Experts in the field of dermatology gathered in Valencia, Spain, to attend the twenty-sixth annual congress of the European Society of Veterinary Dermatology & European College of Veterinary Dermatology (ESVD–ECVD). The continuing education program included insights on such topics as the relevance of lasers in veterinary dermatology, differentiating between autoimmune diseases and diseases that mimic them, Malassezia spp dermatitis, and demodicosis.

Lasers in Veterinary Dermatology from Theory to Practice
A laser can be an important investment, depending on the commonly performed procedures, and can help build business through improved patient experience and enhanced public image. Lasers are usually named for the lasing media (eg, CO$_2$, argon, krypton). The laser beam’s wavelength, a specific characteristic of the lasing media, is responsible for how its energy interacts with target tissue. Therefore, each tissue or procedure may require a different laser type. The CO$_2$ laser is preferred for most dermatology procedures. There are safety concerns to consider. The plume of smoke created by tissue vaporization may contain harmful viable organisms and requires removal via smoke evacuator. In addition, surgical preparation should not include flammable products (eg, alcohol), as the generated heat may cause fire. Burns are possible if care is not taken to incise only the desired tissue. However, lasers helped expedite surgical procedures, improved healing, and decreased postoperative pain (compared with traditional surgery). Most photothermal lasers seal small blood vessels while cutting (decreasing bleeding). As the laser energy vaporizes the tissue instead of crushing or tearing, there is less postoperative swelling and inflammation.—Boord MJ

ComPath, an antimicrobial susceptibility monitoring program, reports susceptibilities for pathogens isolated from dogs and cats across Europe. Skin, ear, and other soft tissue infections were sampled from animals in 10 European countries; aerobic bacteria were isolated and identified via standardized biochemical methods, and minimal inhibitory concentrations (MICs) were determined for 14 common antibiotics including penicillin, amoxicillin–clavulanic acid, ampicillin, oxacillin, clindamycin, chloramphenicol, gentamicin, enrofloxacin, marbofloxacin, and orbifloxacin. The most common canine organism, Staphylococcus pseudointermedius, showed the best susceptibility (91%) to amoxicillin–clavulanic acid, ampicillin, oxacillin, gentamicin, and fluoroquinolones. Resistance was low among all canine isolates, except for Pseudomonas spp; susceptibility reports for feline isolates were comparable. Thirty-six canine and 8 feline Staphylococcus spp were found with a mecA gene, which confers beta-lactam antimicrobials (eg, penicillin) resistance to bacteria.—Ludwig C, De Jong A, El Garch F, et al

Principles of Topical Therapy (Formulations, Penetration, Permeation)
Topical drug formulations must reach the site of action in an appropriate concentration. Sites of action are typically the superficial layers of the skin, deeper layers of the skin, or systemic circulation. Topical treatment of skin disease allows for direct administration of the compound at the site of action without systemic effects. Potential disadvantages include local irritation or poor absorption. Passive diffusion via the epidermal layers and the dermis, the basic mechanism for transdermal absorption, is influenced by pharmaceutical formulation. Other formulations (eg, shampoo) may work if the active ingredient is tolerated by the skin and absorbed relatively quickly. Pour- or spot-on formulations are particularly useful antiparasitics; they are locally administered but spread horizontally within the stratum corneum. The essential pharmacokinetic factors

The next ESVD-ECVD Congress will be held September 11–13, 2014 in Salzburg, Austria.
of topical drugs are the liberation of the pharmaceutical formulation; permeation through the skin; biotransformation in the skin; and the absorption, systemic distribution, and elimination of the drug. Formulations that enable sufficient passage of the active ingredient through the horny layer of the epidermis support dermatological therapy.—Kietzmann M, Stahl J

Surgical Treatment of Chronic Pododermatitis
Chronic pododermatitis, a common disease in the dog, refers to inflammation of the interdigital skin, folds, claw folds, claws, haired skin, pad junction, and/or pads. Pathogenesis, including primary, secondary, predisposing, and perpetuating factors, must be addressed to achieve treatment and avoid recurrence. Deep folds and fibrotic nodules protect and perpetuate secondary bacterial infections. Abnormal weight bearing can occur as the patient no longer walks on the pads but on the haired interdigital skin. Finding the underlying cause (eg, food allergy, atopy, insect hypersensitivity) is imperative. Antimicrobials or corticosteroids are often needed to control allergic disease. Surgical removal of interdigital nodules or deep interdigital folds (ie, fusion podoplasty) may be necessary if chronic factors cause abnormal weight bearing and deep follicular cysts prevent continued improvement. This salvage procedure may provide marked improvement in the quality of life and decrease in recurrent disease. Partial fusion podoplasty may also be an option if only part of the paw is diseased.—Boord MJ

Antifungal Therapy
Organisms involved in superficial mycoses include dermatophytes (eg, Microsporum spp, Trichophyton spp), Malassezia spp, Candida spp, and Trichosporon spp. Infection can involve superficial skin, hair, and claws. Dermatophytosis and Malassezia spp infections are most commonly identified in companion animals. For dermatophytosis, concurrent topical and systemic therapy is recommended. Efficacious topical therapies include 2% lime sulfur, 0.2% enilconazole, and chlorhexidine alone or with miconazole shampoo (contact time, 10 min); whole-body application of lime sulfur or enilconazole can be performed twice weekly. Systemic dermatophytosis therapy should be considered for patients with multifocal lesions, long-hair, multiple-animal homes, or no response to topical therapy. Ketoconazole (10 mg/kg PO q24h), itraconazole (5–10 mg/kg PO q24h), or terbinafine (20–30 mg/kg q12–24h) should be considered for dogs; itraconazole (5–10 mg/kg PO q24h) or terbinafine (20–40 mg/kg q24–48h) should be considered for cats. The environment should be cleaned and disinfected. Therapy should continue until 3 consecutive, weekly fungal cultures are negative. Topical treatment for Malassezia spp includes therapeutic shampoos or leave-on solutions; shampoo containing 2% miconazole–2% chlorhexidine or a 3% chlorhexidine is recommended twice weekly. For systemic therapy, ketoconazole (5–10 mg/kg PO q24h for 3 weeks), itraconazole (5–10 mg/kg PO q24h for 3 weeks or 5 mg/kg twice weekly for 3 weeks), or terbinafine (30 mg/kg PO q24h for 3 weeks, or 30 mg/kg twice weekly) is recommended.—Paterson S

Leporacarus gibbus Infestation in Client-Owned Rabbits & Their Owner
The rabbit fur mite, Leporacarus gibbus, is seldom reported in laboratory and pet rabbit populations. It can cause subclinical infection and rarely pruritic dermatitis. Two pet rabbits from the same household presented with moderate scaling, erythema, pruritus, and alopecia with lesions appearing primarily on the neck. The owner also had a pruritic papular dermatitis on the arms and legs. L gibbus was identified on the rabbits’ skin and fur. Skin cytology and fungal culture samples were negative for bacterial and dermatophyte infections. The rabbits were treated with a single application of 1% moxidectin-10% imidaclopid, and the environment was treated with a miticide. The clinical signs of the rabbits improved markedly after treatment, and the owner’s lesions disappeared. L gibbus dermatitis has only been reported once in humans. Although uncommon, L gibbus should be considered a possible differential diagnosis in pet rabbits when their owners are exhibiting a papular dermatitis. —D’Ovidio D, Santoro D

What’s New in Clinical Dermatology?
Antimicrobial resistance and the emergence and spread of methicillin-resistant Staphylococcus pseudintermedius (MRSP) inspired a review of topical therapy, including topical antimicrobials, antiseptics, and biocides. Evidence supports the use of shampoo with 2%–3% chlorhexidine or 2% chlorhexidine–2% miconazole (2C2M) for the treatment of canine pyoderma. Chlorhexidine-containing products include shampoos (0.8%, 2%, 2C2M, 3%, 4%), conditioners (3% gluconate), wipes (Tris-EDTA+zinc gluconate), and gel (0.45%, 0.3% with Tris-EDTA). In one study, 2C2M, 3%, and 4% formulations had similar efficacy. Benzoyl peroxide 2.5% did not perform well in in vitro studies, but in vivo use demonstrated improvement after 3 weeks of therapy. Other topical reviewed therapies include benzalkonium chloride, triclosan, accelerated hydrogen peroxide, geranium oil, tea tree oil, and grapefruit seed extract (GSE). All the biocides and oils (except GSE) demonstrated efficacy against S pseudintermedius; triclosan demonstrated the highest efficacy. Fusidic acid may be beneficial for treating focal pyoderma and otitis in dogs and cats. Tris-EDTA can potentiate the efficacy of other antimicrobials. When prescribing compounded topical treatment for otitis, product stability must be considered.—Schmidt V

CAPSULES
The Pruritic Dog: What to Do When Treatment Fails
When a patient with presumed atopic dermatitis fails to respond to standard treatment, diagnostics and therapies should be reviewed. Parasitic infestations, microbial overgrowth, infections, systemic infections (eg, leishmaniasis), or metabolic disturbances may obscure initial therapeutic response to atopic dermatitis treatment. Possible contact dermatitis secondary to topical products should be considered, and treatment dosage, duration, and owner compliance should be investigated. A lack of response to steroids should be verified by prescribing at 1–1.5 mg/kg q24h short-acting steroids for ≥1 week. If prednisone is ineffective, prednisolone or methylprednisolone should be considered. Truly refractory atopic dermatitis may benefit from immunosuppressive therapy. The diagnosis may be incorrect. Skin biopsies allow evaluation for dermatological problems unresponsive to conventional antipruritic therapy. Before initiating aggressive immunosuppressive therapy, oral steroids or cyclosporine should be discontinued for ~3–4 weeks and blood work and urinalysis evaluated. Azathioprine has been used to treat refractory atopic dermatitis (2–2.5 mg/kg q24h) but with little efficacy. Oral methotrexate has also been used (5–10 mg/kg q7d) for atopic dogs. When neuropathic or pain-associated pruritus is suspected, neuroactive medication (eg, gabapentin, maropitant) can be considered; however, no published reports support their use for pruritus.—Fondati A

Progressive Tail Necrosis in a Rabbit Colony
An outbreak of progressive tail necrosis occurred in a rabbit colony in Germany; 15 of 103 rabbits were affected. Lesions consisted of variable alopecia, scales, multifocal crusted erosions, and ulcerations on the distal tails. Physical examination revealed no other abnormalities. Two amputated tails were submitted for histopathology, which revealed multiple pathologic changes. No evidence of infection was found. Patients were kept on shavings and straw in outdoor cages; the only potential environmental factor was the cold temperature (0°C). Toxin analysis of the hay did not reveal any abnormality, but the pellets contained elevated levels of ergot alkaloids. After removal of the affected feed, the disease stopped progressing, and all lesions eventually healed. Acral necrosis because of mycotoxin-contaminated feed has been described in cattle and swine but not rabbits. However, the species is highly susceptible to ergot alkaloids, and ergotism should be included in the differentials for progressive tail necrosis.—Thom N, Korn AK, Gross M, et al