Veterinary Use of Ozone

Viral (Rickettsial and Chlamydial) Diseases (VRCDs)
Ozone is very effective in acute and chronic viral diseases as a virucidal agent in reversing positive antibody tests and in improving the general health of the animals.

Ozone is the treatment of choice of Equine Infectious Enema (EIA, Swamp fever) and promptly reverses the clinical symptoms and a positive Coggins test.

Ozone is equally effective against Equine Ehrlichiosis and Potomac Horse Fever, caused by the rickettsial agents Ehrlichia equi and E. risticii respectively, as well as against Equine Encephalomyelitis (EE) including Eastern (EEE), Western (WEE), Venezuelan (VEE) and other togaviral and flaviviral EE, Equine Viral Arteritis, African Horse Sickness (AHS), Equine Herpesvirus I (EHV-1) infection, Equine Viral Rhinopneumonitis and Myeloencephalopathy, Equine Influenza and other VRCDs of horses and other animals including cattle, (e.g. chlamydial abortion from Chlamydia psittaci, et al.), cats, dogs, sheep, goats, domestic birds and various zoo animals.

Respiratory Diseases of Horses
Ozone is effective against respiratory viral infections (RVIs) such as RVIs caused by EHV-1 (rhinopneumonitis), equine arteritis virus, rhovirus, influenza as well as adenovirus pneumonia with combined immunodeficiency in Arabian foals.

Ozone is also effective against viral respiratory infections with secondary bacterial infection that produces mucopurulent nasal discharge, exacerbates the cough, and may lead to lung abscessation, pneumonia or pleurisy. For ozone treatment of COPD (heaves), see part IV.

Ozone is the treatment of choice for Exercise-Induced Pulmonary Hemorrhage (EIPH, Epistaxis, "Bleeder"), especially in States and Countries that do not allow furosemide (LasixR). In most cases ozone reverses the bronchitis, neovascularization and fibrosis, and through a homeopathic mechanism, the other contributory factors of EIPH in "bleeders".

Bacterial Diseases
Ozone is very effective for acute and chronic bacterial
diseases, including those that do not respond well to antibiotics such as Glanders (Pseudomonas mallei); Septicemia in foals (e.g. from E. coli, Klebsiella spp., Actinobacillus spp.); Leptospirosis (Leptospira interrogans); Listeriosis (Listeria monocytogenes); Contagious Equine Metritis (CEM from Taylorella equigenitalis); retained placenta with consecutive metritis, septicaemia and laminitis; Tularemia (Francisella tularensis); Clostridial diseases e.g. Tetanus Enterotoxemia (Cl. perfringens infection); Malignant Edema (Cl. septicum); Botulism and Infectious Necrotic Hepatitis (Cl. novyi); Lyme Disease (Borrelia burgdorferi); Actinobacillosis (e.g. A. equuli in horses); Anthrax; Melioidosis hematogenous septic polyarthritis with primary Brucellosis (Brucella melitensis, B. abortus, B. suis, B. canis, B. ovis, B. neotomae) and others, especially in valuable race horses and zoo animals.

Fungal Diseases
Ozone is effective against systemic Actinomycosis and Candidiasis, Chromomycosis, North American Blastomycosis, Histoplasmosis, Aspergillosis and is a valuable adjunct in Chronic Obstructive Pulmonary Disease (COPD, heaves) of horses.

In the treatment of heaves, ozone relieves acute "asthmatic" attacks and the paroxysmal cough and effectively reverses the allergic component from inhalation of molds, dust and other air pollution as well as the triggering respiratory infection.

Leukemias, Lymphomas and other Malignancies
Ozone is an effective adjunct to high-pH therapy and other treatment methods of the Life Science Universal (LSU) modalities for these conditions.

Ozone is a valuable adjunct for the treatment of Equine Sarcoids (generally in younger horses) and Squamous Cell Carcinoma (most frequently in older horses).

Ozone is particularly effective against any blood and malignant disease caused by viruses and bacteria such as Bovine Leukosis, Canine Malignant Lymphomas, Feline Lymphosarcoma, Feline Leukemia and lymphoproliferative disorders in turkeys, chickens and zoo animals.

Rectal and Other Typical Applications of Ozone
Rectal ozone insufflations are a powerful adjunct to the treatment of both infectious and noninfectious diseases of the digestive tract. Ozone is effective in reducing intestinal parasites (helminths), viruses and rickettsiae (see part I, e.g. Rotavirus and Ehrlichia in horses), bacteria (see Part III, e.g. enterotoxigenic E. coli, Salmonella spp., Rhodococcus (Corynebacterium equi in horses), protozoa and fungi (see Part IV, e.g. Eimeria spp. and Aspergillus fumigatus in horses)
and algae (Prototheca spp.). Ozone is effective in diarrhea and inflammatory bowel disease of horses.

Vaginal ozone insufflations are effective against vaginal Candidiasis (see Part IV, Vaginitis, Equine Coital Exanthema (EHV-3), Contagious Equine Metritis (see Part III).

Intramammary ozone application instead of antibiotics is effective for mastitis in large animals, e.g. mastitis in mares caused by Streptococcus zooepedemicus, S. equi, S. equisimilis, S. agalactiae and S. viridans.

Intra-articular ozone is effective for Septic Arthritis.

Topical ozone is effective for dermatomycosis, osteomyelitis and infected wounds, fistulae (e.g. fistulous withers and poll evil, i.e. inflammation of supraspinous and supra-atlantal bursae caused equine and bovine udder diseases.

Ozone is most valuable for Cattle Embryo Transfer Procedures.

Dosage Recommendations
Intravenous Application of Ozone for the Indications Listed above
To minimize potential inflammatory reactions and discomfort of the animals, inject IM orgotein prior to any IV O3 application. For best effectiveness and to minimize venous irritation use the largest available vein for IV O3 applications and/or different locations for each IV injection.

In almost all animals, IV O3 will produce a homeopathic-type "healing crises" (HHC). This HHC may temporarily increase symptoms of the present illness or produce symptoms of old unresolved conditions. An HHC is excellent proof of the effectiveness of IV O3.

1.) Equine Infectious Anemia (Swamp Fever)
Twelve IV applications on consecutive days of 0.5 milligrams of ozone per kilogram (0.5 mg O3/kg) then recheck Coggins test. If the Coggins test is still positive 4 weeks after the initial treatment series, repeat this series. In about 80% of the cases, the Coggins test becomes negative after one series.

2.) Exercise-Induced Pulmonary Hemorrhage (EIPH, Epistaxis, "Bleeder")
Twelve IV applications on consecutive days of 0.5 mg O3/kg combined with EDTA chelation at an EDTA dosage of 50 mg/kg.

3.) Most Viral, Rickettsial, Chlamydial, Bacterial and Fungal Diseases
Acute: 4 IV applications on consecutive days with 0.5 mg O3/kg. If symptoms have not subsided completely, the treatment may be continued up to 12 days.
Subacute: 6 to 8 applications on consecutive days of 0.5 mg O3/kg. Repeat after a treatment-free interval of 2 weeks if symptoms have not completely subsided.

Chronic: (Such as Chronic Obstructive Pulmonary Disease (COPD, heaves)) 12 IV applications on consecutive days with 0.5 mg O3/kg. If symptoms persist after 4 weeks, repeat with 8 IV applications on consecutive days with 0.5 mg O3/kg. This 8-day regimen may be repeated every 6 weeks until symptoms have subsided completely or no further improvement is noted after O3 administration. All other precautions with COPD, such as strict avoidance of dusty and moldy feed or air pollution, should obviously also be taken.

4.) Leukemias, Lymphomas, Sarcoids and Other Cancers
8-12 IV applications on consecutive days with 0.5 mg O3/kg combined with the high-pH cancer treatment regimen pioneered by Life Science Universal.

Rectal Application of Ozone
Use approximately one liter ozone per 50 kilogram (1.0L O3/50 kg) at a concentration of 70 microgram per milliliter (70µg/mL) and repeat procedure after 30 minutes. If significant discomfort is experienced by the animal, a smaller dosage may be required. Repeat up to 2x daily (b.i.d.) until the outcome is achieved.

Vaginal Application of Ozone
Use approximately 1.0L O3/50kg at 70µ/mL concentration and repeat procedure after 20 minutes. If significant discomfort is experienced by the animal, a smaller dosage may be required. Repeat up to b.i.d. until the desired outcome is achieved.

Intramammary Application of Ozone
Use 30, 60 up to 120mL or more, as tolerated at a concentration of 120µg/mL and repeat every 10 minutes up to a total of six times. Repeat up to b.i.d. until the desired outcome is achieved.

Intra/Peri-Articular Application of Ozone
Use 10 to 60 mL or more, depending on the joint, at a concentration of 70 to 120µg/mL, and apply intra-articularly and also into the periarticular soft tissues, and set multiple periarticular intracutaneous wheals (“quaddels”).

Topical Application of Ozone
This may be done with a catheter or in some cases with a bag. For fistula or osteomyelitis treatments, use a concentration of 120µg/mL and apply as large a volume as required 12 to 15 times with a catheter. Repeat up to b.i.d. until the desired result is achieved. For dermatomycoses and wound cleaning, use 70 to 120µg/mL, and to enhance wound granulation, use 15 to 30µg for a period of 20 to 40 minutes. Repeat up to b.i.d. until the desired result is achieved.

Cattle Embryo Transfer Procedure and Ozone
Ozone insures sterility for all procedures used in conjunction

Dosages
Application of Ozone
0.05micrograms/kg => 50µg/kg (per treatment) Concentration of ozone max. 65µg/mL.

Rectal Application of Ozone
100ml ozone per 50 kilogram (0.1L O3/50 kg) concentration 30 - 35µg/mL.

Vaginal Application of Ozone
100ml ozone per 50 kilogram (0.1L O3/50 kg) concentration 30 - 35µg/mL.

Intramammary Application of Ozone
30, 60 up to 120mL or more, tolerated concentration max. 70µg/mL.

Intra/Peri-Articular Application of Ozone
Use 10 to 60 mL or more, depending on the joint, at a concentration of 70 to 90µg/mL, and apply intra-articularly and also into the periarticular soft tissues, and set multiple periarticular intracutaneous wheals ("quaddels").

Topical Application of Ozone
This may be done with a catheter or in some cases with a bag. For fistula or osteomyelitis treatments, use a concentration of 90µg/mL and apply as large a volume as required 12 to 15 times with a catheter. Repeat up to b.i.d. until the desired result is achieved. For dermatomycoses and wound cleaning, use 70 to 90µg/mL, and to enhance wound granulation, use 15 to 30µg for a period of 20 to 40 minutes. Repeat up to b.i.d. until the desired result is achieved.

Ozonated Water (O3 x H2O)
Ozonated water has obvious multiple beneficial applications in veterinary medicine and surgery.