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## Letter to the Editor

**Human polyomavirus KI and WU in adults with community acquired pneumonia in The Netherlands, 2008–2009****Keywords:**

KI  
WU  
Polyomavirus  
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Dear Editor,

In 2007, Allander et al. from the Karolinska Institute, discovered a new human polyomavirus (KIPyV) in respiratory secretions from patients with acute respiratory tract infections (ARTIs).<sup>1</sup> Furthermore, Gaynor et al. from Washington University, reported in the same year another new polyomavirus (WUPyV) in respiratory secretions.<sup>2</sup> The prevalence of these viruses range from 0% to 8% for KIPyV and from 0% to 1% for WUPyV depending on the age and immune status of the study population.<sup>1–6</sup>

We determined the prevalence of KIPyV and WUPyV in a group of Dutch adult patients admitted to the hospital with community acquired pneumonia (CAP).

A throat swab was collected from 567 adult patients with suspected CAP admitted to the emergency ward of our hospital between March 2008 and March 2009. Patients' ages ranged from 20 to 95 years (mean: 66.83 years; median: 69 years) and 59% were male.

Nucleic acids were extracted using the MagNa pure LC total nucleic acid isolation (Roche Diagnostics, Basel, Switzerland) and samples were tested for the presence of common respiratory viruses by real-time PCR specific for adenovirus, human bocavirus, human metapneumovirus, human rhinovirus, human coronaviruses (OC43, NL63, HKU, 229E), parainfluenza viruses 1–4, influenza A and B viruses, respiratory syncytial virus, and KIPyV and WUPyV.<sup>1,2,7–9</sup>

KIPyV was detected in 3 patients (0.5%) and WUPyV in 4 patients (0.7%), respectively, in both males and females. The ages of the

KIPyV-positive and WUPyV-positive patients ranged from 69 to 82 years (Table 1). Two KIPyV-positive patients had a respiratory syncytial virus or influenza B virus co-infection. Two WUPyV-positive patients had a co-infection, one with coronavirus NL63 and influenza B virus, and another with influenza A virus. One KIPyV- and one WUPyV-positive patient had a positive sputum culture for *Haemophilus influenzae*. None of the polyomavirus positive patients had positive bacterial or fungal blood cultures. Most (5/7) patients with KIPyV and WUPyV had underlying medical conditions. One patient had COPD and breast cancer, one patient had COPD and used immunosuppressive medication, 2 patients suffered from cardiac failure, 1 patient suffered from cardiac failure and diabetes.

Similar to earlier reports we found KIPyV and WUPyV in small percentages of patients (<1%) and co-infections for KIPyV and WUPyV were detected in most of them.<sup>2–6</sup> Given the fact that only 10% of CAP in The Netherlands is hospitalised, we have no data on the majority of patients who recovered at home. In this study KIPyV and WUPyV seem to infect adults (>69 years). Ren et al.<sup>5</sup> did not find any WUPyV and KUPyV in nasal and throat swabs of immunocompetent adults. Abedi Kiasari et al.<sup>6</sup> found 3 of 47 nasopharyngeal aspirates positive for KIPyV (6.3%) of adults aged between 45 and 69 and none positive for WUPyV. Mourez et al.<sup>4</sup> found in nasal aspirates and bronchoalveolar lavages a prevalence of KIPyV of 8% in their population of immunocompromised patients (median age 46 years; range 3–85 years) and a prevalence of 1% of WUPyV.

In the literature KIPyV and WUPyV were detected throughout the year although seasonal variations were detected.<sup>2,3,10</sup> In this study, with limited numbers of positive patients, no seasonality was observed.

Samples were collected using throat swabs in this study. As the sensitivity of our diagnostic PCR assay may be lower if throat swabs are used compared to sputum, nasopharyngeal sampling or washings, it is possible that we underestimate the prevalence of KIPyV and WUPyV in our population.<sup>11</sup>

**Table 1**  
Characteristics of KIPyV and WUPyV positive patients.

	Sex	Age	Month detected	Signs/symptoms	Co-infections
KIPyV positive					
1	Male	80	December 2008	Fever	Respiratory syncytial virus and <i>Haemophilus influenzae</i>
2	Female	75	January 2009	Cough, fever, headache	None
3	Male	82	March 2009	Cough, fever, dyspnoea	Influenza B virus
WUPyV positive					
1	Female	84	May 2008	Cough	None
2	Male	71	September 2008	Cough, fever, dyspnoea	Coronavirus NL63 and Influenza B virus
3	Male	91	January 2009	Cough, fever, dyspnoea	None
4	Female	69	February 2009	Cough, fever, dyspnoea	Influenza A virus and <i>Haemophilus influenzae</i>

In conclusion, KIPyV and WUPyV are incidentally present in adults with community acquired pneumonia. They are more often found in patients with an underlying medical condition. Finally, co-infections with KIPyV and WUPyV with other respiratory viruses are common.

#### Conflict of interest

None.

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Elisabeth G.W. Huijskens\*

Adriana J.M. van Erkel

Marcel F. Peeters

John W.A. Rossen

Laboratory of Medical Microbiology and  
Immunology, St Elisabeth Hospital, Tilburg, The  
Netherlands

\* Corresponding author at: Laboratory of Medical  
Microbiology and Immunology, St Elisabeth  
Hospital, P.O. Box 747, 5000 AS Tilburg, The  
Netherlands. Tel.: +31 13 539 2655;  
fax: +31 13 544 1264.

E-mail address: [i.huijskens@gmail.com](mailto:i.huijskens@gmail.com)  
(E.G.W. Huijskens)

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