REVOLUTIONARY.
Are recurrent bacterial infections a frustration in your practice?

WE HAVE FOUND THE ANSWER.

www.becSCREEN.com
WHY BIOFILM SUSCEPTIBILITY TESTING?

With the advancement of antibiotics, bacteria have evolved out of sheer survival.

While medicine has continued to make strides in this area, we have found ourselves at a place where we are playing catch up to the bacteria.

“This considering the extensive involvement of biofilms in infections and diseases in human (medicine), biofilms are responsible for a wide variety of infections in veterinary medicine.”

(Clutterbuck et al., 2007)

“New tools are required for the prevention, treatment and diagnosis of pathogens that form biofilms during the infection process, because biofilms have unique properties that are absent in planktonic cells.”

(Murphy et al., 2009)

DID YOU KNOW?

As many as 80% of infections are caused by Biofilms, hence the ineffectiveness of treating such chronic cases with MIC results alone.

The becSCREEN™ Antimicrobial Susceptibility Test provides insight to bacterial vulnerability above and beyond current MIC testing, analyzing the bacteria in its biofilm state.

This groundbreaking technology is now available through Spectrum Labs.
For the first time ever, this technology allows us to grow the bacteria in our lab in its Biofilm state rather than in a Planktonic state. This allows us to more effectively assess infections and provide antibiotic treatment to prevent these infections from coming back.

Additionally, this assay also reduces antibiotic usage and future bacterial resitance by allowing Veterinarians to utilize the correct antibiotics and dosage the first time.
Our antibiotic panels have been developed over the course of several years to contain the most up to date and frequently used antibiotics in veterinary medicine. In the event any of our antibiotics become outdated or antiquated, we retain the ability to upgrade our panels at any time, thus ensuring you the highest quality results possible.

Our most current antibiotic panels are:

### MBEC Gram Positive Antibiotics:

- Amoxicillin
- Ampicillin
- Azithromycin
- Cefazolin
- Cefovecin
- Cefpodoxime
- Ceftiofur Sodium
- Chloramphenicol
- Ciprofloxacin
- Clindamycin
- Doxycycline
- Enrofloxacin
- Erythromycin
- Gentamicin Sulfate
- Marbofloxacin
- Minocycline
- Orbifloxacin
- Oxacillin Sodium
- Rifampin
- Tetracycline
- Trimethoprim + Sulfamethoxazole
- Vancomycin

### MBEC Gram Negative Antibiotics:

- Amikacin
- Amoxicillin + Clavulanate
- Ampicillin
- Azithromycin
- Cefazolin
- Cefovecin
- Cefpodoxime
- Ceftiofur Sodium
- Chloramphenicol
- Ciprofloxacin
- Doxycycline
- Enrofloxacin
- Gentamicin Sulfate
- Imipenem
- Marbofloxacin
- Minocycline
- Orbifloxacin
- Piperacillin
- Tetracycline
- Tobramycin Sulfate
- Ticarcillin Clavulanate
- Trimethoprim + Sulfamethoxazole

**“IMPROVED QUALITY OF LIFE FOR PETS”**

contact us (800) 553-1391  
www.becSCREEN.com
MBEC Gram Positive COMBINATION Antibiotics:

<table>
<thead>
<tr>
<th>MBEC Gram Positive Antibiotics</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Amoxicillin/Clavulanate + Linezolid</td>
<td>Trimethoprim/Sulfamethoxazole + Ceftriaxone</td>
</tr>
<tr>
<td>Ampicillin/Sulbactam + Clindamycin</td>
<td>Trimethoprim/Sulfamethoxazole + Clindamycin</td>
</tr>
<tr>
<td>Chloramphenicol + Enrofloxacin</td>
<td>Trimethoprim/Sulfamethoxazole + Doxycycline</td>
</tr>
<tr>
<td>Chloramphenicol + Gentamicin</td>
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</tr>
<tr>
<td>Clindamycin + Ceftriaxone</td>
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</tr>
<tr>
<td>Doxycycline + Clindamycin</td>
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</tr>
<tr>
<td>Enrofloxacin + Doxycycline</td>
<td>Trimethoprim/Sulfamethoxazole + Marbofloxacin</td>
</tr>
<tr>
<td>Gentamicin + Amoxicillin/Clavulanate</td>
<td>Trimethoprim/Sulfamethoxazole + Minocycline</td>
</tr>
<tr>
<td>Gentamicin + Ampicillin/Sulbactam</td>
<td>Vancomycin + Amoxicillin/Clavulanate</td>
</tr>
<tr>
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<td>Vancomycin + Ampicillin/Sulbactam</td>
</tr>
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<td>Gentamicin + Linezolid</td>
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<td>Clindamycin + Vancomycin</td>
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<td>Cefovecin + Trimethoprim/Sulfamethoxazole</td>
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<td>Cefovecin + Linezolid</td>
</tr>
<tr>
<td>Trimethoprim/Sulfamethoxazole + Ampicillin/Sulbactam</td>
<td>Cefovecin + Clindamycin</td>
</tr>
<tr>
<td>Trimethoprim/Sulfamethoxazole + Gentamicin</td>
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MBEC Gram Negative COMBINATION Antibiotics:

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</tr>
<tr>
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<td>Gentamicin + Amoxicillin/Clavulanate</td>
</tr>
<tr>
<td>Amoxicillin/Clavulanate + Orbifloxacin</td>
<td>Gentamicin + Ampicillin</td>
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<td>Amoxicillin/Clavulanate + Trimethoprim/Sulfamethoxazole</td>
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</tr>
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<td>Ampicillin + Azithromycin</td>
<td>Gentamicin + Doxycycline</td>
</tr>
<tr>
<td>Ampicillin + Doxycycline</td>
<td>Gentamicin + Imipenem</td>
</tr>
<tr>
<td>Ampicillin + Minocycline</td>
<td>Gentamicin + Minocycline</td>
</tr>
<tr>
<td>Ampicillin + Orbifloxacin</td>
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</tr>
<tr>
<td>Ampicillin + Trimethoprim/Sulfamethoxazole</td>
<td>Gentamicin + Trimethoprim/Sulfamethoxazole</td>
</tr>
<tr>
<td>Azithromycin + Imipenem</td>
<td>Minocycline + Orbifloxacin</td>
</tr>
<tr>
<td>Ceftazidime + Azithromycin</td>
<td>Minocycline + Trimethoprim/Sulfamethoxazole</td>
</tr>
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<td>Orbifloxacin + Imipenem</td>
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</tr>
<tr>
<td>Doxycycline + Orbifloxacin</td>
<td></td>
</tr>
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</table>
BACTERIAL SUSCEPTIBILITY ORDER FORM

Veterinarian: ________________________________
Clinic: ____________________________________
Address: __________________________________
City: __________ State _____ Zip ____________
Phone: (____) _______ Fax: (____) ____________
Email: ____________________________________

Species No: __________________ Date Rcvd: ________

For Office Use Only:

☐ Check Enclosed  ☐ Bill on receipt of results

Animal’s Name: ____________________________
Owner’s Name: _____________________________
Breed: ____________________________________
Age: __________ Date: ______________

Receive results via email within 7-10 days depending on growth pattern; full results booklet to follow via mail

TESTING PANEL OPTIONS

<table>
<thead>
<tr>
<th>PLEASE CHECK APPROPRIATE BOX</th>
<th>PLEASE NOTE: ACTIVE INFECTION REQUIRED: DISCONTINUE ANTIBIOTICS 7-10 DAYS PRIOR TO SWABBING.</th>
<th>TOTAL COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ MBEC PANEL (Minimum Biofilm Eradication Concentration) Including ID/MIC for chronic recurring infections and combination antibiotic treatment options.</td>
<td>☐</td>
<td>$60.00* per swab</td>
</tr>
</tbody>
</table>

Please indicate which of the following antibiotics the patient has previously been treated with:

- ☐ Amoxicillin
- ☐ Ampicillin
- ☐ Azithromycin
- ☐ Cefazolin
- ☐ Cefovecin
- ☐ Cefpodoxime
- ☐ Ceftiofur Sodium
- ☐ Chloramphenicol
- ☐ Ciprofloxacin
- ☐ Clindamycin
- ☐ Doxycycline
- ☐ Enrofloxacin
- ☐ Erythromycin
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- ☐ Oxacillin Sodium
- ☐ Piperacillin
- ☐ Rifampin
- ☐ Sulfamethoxazole
- ☐ Tetracycline
- ☐ Ticarcillin Clavulanate
- ☐ Tobramycin Sulfate
- ☐ Trimethoprim
- ☐ Vancomycin

In the event there is no growth on any culture you will only be billed $30.00

Current as of 5.30.2014 form: BF2014
1. Where was the swab taken?
   - ear
   - skin
   - interdigital
   - urine
   - open wound
   - compound fracture
   - bone graft
   - gums
   - Other: _________________________________

2. Please describe the condition of swab site (i.e. redness, swelling, etc).
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________

3. Has any previous testing been done? If so where? When?
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________

4. Has the patient ever received treatment?
   - yes
   - no, never treated
   When: _________________________________

5. How long has this issue persisted? When was it first noticed?
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________

6. PLEASE NOTE: Active infection required; no antibiotics for 7-10 days prior to swabbing.

7. What, if any, symptoms have you noticed?
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________

8. Additional Comments:
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
   ______________________________________
Submitting a **SAMPLE:**

**SAMPLES:**
Swab the infected area and store in the recommended transport media.

**PACKAGING:**
Once swab is placed in tube, package similarly to a serum sample (cotton balls to act as shock absorber, inside a sandwich or other sealable bag, etc). Make sure to include your submission paperwork (i.e., order and history form). Attach the provided 2-day pre-paid FedEx label and call FedEx to schedule a pickup (1.800.GO-FEDEX).

**STORAGE:**
Store bacteria in the refrigerator until you are ready to ship. It is not necessary to ship culture on ice.

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**Interpreting RESULTS...**

**FIGURE 1:** These **SAMPLE** results indicate that there are 3 antibiotic options that can provide possible** treatment for the above infection in a biofilm state: *Ciprofloxacin, Gentamicin Sulfate, and Rifampin*. The normal therapeutic dosage for a patient of this weight/size would be utilized, unless directed otherwise by your pharmacist or reference guide.

*Note the vast increase in suggested antibiotics using standard culture and sensitivity. In this case the patient could have been treated with 11 ineffective antibiotics.*

**FIGURE 2:** These results indicate that there were no single antibiotic options available and therefore a combination panel was required. The 4 antibiotic combination options that can provide possible** treatment for the above infection in a biofilm state: *Amikacin/Ciprofloxacin, Amikacin/ Meropenem, Tobramycin/Ciprofloxacin and Tobramycin/Meropenem*. The normal therapeutic dosage for a patient of this weight/size would be utilized, unless directed otherwise by your pharmacist or reference guide.

*unless contraindicated*
Please mail or FedEx (using our prepaid FedEx labels) all samples to:

Spectrum Labs
2801 S 35th St
Phoenix, AZ 85034

Have questions, need Technical Assistance or want to set up training for your office staff? Call us at:

(480) 464-8971

toll-free (800) 553-1391

www.WeAreSpectrum.com