New president of Ellegaard Minipigs USA, Inc.

Jens Ellegaard was appointed President of Ellegaard Minipigs USA, Inc. in February 2001. Jens Ellegaard holds a Master of Science degree in agronomy and was financial manager in Ellegaard Göttingen Minipigs ApS in Denmark, prior to his present job in USA.

His goal is to put the Göttingen minipig on the top of the agenda for researchers looking for a small non-rodent research model, highly defined within health and genetics. Ellegaard Minipigs USA, Inc. will achieve this goal from its present location in Perkasie, PA, which has been approved by USDA as a quarantine site for importing barrier-bred Göttingen minipigs from Denmark. Importations take place on a continuous basis and Göttingen minipigs are sold and distributed all over North America from here. Highly skilled animal technicians take optimal care of the minipigs to ensure the high standards you may expect.

As soon as the American market requires, a breeding facility will be established thus securing the availability of the Göttingen minipig to the scientific communities (organizations). The breeding facility will be genetically maintained from the nucleus herd in Denmark to secure comparability of overseas research in the Göttingen minipig.

The Göttingen minipig is the smallest purpose bred miniature swine bred for research, and more major pharmaceutical companies have the Göttingen minipig listed as their first non-rodent model of choice for dermal toxicology studies. The small size of the Göttingen minipig and the gestation period of 112-114 days also make it very suitable for reproductive toxicology. The Göttingen minipig is early sexually mature at the age of 4-5 months weighing only 10-12 kg. ECG recording using the Nehb-Sporri axial lead system in comparison with limb leads on the Göttingen minipig has shown 1) significantly larger S- and T-wave amplitudes, 2) P-wave and QRS duration are longer and 3) modal vector values are more consistent. This shows that the Göttingen minipig is also a valuable model in safety pharmacology.

Ellegaard Minipigs USA, Inc. and Jens Ellegaard are looking forward to provide the American scientific communities in industry and academia with the porcine research model of the future. Jens Ellegaard will be visiting customers and representing the company at exhibitions and scientific meetings to introduce both himself and the Göttingen minipig to you.

Ellegaard SOT ancillary meeting

Ellegaard Minipigs USA, Inc. and Ellegaard Göttingen Minipigs have arranged a special seminar in conjunction with the Society of Toxicology Annual Meeting on the Göttingen Minipig as Non-Rodent Model in Toxicology. The seminar will take place on 26 March, from 5-7 p.m. at the Marriott Hotel, room Pacific H (Fourth Floor), 55 Fourth Street, San Francisco, CA 94103. The program, location and registration details can be found at www.minipigs.com.

Course on experimental surgery

On 16 May 2001, in connection with the Scand-LAS symposium in Aarhus, we have arranged a course on experimental surgery in minipigs. The course will take place at the Institute for Experimental Clinical Research, Skejby Hospital, Aarhus. The program can be found on the back of this Newsletter, and at www.minipigs.com.

Latest Health Report

The second health report of 2000 is first published now, due to serious delays at the laboratory. Unfortunately, also an unexpected positive result was found. Two out of ten samples from Barrier 2 were positive for Campylobacter coli. This finding was confirmed in 20 samples from Barrier 2, tested at a second laboratory; here one out of twenty samples were positive for Campylobacter coli, so that in total 10% of the samples were positive. Since Campylobacter coli is not pathogenic to pigs, no disease is to be expected. The impact on research has not been investigated.

Please read a description of Campylobacter coli on the next page.
Campylobacter infection in minipigs.

by: Peter Bollen

Campylobacter infections are widespread in animals, and may occur in wild and laboratory rodents (Fernie and Park, 1977), hares, wild boars, pheasants, guinea fowl, turkeys, mallards and domestic ducks (de Boer et al., 1982). Moreover, Campylobacter spp. are well known pathogens of pigs (Straw, 1990). In pigs Campylobacter mucosalis and Campylobacter hyointestinalis are considered pathogenic, causing proliferative enteropathies (Rowland and Lawson, 1992). The primary source of infection is contaminated feces, mainly via the pig-to-pig route, but there are indications that sources other than pigs may occasionally have importance in the introduction of infection into high-health status herds (Rowland and Lawson, 1992). Although diarrhea is not always a feature of infection, decrease in daily gain and feed intake is observed in most infected pigs (Straw, 1990).

Campylobacter infections are not among the common intestinal bacterial infections of Danish conventional pig populations (Stege et al., 2000). The most common etiological agents of intestinal bacterial infections include Escherichia coli, Clostridium perfringens, Lawsonia intracellularis, Salmonella enterica, and Brachyspira (Serpulina) spp. Several of these pathogens are important causes of food-borne disease in humans (Moxley and Duhamel, 1999).

Campylobacter coli is unrelated to disease, but when endemic, is excreted in feces by animals of all ages. Although gnotobiotic pigs easily can be experimentally infected with Campylobacter spp., disease or lesions have never been found in association with such infection (Rowland and Lawson, 1992). In Barrier 2 of the Ellegaard Göttingen Minipig breeding herd, Campylobacter coli was found in 3 out of 30 animals. Initially, during routine health monitoring on 13 November 2000 (results available 2 January 2001), 2 out of 10 animals were found positive for Campylobacter spp., which by differentiation appeared to be Campylobacter coli. On 11 January this infection was confirmed in 20 additional samples from Barrier 2, in which 1 positive result was found.

Since Campylobacter coli is unrelated to disease, no negative consequences are to be expected. No clinical signs have been observed in the minipigs of Barrier 2. Also, there is no direct zoonotic risk, since human infection only occurs after ingestion of contaminated raw meat. Campylobacter spp. generally occurs in raw meat, and chicken exhibits the highest contamination rate (83.3%), followed by lamb (72.9%), pig (71.7%), and ox (54.2%) liver. Campylobacter jejuni predominates in chicken (77.3%), lamb (75.0%), and ox (49.0%) liver, and Campylobacter coli predominates in pig liver (42.4%) (Kramer et al., 2000). However, this is not considered as an actual risk for working with minipigs in a research environment.

It has not been reported to which degree Campylobacter coli has an influence on research results. Campylobacter coli is not enterotoxic, but enterotoxigenic properties may be induced after serial intraportal passage in mice (Fernandez et al., 1999).

References:


Health status summary

During the latest health screening, three positive results for Campylobacter coli were found in a total of 30 samples from barrier 2.

Barrier 1 is free of Campylobacter coli, but serology showed a positive result for Porcine Parvovirus (PPV) as before. Barrier 2 remains negative for PPV.

Rotavirus antibodies are persistently found in both barriers, but since the latex agglutination test on feces is negative no virus is present. The positive results are the consequence of maternal antibodies.

The positive results are not accompanied with clinical disease, and we guarantee a good clinical health of all minipigs.
Meet the Ellegaard Staff...

Inge N. Christensen: Secretary.
You will hear Inge on the telephone when ringing to our general telephone number. Inge handles incoming orders from receipt to delivery.

Merete Sørensen: Marketing and Administration.
Merete is responsible for PR matters, as well as the administration of courses and workshops.

Charlotte Nicolaisen: Production Manager.
Charlotte is responsible for both barrier units. She also visits customers for teaching biotechnical procedures, housing and husbandry.

Peter Bollen: Scientific Manager.
Pete is responsible for quality assurance and customers services. He is dealing with all scientific questions from customers.

Rina Petersen: Chief Animal Technician, Barrier I.
Rina has the daily responsibility of barrier unit I. She has 3 animal technician trainees to help her.

Lars Ellegaard: Managing Director.
Lars is the founder of the company. He will also visit customers, and is present at most meetings and exhibitions.

Louise Hansen: Chief Animal Technician, barrier II
Louise has the daily responsibility of barrier unit II. She has 2 animal technician trainees to help her.

Jens Ellegaard: President of Ellegaard USA, Inc.
Jens recently moved to Perkasie, PA, to be in charge of the US site.
Program for the Experimental Surgery Course in Minipigs

On 16 May 2001, in connection with the Scand-LAS symposium in Aarhus, we are proud to offer a course on experimental surgery in minipigs.

The workshop will take place at the Institute for Experimental Clinical Research, Skejby Hospital, Aarhus.

Program:

8.30 Welcome, Prof. J.C. Djurhuus
8.45 Introduction to the course, Peter Bollen/Fredrik Dagnes-Hansen
9.00 Handling of minipigs, anesthesia, and superficial and chronic surgical cannulations in the minipig, Michael Swindle
9.45 Catheter maintenance, Anthony Webb
10.30 Coffee break
10.45 Telemetry techniques in large animals, with focus on the minipig, Steven Hachtman and Dan Huetteman
11.30 Practical introduction to the workshop
12.15 Lunch
13.00-17.00 Surgery workshop with six stations. (Four stations can be selected)

Station 1: Anesthesia, tracheal intubation, drug administration
Michael Swindle
Station 2: Surgical cannulation
Anthony Webb
Station 3: Thoracotomy, extracorporeal perfusion, induction of myocardial ischemia, ultrasound monitoring
Michael Hasenkam
Station 4: Laparotomy and cannulation of ducts
Pål Wara
Station 5: Surgical implantation of telemetry equipment and data recording
Steven Hachtman and Dan Huetteman
Station 6: Magnetic resonance scanning techniques (computer presentation)
Hans Stadkilde-Jørgensen

The registration fee is DKK 3,500 (€ 475) and registration can be done by contacting Merete Soerensen (tel. +45 58185818), or register at: ellegaard@minipigs.dk.

Meeting calendar 2001

Ellegaard Göttingen Minipigs and Ellegaard Minipigs USA, Inc. will be represented at the following scientific meetings and exhibitions:

Society of Toxicology Annual Meeting
Visit us at booth no. 1306

IAT Congress
28. – 30. March, Jersey, UK
Visit us at stand no. 17

Experimental Biology 2001
31. March – 4. April, Orlando, Fl., USA (http://www.faseb.org/meetings/eb2001/)
Visit us at booth no. 972

Scand-LAS Symposium

AFSTAL 2001
26. – 29. June, Tours, France

GV-SOLAS Scientific Meeting
10. – 13. September, Ulm, Germany

Eurotox 2001
13. – 16. September,
Istanbul, Turkey (http://www.uta.fi/eurotox/)
Visit us at booth no. 3

AALAS National Meeting
21. – 25. October, Baltimore, Md. USA (http://www.aalas.org/)