

Date: 26 September 2002

**Publications concerning seal virus research - before 1988**

Osterhaus ADME, Yang H, Spijkers HEM, Groen J, Teppema JS, Steenis G van.  
The isolation and partial characterization of a highly pathogenic herpesvirus from the harbor seal (*Phoca Vitulina*).  
Arch. Virol. 86: 239-251 (1985).

Borst GHA, Osterhaus ADME, Walvoort HC, Reijnders PJH, Van der Kamp JS.  
An outbreak of a herpesvirus infection in harbor seals (*Phoca vitulina*).  
J. Wildl. Dis. 22 (1): 1-6 (1986).

Osterhaus ADME, Groen J, De Clercq E.  
Selective inhibitory effects of (S)-9-(3-hydroxy-2-phosphonyl-methoxypropyl)-adenine and  
1-(2'-deoxy-2'-fluoro- $\beta$ -D-arabinofuranosyl)-5-iodouracil on seal herpesvirus (phocid  
herpesvirus 1) infection *in vitro*.  
Antiviral Res. 7: 221-226 (1987).

## **Publications concerning seal virus research - 1988**

Osterhaus ADME.

Seal death.

Nature 334: 301-302 (1988).

Osterhaus ADME, Vedder EJ.

Identification of virus causing recent seal deaths.

Nature 335: 20 (1988).

Osterhaus A, Groen J, De Vries P, UytdeHaag F, Klingeborn B, Zarnke R.

Canine distemper virus in seals.

Nature 335: 403 (1988).

Osterhaus A, Spijkers I, Broeders H, Vedder E.

Een uitbraak van 'hondeziekte' bij zeehonden (1).

Tijdschr. Diergeneesk. 113 (18): 1011-1012 (1988).

Osterhaus A, Broeders H, Spijkers I, Groen J, Vedder E.

Een uitbraak van 'hondeziekte' bij zeehonden (2).

Tijdschr. Diergeneesk. 113 (19): 1061-1062 (1988).

Osterhaus ADME, Vedder L, Moutou F, Van Bressem MF, Pastoret PP.

La maladie des phoques en Europe.

J. Ann. Md. vt. 132: 611-621 (1988).

## **Publications concerning seal virus research - 1989**

Osterhaus ADME, UytdeHaag FGCM, Visser IKG, Vedder EJ, Reijnders PJM, Kuiper J, Brugge HN.  
Seal vaccination succes.  
Nature 337: 21 (1989).

Osterhaus ADME, Groen J, UytdeHaag FGCM, Visser IKG, Van de Bildt MWG, Bergman A, Klingeborn B.  
Distemper virus in Baikal seals.  
Nature 338: 209-210 (1989).

Osterhaus ADME.  
Zeehondensterfte veroorzaakt door zeehonden distempervirus.  
Microbrief 17 (4): 2-5 (1989).

Osterhaus ADME, Vedder EJ.  
No simplification in the aetiology of recent seal deaths.  
AMBIO 18: 297-298 (1989).

Osterhaus ADME, Groen J, UytdeHaag FGCM, Visser IKG, Vedder EJ, Crowther J, Bostock CJ.  
Morbillivirus infections in European seals before 1988.  
Vet. Rec. 125: 326 (1989).

Osterhaus ADME.  
A morbillivirus causing mass mortality in seals.  
Vaccine 7: 483-484 (1989).

Visser IKG, Van de Bildt MWG, Brugge HN, Reijnders PJH, Vedder EJ, Kuiper J, De Vries P, Groen J, Walvoort HC, UytdeHaag FGCM, Osterhaus ADME.  
Vaccination of harbour seals (*Phoca vitulina*) against phocid distemper with two different inactivated canine distemper virus (CDV) vaccines.  
Vaccine 7: 521-526 (1989).

Osterhaus ADME, Broeders HWJ, Groen J, UytdeHaag FGCM, Visser IKG, Van de Bildt MWG, Örvell C, Kumarev VP, Zorin VL.  
Different morbilliviruses in European and Siberian seals.  
Vet. Rec. 125: 647-648 (1989).

Reijnders PJH, Van der Hage M, Harwood J, Van der Heijden IKG, Olsson M, Osterhaus ADME, Ross HM.  
Report on the International Workshop Seal Disease Epidemic, held at the Research Institute for Nature Management, 17-18 January 1989, Texel.

## **Publications concerning seal virus research - 1990**

Osterhaus ADME, De Vries P, UytdeHaag FGCM, Visser IKG, Morein B.  
Induction of protective immunity with morbillivirus iscom preparations.  
In: Vaccines 90: Proceedings of the meeting "Modern Approaches to New Vaccines Including the Prevention of AIDS", 20-24 september 1989, Cold Spring Harbor, 1990; pp. 145-150.

Visser IKG, Kumarev VP, Örvell C, De Vries P, Broeders HWJ, Van de Bildt MWG, Groen J, Teppema JS, Burger MC, UytdeHaag FGCM, Osterhaus ADME.  
Comparison of two morbilliviruses isolated from seals during outbreaks of distemper in North West Europe and Siberia.  
Arch. Virol. 111: 149-164 (1990).

Osterhaus ADME, Broeders WHJ, Visser IKG, Teppema JS, Vedder EJ.  
Isolation of an Orthopoxvirus from pox-like lesions of a grey seal (*Halichoerus grypus*).  
Vet.Rec. 127: 91-92 (1990).

Osterhaus ADME, Groen J, Spijkers HEM, Broeders HWJ, UytdeHaag FGCM, De Vries P, Teppema JS, Visser IKG, Van de Bildt MWG, Vedder EJ.  
Mass mortality in seals caused by a newly discovered morbillivirus.  
Presentation First Congress of the European Society for Veterinary Virology, 5-7 April 1989, Liege.  
J. Vet. Microbiol. 23: 343-350 (1990).

Visser IKG, De Swart RL, Teppema JS, Reijnders PJH, UytdeHaag FGCM, Vos JG, Osterhaus ADME.  
De oorzaak van zeehondeziekte in Europa en Siberië .  
In: Berichten uit het RIVM 1989: 296-300 (1990).

De Swart RL, Reijnders PJH, Vos JG, Osterhaus ADME.  
Inventarisatie van immunotoxische xenobiotica. Moleculaire en cellulaire achtergronden en mogelijke invloed op de immuunstatus van de gewone zeehond (*Phoca vitulina*).  
RIVM rapport nr. 479001001 (900901).

Timmerman A, Vedder L, Spijkers HEM, Broeders H, Osterhaus A.  
Cellen van de gewone zeehond (*Phoca vitulina*) verkregen door nierperfusie, voor gebruik in virologisch onderzoek.  
Biotechniek 3: 44-45 (1990).

## **Publications concerning seal virus research - 1991**

Visser IKG, Teppema JS, Osterhaus ADME.  
Virus infections of seals and other pinnipeds.  
Revs. Med. Microbiol. 2: 105-114 (1991).

Van Bressem MF, Visser IKG, Van de Bildt MWG, Teppema JS, Raga JA, Osterhaus ADME.

Morbillivirus infection in Mediterranean striped dolphins (*Stenella coeruleoalba*).

Vet. Rec. 129: 471-472 (1991).

Visser IKG.

The rehabilitation of an orphaned Mediterranean monk seal (*Monachus monachus*) in the National Marine Park of the Northern Sporades, Greece.

Report of The Seal Rehabilitation and Research Center, Pieterburen, The Netherlands, and the Hellenic Society for the Study and the Protection of the Monk Seal, Athens, Greece (1991).

## **Publications concerning seal virus research - 1992**

Osterhaus ADME, Visser IKG, De Swart RL, Van Bressem MF, Van de Bildt MWG, Örvell C, Barrett T, Raga JA.  
Morbillivirus threat to Mediterranean monk seals?  
Vet. Rec.: 130: 141-142 (1992).

Visser IKG, Vedder EJ, Van de Bildt MWG, Örvell C, Barrett T, Osterhaus ADME.  
Canine distemper virus iscoms induce protection in harbour seals (*Phoca vitulina*) against  
phocid distemper but still allow subsequent infection with phocid distemper virus-1.  
Vaccine 10 (7): 435-438 (1992).

Barrett T, Crowther J, Osterhaus ADME, Subbarao SM, Groen J, Haas L, Mamaev LV,  
Titenko AM, Visser IKG, Bostock CJ.  
Molecular and serological studies on the recent seal virus epizootics in Europe and Siberia.  
Science of the Total Environment: 115: 117-132 (1992).

Ross PS, Visser IKG, Broeders HWJ, Van de Bildt MWG, Bowen WD, Osterhaus ADME.  
Antibodies to phocine distemper virus in Canadian seals.  
Vet. Rec. 130: 514-516 (1992).

Barrett T, Blixenkrone-Møller M, Domingo M, Harder T, Have P, Liess B, Örvell C,  
Osterhaus ADME, Plana J, Svansson V.  
Round table on morbilliviruses in marine mammals.  
Vet. Microbiol. 33: 287-295 (1992).

## Publications concerning seal virus research - 1993

Visser IKG.

Morbillivirus infections in seals, dolphins and porpoises.

Thesis State University Utrecht, 13 January 1993.

De Vries P, Osterhaus ADME.

Vaccines against morbillivirus infections.

In: Progress in Vaccinology, vol. 4 "Veterinary Vaccines" (Pandey R, Höglund S and Prasad G, eds), Springer Verlag New York Inc., pp. 163-181 (1993).

Visser IKG, Van Bressem MF, De Swart RL, Van de Bildt MWG, Vos HW, Van der Heijden RWJ, Saliki JT, Örvell C, Kitching P, Kuiken T, Barrett T, Osterhaus ADME.

Characterization of morbilliviruses isolated from dolphins and porpoises in Europe.

J. Gen. Virol. 74: 631-641 (1993).

Visser IKG, Van Bressem MF, Barrett T, Osterhaus ADME.

Morbillivirus infections of aquatic mammals

Vet. Res. 24: 169-178 (1993).

Barrett T, Visser IKG, Mamaev L, Goatley L, Van Bressem MF, Osterhaus ADME.

Dolphin and porpoise morbilliviruses are genetically distinct from phocine distemper viruses.

Virology 193: 1010-1012 (1993).

Visser IKG, Van Bressem MF, Van de Bildt MWG, Groen J, Örvell C, Raga JA, Osterhaus ADME.

Prevalence of morbilliviruses among pinniped and cetacean species.

Rev. sci. tech. Off. int. Epiz. 12: 197-202 (1993).

Van Bressem MF, Visser IKG, De Swart RL, Örvell C, Stanzani L, Androukaki E, Siakavara K, Osterhaus ADME.

Dolphin morbillivirus infection in different parts of the Mediterranean Sea.

Arch. Virol. 129: 235-242 (1993).

De Swart RL, Kluten LMG, Huizing CJ, Vedder EJ, Reijnders PJH, Visser IKG, UytdeHaag FGCM, Osterhaus ADME.

Mitogen and antigen induced B cell and T cell responses of peripheral blood mononuclear cells of the harbour seal (*Phoca vitulina*).

Vet. Immunol. and Immunopathol. 37: 217-230 (1993).

Visser IKG, Van der Heijden RWJ, Van de Bildt MWG, Kenter MJH, Örvell C, Osterhaus ADME.

Fusion protein gene nucleotide sequence similarities, shared antigenic sites and phylogenetic analysis suggest that phocid distemper virus 2 and canine distemper virus belong to the same virus entity.

J. Gen. Virol. 74: 1989-1994 (1993).

Visser IKG, Vedder EJ, Vos HW, Van de Bildt MWG, Osterhaus ADME.

Continued presence of phocine distemper virus in the Dutch Wadden Sea seal population.

Vet. Rec. 133: 320-322 (1993).

Osterhaus ADME, Broeders HWJ, Teppema KS, Kuiken T, House JA, Vos HW, Visser

IKG.

Isolation of a virus with rhabdovirus morphology from a white-beaked dolphin  
(*Lagenorhynchus albirostris*).

Arch. Virol. 133: 189-193 (1993).

Ross PS, Pohajdak B, Bowen WD, Addison RF.

Immune function in free-ranging harbor seal (*Phoca vitulina*) mothers and their pups during lactation.

J. Wild. Dis. 29 (1): 21-29 (1993).

## **Publications concerning seal virus research - 1994**

De Swart RL, Ross PS, Vedder EJ, Timmerman HH, Heisterkamp SH, Van Loveren H, Vos JG, Reijnders PJH, Osterhaus ADME.  
Impairment of immune function in harbour seals (*Phoca vitulina*) feeding on fish from polluted waters.  
*Ambio* 23: 155-159 (1994).

Stuen S, Have P, Osterhaus ADME, Arnemo JM, Moustgaard A.  
Serological investigation of virus infections in harp seal (*Phoca groenlandica*) and hooded seals (*Cystophora cristata*).  
*Vet. Rec.* 134: 502-503 (1994).

Lebich M, Harder TC, Frey HR, Visser IKG, Osterhaus ADME, Liess B.  
Comparative immunological characterization of type-specific and conserved B-cell epitopes of pinniped, felid and canid herpesviruses.  
*Arch. Virol.* 136: 335-347 (1994).

Ross PS, De Swart RL, Visser IKG, Murk W, Bowen WD, Osterhaus ADME.  
Relative immunocompetence of the newborn harbour seal, *Phoca vitulina*.  
*Vet. Immunol. and Immunopathol.* 42: 331-348 (1994).

Osterhaus ADME, Broeders HWJ, Visser IKG, Teppema JS, Kuiken T.  
Isolation of a parapoxvirus from pox-like lesions in grey seals.  
*Vet. Rec.* 135: 601-602 (1994).

De Swart RL, Ross PS, Vedder LJ, Timmermann HH, Heistedrkamp SH, Van Loveren H, Vos JG, Reijnders PJH, Osterhaus ADME.  
Seehunde zeigen Störungen des Immunsystems nach Einnahme von schadstoffhaltigem Fisch.  
In: Kind und Umwelt; Schadstoffe Heute im Boden, in Vögeln, in Fischen, in Säugern, im Menschen (Schlumpf M and Lichtensteiger W, eds), Pharmakologisches Institut der Universität Zürich, pp. 89-109 (1994).

## **Publications concerning seal virus research - 1995**

Ross PS, De Swart RL, Reijnders PJH, Van Loveren H, Vos JG, Osterhaus ADME.  
Contaminant-related suppression of delayed-type hypersensitivity (DTH) and antibody responses in harbor seals fed herring from the Baltic Sea.  
Environmental Health Perspectives 103: 162-167 (1995).

Osterhaus ADME.  
Isolation of a parapoxvirus from grey seals  
Vet. Rec. 136: 108 (1995).

Osterhaus ADME, De Swart RL, Vos HW, Ross PS, Kenter MJH, Barrett T.  
Morbillivirus infections of aquatic mammals: newly identified members of the genus.  
Paper ESVV International Symposium on Morbillivirus Infections, 12-13 June 1994,  
Hannover.  
Vet. Microbiol. 44: 219-227 (1995).

Mamaev LV, Denikina NN, Belikov SI, Volchkov VE, Visser IKG, Fleming M, Kai C, Harder TC, Liess B, Osterhaus ADME, Barrett T.  
Characterisation of morbilliviruses isolated from Lake Baikal seals (*Phoca sibirica*).  
Paper ESVV International Symposium on Morbillivirus Infections, 12-13 June 1994,  
Hannover, Germany.  
Vet. Microbiol. 44: 251-259 (1995).

Barrett T, Blixenkrone-Møller M, Di Guardo G, Domingo M, Duignan P, Hall A, Mamaev L, Osterhaus ADME.  
Morbilliviruses in aquatic mammals: report on round table discussion.  
Paper ESVV International Symposium on Morbillivirus Infections, 12-13 June 1994,  
Hannover, Germany.  
Vet. Microbiol. 44: 261-265 (1995).

De Swart RL, Ross PS, Timmerman HH, Vos HW, Reijnders PJH, Vos JG, Osterhaus ADME.  
Impaired cellular immune response in harbour seals (*Phoca vitulina*) feeding on environmentally contaminated herring.  
Clin. Exp. Immunol. 101: 480-486 (1995).

De Swart RL, Harder TC, Ross PS, Vos HW, Osterhaus ADME.  
Morbillivirus diseases of marine mammals.  
Infect. Agent. Dis. 4: 125-130 (1995).

De Swart RL, Ross PS, Timmerman HH, Hijman WC, De Ruiter EM, Liem AKD, Brouwer A, Van Loveren H, Reijnders PJH, Vos JG, Osterhaus ADME.  
Short term fasting does not aggravate immunosuppression in harbour seals (*Phoca vitulina*) with high body burdens of organochlorines.  
Chemosphere 31: 4289-4306 (1995).

De Swart RL, Osterhaus ADME.  
Morbillivirus infections in marine mammals.  
IUCN Species Survival Commission Veterinary Specialist Group, Newsletter 10: 6-8 (1995).

De Swart RL.

Impaired immunity in seals exposed to bioaccumulated environmental contaminants.  
Thesis Erasmus University Rotterdam, 23 June 1995.

Ross PS.  
Seals, pollution and disease: environmental contaminant-induced immunosuppression.  
Thesis State University Utrecht, 20 Sepember 1995.

## **Publications concerning seal virus research - 1996**

Ross PS, De Swart RL, Timmerman HH, Reijnders PJH, Vos JG, Van Loveren H, Osterhaus ADME.

Suppression of natural killer cell activity in harbour seals (*Phoca vitulina*) fed Baltic Sea herring.

Aquatic Toxicology 34: 71-84 (1996).

Harder TC, Harder M, Vos H, Kulonen K, Kennedy-Stoskopf S, Liess B, Appel MJG, Osterhaus ADME.

Characterization of phocid herpesvirus-1 and -2 as putative alpha- and gamma-herpesviruses of North American and European pinnipeds.

J. Gen. Virol. 77: 27-35 (1996).

Harder TC, Kenter M, Vos H, Siebelink K, Huisman W, Van Amerongen G, Örvell C, Barrett T, Appel MJG, Osterhaus ADME.

Canine distemper virus from diseased large felids: Biological properties and phylogenetic relationships.

J. Gen. Virol. 77: 397-405 (1996).

Vos JG, Bloksma N, Osterhaus ADME, Van Loveren H, Wester PW.

Comparative sensitivity of different species to environmental chemical-induced immunotoxicity.

In: Modulators of Immune Responses: The Evolutionary Trail, SOS Publications, Fair Haven NJ, USA, pp. 351-364 (1996).

Ross PS, De Swart RL, Timmerman HH, Van Loveren H, Vos JG, Osterhaus ADME.

Immunotoxicological studies in the harbour seal (*Phoca vitulina*).

In: Modulators of Immune Responses: The Evolutionary Trail, SOS Publications, Fair Haven NJ, USA, pp. 579-584 (1996).

De Swart RL, Ross PS, Vos JG, Osterhaus ADME.

Impaired immunity in harbour seals (*Phoca vitulina*) exposed to bioaccumulated environmental contaminants: review of a long-term feeding study.

Environmental Health Perspectives 104 (Suppl.4): 823-828 (1996).

Ross P, De Swart R, Addison R, Van Loveren H, Vos J, Osterhaus A.

Contaminant-induced immunotoxicity in harbour seals: wildlife at risk?

Toxicology 112: 157-169 (1996).

Mamaev LV, Visser IKG, Belikov SI, Denikina NN, Harder T, Goatley L, Rima B, Edginton B, Osterhaus ADME, Barrett T.

Canine distemper virus in Lake Baikal seals (*Phoca sibirica*).

Vet. Rec. 138: 437-439 (1996).

Ross PS, Van Loveren H, De Swart RL, Van der Vliet H, De Klerk A, Timmerman HH, Van Binnendijk R, Brouwer A, Vos JG, Osterhaus ADME.

Host resistance to rat cytomegalovirus (RCMV) and immune function in adult PVG rats fed herring from the contaminated Baltic Sea.

Arch. Toxicol. 70: 661-671 (1996).

## Publications concerning seal virus research - 1997

Harder TC.

Herpesviruses and morbilliviruses of aquatic and terrestrial carnivores  
Thesis Erasmus University Rotterdam, 29 October 1997.

Harder TC, Osterhaus ADME.

Molecular characterization and baculovirus expression of the glycoprotein B of a seal herpesvirus (phocid herpesvirus-1).

Virology 227: 343-352 (1997).

Harder TC, Osterhaus ADME.

Canine distemper virus - a morbillivirus in search of new hosts?

Trends in Microbiology 5: 120-124 (1997).

Harder TC, Vos H, De Swart RL, Osterhaus ADME.

Age-related disease in recurrent outbreaks of phocid herpesvirus type-1 infections in a seal rehabilitation centre: Evaluation of diagnostic methods.

Vet. Rec. 140: 500-503 (1997).

Kappe AL, Bijlsma R, Osterhaus ADME, Van Delden W, Van de Zande L.

Structure and amount of genetic variation at minisatellite loci within the subspecies complex of *Phoca vitulina* (the harbour seal).

Heredity 78: 457-463 (1997).

Vos JG, Van Loveren H, Osterhaus ADME, Vaal MA, Vethaak AD, Wester PW.

Immunotoxicity of environmental pollutants: adverse effects on resistance to infectious diseases.

In: Proceedings OECD Workshop "Ecotoxicology: responses, biomarkers and risk assessment" 10-13 April 1996, Maui, Hawaï, USA, (Zelikoff JT, ed.) SOS Publications, Fair Haven, NJ, USA, pp. 127-136 (1997).

Osterhaus A, Groen J, Niesters H, Van de Bildt M, Martina B, Vedder L, Vos J, Van Egmond H, Ba Abou Sidi, Mohamed Ely Ould Barham.

Morbillivirus in monk seal mass mortality.

Nature 388: 838-839 (1997).

Zarnke RL, Harder TC, Vos HW, Ver Hoef JM, Osterhaus ADME.

Serologic survey for phocid herpesvirus-1 and -2 in marine mammals from Alaska and Russia.  
J. Wildl. Dis. 33: 459-465 (1997).

Ross PS, De Swart RL, Van der Vliet H, Willemse L, De Klerk A, Van Amerongen G, Groen J, Brouwer A, Schipholt I, Morse DC, Van Loveren H, Osterhaus ADME, Vos JG.

Impaired cellular immune response in rats exposed perinatally to Baltic Sea herring oil or 2,3,7,8-TCDD.

Arch. Toxicol. 17: 563-574 (1997).

De Guise S, Ross PS, Osterhaus ADME, Martineau D, Béland P, Fournier M.

Immune functions in beluga whales (*Delphinapterus leucas*): Evaluation of natural killer cell activity.

Vet. Immunol. Immunopathol. 58: 345-354 (1997).

## **Publications concerning seal virus research - 1998**

Harder TC, Harder M, De Swart RL, Osterhaus ADME, Liess B.  
Major immunogenic proteins of phocid herpes-viruses and their relationships to proteins of canine and feline herpesviruses.  
Vet. Quart. 20: 50-55 (1998).

Osterhaus A, Van de Bildt M, Vedder L, Martina B, Niesters H, Vos J, Van Egmond H, Liem D, Baumann R, Androukaki E, Kotomatas S, Komnenou A, Ba Abou Sidi, Azza Bent Jiddou, Mohamed Ely Ould Barham.  
Monk seal mortality: virus or toxin?  
Vaccine 16: 979-981 (1998).

## **Publications concerning seal virus research - 1999**

Birkun A Jr, Kuiken T, Krivokhizhin S, Haines DM, Osterhaus ADME, Van de Bildt MWG, Joiris CR, Siebert U.  
Epizootic of morbilliviral disease in common dolphins (*Delphinus delphis ponticus*) from the Black Sea.  
Vet. Rec. 144: 85-92 (1999).

Harvell CD, Kim K, Burkholder JM, Colwell RR, Epstein PR, Grimes J, Hofmann EE, Lipp E, Osterhaus ADME, Overstreet R, Porter JW, Smityh GW, Vasta G.  
Emerging marine diseases - Climate links and anthropogenic factors.  
Science 285: 1505-1510 (1999).

Van de Bildt MWG, Vedder EJ, Martina BEE, Ba Abou Sidi, Azza Bent Jiddou, Mohamed Ely Ould Barham, Androukaki E, Kotomatas S, Komnenou A, Niesters HGCM, Osterhaus ADME.  
Morbilliviruses in Mediterranean monk seals.  
Vet. Microbiol. 69: 19-21 (1999).

## **Publications concerning seal virus research - 2000**

Van der Kamp JS, Osterhaus ADME.

De gewone zeehond (*Phoca vitulina*) in de vorige eeuw.

Tijdschr. Diergeneesk. 125 (6): 194-196 (2000).

Osterhaus ADME, Rimmelzwaan GF, Martina BEE, Bestebroer TM, Fouchier RAM.

Influenza B virus in seals.

Science 288: 1051-1053 (2000).

Van Loveren H, Ross PS, Osterhaus AD, Vos JG.

Contaminant-induced immunosuppression and mass mortalities among harbor seals.

Toxicol. Lett. 112-113: 319-324 (2000).

Ross PS, Vos JG, Birnbaum LS, Osterhaus ADME.

PCBs are a health risk for humans and wildlife.

Science (letter) 289: 1878-1879 (2000).

Van de Bildt MWG, Martina BEE, Vedder EJ, Androukaki E, Kotomatas S, Komnenou A, Sidi BA, Jiddou AB, Barham MEO, Niesters HGM, Osterhaus ADME.

Identification of morbilliviruses of probable cetacean origin in carcasses of Mediterranean monk seals (*Monachus monachus*).

Vet.Rec. 146: 691-694 (2000).

Kennedy S, Kuiken T, Jepson PD, Deaville R, Forsyth M, Barret T, Van de Bildt MWG, Osterhaus ADME, Eybatov T, Duck C, Kydymanov A, Mitrofanov I, Wilson S.

Mass die-off of Caspian seals caused by canine distemper virus.

Emerging Infectious Diseases 6: 637-639 (2000).

## **Publications concerning seal virus research - 2001**

Van de Bildt MWG, Martina BEE, Ba Abou Sidi, Osterhaus ADME.  
Morbillivirus infection in a bottlenosed dolphin and a Mediterranean monk seal from the Atlantic coast of West Africa.  
Vet. Rec. 148: 210-211(2001).

Osterhaus ADME.

Catastrophes after crossing species barriers.

Invited lecture, Royal Society discussion meeting on 'Origins of HIV and the AIDS epidemic', 11-12 September 2000, London, UK.  
Phil. Trans. R. Soc. Lond. B 356: 791-793 (2001).

Osterhaus ADME

Morbillivirus outbreaks among aquatic mammals.

Abstract Mérieux Foundation Symposium on Emergence and Control of Ortho- and Paramyxovirus Diseases, 13-16 December 2000, Veyrier-du-Lac, France. Proceedings, pp. 161-165 (2001).

Fouchier RAM, Bestebroer TM, Martina BEE, Rimmelzwaan GF, Osterhaus ADME.

Infection of grey seals and harbour seals with influenza B virus.

In: "Options for the control of influenza IV", Excerpta Medica, International Congress Series No. 1219 (Osterhaus A, Cox N, Hampson A, eds.), Elsevier Science BV, Amsterdam, The Netherlands, pp. 225-231 (2001).

## **Publications concerning seal virus research - 2002**

Martina BEE, Airikkala MI, Harder TC, Van Amerongen G, Osterhaus ADME.  
A candidate phocid herpesvirus vaccine that provides protection against feline herpesvirus infection.  
Vaccine 20: 943-948 (2002).

Jensen T, Van de Bildt M, Dietz HH, Andersen TH, Hammer AS, Kuiken T, Osterhaus ADME.  
Another phocine distemper outbreak in Europe.  
Science 297: 209 (2002).

Martina BEE, Jensen TH, Van de Bildt M WG, Harder TC, Osterhaus ADME.  
Variations in severity of phocid herpesvirus type 1 infections with age in grey seals and harbour seals.  
Vet. Rec. 150: 572-575 (2002).

## **Abstracts and presentations concerning seal virus research - before 1988**

Osterhaus ADME, Yang H, Spijkers I, Groen J, Teppema J en van Steenis G.  
Isolatie en gedeeltelijke karakterisatie van een sterk pathogeen herpesvirus van zeehonden.  
Presentation "Virologendag", 2 May 1985, Bilthoven.

Osterhaus A, Yang H, Teppema JG, Steenis G van.  
The isolation and partial characterization of a highly pathogenic herpesvirus from the harbor seal (*Phoca vitulina*).  
Poster presentation 1985 Symposium of the European Society against Virus Diseases, Oslo, 16-19 June 1985 (Proceedings).

Osterhaus A, Yang H, Teppema JS, Steenis G van.  
The isolation and partial characterization of a highly pathogenic herpesvirus from the harbor seal (*Phoca vitulina*).  
Abstract Vth International Conference on Wildlife Diseases, 18-24 August 1985, Uppsala (Proceedings).

Osterhaus ADME, Vedder L, Zarnke R, Spijkers I.  
Prevalence of virusneutralizing antibodies to seal herpesvirus (Phocid Herpesvirus 1) in different pinniped species.  
Presentation 7th Biennial Conference on the Biology of Marine Mammals, 5-9 December 1987, Miami, Florida, USA.

## **Abstracts and presentations concerning seal virus research - 1988**

Vedder EJ, Bos JH, Van der Kamp J, Reijnders PJH, Visser IKG, Osterhaus ADME.  
Clinical and Pathological findings in harbour seals (*Phoca vitulina*) during the recent outbreak  
of mass mortality in the seas of north-western Europe.  
Abstract Workshop Animal Welfare, Animal Rights and the Zoo & Wildlife Fields, 6-10  
November 1988, Toronto.

Osterhaus A, Groen J, Visser I, De Vries P, UytdeHaag F.  
Een uitbraak van "hondziekte" in zeehonden.  
Presentation "Virologendag", 8 December 1988, Bilthoven.

## **Abstracts and presentations concerning seal virus research - 1989**

Osterhaus ADME.

Mass mortality in seals caused by a CDV-like morbillivirus.

Presentation International Workshop on current research in seal diseases, 20-22 February 1989, Hannover.

Visser IKG, Osterhaus ADME.

Vaccination of seals against infection with a CDV-like morbillivirus.

Presentation Meeting of the European Association for Aquatic Mammals (EAAM), 4-6 March 1989, Tenerife.

Osterhaus ADME, De Vries P, UytdeHaag FGCM.

Induction of protective immunity with morbillivirus iscom preparations.

Presentation Medigone Symposium Vaccins, 25-26 April 1989, Lunteren.

Osterhaus ADME.

Mass mortality in seals caused by a CDV-like morbillivirus.

Presentation Behringwerke AG, 26 April 1989, Marburg.

Osterhaus ADME.

Die Virusepidemie unter den Seehunden: die Virologie und die Untersuchungen nach einem Vaccin.

Presentation Internationale Bijeenkomst van Zeehondenopvangstations, 5-6 May 1989, Texel.

Van der Heijden-Visser IKG.

Canine distemper-like virus infection among seals.

Presentation 11th Scandinavian Virus Symposium, 30 May - 2 June 1989, Reykjavik.

Osterhaus ADME, Reijnders PJH.

Seal disease epidemic in Northwestern Europe: Present state of virological investigations and required research.

Presentation 1989 ICES meeting, 5-7 October 1989, Den Haag.

Osterhaus ADME.

Seal disease epidemic in Northwestern Europe: Identification of a seal morbillivirus as the primary cause.

Voordracht Eighth Biennial Conference on the Biology of Marine Mammals, 7-11 December 1989, Pacific Grove, California, USA.

Visser IKG, Kumarev VP, De Vries P, UytdeHaag FGCM, Osterhaus ADME.

Seal disease epidemic in Northwestern Europe: Identification of a seal morbillivirus as the primary cause.

Poster Eighth Biennial Conference on the Biology of Marine Mammals, 7-11 December 1989, Pacific Grove, California, USA.

## **Abstracts and presentations concerning seal virus research - 1990**

Osterhaus ADME.

Seal disease epidemic in northwestern Europe: Present state of virological investigations.  
Abstract Lecture Edinburgh Science Festival, 2-16 april 1990, Edinburgh.

Osterhaus ADME, Visser IKG, Groen J, Vedder EJ, De Vries P, UytdeHaag FGCM.  
Identification and partial characterization of a morbillivirus causing mass mortality among seals in North West Europe.

Poster presentation VIIIth International Congress of Virology Berlin, 26-31 augustus 1990, Berlijn.

Proceedings pp. 488 (1990).

De Vries P, Visser IKG, Morein B, UytdeHaag FGCM, Osterhaus ADME.

Morbillivirus iscoms as a candidate subunit vaccine.

Poster presentation VIIIth International Congress of Virology Berlin, 26-31 augustus 1990, Berlijn.

Proceedings pp. 352 (1990).

Visser IKG, Kumarev VP, rvell C, De Vries P, UytdeHaag FGCM, Osterhaus ADME.

Comparison of two morbilliviruses isolated from seals during outbreaks of distemper in North West Europe and Siberia.

Oral presentation VIIIth International Congress of Virology Berlin, 26-31 augustus 1990, Berlijn.

Proceedings pp. 135 (1990).

De Swart RL, Visser IKG, Ross PS, Reijnders PJH, UytdeHaag FGCM, Vos JG, Osterhaus ADME.

The influence of environmental contaminants on the functioning of the immune system of pinnipeds.

In: Proceedings 7th International Wadden Sea Symposium, 22-26 oktober 1990, Ameland, N. Dankers, C.J. Smit & M. Scholl (eds.) IBN-DLO Publication Series No. 20, pp. 295-297 (1992).

## **Abstracts and presentations concerning seal virus research - 1991**

Visser IKG, Osterhaus ADME.

Virus infections of marine mammals; an overview.

Presentation 5th Annual Conference of the European Cetacean Society, 21-23 February 1991, Sandefjord.

Osterhaus ADME.

Collection of samples for virological examination.

Presentation First European Cetacean Society Workshop on Cetacean Pathology, 13-14 September 1991, Leiden, The Netherlands.

Osterhaus ADME, Visser IKG, Van Bressem MF, Van de Bildt MWG, De Swart RL, Örvell C, Raga JA.

Prevalence of morbilliviruses among pinnipeds and cetaceans.

Abstract Second Congress of the European Society for Veterinary Virology, 23-26 September 1991, Uppsala, Sweden.

Osterhaus ADME, Visser IKG, Van Bressem MF, Van de Bildt MWG, De Swart RL, Örvell C, Raga JA.

Prevalence of morbilliviruses among pinnipeds and cetaceans.

Abstract CNEVA Symposium on Health and Management of free-ranging mammals, 14-17 October 1991, Nancy, France.

Osterhaus ADME.

Identificatie en karakterisatie van verschillende nieuwe morbillivirussen die ernstige uitbraken van distemper veroorzaken onder pinnipedia en cetaceen.

Presentation Dutch Society of Pathology, 1-2 November 1991, Utrecht, The Netherlands.

Osterhaus ADME.

The characterization of the virus that caused the recent mortality among dolphins in the Mediterranean and its relationship with other viruses of aquatic mammals.

Presentation Mediterranean Striped Dolphins Mortality International Workshop, 4-5 November 1991, Palma de Mallorca, Spain.

De Swart RL, Ross PS, Visser IKG, Vedder EJ, Reijnders PJH, UytdeHaag FGCM, Osterhaus ADME.

Functional studies on the immune system of the harbour seal (*Phoca vitulina*).

Abstract oral presentation Ninth Biennial Conference on the Biology of Marine Mammals, 5-9 December 1991, Chicago, USA.

Ross PS, Visser IKG, Broeders HWJ, Bowen WD, Osterhaus ADME.

Morbillivirus antibodies in Canadian harbour seals (*Phoca vitulina*) and their lactogenic transfer to pups.

Abstract oral presentation Ninth Biennial Conference on the Biology of Marine Mammals, 5-9 December 1991, Chicago, USA.

Visser IKG, Van Bressem MF, Van de Bildt MWG, De Swart RL, Örvell C, Raga JA, Osterhaus ADME.

Prevalence of morbilliviruses among pinnipeds and cetaceans.

Abstract "Virologendag", 12 December 1991, Bilthoven, The Netherlands.

De Swart RL, Ross PS, Visser IKG, Vedder EJ, Reijnders PJH, UytdeHaag FGCM, Osterhaus ADME.

Functional studies on the immune system of the harbour seal (*Phoca vitulina*).

Abstract Autumn meeting Nederlandse Vereniging voor Immunologie 19-20 December 1991

## **Abstracts and presentations concerning seal virus research - 1992**

Osterhaus ADME.

Studies on virus infections of wild aquatic mammals.

Ceremony for the CIBA-GEIGY Prize for Research in Animal Health 1991,  
5 February 1992, Basel, Switzerland.

Osterhaus ADME, Visser IKG.

Morbilliviruses and herpesviruses affecting free-living marine mammals.

Abstract WAVMI 12th International Symposium on New and Emerging Infectious Diseases,  
8-12 September 1992, Davis, USA.

Osterhaus ADME.

Morbilliviruses of seals and dolphins.

Abstract Lecture Biennial Conference of the Spanish Society of Virology, 21-24 September  
1992, Barcelona, Spain.

Ross PS, De Swart RL, Timmerman H, Reijnders PJH, Van Loveren H, Vedder EJ, Osterhaus  
ADME.

Immunotoxicological studies of the harbor seal (*Phoca vitulina*).

Abstract SETAC 13th Annual Meeting, 8-12 November 1992, Pensacola, USA.

## **Abstracts and presentations concerning seal virus research - 1993**

Osterhaus ADME, Broeders HWJ, Teppema JS, Vos HW, Kuiken T, Visser IKG.

A rhabdovirus in European marine mammals.

Abstract poster presentation IXth International Congress of Virology, 8-13 August 1993, Glasgow.

Visser IKG, Barrett T, Van Bressem MF, Mamaev LV, Van der Heijden RWJ, Osterhaus ADME.

Morbilliviruses of aquatic mammals: New members of the genus.

Abstract oral presentation IXth International Congress of Virology, 8-13 August 1993, Glasgow.

Visser IKG, Van Bressem MF, Barrett T, Osterhaus ADME.

Morbillivirus infections in aquatic mammals.

Abstract Tenth Biennial Conference on the Biology of Marine Mammals, 12-15 November 1993, Galveston.

Osterhaus ADME, Broeders HWJ, Teppema, KS, Kuiken T, House JA, Vos HW, Visser IKG.

Isolation of a rhabdovirus from a white-beaked dolphin (*Lagenorhynchus albirostris*).

Abstract Tenth Biennial Conference on the Biology of Marine Mammals, 12-15 November 1993, Galveston.

Ross PS, De Swart RL, Timmerman HH, Vedder EJ, Vos JG, Reijnders PJH, Osterhaus ADME.

Impairment of non-specific immune responses in harbour seals (*Phoca vitulina*) feeding on fish from polluted waters.

Abstract Tenth Biennial Conference on the Biology of Marine Mammals, 12-15 November 1993, Galveston.

De Swart RL, Ross PS, Timmerman HH, Vedder EJ, Vos JG, Reijnders PJH, Osterhaus ADME.

Impairment of specific immune responses in harbour seals (*Phoca vitulina*) feeding on fish from polluted waters.

Abstract Tenth Biennial Conference on the Biology of Marine Mammals, 12-15 November 1993, Galveston.

## **Abstracts and presentations concerning seal virus research - 1994**

Mamaev LV, Denikina NN, Belikov SI, Volchkov VE, Visser IKG, Harder TC, Liess B, Osterhaus ADME, Barrett T.

Characterisation of morbilliviruses isolated from Lake Baikal seals.

Abstract ESVV International Symposium on Morbillivirus Infections, 12-13 June 1994, Hannover, Germany.

Osterhaus ADME, De Swart RL, Vos HW, Ross PS, Kenter MJH, Barrett T.

Morbilliviruses of aquatic mammals: New members of the genus.

Abstract ESVV International Symposium on Morbillivirus Infections, 12-13 June 1994, Hannover, Germany.

Barrett T, Blixenkrone-Møller M, Di Guardo G, Domingo M, Duignan P, Hall A, Mamaev L, Osterhaus ADME.

Morbilliviruses in aquatic mammals: report on round table discussion.

ESVV International Symposium on Morbillivirus Infections, 12-13 June 1994, Hannover, Germany.

Ross PS, De Swart RL, Timmerman HH, Vedder LJ, Reijnders PJH, Van Loveren H, Vos JG, Osterhaus ADME.

Immunosuppression in harbour seals fed fish from the contaminated Baltic Sea.

Abstract 15th Annual Meeting of the Society of Environmental Toxicology and Chemistry, 30 October - 3 November 1994, Denver, USA.

## **Abstracts and presentations concerning seal virus research - 1995**

De Swart RL, Ross PS, Timmerman HH, Van Loveren H, Reijnders PJH, Vos JG, Osterhaus ADME.

Impairment of immune function in harbour seals (*Phoca vitulina*) feeding on fish contaminated through the food chain.

Abstract posterpresentation Annual Meeting Nederlandse Vereniging voor Toxicologie, 13 January 1995, Utrecht, The Netherlands.

De Swart RL, Ross PS, Timmerman HH, Van Loveren H, Reijnders PJH, Vos JG, Osterhaus ADME.

Impairment of immune function in harbour seals (*Phoca vitulina*) feeding on fish contaminated through the food chain.

Abstract WWF meeting, Environmentally Induced Alterations in the Immune System: The Wildlife/ Human connection, Wingspread, Racine, Wisconsin, USA, 10-12 February 1995.

Ross PS, De Swart LR, Timmerman HH, Van Loveren H, Vos JG, Osterhaus ADME.

PCB-related impairment of immune function in harbour seals fed herring from the Baltic Sea.

Abstract SETAC 95, 5-9 November 1995, Vancouver, Canada.

## **Abstracts and presentations concerning seal virus research - 1996**

Ross PS, Van Loveren H, De Swart RL, Timmerman HH, Brouwer A, Osterhaus ADME, Vos JG.

Impaired immune function in seals and laboratory rats exposed to dioxin-like compounds from Baltic herring.

Abstract Netherlands Society of Toxicology Annual Meeting, Utrecht University, 11 January 1996, Utrecht, The Netherlands.

Human and Experimental Toxicology 15: 941 (1996).

Ross PS, De Swart RL, Timmerman HH, Reijnders PH, Van Loveren H, Vos JG, Osterhaus ADME.

Contaminant-related immunosuppression in harbor seals fed herring from the baltic sea.

Abstract 35th Annual Meeting of the Society of Toxicology, 10-14 March 1996, Anaheim, USA.

Ross PS, De Swart RL, Vos JG, Osterhaus ADME.

Xenobiotica en virusinfecties bij zeehonden.

Abstract Pathologendagen, 18-19 april 1996, Ede, Nederland.

Ross PS, De Swart RL, Van Loveren H, Vos JG, Osterhaus ADME.

Xenobiotica en virusinfecties bij zeehonden.

Abstract NVMM en NvvM Symposium "Stress", 1-2 mei 1996, Lunteren, Nederland.  
Ned. T. Med. Microbiol. 4: S8 (1996).

Osterhaus ADME, De Swart RL, Ross PS, Vos JG.

Impact of environmental pollution on the immune system of aquatic mammals.

Lecture 4th European Conference SECOTOX 96 "Ecotoxicology and Environmental Safety", 25-28 August 1996, Metz, France.

Osterhaus ADME, De Swart RL, Ross PS, Vos JG.

Seals, pollution and disease.

Lecture 17th Congress of the European Society for Comparative Physiology and Biochemistry "Adaptation to Stress in Aquatic and Terrestrial Ecosystems: Physiology, Biochemistry and Toxicology", 27-31 August 1996, Antwerp, Belgium.

De Swart RL, Ross PS, Vos JG, Osterhaus ADME.

Impact of environmental pollution on the immune system of aquatic mammals.

Abstract 1st International Symposium on Physiology and Ethology of Wild and Zoo Animals, 18-21 September 1996, Berlin, Germany.

De Swart RL, Ross PS, Vos JG, Osterhaus ADME.

Impaired immunity in harbour seals (*Phoca vitulina*) fed environmentally contaminated herring.

Abstract Symposium "Oorzaken en risico's van ziekten bij Nederlandse wilde diersoorten, 11 oktober 1996, Utrecht, Nederland.

Vet. Quart.: 18: : S127-S128 (1996).

## **Abstracts and presentations concerning seal virus research - 1997**

Ross PS, De Swart RL, Vos JG, Osterhaus ADME.

Contaminants, immunotoxicity, and outbreaks of disease in marine mammals.

Abstract International Scientific Conference on the effects of the environment on human health in the great lakes and St.Lawrence river basins, 12-15 May 1997, Montreal, Canada.

Ross PS, De Swart RL, Vos JG, Osterhaus ADME.

Immunotoxicity of dioxin-like compounds in Baltic Sea herring to rats exposed during pregnancy and lactation.

Abstract International Scientific Conference on the effects of the environment on human health in the great lakes and St.Lawrence river basins, 12-15 May 1997, Montreal, Canada.

Harder TC, Osterhaus ADME.

Phocid herpesvirus type-2: Evidence for a gamma-3-herpesvirus of seals.

Abstract 4th International Congress of Veterinary Virology "Virus survival and vaccination", 24-27 August 1997,

Edinburgh, Schotland.

Short Communication in Vet.Microbiology: submitted.

Ross PS, Timmerman HH, Osterhaus ADME, Ikonomou M, Addison RF.

Levels of PCBs, PCDDs and PCDFs in British Columbia harbor seals (*Phoca vitulina*) and associated bioeffects.

Abstract SETAC 97, November 1997, San Francisco, USA.

## **Abstracts and presentations concerning seal virus research - 1998**

Osterhaus ADME, Harder TC.

Authentic alpha- and gammaherpesviruses of pinnipeds.

Abstract World Marine Mammal Science Conference, 20-24 January 1998, Monaco.

Birkun A Jr, Kuiken T, Haines DM, Joiris CR, Krivokhizin S, Osterhaus ADME.

Epizootic of morbilliviral disease in Black Sea common dolphins in 1994.

Abstract World Marine Mammal Science Conference, 20-24 January 1998, Monaco.

Vedder EJ, Androukaki E, Ba AS, 't Hart P, Jiddou AM, Kotomatas S, Osterhaus A.

Rehabilitation program for orphaned Mediterranean monk seal (*Monachus monachus*) pups.

Abstract World Marine Mammal Science Conference, 20-24 January 1998, Monaco.

Van de Bildt MWG, Vedder EJ, Martina B, Vos JG, Van Egmond H, Liem AKD, Baumann RA, Androukaki E, Kotomatas S, Komninou A, Ba Abou Sidi, Mohamed Ely Ould Barham, Niesters HGM, Osterhaus ADME.

Monk seal mortality caused by a morbillivirus infection?

Abstract World Marine Mammal Science Conference, 20-24 January 1998, Monaco.

Van de Bildt MWG, Vedder JE, Martina B, Ba Abou Sidi, Azza Bent Jiddou, Mohamed Ely Ould Barham, Androukaki E, Kotomatas S, Komnenou A, Niesters HGM, Osterhaus ADME. Morbilliviruses in Mediterranean monk seals.

Abstract First International Meeting on Virology of Carnivores, 13-15 May 1998, Utrecht, Nederland

Osterhaus ADME.

Gezondheids- en milieu-aspecten van strandingen van zeezoogdieren.

Abstract lezing Symposium over strandingen van potvissen, 15-16 oktober 1998, Ameland.

## **Abstracts and presentations concerning seal virus research - 1999**

Osterhaus ADME.

Sleuthing pathogens: Morbilliviruses affecting marine mammals.

Abstract 1999 AAAS Annual Meeting and Science Innovation Exposition, 21-26 January 1999, Anaheim, CA, USA.

Fouchier RAM, Bestebroer TM, Martina BEE, Van de Bildt MWG, Van Amerongen G, Rimmelzwaan GF, Osterhaus ADME.

Natural influenza B infection of harbour seals.

Abstract 11 International Symposium on Influenza and other Respiratory Viruses, 10-12 December 1999, Grand Cayman, Cayman Islands.

## **Abstracts and presentations concerning seal virus research - 2000**

Fouchier RAM, Rimmelzwaan GF, Martina BEE, Bestebroer TM, Osterhaus ADME.  
Influenza B virus in seals.

Abstract meeting NWO/GB-MW werkgemeenschaps Vaccins, 6-7 April 2000, Hindeloopen.

Osterhaus ADME, Rimmelzwaan GF, Martina BEE, Bestebroer TM, Fouchier RAM.  
Influenza B virus in seals.

Abstract voorjaarsvergadering NVMM en NVvM, 17-19 April 2000, Veldhoven.

Tryland M, Neuvonen E, Derocher AE, Wiig O, Osterhaus ADME.  
Morbillivirus and calicivirus antibodies in polar bears (*ursus maritimus*) from Svalbard.  
Abstract Wildlife Disease Association Conference, 4-8 June 2000, Wyoming, USA.

Rimmelzwaan GF, Martina BEE, Bestebroer TM, Fouchier RAM, Osterhaus ADME.  
Influenza B virus in seals.

Abstract European Virology 2000 Meeting, 17-21 September 2000, Glasgow, Scotland.  
*J. Clin. Virol.* 18: 33 (2000).

Osterhaus ADME.

Morbillivirus outbreaks among aquatic mammals.

Abstract Méruex Foundation Symposium on Emergence and Control of Ortho- and  
Paramyxovirus Diseases, 13-16 December 2000, Veyrier-du-Lac, France.

## **Abstracts and presentations concerning seal virus research - 2001**

Osterhaus ADME.

Een onzichtbare dreiging in een nieuw tijdperk.

Voordracht Hollandsche Maatschappij der Wetenschappen, 12 mei 2001, Haarlem.

Haarlemse Voodrachten LXI, Haarlem 2001.

Martina B, Kuiken T, Osterhaus A.

Vaccination of grey seals with a recombinant phocid herpesvirus-1 gB vaccine.

Abstract 14<sup>th</sup> Biennial Conference on the Biology of Marine Mammals, 28 November-3 December 2001, Vancouver, Canada.



## **Abstracts and presentations concerning seal virus research - 2002**

Osterhaus ADME.

The seal rehabilitation history in Europe and the need for specified techniques and protocols.  
Abstract ECS congress, 7 April 2002, Liege, Belgium.

Jensen TH, 't Hart L, Jiddou AM, Fall KOM, Osterhaus ADME.

Successful rehabilitation of a monk seal in Mauritania.  
Abstract ECS congress, 7 April 2002, Liege, Belgium.