**LETTER TO THE EDITOR**

Isolation from a Nonclinical Sample of *Leclercia adecarboxylata* Producing a VIM-1 Metallo-β-Lactamase

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*Leclercia adecarboxylata* belongs to the family *Enterobacteriaceae* and is rarely isolated from clinical material, especially from immunocompromised patients. This bacterium is usually susceptible to most commonly used antibiotics, including beta-lactams. However, a few cases of antibiotic-resistant *L. adecarboxylata* strains have been reported (1, 2). Here, we report a case of a VIM-1-producing *L. adecarboxylata* strain.

A survey study focused on compliance of hand hygiene among the staff was performed in Na Homolce Hospital, Prague, Czech Republic, in May 2011. Both hands were pressed onto the surface of blood agar, which was then incubated overnight at 35°C. The bacteria grown on blood agar were preliminarily identified by matrix-assisted laser desorption–ionization time of flight mass spectrometry (MALDI-TOF MS) (Bruker Daltonik, GmBH, Bremen, Germany), and only potentially pathogenic bacteria (e.g., *Enterobacteriaceae, Staphylococcus aureus*) were subjected to susceptibility testing (3). Non-carbapenem-susceptible strains were further investigated.

The only detected non-carbapenem-susceptible *Enterobacteriaceae* strain was *L. adecarboxylata* Lec-476. Identification of *L. adecarboxylata* was, additionally, confirmed by its 16S rRNA gene sequence (1). Lec-476 was resistant or nonsusceptible to Piperacillin, piperacillin-tazobactam, ceftotaxime, ceftazidime, cefepime, and meropenem but susceptible to aztreonam (Table 1), as determined by the broth dilution method (3) and interpreted according to the criteria of the European Committee on Antimicrobial Susceptibility Testing (EUCAST). The isolate was also resistant to various non-β-lactam antibiotics. Carbapenemase production was hypothesized by a positive result in the MALDI-TOF MS meropenem hydrolysis assay (4). Lec-476 tested negative by the boronic acid-meropenem hydrolysis assay (4). Lec-476 was hypothesized by a positive result in the MALDI-TOF MS –lactam antibiotics. Carbapenemase production according to the criteria of the European Committee on Antimicrobial Susceptibility Testing (EUCAST), and only potentially pathogenic bacteria (e.g., *Enterobacteriaceae, Staphylococcus aureus*) were subjected to susceptibility testing (3). Non-carbapenem-susceptible strains were further investigated.

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**TABLE 1** Antibiotic susceptibilities of strains harboring VIM-1-encoding plasmids

<table>
<thead>
<tr>
<th>Isolate</th>
<th>MIC (mg/liter) of:*</th>
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<tbody>
<tr>
<td></td>
<td>Pip</td>
</tr>
<tr>
<td><em>L. adecarboxylata</em> Lec-476*</td>
<td>&gt;64</td>
</tr>
<tr>
<td><em>E. coli</em> trc Lec-476*</td>
<td>64</td>
</tr>
<tr>
<td><em>E. coli</em> A15 (recipient)</td>
<td>≤0.5</td>
</tr>
</tbody>
</table>

*Pip,* piperacillin; *Ptz,* piperacillin-tazobactam (inhibitor fixed at 4 mg/liter); *Ctx,* cefotaxime; *Caz,* ceftazidime; *Fep,* cefepime; *Atm,* aztreonam; *Mem,* meropenem; *Gen,* gentamicin; *Amk,* amikacin; *Col,* colistin; *Tmp,* trimethoprim; *Cip,* ciprofloxacin. MICs were interpreted using guidelines from the European Committee on Antimicrobial Susceptibility Testing (EUCAST) from 2011 (http://www.eucast.org/).

*Transconjugant of *L. adecarboxylata* Lec-476.

This study, along with previous reports of antibiotic-resistant *L. adecarboxylata* (1, 2), shows that this rarely isolated and inherently resistant species is capable of acquiring and maintaining resistance plasmids. To our knowledge, this is the first report of an MBL-producing *L. adecarboxylata* strain. It is of note that Lec-476 was discovered from a nonclinical sample from a hospital that was considered free of MBL- or other carbapenemase-producing isolates. The origin of this isolate is not known. Such a finding indicates the spreading potential of carbapenemase genes via routes that remain largely unknown. Acquisition of a self-transferable, VIM-1-encoding plasmid by the clinically insignificant species *L. adecarboxylata* is disquieting, since such bacteria can act as hidden sources of clinically important resistance determinants.
Nucleotide sequence accession number. The bla<sub>VIM-1</sub>-carrying sequence from <i>L. adecarboxylata</i> Lec-476 has been assigned GenBank accession number KC430094.

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We declare that we have no conflict of interest.

REFERENCES