

# LDA2Net: Digging under the surface of COVID-19 topics in literature

Topic 80 companion sheet

G. Minello

C.R.M.A. Santagiustina

M. Warglien

This file contains the following supplementary information for Topic 80 of the manuscript “*LDA2Net: Digging under the surface of COVID-19 topics in scientific literature*”:

- Human label and automatic n-gram label proposals (Table 1)
- Summary measures (Table 2)
- Network of top 25 bigrams (Figure 1)
- Wordclouds of top 25 words by node relevance measure (Figure 2)
- Wordclouds of top 25 bigrams by edge relevance measure (Figure 3)
- Filtered (0.99 percentile) topic network (Figure 4)

Table 1: Human and automatic label proposals. Automatic label candidate for largest word community of the topic. In parenthesis: absolute frequency of the walk out of a sample of size 1000.

Human label	2-gram label	3-gram label	4-gram label
antiviral treatments	antiviral->drugs (15.3%)	antiviral->drugs->used (1.9%)	antiviral->drugs->used->treatment (0.7%)

Here follows the set of topic-specific measures that have been used to classify the topic and to analyse its structural properties (see manuscript for details):

Table 2: Summary measures

	JSD	Mean propensity	Variance propensity	Modularity	Barrat Clustering Coeff.
value	0.691806	0.009335	0.000487	0.115709	0.596658
rank	74	104	89	85	86

Based on the aforementioned measures, Topic 80 has been classified as a SPECIALIZED topic.



A word cloud of COVID-19 related terms. The most prominent words are 'treatment', 'drugs', 'clinical', 'efficacy', 'effective', 'combination', 'trials', 'therapeutic', 'antiviral', 'drug', 'treating', 'medicine', 'remdesivir', 'hydroxychloroquine', 'therapies', 'azithromycin', 'lopinavir used', 'effects', 'currently', 'ritonavir', 'medicines', 'therapy', 'use', and 'antiviral'. The words are arranged in a circular pattern, with 'treatment' and 'drugs' being the largest and most central.

A word cloud of COVID-19 related terms. The most prominent words are 'clinical', 'treatment', 'drugs', 'antiviral', 'trials', 'effective', 'therapy', 'adverse', 'currently', 'use', 'efficacy', 'therapies', 'administration', 'repurposing', 'specific', 'remdesivir', 'therapeutic', 'medicine', 'effects', 'studies', 'used', 'combination', 'hydroxychloroquine', and 'treatments'. The words are arranged in a circular pattern, with 'clinical' and 'treatment' being the largest and most central.

A word cloud of terms related to HIV treatment. The most prominent words are 'drugs', 'treatment', 'clinical', and 'therapy'. Other visible words include 'currently', 'hydroxychloroquine', 'remdesivir', 'antiviral', 'used', 'ritonavir', 'administration', 'lopinavir', 'drug', 'viral', 'action', 'several', 'trial', 'efficacy', 'studies', 'effects', 'plus', 'repurposing', and 'therapeutic'. The words are arranged in a circular pattern, with 'drugs' and 'treatment' being the largest and most central.

3



