MASARYKOVA UNIVERZITA

Research Department

Summary Bibliometric Analysis

Authors

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About the analysis

Bibliometrics is extensively being used as supporting technique in a process of research assessment worldwide. Centre for Scientometric Support (CSS) offers bibliometric service to assist the Masaryk University community in utilizing quantitative methods for various purposes (individual portfolios, multidimensional analysis of research performance of a certain unit, analysis and recommendations for improving publishing strategies and others).

This report is a result of summary bibliometric analysis of the publication dataset of *Research Institution*. Although bibliometrics serves as an quantitative support for evaluation pursposes, we have to consider the limitations of bibliometrics. With respect to international good practice, indicators should never be used as the sole criteria for making final decisions in the evaluation process. Quantitative data should always be used in combination with other forms of evaluation, such as peer review, to provide critical insight.

Usually is useful to limit the publication and citation window to balance currency with accuracy (recent publications usually don´t receive enough citations for bibliometric indicators to be reliable). In this specific case of *Research Institution t* this was not possible, according to period of existence of *Research Institution t*, to have publication window long enough.

Dataset for this report was provided by *Research Department* itself and negotiated with CSS. All publications were identified by searching Web of Science. The **subject categories** are assigned automatically to articles by Web of Science based on the journal where the article is published in. An article may be assigned to multiple subject categories. Our analyses are based on data obtained from InCites. We limited the analysis to original research publications (article, review, letter). Proceeding Papers were purposely not counted.

The analyses presented in this report are categorized into themes: production, benchmarking, collaboration, journals, research topics, citation impact.

Sources	Web of Science, InCites
Document Types limitation	Article, Review, Letter (A-R-L)
Publication Window	2011-2016
Citation Window	Not defined

Content

General observations

In 2011 the number of scientific outputs is very low. Please, take it into the consideration.

The overall percentage of the co-publications with foreign institutions is continuously increasing. At the same time, the overall percentage of the publications, where *Research Department* author is a main author (reprint author) is slightly decreasing. This is usual phenomenon, we expect the overall percentage of publications, where main author is affiliated to *Research Department*, to be stabilized at the value ca. 50%. Otherwise, while considering **only the set of publications with international collaboration**, the percentage of publications, where main author is affiliated to *Research Department*, is in this particular set rapidly increasing (from 22% in 2011 to 41% in 2016). The interpretation is that in terms of international collaboration, ***Research Department* is attracting a strong position.**

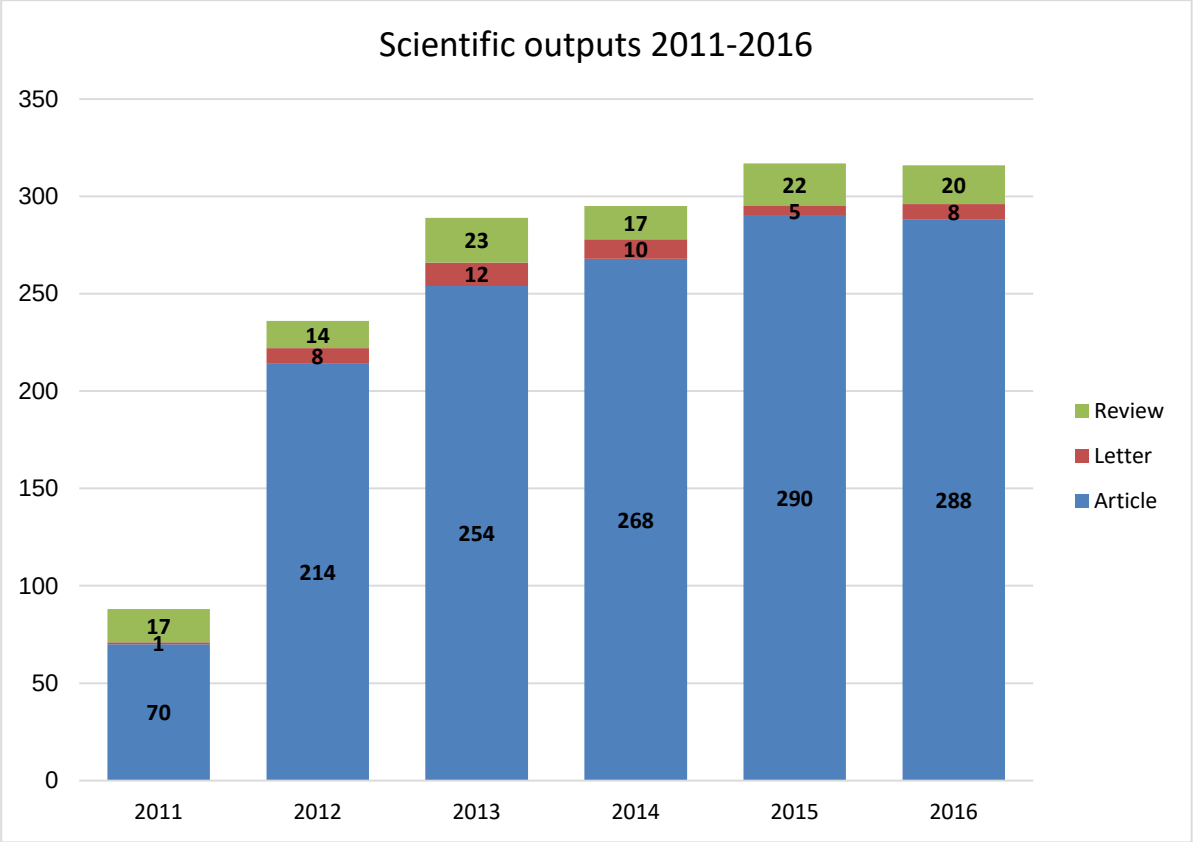
We consider IST not very proper institution for benchmarking analysis. The structure of research fields does not fully meet *Research Department* structure. The benchmark could possibly work well, if another input values (finance, HR) would be included into study.

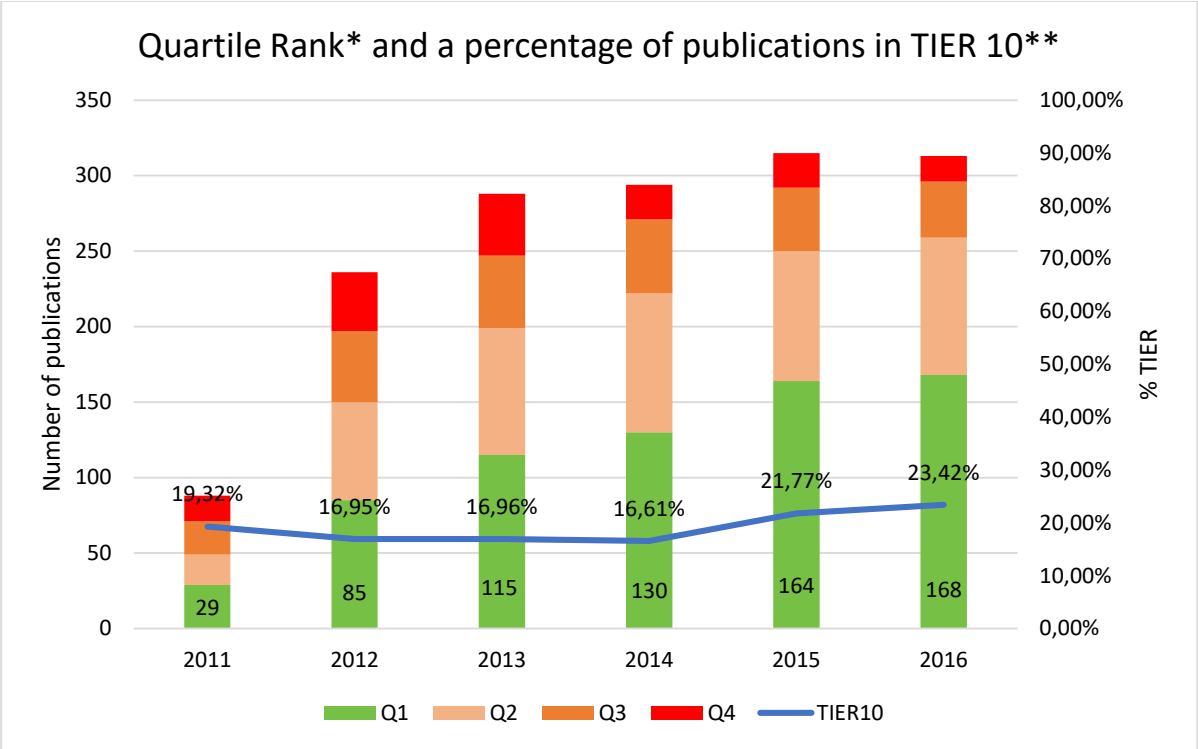
In average, *Research Department* is producing highly impactful publications, when exceeds the percentile thresholds for the 1%, 5%, 10%, 25% and 50% most cited publications in respective field (see Chapter 6 Citation Impact). Scientific impact measured by percentiles tends to increase over time.

The analysis is prepared at the *Research Department* "macro level" as an overview analysis, we would recommend to focus more on meso-level (research programme) or even micro level (research group/topic). In the overview focus an excellent and individual performance is hidden in the statistical average.

1. Production and general overview (A-R-L, 2011-2016)

Scientific outputs





*Based on Journal Impact Factor (JIF).

**Based on the average JIF percentile.

Top Papers – Essential Science Indicators (2011-2016)

We present here a list of publications listed in the InCites module Essential Science Indicators (ESI). In ESI, each journal is assigned to one of 22 research fields. In ESI only **articles** and **reviews** are shown. There are two main indicators – Highly Cited Papers and Hot Papers.

The **highly cited** threshold is the minimum number of citations received by the top 1% of papers in the research field published in the specified year. **Hot papers** are papers that receive a large number of citations soon after publication, relative to other papers of the same field and age.[1]

The list of publications cited enough to meet the „highly cited" threshold can be considered as **indication of most influential research topics**. It is important to take into account the share of *Research Department* authors and their overall contribution.

ANONYMIZED List of ESI papers with details

[1] They received a number of citations in the most recent two-month period that places them in the top 0,1% of papers in the same ESI field.

2. Benchmarking

Research Department scientific outputs are benchmarked with data sets of different institutions/units. Benchmark is done according to selected research areas. Five basic bibliometric indicators focused on the impact of individual articles, as well as journals, were selected for comparison.

Indicators used (Detailed description can be found in chapter **Indicators)**:

- Category Normalized Citation Index (CNCI)
- % Documents in Q1 journals
- % Documents in TOP 10%
- Citation Impact
- Average Percentile

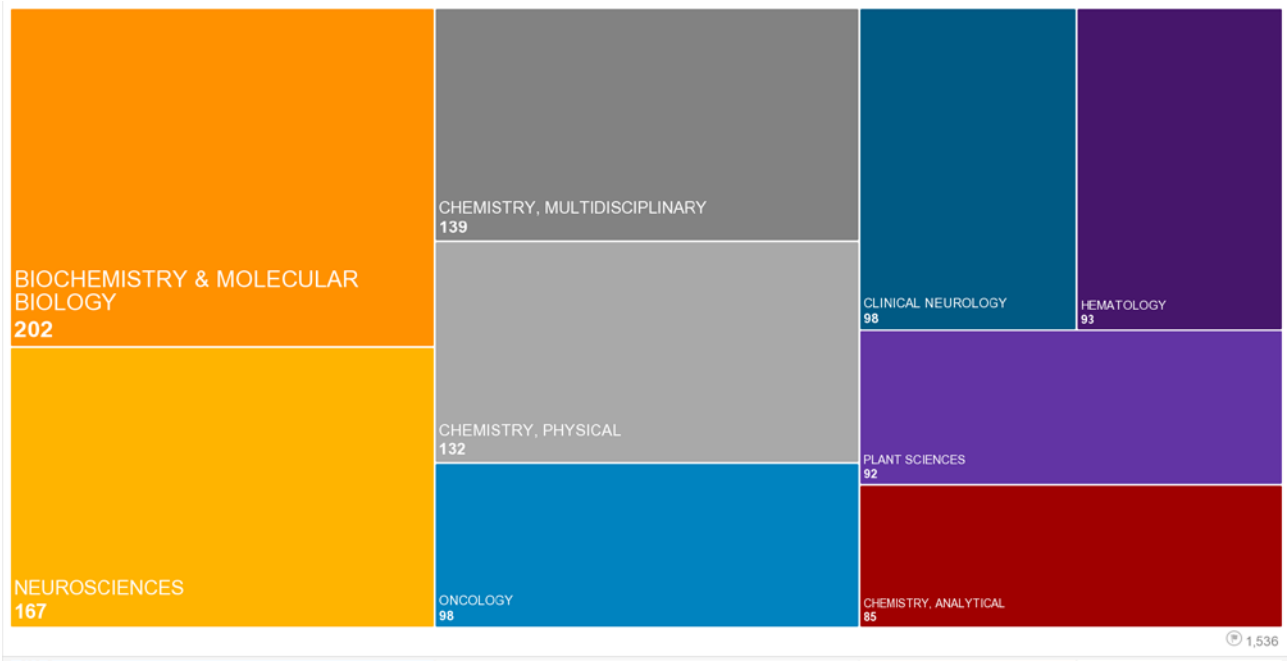
Selected benchmark institutions / unit (discussed with *Research Department*):

- Masaryk University
- Czech Republic (average)
- Institute of Science and Technology – IST (Austria)
- Flanders Institute for Biotechnology – VIB (Belgium)

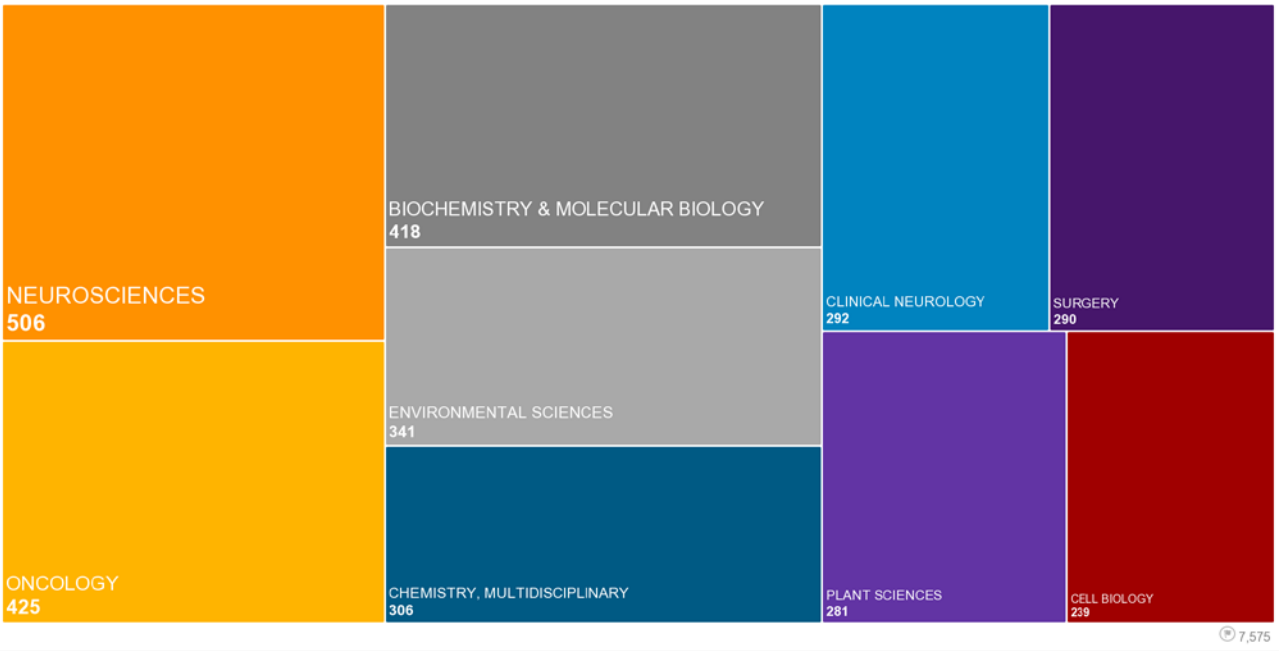
Frequent Research Areas

The treemaps below represent TOP 10 research areas based on the total number of publications. The research areas of all benchmark institutions are not overlapping with *Research Department.* In addition to the TOP 10 *Research Department* research areas, there is a comparison chart of "Genetics & Heredity" research area, which has fundamental position in both foreign institutions and it is on 15th please of research areas in *Research Department.*

RESEARCH DEPARTMENT

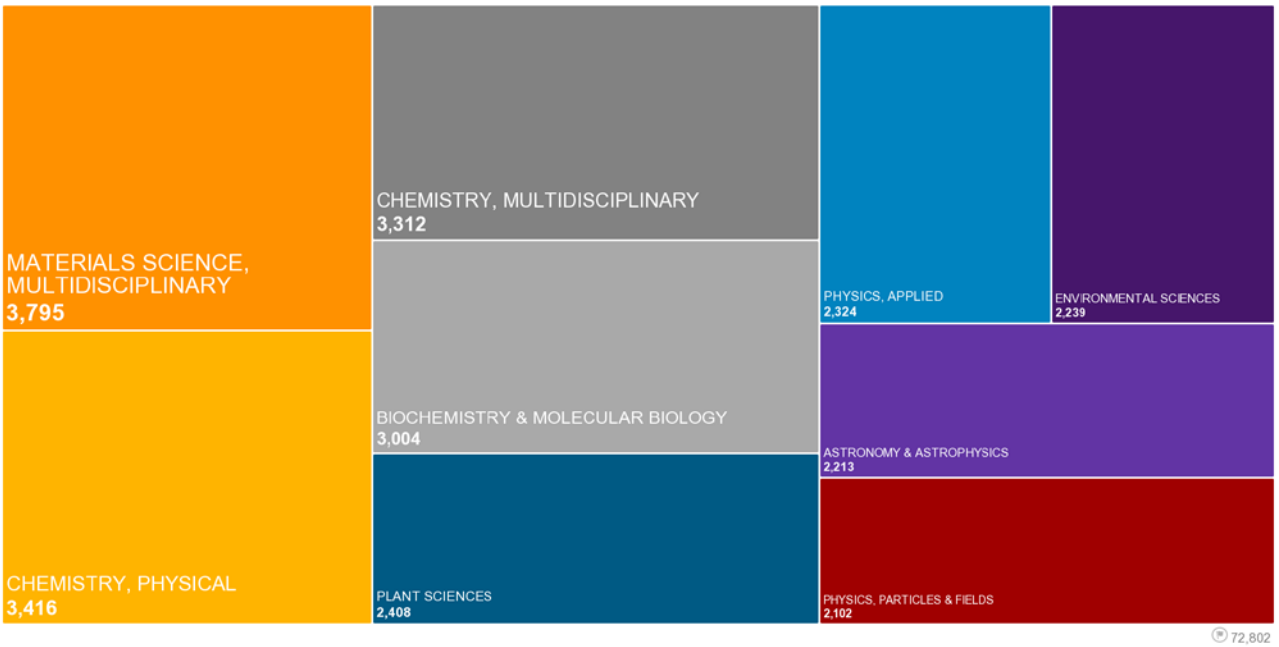


Masaryk University



Indicators: Web of Science Documents. **Schema:**Web of Science.**Organization Name:**Masaryk University Brno.**Document Type:**Article,Review,Letter.**Time Period:**2011-2016
InCites dataset updated Aug 19, 2017. Includes Web of Science™ content indexed through Jun 30, 2017. Export Date: Aug 31, 2017.

Czech Republic

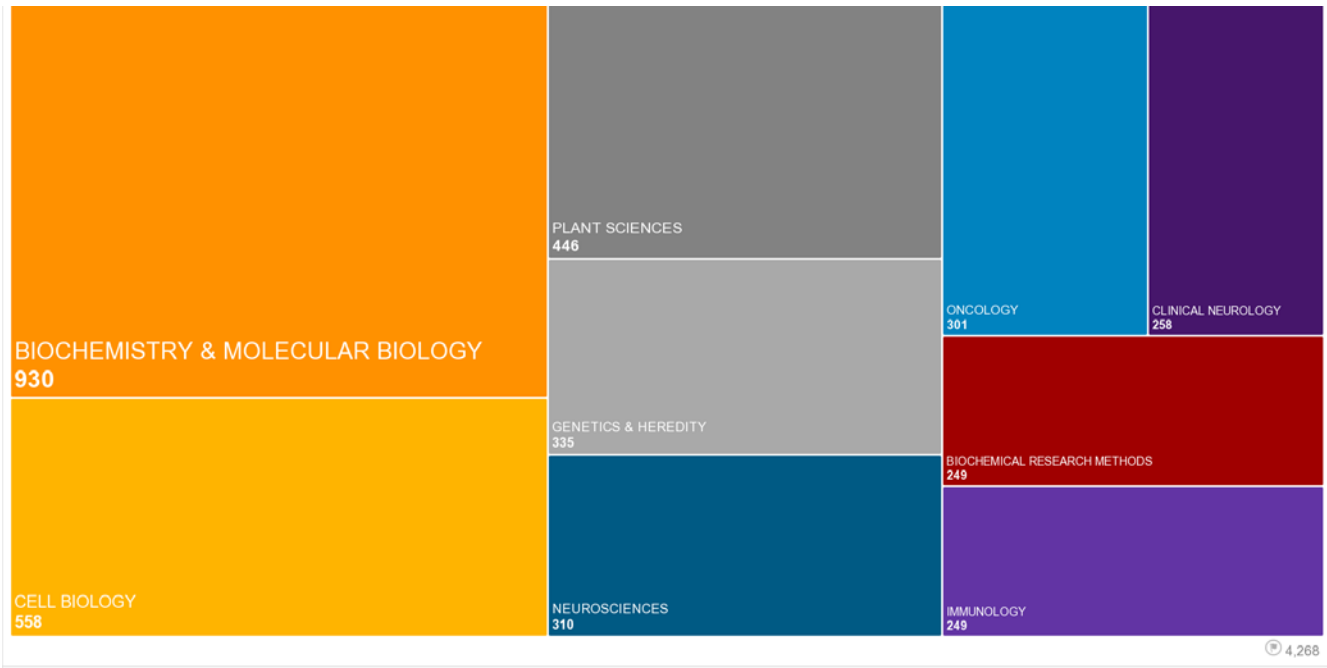


Indicators: Web of Science Documents. **Schema:**Web of Science.**Location:**CZECH REPUBLIC.**Document Type:**Article,Review,Letter.**Time Period:**2011-2016
InCites dataset updated Aug 19, 2017. Includes Web of Science™ content indexed through Jun 30, 2017. Export Date: Aug 31, 2017.

IST

Indicators: Web of Science Documents. **Schema:**Web of Science.**Organization Name:**Institute of Science & Technology - Austria.**Document Type:**Article,Review,Letter.**Time Period:**2011-2016
InCites dataset updated Aug 19, 2017. Includes Web of Science™ content indexed through Jun 30, 2017. Export Date: Aug 31, 2017.

VIB

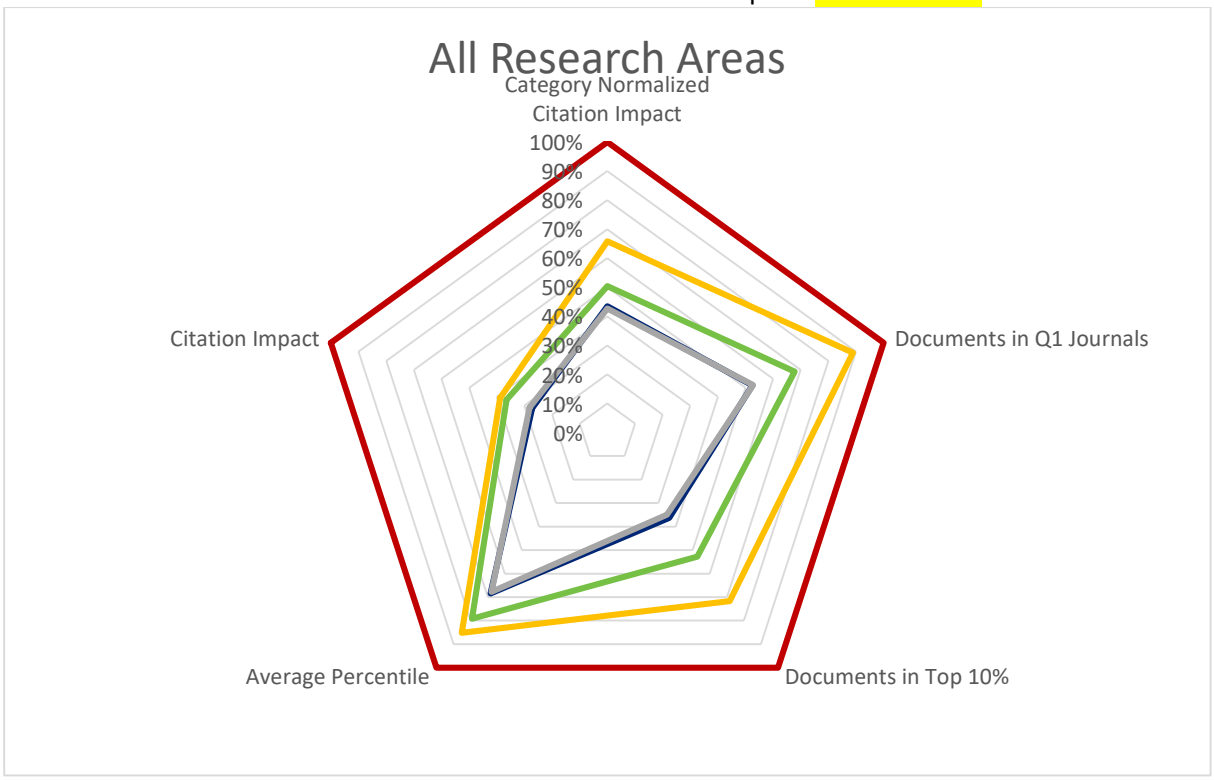


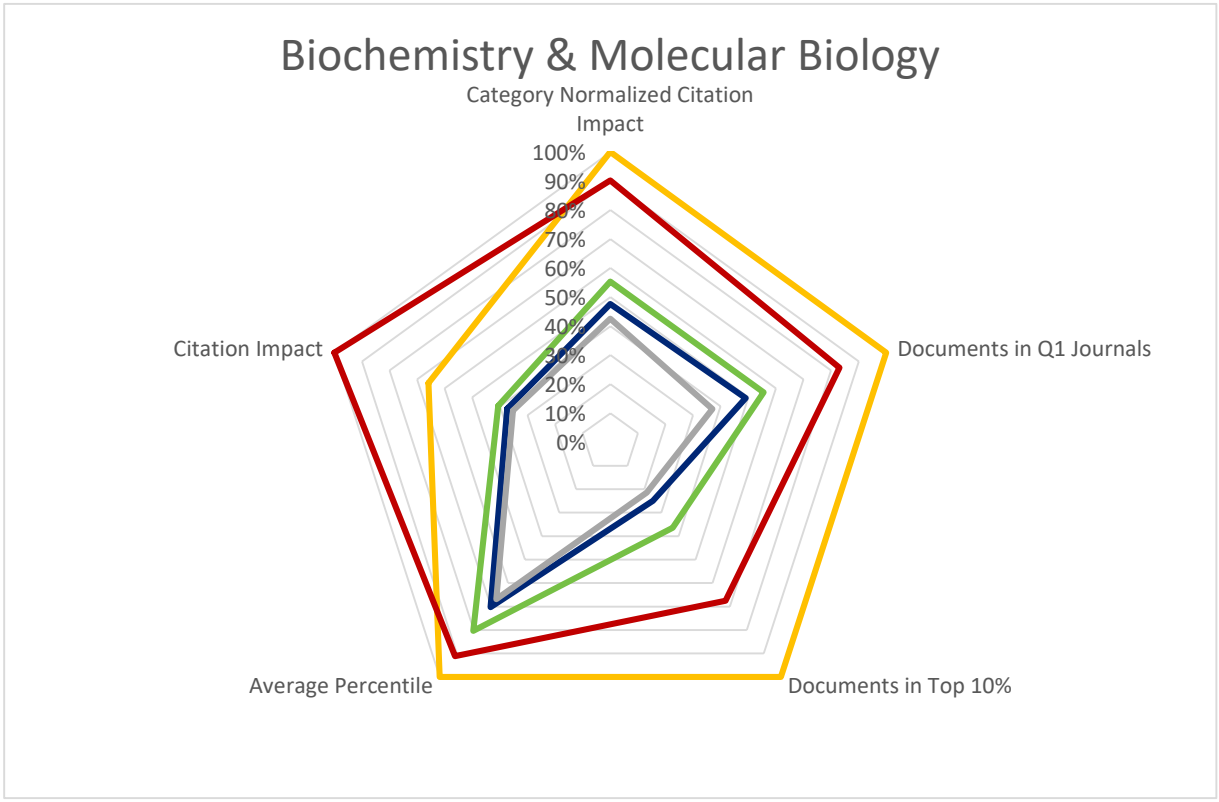
Indicators: Web of Science Documents. **Schema:**Web of Science.**Organization Name:**Flanders Institute for Biotechnology.**Document Type:**Article,Review,Letter.**Time Period:**2011-2016
InCites dataset updated Aug 19, 2017. Includes Web of Science™ content indexed through Jun 30, 2017. Export Date: Aug 31, 2017.

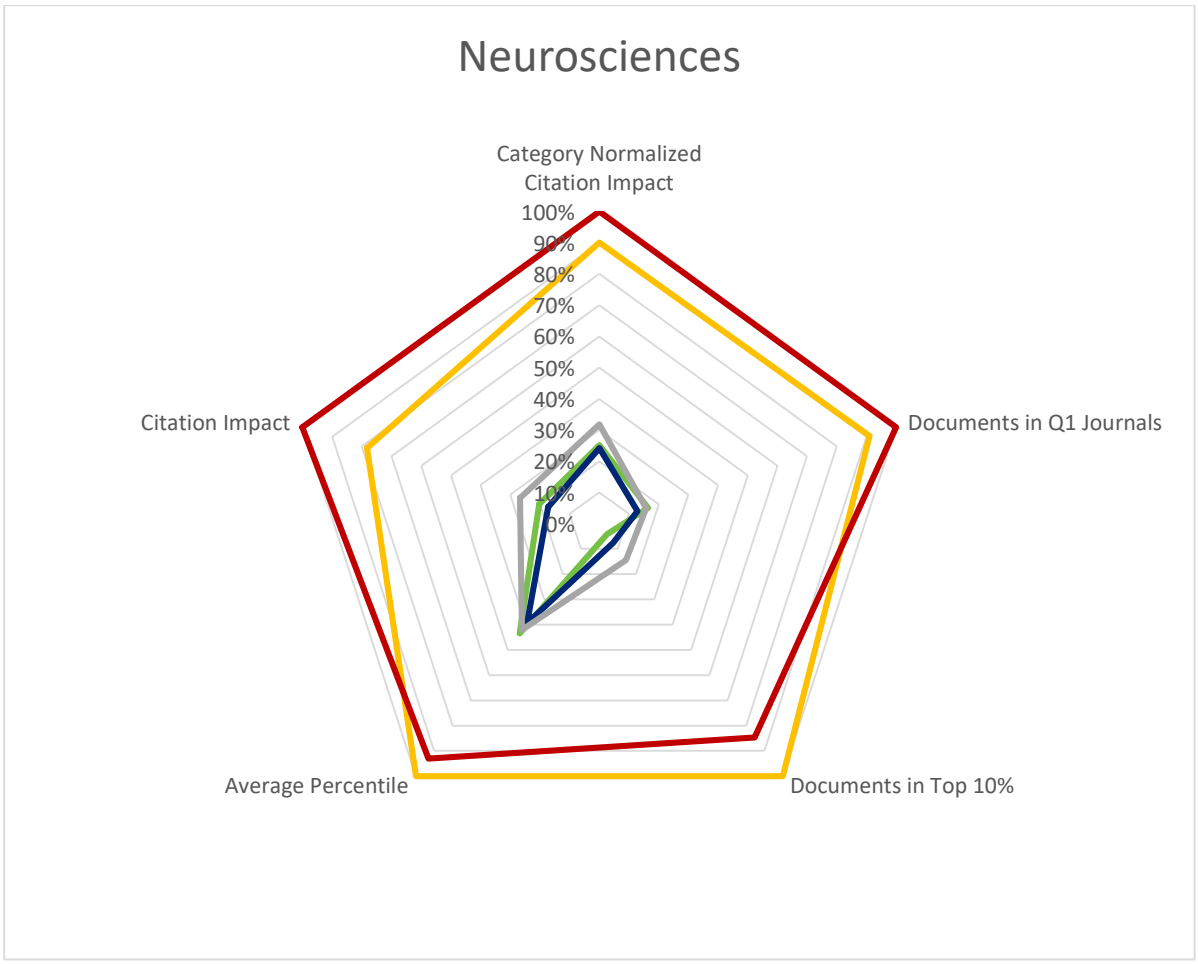
Comparison of main research areas in radar charts

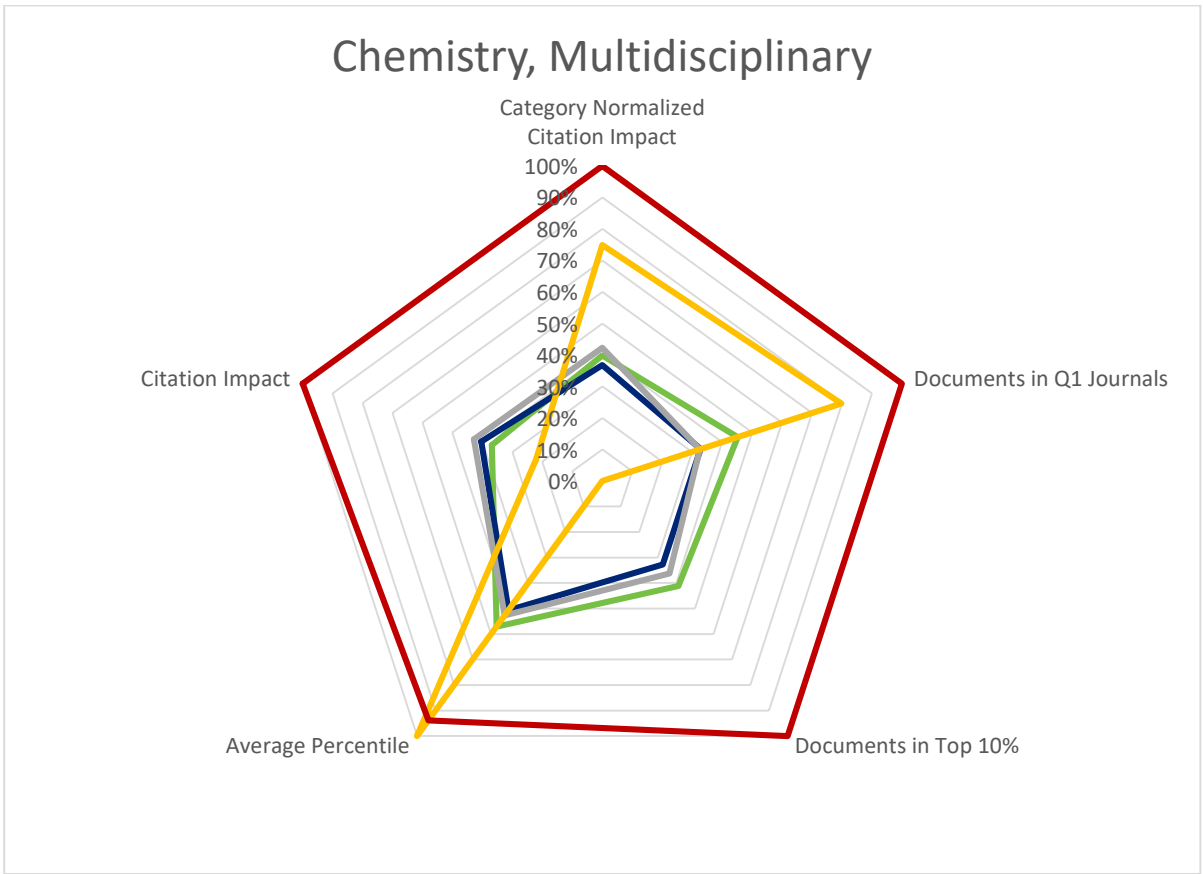
The values in radar charts do not show absolute values, they are recalculated in comparison with the best result. Absolute values can be found below and full list in Appendix 1. For statistical reason if any research area is not sufficiently represent in a benchmark unit, the data are not listed for possible distortion.

Note: the number in brackets shows the count of scientific outputs. ANONYMIZED






Neurosciences
Category Normalized Citation Impact
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Documents in Q1 Journals
Documents in Top 10%
Average Percentile
Citation Impact


Chemistry, Multidisciplinary
Category Normalized Citation Impact
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Documents in Q1 Journals
Documents in Top 10%
Average Percentile
Citation Impact

Overview or research areas, benchmark with other institutions

TOP 10 Research areas based on the number of WoS documents. In Appendix 1 you can find full list with the threshold 10 documents (2011 – 2016).

Category	Institution	WoS Docs	CNCI	Times Cited	% Docs Cited	% Docs in Q1 J	% Docs in Q2 J	% Docs in Q3 J	% Docs Q4 J	% Docs in Top 1%	% Docs in Top 10%	% Internat. Collab.	Average Percentile	Citation Impact	Highly Cited Papers
All	RD	1535	1,24	16547	84,89	52,81	24,88	12,41	9,9	1,82	15,24	47,49	48,15	10,78	26
	MU	7575	1,07	60839	77,83	40,91	24,93	17,77	16,4	1,47	10,48	47,5	55,23	8,03	111
	ČR	72802	1,05	605002	76,84	41,1	25,51	18,01	15,38	1,36	10,1	50,8	55,7	8,31	905
	IST	695	1,62	7956	80,86	69,21	18,68	7,32	4,78	2,16	20,72	83,88	44,26	11,45	21
	VIB	4269	2,46	126177	92,57	77,87	14,23	5,26	2,64	5,86	28,88	67,18	34,57	29,56	271
Biochemistry & Molecular Biology	RD	202	1,3	2513	91,09	46,75	37,28	11,83	4,14	0,99	14,36	61,39	44,93	12,44	4
	MU	418	1,12	4781	86,36	41,32	35,03	13,77	9,88	1,44	9,81	59,09	51,85	11,44	9
	ČR	3004	1	32462	86,65	31,15	36,67	20,33	11,85	0,8	8,42	58,02	54,1	10,81	35
	IST	94	2,35	1896	92,55	84,21	10,53	2,63	2,63	4,26	39,36	88,3	31,38	20,17	8
	VIB	930	2,12	28482	93,23	69,92	19,25	7,62	3,21	4,3	26,56	68,17	37,53	30,63	56
Neurosciences	RD	167	0,53	812	71,86	11,18	23,6	23,6	41,61	0	1,2	23,35	71,92	4,86	0
	MU	506	0,51	2101	63,83	8,81	17,21	17,01	56,97	0	2,17	35,57	74,52	4,15	0
	ČR	1883	0,67	12086	67,5	10,77	15,84	15,45	57,95	0,48	4,14	34,94	72,8	6,42	7
	IST	49	1,9	921	93,88	62,07	31,03	3,45	3,45	4,08	28,57	77,55	35,42	18,8	2
	VIB	310	2,11	7448	93,23	68,2	21,2	5,3	5,3	4,84	24,19	71,61	39,9	24,03	16
Chemistry, Multidisciplinary	RD	139	0,65	1103	76,26	42,42	17,42	14,39	25,76	0	5,76	51,8	63,19	7,94	2
	MU	306	0,6	2660	72,55	30,85	16,27	18,31	34,58	0	4,58	44,12	67,34	8,69	7
	ČR	3312	0,69	30501	72,4	30,65	22,15	16,34	30,87	0,42	5,07	44,78	66,06	9,21	51
	IST	4	1,22	19	100	75	0	0	25	0	0	50	35,55	4,75	0
	VIB	50	1,63	1076	98	94	6	0	0	2	14	48	39,49	21,52	2

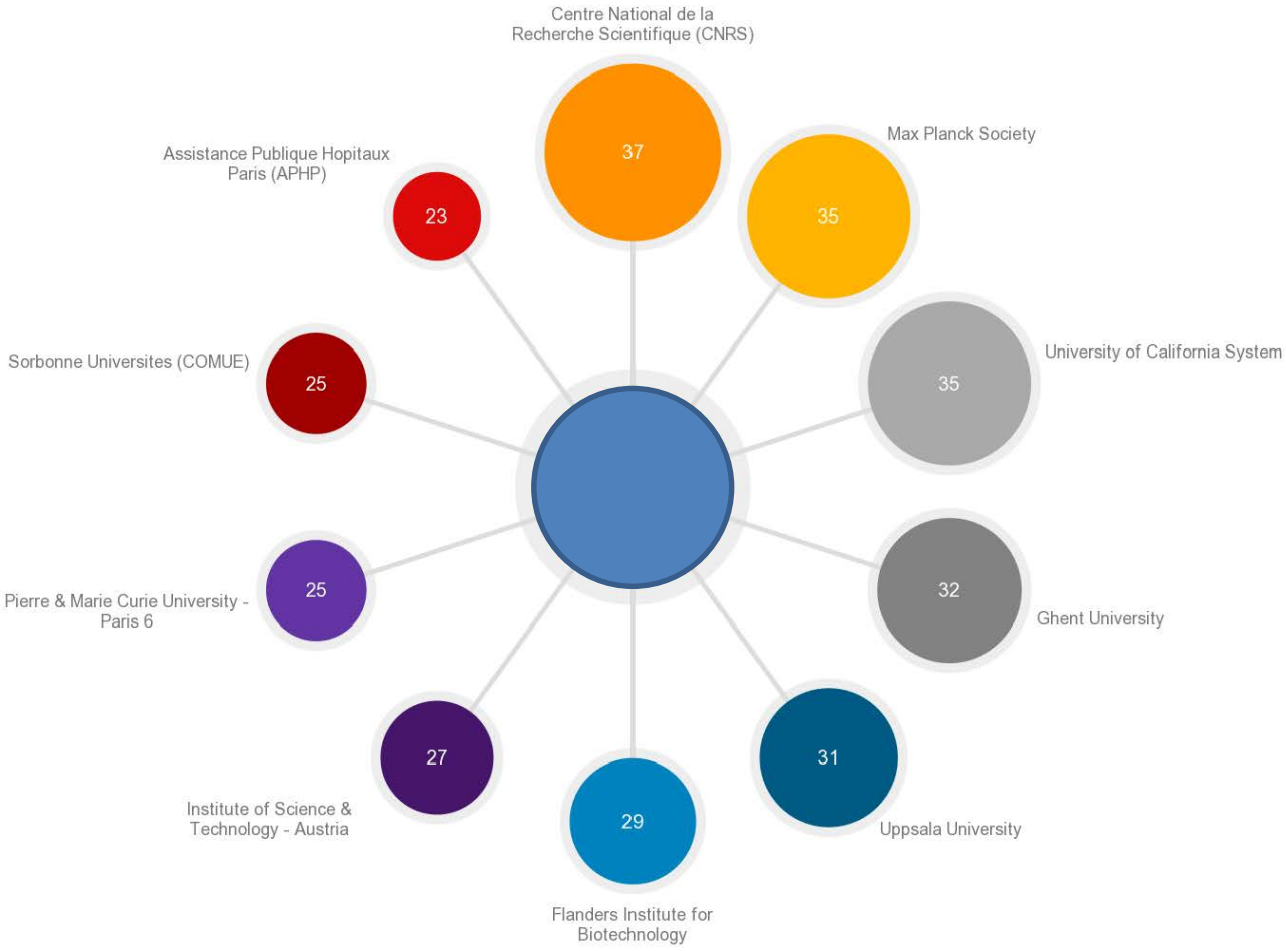
Excluded research areas (below the treshold of 10 publications in the period 2011 - 2016): Chemistry, Medicinal; Mycology; Chemistry, Applied; Psychology, Experimental; Mathematical & Computational Biology; Thermodynamics; Peripheral Vascular Disease; Pathology; Engineering, Biomedical; Geochemistry & Geophysics; Orthopedics; Cardiac & Cardiovascular Systems; Physiology; Psychology; Dermatology; Nutrition & Dietetics; Cell & Tissue Engineering; Respiratory System; Parasitology; Materials Science, Ceramics; Polymer Science; Biology; Psychology, Biological; Engineering, Electrical & Electronic; Anatomy & Morphology; Entomology; Gastroenterology & Hepatology; Agriculture, Multidisciplinary; Medical Laboratory Technology; Zoology; Computer Science, Theory & Methods; Engineering, Multidisciplinary; Critical Care Medicine; Computer Science, Artificial Intelligence; Geosciences, Multidisciplinary; Psychology, Multidisciplinary; Engineering, Chemical; Microscopy; Transplantation; Medical Informatics; Rehabilitation; Astronomy & Astrophysics; Materials Science, Biomaterials; Physics, Mathematical; Psychology, Clinical; Geriatrics & Gerontology; Psychology, Developmental; Tropical Medicine; Statistics & Probability; Environmental Sciences; Mechanics; Ecology; Allergy; Toxicology; Physics, Particles & Fields; Energy & Fuels; Medicine, Legal; Acoustics; Urology & Nephrology; Robotics; Family Studies.

3. Collaboration (A-R-L, 2011-2016)

The diagrams depict the institutional collaboration network. Institutions are connected to MU if one or more authors affiliated with each institution co-authored at least one article with affiliation to *Research Department*. Here, in the diagram, only the largest connected components is shown.

Collaboration with Czech and Slovak institutions by number of publications – top 10

International collaboration (except Czech and Slovak RO´s) by number of publications – TOP 10



International publications

Note: Slovak ROs are counted as abroad institutions

The important indicator is the number of publications published in collaboration with authors from foreign institutions. The tab below shows that the overall percentage of the international publication is growing which may be related to many factors:

- New international grants
- Higher awareness about the *Research Department* in the worldwide scientific community
- Incoming researcher with the links to previous labs

The more important is the growth of the share of the *Research Department* corresponding authors in these international publications. However, overall share of *Research Department* corresponding authors is slightly decreasing.

	2011	2012	2013	2014	2015	2016	Average
International papers	33%	36%	44%	50%	53%	56%	48%
Research Department corresponding author	22%	22%	30%	34%	37%	41%	32%

4. Journals (A-R-L, 2011-2016)

In this part, we focus on journals where results (types A-R-L) were published in the period from 2011 to 2016. The journals are divided into two groups: a) Czech and Slovak journals and b) international journals. The table summarizes only the journals in which more than 5 papers are published. The international journals are undoubtedly of higher quality, the articles are more cited, etc. Only a negligible share of *Research Department* results is published in Czech and Slovak journals.

We use following indicators:

- Times Cited
- % Docs Cited
- Category Normalized Citation Impact
- Journal Normalized Citation Impact
- Article Influence
- Journal Impact Factor
- Quartile

Comparison of publishing in Czech/Slovak and international journals (A-R-L, 2011-2016)

	Number of journals	Number of articles	Number of citations	Average number of citations per article
CZ/SK	14	119	167	1,4
International journals	554	1396	16105	11,15

	2011	2012	2013	2014	2015	2016	Total*
CZ/SK	12	36	31	13	17	11	120
International journals	76	200	258	282	300	305	1421

*The number is different from the previous table, because it counts also journals not listed in JCR.

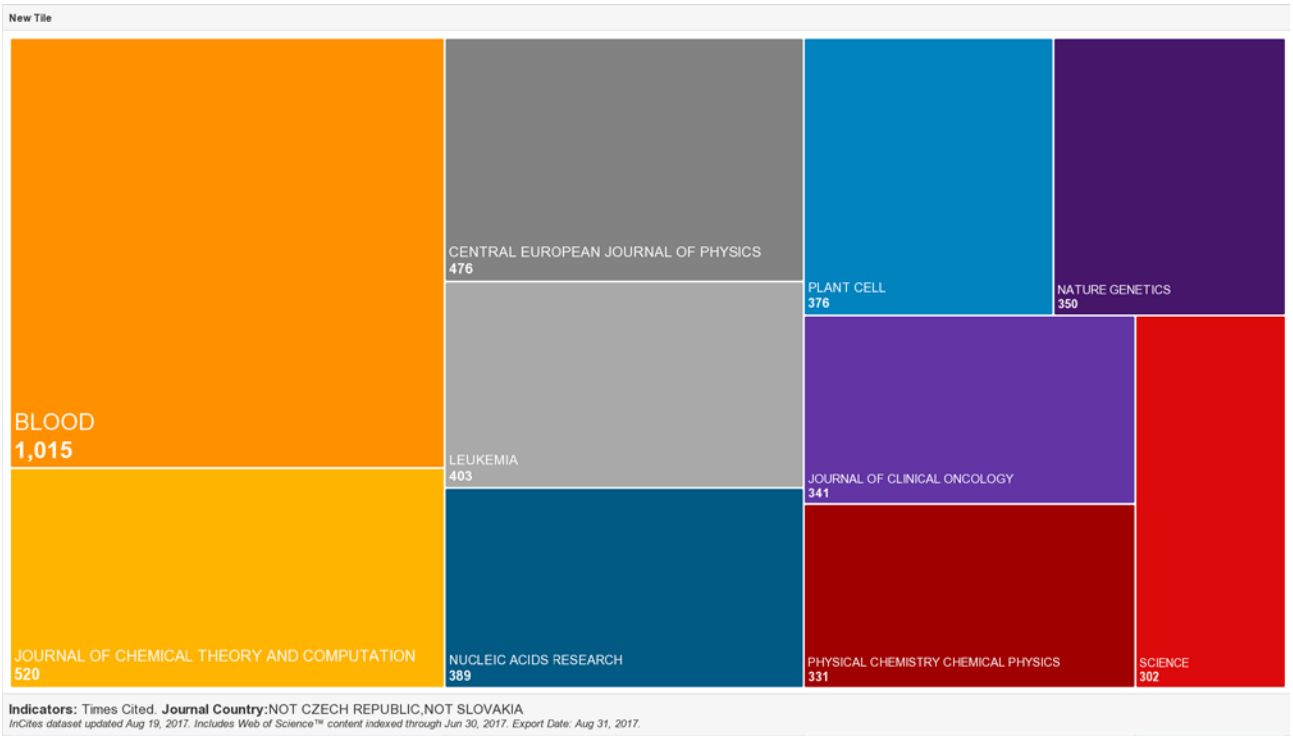
Czech and Slovak journals	WoS Docs	Times Cited	% Docs Cited	CNCI	Journal Normalized Citation Impact	Article Influence	Journal Impact Factor	Quartile
CESKA A SLOVENSKA NEUROLOGIE A NEUROCHIRURGIE	54	58	42,59	0,13	1,25	0,025	0,368	Q4
CHEMICKE LISTY	32	20	34,38	0,03	0,69	0,033	0,387	Q4
VETERINARNI MEDICINA	6	11	83,33	0,44	0,95	0,217	0,489	Q3
CHEMICAL PAPERS	5	11	80	0,19	0,95	0,224	1,258	Q3

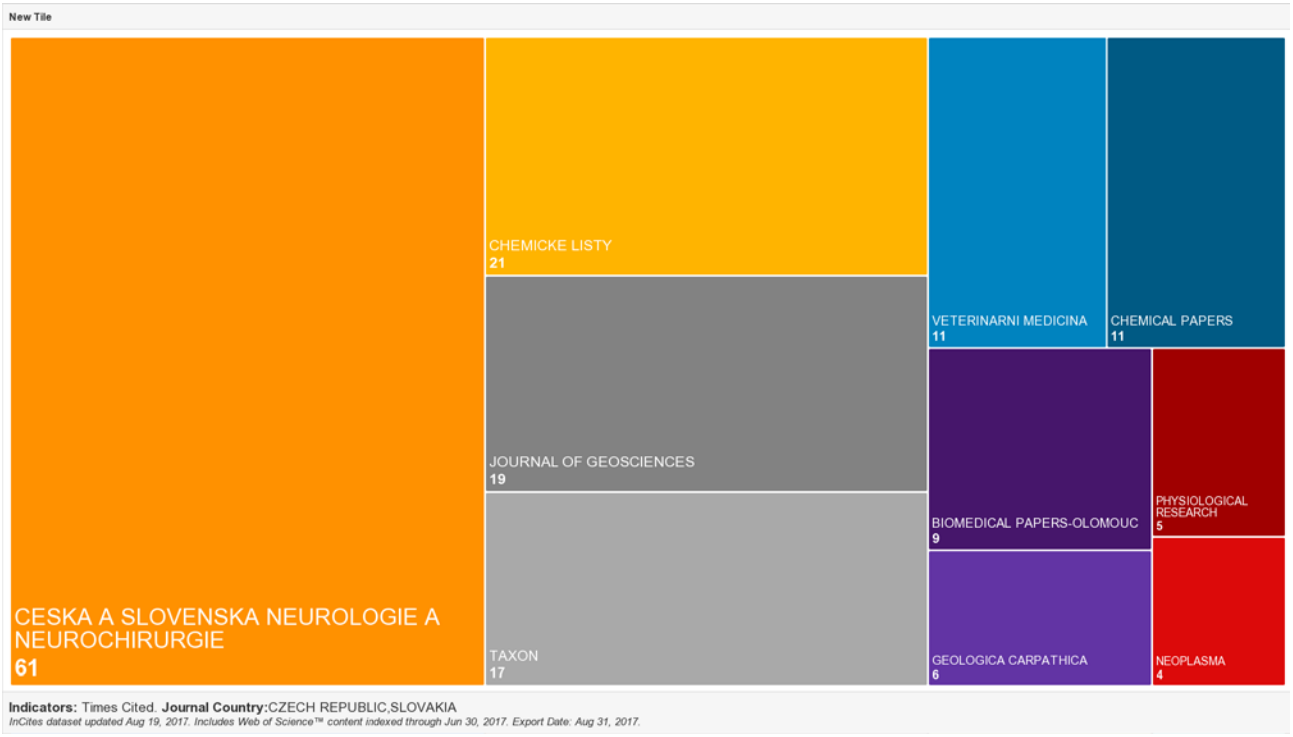
International journal	WoS Docs	Times Cited	% Docs Cited	CNCI	Journal Normalized Citation Impact	Article Influence	Journal Impact Factor	Quartile
PLOS ONE	39	276	92,31	0,85	0,91	1,053	2,806	Q1
PHYSICAL CHEMISTRY CHEMICAL PHYSICS	31	318	90,32	1,26	1,13	1,123	4,123	Q1
NUCLEIC ACIDS RESEARCH	27	374	100	1,53	0,59	3,838	10,162	Q1
PHYSICAL REVIEW B	25	167	80	0,71	0,73	1,224	3,836	Q2
JOURNAL OF CHEMICAL THEORY AND COMPUTATION	25	505	96	1,94	1,25	1,947	5,245	Q1
JOURNAL OF PHYSICAL CHEMISTRY B	17	182	94,12	0,81	1,16	0,916	3,177	Q2
LEUKEMIA & LYMPHOMA	14	57	71,43	0,38	0,6	0,809	2,755	Q2
CHEMISTRY-A EUROPEAN JOURNAL	14	187	100	1,03	0,92	1,335	5,317	Q1
PLANT JOURNAL	14	178	92,86	2,52	0,98	2,166	5,901	Q1
ELECTROPHORESIS	12	102	91,67	1,2	1,46	0,519	2,744	Q2
EPILEPSY & BEHAVIOR	12	73	91,67	0,46	0,62	0,679	2,631	Q2
HAEMATOLOGICA	11	79	81,82	1,59	1,04	2,464	7,702	Q1
SPECTROCHIMICA ACTA PART B-ATOMIC SPECTROSCOPY	11	83	90,91	1,51	1,05	0,664	3,241	Q1
LEUKEMIA	11	394	100	5,1	2,12	3,826	11,702	Q1
PLANT CELL	11	366	100	3,43	1,39	3,563	8,688	Q1
NEW PHYTOLOGIST	11	111	100	2,48	0,84	2,512	7,33	Q1
JOURNAL OF CHROMATOGRAPHY A	11	85	90,91	1,54	1,25	0,757	3,981	Q1
BLOOD	11	992	90,91	7,01	2,63	4,022	13,164	Q1
RSC ADVANCES	10	28	90	0,56	0,98	0,589	3,108	Q2
THIN SOLID FILMS	10	71	100	0,83	1,58	0,383	1,879	Q2
JOURNAL OF EXPERIMENTAL BOTANY	10	65	100	1,57	0,74	1,789	5,83	Q1
JOURNAL OF BIOMOLECULAR NMR	10	140	90	1,64	1,38	1,056	2,41	Q2
TUMOR BIOLOGY	9	101	88,89	1,6	1,84	0,609	3,65	Q2
JOURNAL OF NEURAL TRANSMISSION	9	62	88,89	0,76	1,09	0,683	2,392	Q3
ELECTROCHIMICA ACTA	9	50	77,78	0,53	0,43	0,826	4,798	Q1
SCIENTIFIC REPORTS	9	46	77,78	1,02	1,04	1,482	4,259	Q1
POLYHEDRON	9	25	88,89	0,45	0,51	0,291	1,926	Q2
AMERICAN JOURNAL OF HEMATOLOGY	9	75	88,89	0,82	0,82	1,472	5,275	Q1
ANALYTICAL CHEMISTRY	9	44	88,89	1,19	0,66	1,402	6,32	Q1
MONATSHEFTE FUR CHEMIE	8	8	62,5	0,16	0,55	0,201	1,282	Q3

International journal	WoS Docs	Times Cited	% Docs Cited	CNCI	Journal Normalized Citation Impact	Article Influence	Journal Impact Factor	Quartile
PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA	8	110	87,5	2,37	0,88	4,721	9,661	Q1
CLINICAL NEUROPHYSIOLOGY	8	51	87,5	0,64	0,58	1,104	3,866	Q1
JOURNAL OF BIOLOGICAL CHEMISTRY	8	85	87,5	0,84	0,76	1,587	4,125	Q2
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY	8	200	100	1,62	0,6	3,789	13,858	Q1
JOURNAL OF ANALYTICAL ATOMIC SPECTROMETRY	8	29	87,5	0,52	0,36	0,767	3,379	Q1
JOURNAL OF PHYSICAL CHEMISTRY LETTERS	7	175	100	1,92	0,92	2,666	9,353	Q1
FRONTIERS IN PLANT SCIENCE	7	12	71,43	0,41	0,37	1,305	4,298	Q1
CALPHAD-COMPUTER COUPLING OF PHASE DIAGRAMS AND THERMOCHEMISTRY	7	37	85,71	0,75	1,2	0,481	1,6	Q2
ELECTROANALYSIS	7	23	71,43	0,43	0,62	0,409	2,851	Q2
ONCOTARGET	7	45	42,86	2,36	2,88	1,18	5,168	Q1
PLASMA SOURCES SCIENCE & TECHNOLOGY	6	31	100	1,84	1,19	0,836	3,302	Q1
JOURNAL OF APPLIED CRYSTALLOGRAPHY	6	16	83,33	0,4	0,6	1,493	2,495	Q2
NEUROPSYCHIATRIC DISEASE AND TREATMENT	6	19	66,67	0,35	0,57	0,598	2,198	Q3
JOURNAL OF BIOMOLECULAR STRUCTURE & DYNAMICS	6	112	100	2,68	3,61	0,542	3,123	Q2
JOURNAL OF PHYSICAL CHEMISTRY A	6	105	100	1,22	1,54	0,764	2,847	Q2
EPILEPSY RESEARCH	6	18	66,67	0,4	0,52	0,753	2,367	Q3
NATURE COMMUNICATIONS	6	142	83,33	3,25	1,01	5,732	12,124	Q1
PHYSICAL REVIEW LETTERS	6	178	100	4,17	1,45	3,261	8,462	Q1
JOURNAL OF THE NEUROLOGICAL SCIENCES	6	77	100	1,05	1,61	0,694	2,295	Q3
NEUROENDOCRINOLOGY LETTERS	6	24	83,33	0,21	0,9	0,206	0,918	Q4
CHROMOSOMA	5	52	100	1,23	1,74	1,831	4,414	Q1
INORGANIC CHEMISTRY	5	30	80	1,5	0,79	0,997	4,857	Q1
INTERNATIONAL JOURNAL OF SYSTEMATIC AND	5	47	100	2,36	4,52	0,389	2,134	Q3

International journal	WoS Docs	Times Cited	% Docs Cited	CNCI	Journal Normalized Citation Impact	Article Influence	Journal Impact Factor	Quartile
EVOLUTIONARY MICROBIOLOGY								
CURRENT PROTEIN & PEPTIDE SCIENCE	5	33	100	0,16	0,64	0,8	2,576	Q3
GENES & DEVELOPMENT	5	244	100	2,97	1,23	6,37	9,413	Q1
JOURNAL OF SEPARATION SCIENCE	5	23	100	0,67	0,78	0,417	2,557	Q2
CARCINOGENESIS	5	36	100	1,15	0,98	1,318	5,105	Q1
SURFACE & COATINGS TECHNOLOGY	5	13	100	1,57	2,41	0,523	2,589	Q1
APPLIED SURFACE SCIENCE	5	20	80	1,07	0,97	0,588	3,387	Q1
JOURNAL OF CHEMICAL INFORMATION AND MODELING	5	60	100	1,15	0,71	1,078	3,76	Q1
INTERNATIONAL JOURNAL OF ELECTROCHEMICAL SCIENCE	5	36	100	0,53	1,18	0,265	1,469	Q3
ACTA PHYSICA POLONICA A	5	4	60	0,18	1,57	0,104	0,469	Q4
JOURNAL OF VIROLOGY	5	13	100	1,49	1,17	1,454	4,663	Q1
CYTOGENETIC AND GENOME RESEARCH	5	28	100	0,54	1,72	0,505	1,354	Q4
CURRENT BIOLOGY	5	178	100	2,28	1,18	4,736	8,851	Q1
BRITISH JOURNAL OF HAEMATOLOGY	5	53	60	0,88	0,76	1,992	5,67	Q1
CANADIAN MINERALOGIST	5	19	80	0,51	1,16	0,468	0,817	Q4
JOURNAL OF CHEMINFORMATICS	5	74	80	1,75	1,39	1,825	4,22	Q1

Comparison of citation counts in Czech/Slovak and international journals





5. Research topics by AIS a CNCI (keywords analysis)

In this analysis, we compare the visibility of journals (Article Influence Score) and impact of articles (Category Normalized Citation Impact) in respective fields (topics).

We analysed co-occurrence of keywords in WOS field tags DE (keywords), ID (KeyWords Plus®). Only in case that DE or ID = null, we extracted also WoS field AB (abstract). This approach enables us to avoid irrelevant terms, frequently occurred in abstracts. We also removed some of the irrelevant terms manually. Only terms appearing in 7 or more times are shown.

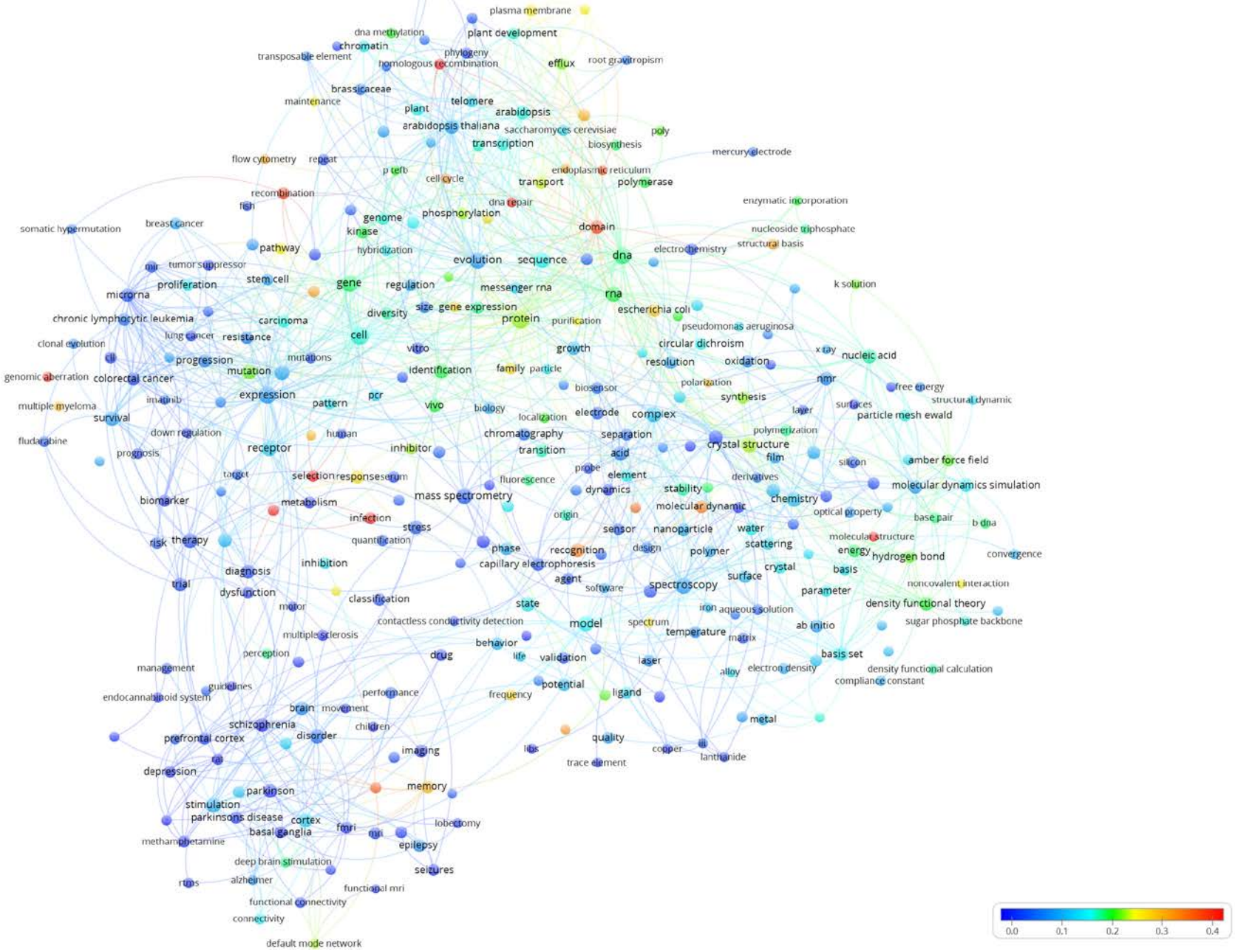
We linked every text string (extracted from single publication) with AIS indicator and CNCI indicator on the article level. We then created network based on co-occurrence with specialized software for analysing bibliographic information (VOSviewer). Alongside clustering analysis we visualized also a network provided with average AIS and CNCI score calculated from values for each term. These two views allow to compare the visibility (AIS) and impact (CNCI) of respective fields (topics).

The result is as follows. Full analysis with zooming option is available here (Java environment required):

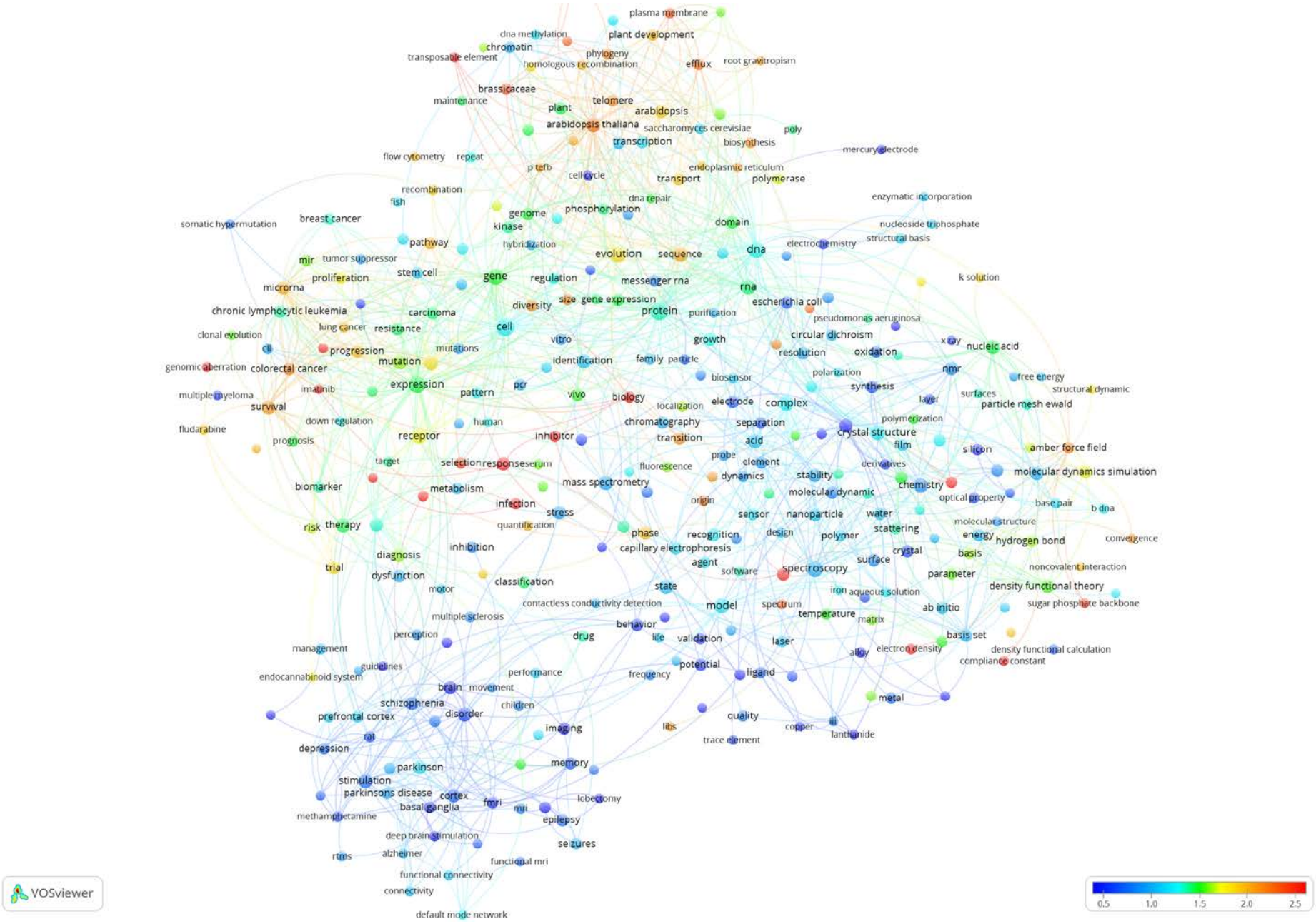
Map based on a text data with AIS score (reputation or visibility of the topic)

Map based on a text data with CNCI score (average citation impact of the topic)

Map based on a text data with AIS score (color scale)



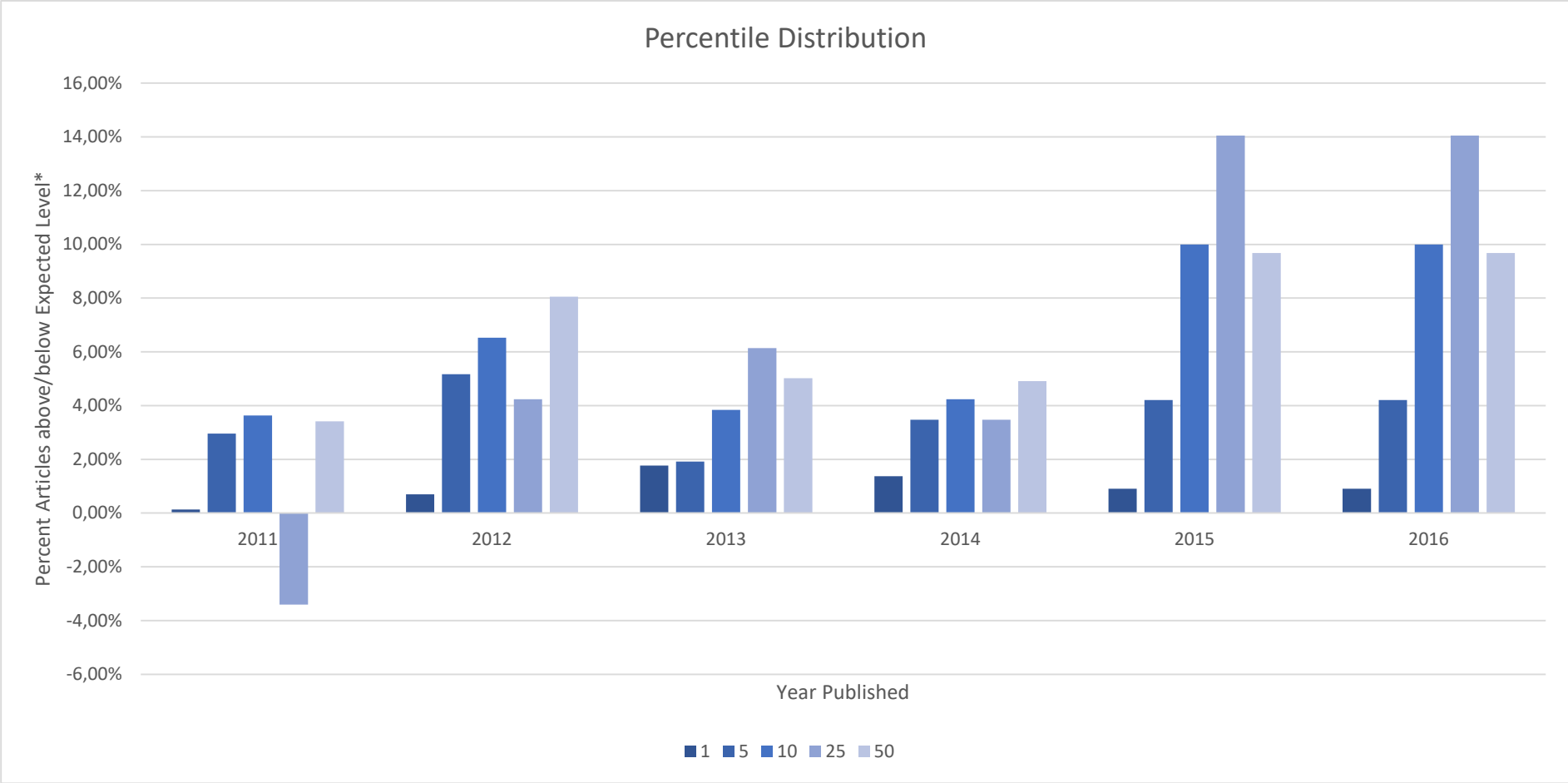
Map based on a text data with CNCI score (color scale)



6. Citation Impact

Percentile Distribution

This analysis shows the overall citation impact of *Research Department*. We used percentiles calculated at the article level. A theoretically average publication set would have 1% of its articles ranked in the top 1% for citation counts, 10% articles in the top 10% and so on.



*Percentage articles above/below expected percentile threshold

7. Reprint authors

In the following table, we focus on *Research Department* reprint authors and their output. The number of publications is supported by indicators based on citations (CNCI, Citation Impact). The threshold is 5 publications and we selected only group leaders.

anonymized

8. Indicators

Article Influence – determines the average influence of a journal's articles over the first five years after publication. It is based on the value of Eigenfactor. The mean Article Influence Score is 1.00. An Article Influence Score greater than 1.00 indicates that the articles in a journal have an above-average influence.

Category Normalized Citation Impact (CNCI) – determines the citation impact of the article relative to the average number of citations of all articles of the same type in the same field and in the same publication year as the article under review. A value greater than 1 indicates that the number of citations is greater than the average of the field.

Journal Impact Factor (JIF) – is defined as all citations to the journal in the current JCR year to items published in the previous two years, divided by the total number of scholarly items published in the journal in the previous two years. The Journal Impact Factor Percentile transforms the rank in category by Journal Impact Factor into a percentile value, allowing more meaningful cross-category comparison.

Journal Normalized Citation Impact (JNCI) – determines the citation impact of the article against the average number of citations of all articles of the same type, in the same journal and in the same publication year as the article under review. A value greater than 1 indicates that the number of citations is greater than the average number of the citation in that journal.

Percentiles – The percentile in which the paper ranks in its category and database year, based on total citations received by the paper. The higher the number citations, the smaller the percentile number. The maximum percentile value is 100, indicating 0 citations received. Average percentile is the mean of the percentiles for articles in the set.

Quartile (=Journal Impact Factor Percentile) – transforms the rank in category by Journal Impact Factor into a percentile value, allowing more meaningful cross-category comparison**.**