Executive Governor of Cross River State, Nigeria, also attended.

The autobiography, which chronicles the life and times of Sir Dawda, who was the leader of the People’s Progressive Party (the party that led The Gambia to independence) for some 40 years, was reviewed by Mr. Monie Ralph Captan, former Foreign Minister of Liberia, Chairman of Comium Liberia and President of the Liberia Chamber of Commerce.

Sir Dawda served the Gambia as Veterinary Officer, Principal Veterinary Officer, Minister of Education, Prime Minister and then President. In this moving account, Sir Dawda Jawara, widely known for his tolerance, respect for



*H.E Alhaji Sir Dawda Kairaba Jawara with H.E Sheikh Prof Alhaji Dr Yahya A.J.J Jammeh, President of the Republic of The Gambia*

democracy and the rule of law, bares his heart on the struggle for the independence of The Gambia, the establishment of the African Commission on Human and Peoples’ Rights in The Gambia, the 1981 abortive coup, the Senegambia Confederation, the 1994 coup and life in exile in the UK. With conciseness and candour, Sir Jawara gives a graphic account of the events leading up to his reconciliation with President Jammeh.

Kairaba is essential reading for anyone who is interested in the political and socio-economic development of The Gambia.

~ Gambia News, 2010

### Nigeria’s livestock resource worth N65bn

The livestock sub-sector in Nigeria contributes about N65billion which represents 20 per cent of the national income derived from the agriculture sector.

Minister of Agriculture and Rural development Professor Sheikh Ahmad Abdullah made this known at the National Feed Millers Summit that was held in Ibadan to discuss ways on improving livestock feed for quality animal product. Livestock sector is one of the major contributors of income and employment to a large number of rural dwellers in Nigeria and also provide 80 per cent of the meat requirement of the country, hence the need to ensure that livestock feed is rich and of good quality, the minister said.

The minister who was represented by the Director for

Livestock Development, Lawal Sanda, indicated that the value of the animal sector can double four times if improved technology and other structures are put in place. President of the Nigeria Institute of Animal Science, Professor Placid Njoku said attention must to given to the quality of feed given to livestock because it has an impact on human health and welfare.

He said animals like chickens express production rate based on the quantity and quality of feed they are given that is why the institute “is making effort to improve the breeding stock and feed quality and supply.”

Daily Trust, 9 Nov 2010

# UK Mediterranean

## Mary Brancker remembered

Despite the disruption caused by the harsh winter weather, there was a strong attendance at a memorial service for Mary Brancker, held at the church of St Stephen with St John in London on December 3. As one of those present remarked, the severe conditions would not have deterred Miss Brancker, for whom the words 'indomitable' and 'indefatigable' hardly did justice.

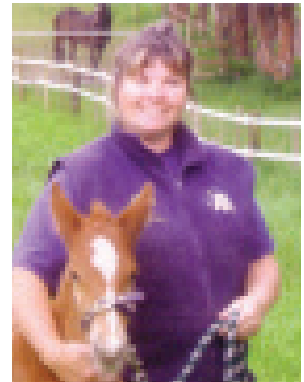


Miss Brancker, who was the first woman President of the BVA, died on July 18 this year, aged 95. Her many achievements, across many branches of veterinary medicine, have been documented in several obituaries in *Veterinary Record*, which reflect the esteem in which she was held. Further tributes were paid at the memorial service, where phrases such as 'energy and enthusiasm', 'unique personality and character', and 'astute and pragmatic' cropped up more than once. Reference was also made to laughter and her strong sense of fun. Referring to her commanding voice and ability to organise. Vic Simpson, who shared Miss Brancker's interest in veterinary zoological medicine, summed up her enthusiasm with the remark, 'I'm not sure what kind of animals there are in heaven but, if there is not already a celestial veterinary society. Mary will have founded one by now.'

~ *Veterinary Record*, Dec 11, 2010

## Director appointed for Edinburgh's new animal welfare centre

Natalie Waran has been appointed as the Director of the Jeanne Marchig International Centre for Animal Welfare Education at the Royal (Dick) School of Veterinary Studies (R[D]SVS). The new centre has been established with a £2 million donation from the Marchig Animal Welfare Trust. It aims to create a focal point for animal welfare education worldwide, and to establish new veterinary courses, as well as collaborating with international partners to improve the understanding of animal welfare issues.



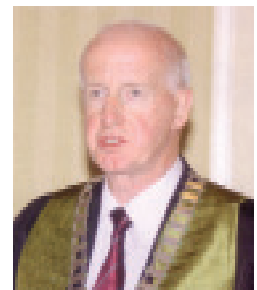
Professor Waran's appointment will see her return to the R(D)SVS, where she worked as a senior lecturer for 14 years until 2004. She is currently professor of animal welfare at the Unitec Institute of Technology in New Zealand, where she is also head of the Department of Natural Sciences, and associate dean for the Faculty of Social and Health Sciences.

~ *Veterinary Record*, Dec 11, 2010

## New President of BVA

Mr Harvey Locke was elected President of the British Veterinary Association (BVA) for 2010/2011 held at Glasgow.

A small animal practitioner in Stockport, Harvey Locke has veterinary science in his blood: when he qualified from Liverpool University in 1969 he became the fourth consecutive generation of vets in his family. His great grandfather was President of the RCVS one hundred years ago in 1910/11 and his grandfather was President of the RCVS in 1934/35. His daughter and his niece have both recently graduated from Liverpool to join the profession as the fifth consecutive generation.



Mr Locke has been actively and continuously involved in veterinary politics for 24 years and is a former President of the British Small Animal Veterinary Association and Vice President of the Union of European Veterinary Practitioners.

## International issues, common challenges

Presidents and senior staff members of veterinary associations in the USA, Canada, Australia, New Zealand, South Africa and the UK gathered in London from September 18 to 20, for a meeting of the International Veterinary Officers



Council (IVOC). IVOC acts as a forum to promote dialogue and collaboration among the six member associations, with a view to harmonising policies and optimising resources. It was a successful few days in which the topics discussed ranged from membership benefits and retention of members, to animal welfare and official veterinarians. The RCVS hosted a half-day meeting of IVOC at which regulation, education and legislation were discussed, It became clear that many of the problems being experienced in the UK are also being

## Worcester vet is 'equine vet of the year'

David Denny, a veterinary surgeon in Worcester was named 'Petplan Equine Vet of the Year' at the Animal Health Trust's annual equestrian awards in London in November.



David Denny receives the 'Equine Vet of the Year' award from Alison Andrew

Over 200 nominations for the award were received from horse owners all over the UK, with three finalists, and the eventual winner being selected by an independent panel.

Mr. Denny has run a general practice in Worcester for more than 40 years. The judges were particularly impressed by his years of experience in diagnosing equine problems, his commitment to always putting the welfare of the horse first and the testimonials given by his clients.

'This award recognises those vets which go the extra mile in providing an outstanding service to horse owners,'

~ Veterinary Record, Nov 13, 2010

## RVC appoints its next principal

Stuart Reid will become the new principal of the Royal Veterinary College (RVC) on January 1 next year following his appointment by the RVC's council.



Professor Reid is currently professor of veterinary informatics and epidemiology and head of the School of Veterinary Medicine at the University of Glasgow. He qualified from Glasgow in 1987 and held a number of posts at the university before becoming dean of the veterinary faculty in 2005. He was appointed to the first joint Chair between the universities of Strathclyde and Glasgow in 1997.

He succeeds Quintin McKellar as principal of the RVC. Professor McKellar, who was appointed to the role in 2004, is taking up the post of vice-chancellor of the University of Hertfordshire.

~ Veterinary Record, Nov 20, 2010

*Animals have these advantages over man: They have no theologians to instruct them, their funerals cost them nothing, and no one starts lawsuits over their wills.*

~ Voltaire



## WSAVA embraces 'one health'

The WSAVA (World Small Animal Veterinary Association) is 50 years old this year and, to mark the anniversary, the association has adopted 'One Health' as a major theme. It has also embarked on a three-year project aimed at increasing companion animal veterinarians' involvement in one health. In a special lecture at the congress, Michael Day, chairman of the WSAVA's scientific committee, explained the background to the initiative and how the association intends to engage with the concept in the future.



One health (formerly called one medicine) aims to improve the lives of all species - human and animal through the integration of human medicine, veterinary medicine and environmental science.

Much of the focus of one health has been on diseases and zoonotic diseases that occur in production animals and wildlife, and on improved environmental management and laboratory research. However as Professor Day explained, there are many examples of major human diseases in which companion animals play an integral role in transmission or by acting as reservoirs of infection. Obvious examples include rabies and leishmaniasis but, he said, there are many other instances where the close relationship between pet animals and humans creates potential for disease transmission, and companion animal veterinarians should be vigilant in disease surveillance in these species. Examples included the potential susceptibility of cats to infection with H5N1 avian influenza virus, and the recent attention to MRSA infection in animals as well as humans. Meanwhile, global movement of companion animals was now occurring on an unprecedented scale, increasing the potential for movement of disease. Adding to this the contribution that study of

companion animals could make to the integration of research efforts, it was clear, said Professor Day, that there was 'gross under-recognition of the importance of small animals in the one health concept'.

To rectify this, the WSAVA had established a new international committee to develop and promote the concept more effectively. With a membership of more than 70 national small animal veterinary associations, and its role in scientific education, the WSAVA, he explained, was in a unique position to rapidly contact and coordinate the efforts of the global small animal veterinary community, particularly practitioners in developing countries. As a result, it could play a key role in establishing a strong and effective communications network: this might serve as a means of rapidly disseminating scientific information (for example, in the case of a global disease pandemic involving companion animals), or initiating new disease control programmes. Given sufficient funding, it might also be feasible to coordinate global companion animal infectious disease surveillance through sentinel practices in member nations contributing data to a central database.

The committee, which will be chaired by Professor Day, will meet once a year for the next three years, and the first meeting is planned for January 2011. As well as coordinating disease surveillance and control efforts, its remit will include greater integration of human and veterinary clinical research, as is embraced in the one health concept.

~ **Veterinary Record, Nov 6, 2010**

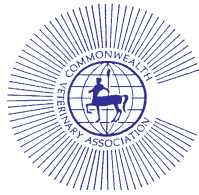
### Bacteria turned into antiviral gene therapy agent

New studies conducted by researchers at the University of California, Berkeley, could one day lead to anti-viral treatments that involved swallowing Salmonella bacteria, effectively using one bug to stop another.

The researchers have reprogrammed Salmonella, the same foodborne pathogen that can cause diarrhoea, fever and abdominal cramps, to safely transport virus-stopping enzymes into cells without causing disease.

Not only did this technique effectively treat mice infected with cytomegalovirus, it worked as an oral solution that was swallowed instead of injected. "A number of vaccines, including those for polio and smallpox, use live but weakened viruses to build up the immune system. But this is the first time anyone has successfully engineered bacteria for treatment of a viral infection", said Fenyong Liu.

~ **Deccan Herald, Feb 12, 2011**



## 5<sup>th</sup> Pan Commonwealth Veterinary Conference 21 – 26 March 2011, Accra, Ghana

**Theme: The Role Of Veterinarians And Livestock Farmers in Food Security And Poverty Alleviation**

### PROGRAMME

<b>Registration, 21<sup>st</sup> March</b>	
Check in and Early meals	
<b>Opening, 21<sup>st</sup> March</b>	
<p>Plenary: The Role of Veterinarians and Livestock Farmers in Food Security and Poverty Alleviation</p> <p>Course of 11 Medical Veterinary Officers to be held for a period of 20 minutes, 9.00 am - 10.00 am</p> <p>Course of 11 Medical Veterinary Officers to be held for a period of 20 minutes, 10.15 am - 10.35 am</p>	
<b>Workshop, 21<sup>st</sup> March</b>	
<p>Course of 11 Medical Veterinary Officers to be held for a period of 20 minutes, 9.00 am - 10.00 am</p> <p>Course of 11 Medical Veterinary Officers to be held for a period of 20 minutes, 10.15 am - 10.35 am</p>	
08.00 – 08.30 per	Registration, 21 <sup>st</sup> March
08.30 – 09.00 per	Opening Ceremony, 21 <sup>st</sup> March, 9.00 am - 10.00 am
	Workshop of 11 Medical Veterinary Officers, 10.15 am - 10.35 am

### SCIENTIFIC PROGRAMME

<b>Workshop, 21<sup>st</sup> March</b>	
<b>MAIN HALL</b>	
	<b>PLenary-21<sup>st</sup> March</b>
08.00 – 08.30 per	Registration, 21 <sup>st</sup> March
08.30 – 09.00 per	Opening Ceremony, 21 <sup>st</sup> March, 9.00 am - 10.00 am
09.00 – 09.30 per	Workshop of 11 Medical Veterinary Officers, 10.15 am - 10.35 am
09.30 – 10.00 per	Workshop of 11 Medical Veterinary Officers, 10.15 am - 10.35 am
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**Posters Will Be Submitted During Afternoon Tea on Wednesday, 23rd March and Thursday, 24th March**

<b>PRESENT, 8PM-8.30PM</b>	<b>FIELD TRIPS</b>
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**POSTER PRESENTATION SCHEDULE**

<b>Posters Submitted at Conference Dinner Night 7.30 - 9.30 pm on Wednesday, 23<sup>rd</sup> March and Thursday 24<sup>th</sup> March</b>	
<b>I. General</b>	
1.	Prevalence Survey of Borna Disease among the Adult Male in Nigeria – <a href="#">O. A. Abayo, Nigeria</a>
2.	Interrelation Between Diarrhoeal Illnesses and the Prevalence of Bibliographic Review – <a href="#">Giuseppe L. Di Nese, Italy</a>
3.	Comparative Responses of Mice to Different Doses of Toxins of <i>Coccidia</i> Species of the Genus – <a href="#">Oyegbede Olujobayo, Nigeria</a>
4.	The Effect of Different Ratios of Incubation Medium on the Performance of <i>Junco hyemalis</i> – <a href="#">Abayomi Oluwole, Oshana, Nigeria</a>
5.	Biological Control of <i>Leishmania</i> and <i>Trypanosoma</i> in the Blood of Cattle – <a href="#">L. A. Oluwole, Nigeria</a>
6.	Effect of <i>Leishmania</i> on the Blood of Cattle in the Blood of Cattle in the Blood of Cattle in the Blood of Cattle – <a href="#">Oluwole, Nigeria</a>
7.	The economic implications of rinderpest in small ruminants in northern Nigeria – <a href="#">R. O. Oluwole, Nigeria</a>
8.	Multiple births and reproductive problems in West African Dwarf cattle in the southern guinea savanna zone of Nigeria – <a href="#">O. T. Oluwole, Nigeria</a>
9.	Prevalence of <i>Leishmania</i> in the blood of cattle in the southern guinea savanna zone of Nigeria – <a href="#">O. T. Oluwole, Nigeria</a>
10.	Correlation of Body Length with Geographic Location of Bipolar Length in Nigeria – <a href="#">L. A. Oluwole, Nigeria</a>
11.	Effect of <i>Leishmania</i> on the Blood of Cattle in the Blood of Cattle in the Blood of Cattle – <a href="#">Oluwole, Nigeria</a>
12.	Etiology of the Condition of Dogs, Cats, and Pigs, Parasites to Pathology Unit of the Faculty of Veterinary Teaching Hospital, Ibadan, Nigeria (1999-2004) – <a href="#">O. T. Oluwole, Nigeria</a>
13.	Improving Working Effectiveness through the Development of Water Resources in the Savanna Zone of Nigeria – <a href="#">Oluwole, Nigeria</a>
<b>II. Posters</b>	
14.	Effect of <i>Leishmania</i> on the Blood of Cattle in the Blood of Cattle in the Blood of Cattle – <a href="#">Oluwole, Nigeria</a>
15.	Effect of Posters on the Blood of Cattle in the Blood of Cattle in the Blood of Cattle – <a href="#">Oluwole, Nigeria</a>
16.	The Importance of Posters in the Blood of Cattle in the Blood of Cattle in the Blood of Cattle – <a href="#">Oluwole, Nigeria</a>
17.	Consequences of the Blood of Cattle in the Blood of Cattle in the Blood of Cattle – <a href="#">Oluwole, Nigeria</a>
18.	The Effect of Basic Laboratory Design on the Efficiency of PCR in the Blood of Cattle – <a href="#">Oluwole, Nigeria</a>

\* to be confirmed

# Journal of Commonwealth Veterinary Association

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Articles should have a structured abstract of no more than 250 words. The subdivision is up to the author, but should encompass the Objective, Design, Procedure, Results and Conclusion. Write subheadings in lower case bold letters, followed by the text on the same line. List nonstandard abbreviations and their explanations after the abstract. Use only the abbreviated form in the text. Avoid use of abbreviations in the abstract. The main headings, following an untitled introduction, are Materials and Methods, Results, Discussion, Acknowledgments and References. The introduction should state the purpose of the study. The contents of Materials and Methods should enable others to reproduce the work. Present the findings in Results concisely and logically. Evaluate and interpret the findings in the Discussion, but do not present new data. If possible, write the main conclusions at the end of the Discussion. Headings may vary from standard if the variation makes the article more informative.

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Type each table double-spaced on a separate page. Number tables in Arabic in the order they are referred to in the text. Each table should have a concise title that describes its content adequately. Information in the table must not be repeated in detail in the text. Do not use vertical lines. Use horizontal lines to separate the table from the title, and footnotes and column headings from data.

### Figures

Both black and white and colour photographs are encouraged to a maximum of five only. Figures can be submitted in digital form as separate files. They should be saved as TIFF, JPEG or EPS files with a resolution of 300 dpi. EPS files must be saved with the preview option. Illustrations provided as MS Word files will not be accepted. Write legends for figures and explanations of symbols on a separate page. Legends should contain enough information to make the figure comprehensible without reference to the text.

### References

Cite only those publications that are essential for the understanding of the study. Number text references consecutively, in the order in which they are mentioned, by superscript Arabic numerals. Write and number the reference list in the sequence of the references in the text. References to journals, books, conference proceedings, organisational papers, anonymous editorials, foreign language articles and internet web sites, respectively, are written as follows:

1. Gibson KT, Hodge H, Whittam T. Inflammatory mediators in equine synovial fluid. *Aust Vet J* 1996; 73: 148-151.
2. Peterson ME, Randolph JF, Mooney CT. Endocrine diseases. In: Sherding RG, Editor. *The Cat: Diseases and Management*. 2nd edn. Churchill Livingstone, New York, 1994: 1403-1506.
3. Rhodes AP. Infectious bovine keratoconjunctivitis vaccination. In: *Proceedings of the 23rd Seminar, Sheep and Beef Cattle Society*, New Zealand Veterinary Association, June 1993.
4. Australian Veterinary Association. Tethering of sows and sow stalls. In: Greenwood PE, editor. *Members' Directory and Policy Compendium*. 1997: B5.
5. Where do we stand on manpower? [editorial] *Vet Rec* 1995; 137: 1.
6. Homberger FR. Mäusehepatitis-Virus. *Schweiz Arch Tierheilkd* 1996; 138: 183-188.
7. Council of Docked Breeds. The case for docking. <http://www.cdb.org>. 1992. Retrieved 15 October 2001.

List all authors if there are five or fewer. When there are more than five authors, list only the first three and add 'et al'. Write titles of books, journals and other publications in italics. Capitalise only the first letter of the book titles. Do not underline or use bold letters. The abbreviation of journals follows that of Serial sources for the BIOSIS previews database. Cite references to unpublished work only in the text, with a notation of (personal communication) or (unpublished). Please send a copy of any cited work that is included in the reference list as 'in press'. It is the authors' responsibility to check the accuracy of reference citations.

### Acknowledgments

Only acknowledge significant intellectual, technical and financial contributions. A short work warrants short acknowledgments.

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Articles of general interest, experiences in treating of clinical cases, country reports, success stories in animal production, using innovative approaches and where possible enhancing the contribution of women and also using sustainable methods are also encouraged.

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~ Editor, JCVA

## CALENDAR OF EVENTS

### 2011

5th Pan Commonwealth Veterinary Conference, Accra, Ghana. **March 21-25.**

BSAVA Congress 2011, Birmingham, UK. **Mar 31 - Apr 3.**

World Conference on Veterinary Education, Lyon, France. **May 13-15.**

AVA Annual Conference, Adelaide, South Australia. **May 15-20.**

NZVA Annual Conference, Christchurch Convention Centre, New Zealand. **June 20-24.**

UFAW International Animal Welfare Symposium, Portsmouth, UK. **Jun 28-29.**

30th World Veterinary Congress, Cape Town, South Africa. **October 10-14.**

### 2012

27th Biennial Caribbean Veterinary Conference, Trinidad and Tobago. (Date to be announced).

CVA Regional Meeting of Asian Region, Colombo, Sri Lanka. (Date to be announced).

CVA Regional Meeting of Australasia/Oceania Region, Fiji. (Date to be announced).

CVA Regional Meeting of UK Mediterranean Region, Malta. (Date to be announced).

### 2014

28th Biennial Caribbean Veterinary Conference, Cayman Islands. (Date to be announced).

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