



# MU-Multi Mentoring System: Update WUR 2020

# Our Missions & Ambition




**Health Literacy**      **Internationalization Literacy**      **Digital Literacy**

**Environmental Literacy**      **Financial Literacy**



EdPEX

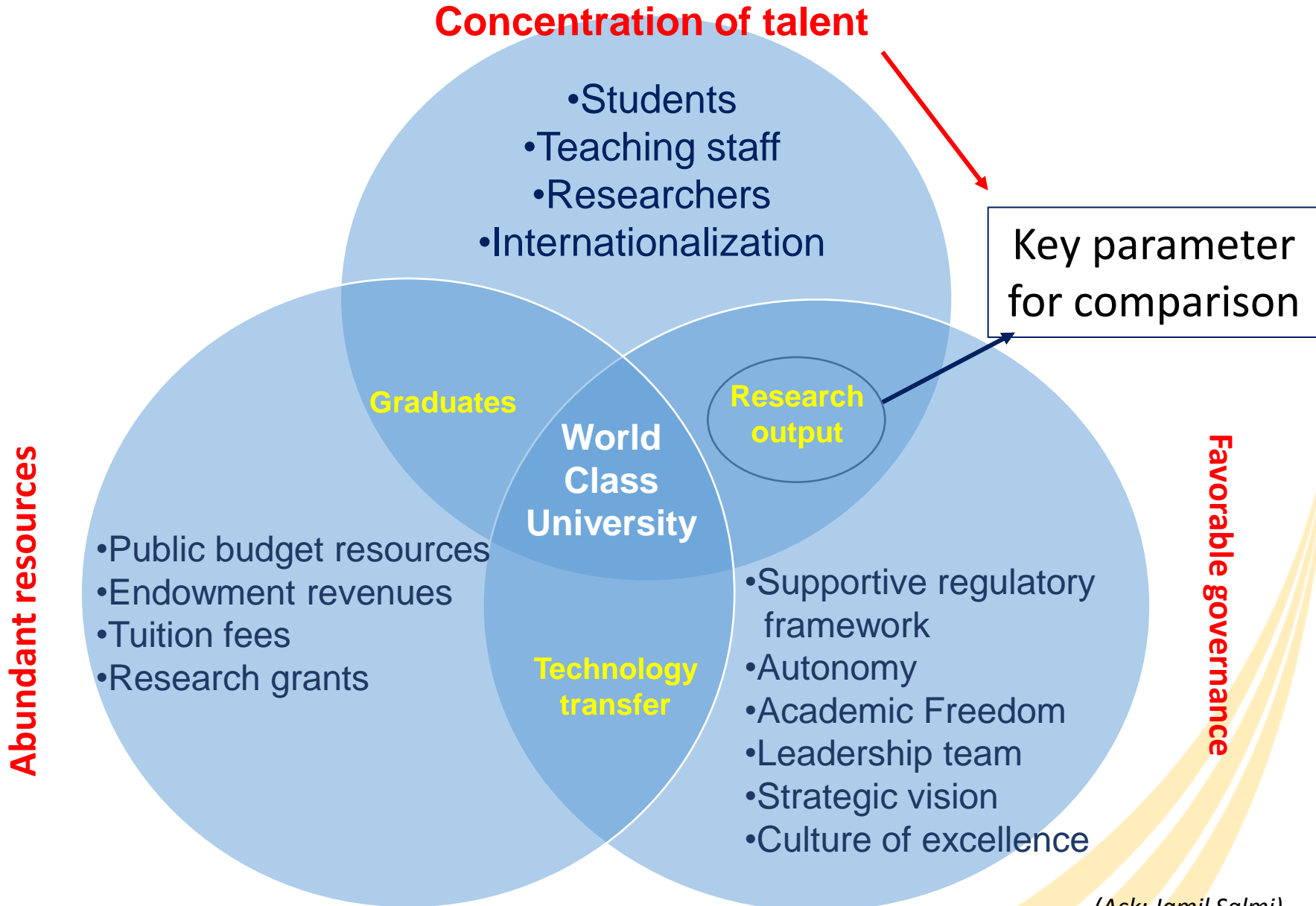


Teaching & Learning  
 Research & Innovation  
 Kn Tx & Social Contribution

MU Core Value  
 21<sup>st</sup> Century Skills  
 Quality Curriculum  
 Entrepreneurial Education  
 Safe, Green, Healthy Campus  
 Digital Convergence University



# Our Vision: Top 100 WCU in 2030



# Research Based U- Ranking

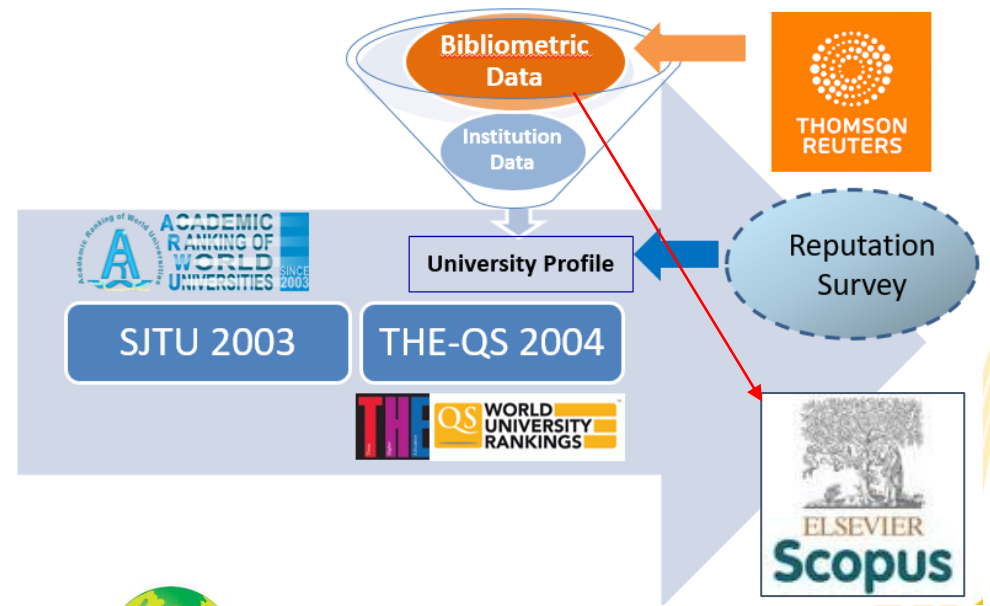


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University Ranking by Academic Performance




The key pillars:  
Teaching  
**Research**  
Global outlook  
Knowledge Transfer





RANKING SYSTEM	INDICATOR DIMENSION	WEIGHTING
<p>SJT <i>Academic Ranking of World Universities</i></p> 	<ul style="list-style-type: none"> <li>Quality of Education</li> <li>Quality of Faculty               <ul style="list-style-type: none"> <li>No. Nobel Prize/Field Medal</li> <li>No. HiCi Researchers</li> </ul> </li> <li>Research Output               <ul style="list-style-type: none"> <li>No. Articles in Nature/Science</li> <li>No. Articles in Citation Index</li> </ul> </li> <li>Size of Institution</li> </ul>	<p>10%</p> <p>20%</p> <p>20%</p> <p>20%</p> <p>10%</p>
<p>Times QS <i>World University Ranking</i></p> 	<ul style="list-style-type: none"> <li>Peer Appraisal</li> <li>Graduate Employability</li> <li>Teaching Quality/SSR</li> <li>International Students</li> <li>International Faculty</li> <li>Research Quality/Citations per Faculty</li> </ul>	<p>40%</p> <p>10%</p> <p>20%</p> <p>5%</p> <p>5%</p> <p>20%</p>
<p><i>Performance Ranking of Scientific Papers for Research Universities</i></p> 	<ul style="list-style-type: none"> <li>Research Productivity               <ul style="list-style-type: none"> <li>No. Articles in last 11 years</li> <li>No. Articles in current year</li> </ul> </li> <li>Research Impact               <ul style="list-style-type: none"> <li>No. Citations in last 11 years</li> <li>No. Citations in last 2 years</li> <li>Aver. no Citations in last 11 years</li> </ul> </li> <li>Research Excellence               <ul style="list-style-type: none"> <li>HiCi index of last 2 years</li> <li>No. HiCi Papers, last 10 years</li> <li>No. Articles High-Impact Journals in Current Year</li> <li>No. Subject Fields where University Demonstrates Excellence</li> </ul> </li> </ul>	<p>10%</p> <p>10%</p> <p>10%</p> <p>10%</p> <p>10%</p> <p>20%</p> <p>10%</p> <p>10%</p> <p>10%</p>

Source: SJT, Times QS, and Higher Education Evaluation and Accreditation Council of Taiwan.



# Excellence: Staffs & Researchers (How to Build?)



ศ.บพ.วิชัย เอกพลากร  
คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี



ศ.ดร.อันวินทร์ กิจจิตฺตเสถียร  
คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี



ศ.บพ.วิศิษฎ์ กองบุญเกิด  
คณะแพทยศาสตร์ศิริราชพยาบาล



ศ.ดร.บพ.วรุฒม์ ไร่หิสรวิวัฒน์  
คณะแพทยศาสตร์ศิริราชพยาบาล



ศ.บพ.นิพนธ์ พงษ์วรินทร์  
คณะแพทยศาสตร์ศิริราชพยาบาล



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คณะแพทยศาสตร์ศิริราชพยาบาล



ศ.ดร.กัญญา สุนทรสุข  
คณะเภสัชศาสตร์



พ.ศ.ดร.ธีรเกียรติ์ เกิดเจริญ  
คณะวิทยาศาสตร์



ศ.บพ.สุทัศน์ พึ่งเจริญ  
สถาบันชีววิทยาศาสตร์โมเลกุล



ศ.เกียรติคุณ ดร.วิสุทธ์ ไบไม้  
คณะวิทยาศาสตร์



ศ.เกียรติคุณ ดร.ยอคะทัย เทพรามบท  
คณะวิทยาศาสตร์



รศ.ดร.ปัทมาภรณ์ กฤตยพงษ์  
คณะวิทยาศาสตร์



Prof. Timothy Flegel  
คณะวิทยาศาสตร์



Prof. Philip Hallinger  
วิทยาลัยการจัดการ



Prof. Duncan R. Smith  
สถาบันชีววิทยาศาสตร์โมเลกุล



ศ.ดร.มัลลิกา อิมวงศ์  
คณะวิทยาศาสตร์



ศ.ดร.พญ.ศศิธร บุ๊กกุดฉายา  
คณะวิทยาศาสตร์



ศ.ดร.บพ.พลรัตน์ วิไลรัตน์  
คณะวิทยาศาสตร์

Source: World's Top 2% Scientists by Stanford University 2020

คณาจารย์และนักวิจัยอาคันตุกะ



Prof. Sir Nicholas White  
คณะเวชศาสตร์เขตร้อน



Prof. Nicholas Day  
คณะเวชศาสตร์เขตร้อน



Prof. Marcus Schultz  
คณะเวชศาสตร์เขตร้อน



Prof. Lorenz Von Seidlein  
คณะเวชศาสตร์เขตร้อน



Prof. Francois Nosten  
คณะเวชศาสตร์เขตร้อน



Prof. Rose McGredy  
คณะเวชศาสตร์เขตร้อน



Prof. Arjen Dondorp  
คณะเวชศาสตร์เขตร้อน



Prof. Eiji Konishi  
คณะเวชศาสตร์เขตร้อน



Prof. Richard Coker  
คณะสาธารณสุขศาสตร์



Prof. Yasuyuki Tanaka (ทัมแท็งสมุ)  
คณะวิทยาศาสตร์

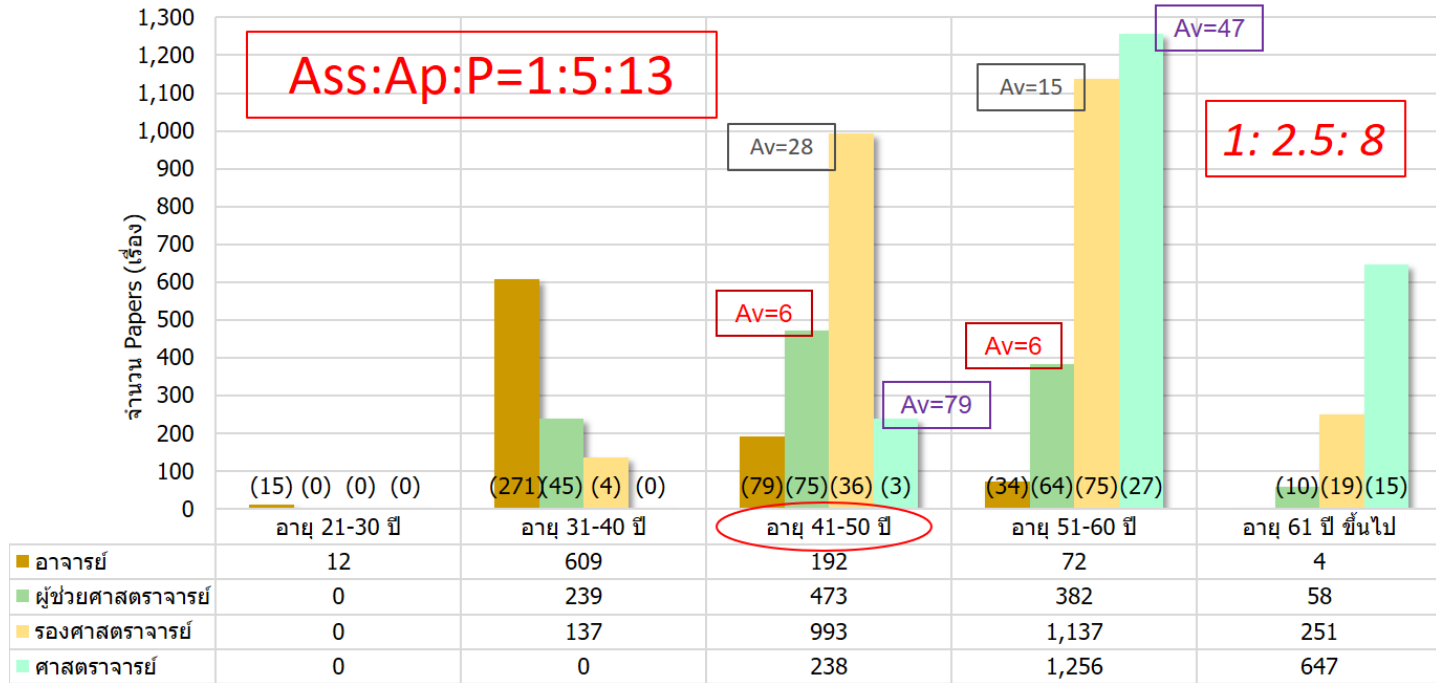


Prof. Cornelis Verdyun  
คณะวิทยาศาสตร์

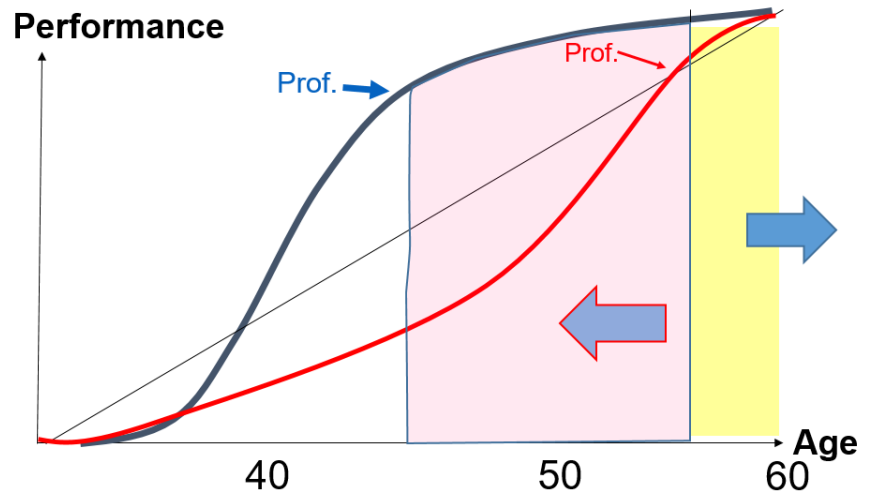
คณาจารย์ นักวิจัยและอาจารย์อาคันตุกะของมหาวิทยาลัยมหิดล  
ที่ได้รับการตีพิมพ์และอ้างอิงสูงที่สุดใน Top 2% ของโลก



# Excellence: Research Productivity (Demographic)

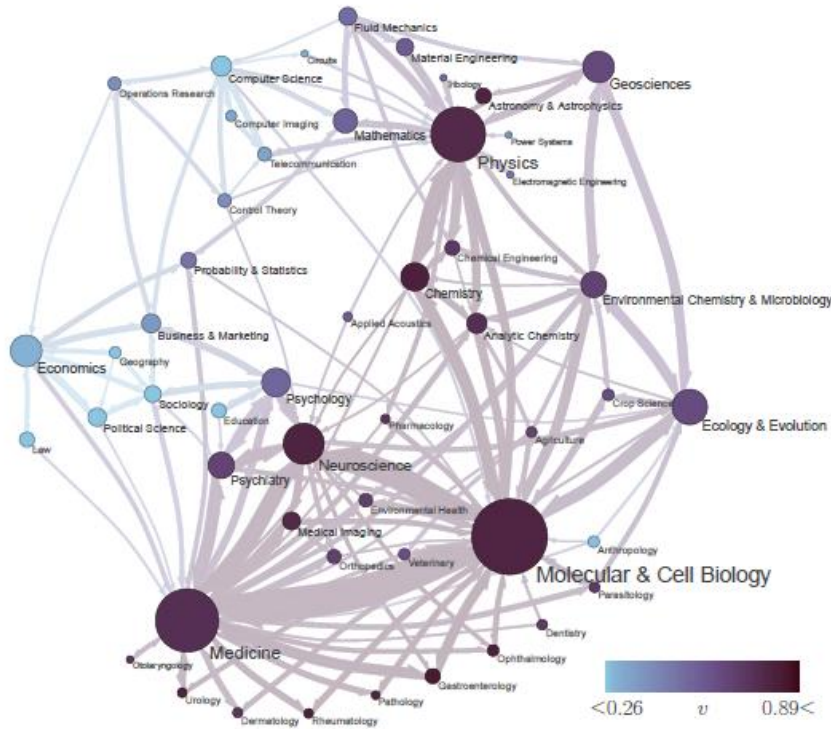


**“To mentor young staffs to achieve professorship is important”**





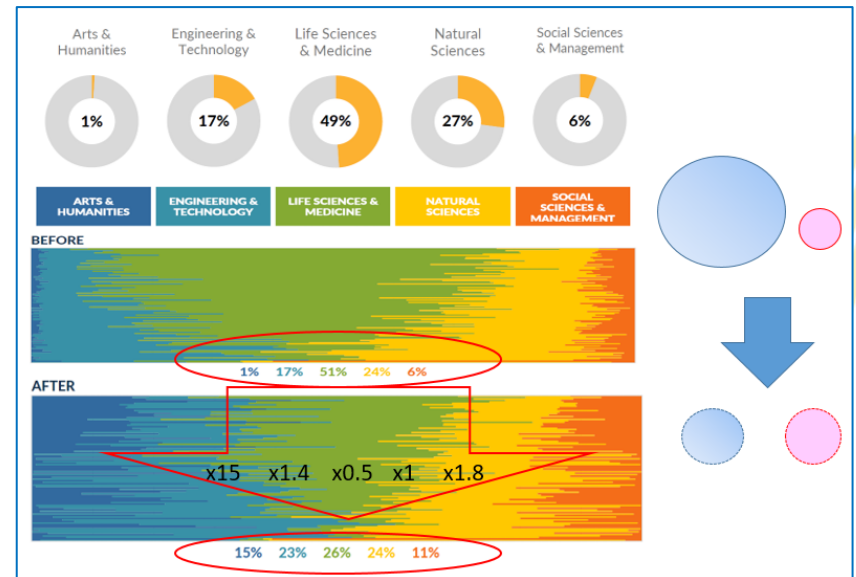
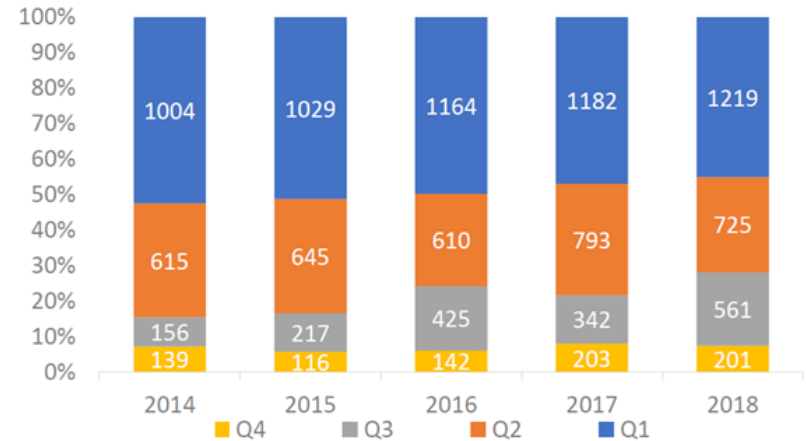
# Excellence: Research Quality & Impact (How to Compare & To Focus On?)



Citation/Paper  
 Citation/Faculty  
 Quality of Journal  
 Field Weight Citation  
 QS-Standardized Method

## Mahidol University Research Overview

Publications in Top Quartiles Journal (CiteScore) : 2014 – 2018



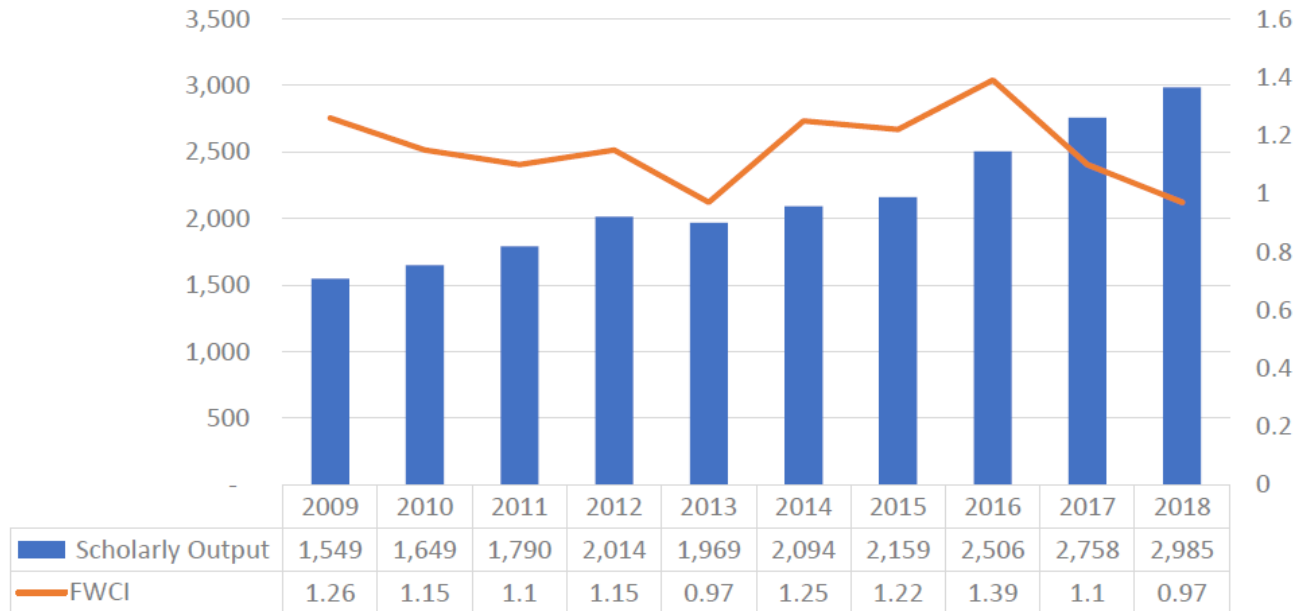




# Research Output & FWCI

## Mahidol University Research Overview

### Research Overview: 2009 – 2018



### Key Findings

- Mahidol University’s publication output has been steadily increasing at a CAGR of 7.5% over a 10 year period from 2009 to 2018.
- It grew from 1,549 publications in 2009, peaking at 2,985 publications in 2018.
- Mahidol University’s FWCI has been fluctuating – its highest was 1.39 in 2016.




# Ranking: Journal & Window Period

## CWTS Leiden Ranking 2020

Start tour

 **List view**

 **Chart view**

 **Map view**

### Time period, field, and region/country

Time period: 2015–2018 **4Y** ▼

Field: All sciences ▼

Region/country: Thailand ▼

Min. publication output: 100 ▼

### Indicators

Type of indicators: Scientific impact ▼ ?

Indicators: P, P(top 10%), PP(top 10%) ▼ ?

Order by: P ▼

Calculate impact indicators using fractional counting ?

	University		P	P(top 10%)	PP(top 10%)	
1	Mahidol Univ		3187	178	5.6%	
2	Chulalongkorn Univ		2934	157	5.3%	
3	Chiang Mai Univ		1863	96	5.1%	
4	Khon Kaen Univ		1535	76	4.9%	
5	Prince Songkla Univ		1375	57	4.2%	
6	Kasetsart Univ		1209	50	4.2%	



# Ranking: Output & Window Period

## NTU RANKING

Performance Ranking of Scientific Papers for World Universities

World Rank	University	Country	Score	11 Years Articles	Current Articles	11 Years Citations	2 Years Citations	Ave. Citation	H-Index	HiCi Papers	Hi-Impact Journal Articles
495	Mahidol University		32.3	30.2	35.8	24.7	30.4	49.7	46.6	23.4	27.1

## Mahidol University

### World University Rankings

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World University Rankings	-	421	479	494	458	433	494	460	477	466	448	445	493	495

### Chulalongkorn University

2013	2014	2015	2016	2017	2018	2019	2020
-	-	-	-	501-550	551-600	501-550	551-600

### University of Malaya

2012	2013	2014	2015	2016	2017	2018	2019	2020
-	-	470	378	323	306	305	305	328

### National Taiwan University

2012	2013	2014	2015	2016	2017	2018	2019	2020
101	98	98	102	112	114	122	126	139



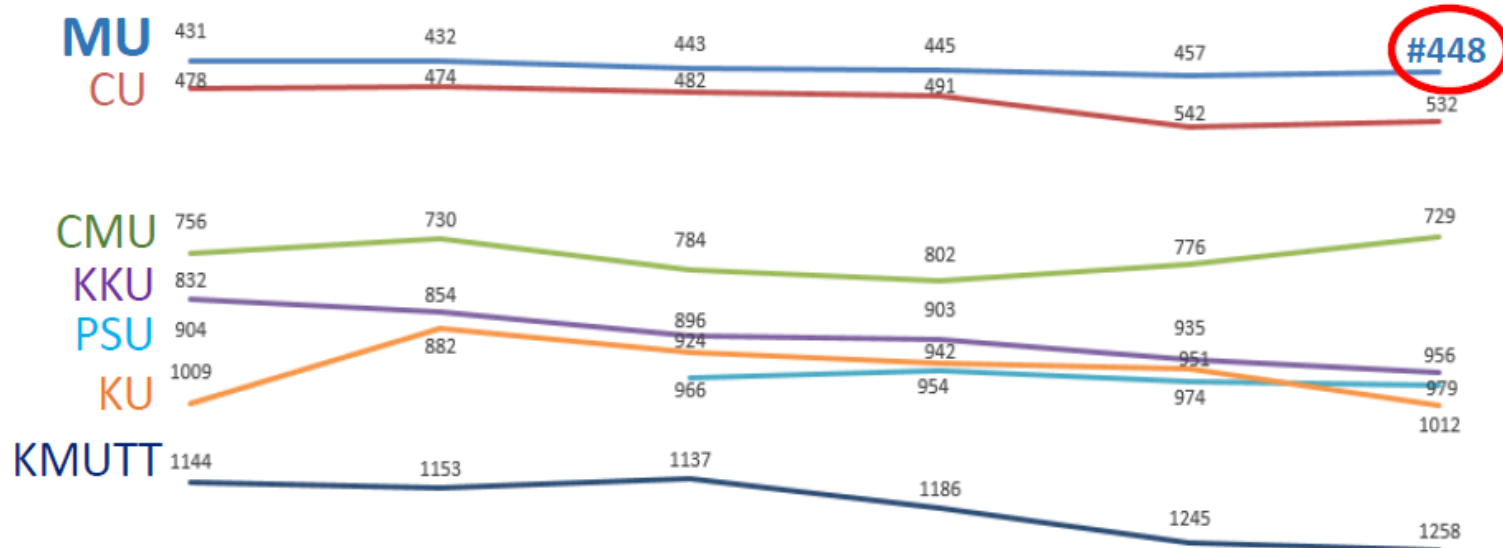
# Ranking: Output & Window Period



Indicator	Objective	Coverage	Source
Article (21%)	Current Scientific Productivity	2017	InCites
Citation (21%)	Research Impact	2013-2017	InCites
Total Document (10%)	Scientific Productivity	2013-2017	InCites
Article Impact Total (18%)	Research Quality	2013-2017	InCites
Citation Impact Total (15%)	Research Quality	2013-2017	InCites
International Collaboration (15%)	International Acceptance	2013-2017	InCites

[https://www.urapcenter.org/Rankings/2020-2021/World\\_Ranking\\_2020-2021](https://www.urapcenter.org/Rankings/2020-2021/World_Ranking_2020-2021)

## Top Thai Universities in URAP World Rankings





## Thai Universities

## Score by Pillars of THE University Rankings

Rank	Name	Total score* 100%		Teaching 30%		Research 30%		Citations 30%		Industry Income 2.5%		International Outlook 7.5%	
		2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
		<b>601-800</b>	<b>Mahidol University</b>	<b>34.89</b>	<b>34.63</b>	<b>33.9</b>	<b>31.6</b>	<b>22.3</b>	<b>21.0</b>	<b>42.8</b>	<b>45.2</b>	<b>71.4</b>	<b>73.4</b>
601-800	Mae Fah Luang University	31.22	33.99	16.8	14.4	9.9	9.0	60.4	74.4	45.5	34.5	52.7	50.6
601-800	Chulalongkorn University	30.23	27.07	34.4	31.5	22.0	21.7	29.3	22.2	60.2	64.8	40.3	37.8
801-1000	KMUTT	25.78	21.32	18.8	17.3	17.5	16.7	35.0	23.6	72.3	74.0	34.5	29.2
1001+	Chiang Mai University	20.95	19.57	22.4	20.8	15.6	14.2	19.9	18.0	44.6	48.6	32.9	32.8
1001+	Khon Kaen University	20.02	19.19	<b>Research 30%</b>				<b>Citations 30%</b>				30.3	31.1
1001+	Suranaree University of Technology	19.99	21.22									20.2	19.6
1001+	Prince of Songkla University	17.67	17.07	2021	2020	2021	2020	20.2	19.6				
1001+	KMITL	17.40	16.72	<b>22.3</b> <b>21.0</b> <b>42.8</b> <b>45.2</b>				34.7	37.1				
1001+	Kasetsart University	17.36	16.78					34.4	34.4				
1001+	Thammasat University	17.02	16.15	<b>9.9</b> <b>9.0</b> <b>60.4</b> <b>74.4</b>				35.9	35.9				
1001+	Naresuan University	15.85	14.69					21.3	20.9				
1001+	KMUTN	15.52	13.14	<b>22.0</b> <b>21.7</b> <b>29.3</b> <b>22.2</b>				24.9	27.5				
1001+	Silpakorn University	14.45	14.28					27.5	26.1				
1001+	Burapha University (New comer!)	14.29		<b>18.1</b> <b>15.1</b> <b>8.5</b> <b>8.4</b> <b>9.7</b> <b>12.0</b> <b>55.0</b> <b>40.0</b>				26.9	26.1				
1001+	Maharakham University	13.50	14.09					19.3	20.9				
1001+	Srinakharinwirot University	13.17	14.85										

\*self-calculation by percentage of each indicator

# QS-Standardized Method



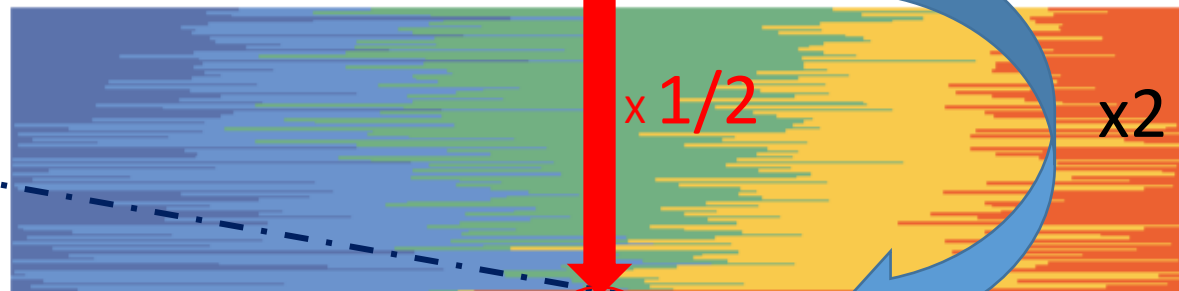
- Arts & Humanities
- Engineering & Technology
- Life Sciences & Medicine
- Natural Sciences
- Social Sciences & Management

BEFORE



1% 17% 51% 24% 6%

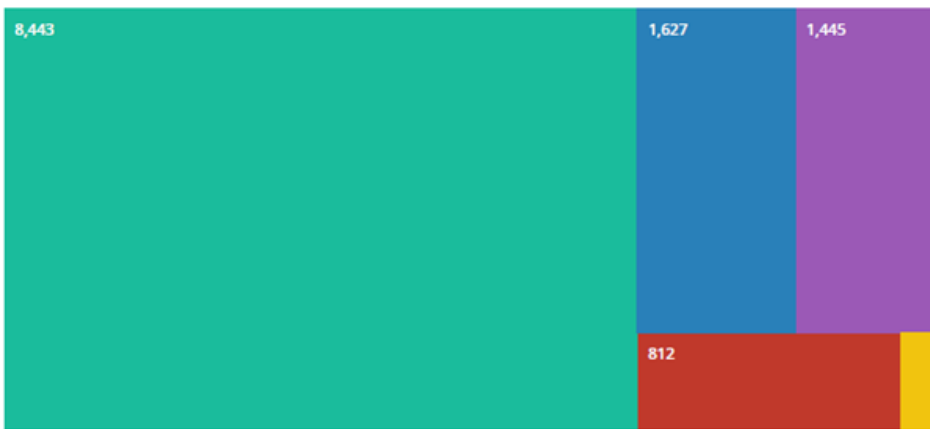
AFTER



15% 23% 26% 24% 11%

## PAPERS

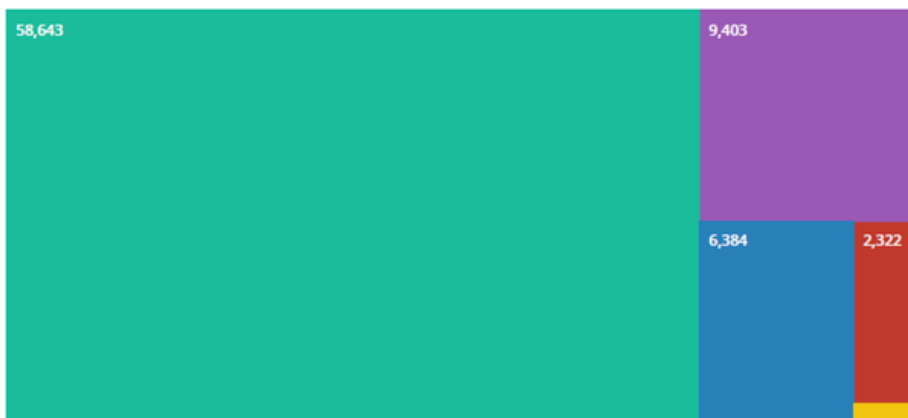
Indexed in Scopus in the 2013-2017 period



- Arts & Humanities
- Engineering & Technology
- Life Sciences & Medicine
- Natural Sciences
- Social Sciences & Management

## CITATIONS (EXCLUDING SELF-CITATIONS)

For the above papers in the 2013-2018 period





มหาวิทยาลัยมหิดล

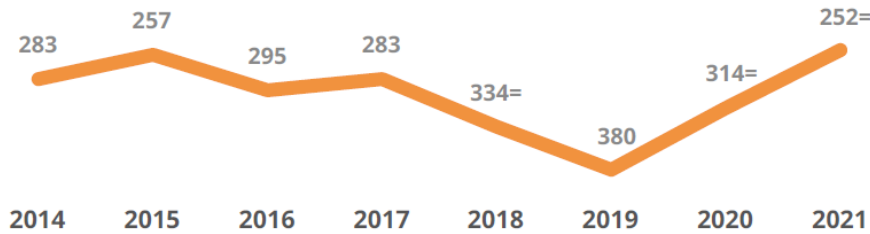


## RANKINGS TREND

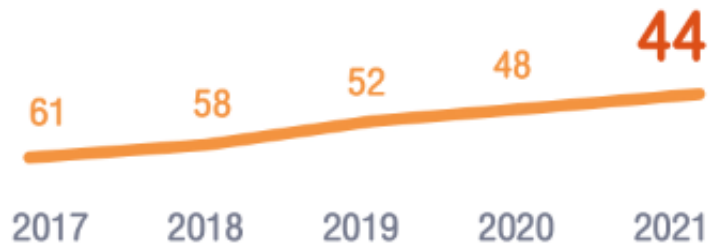
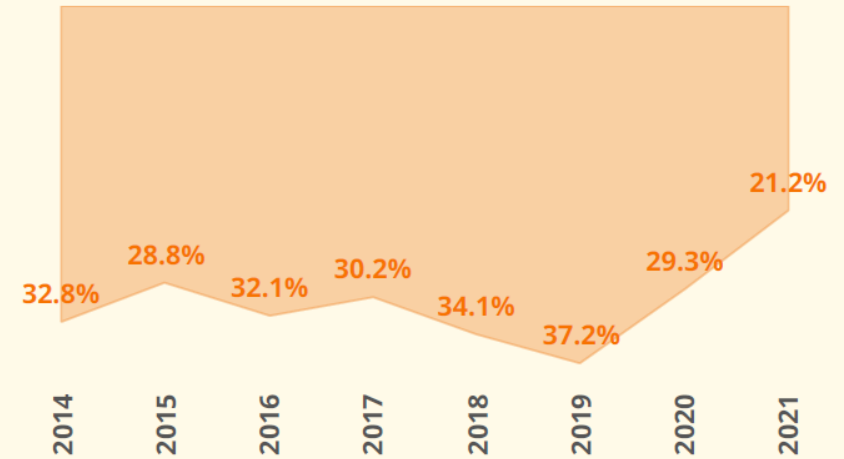
OVERALL RANK

**252=**

OVERALL, THE INSTITUTION IMPROVED ON ITS 2020 PERFORMANCE BY 62 PLACES.



## PERCENTILE EVOLUTION QS WORLD UNIVERSITY RANKINGS



YEAR ON YEAR SWING

Academic Reputation	196	▲	16
Employer Reputation	208	▲	81
Citations per Faculty	601+	▼	
Faculty Student	195	▲	41
International Faculty	601+	▼	
International Students	601+	▼	

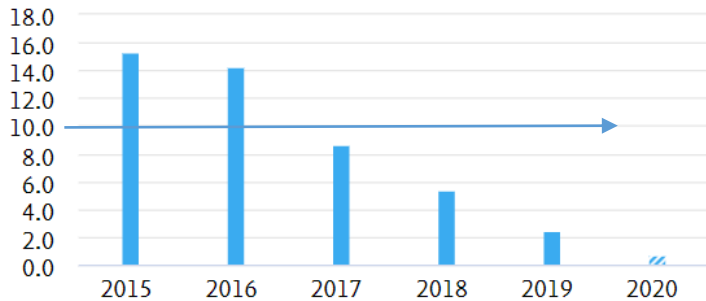


# Research: Output & Impact

2015-2020

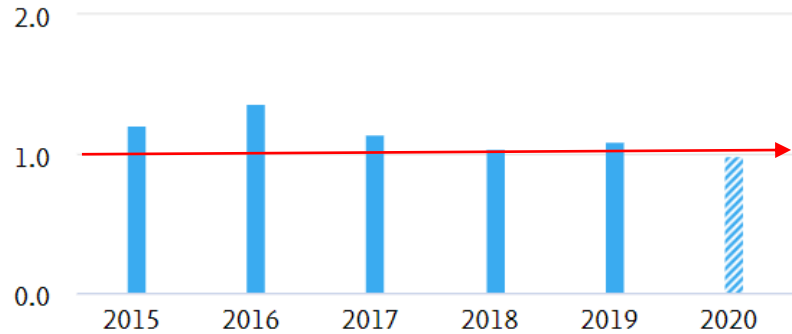
## MU

### Citations per Publication ①



7.3

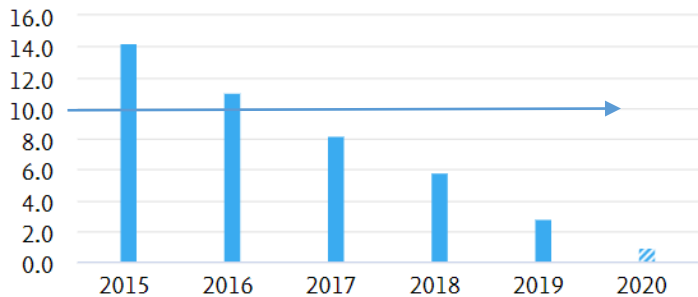
### Field-Weighted Citation Impact ①



1.13

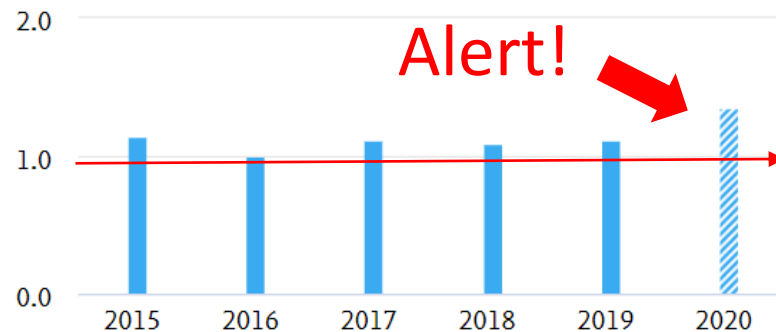
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### Citations per Publication ①



6.8

### Field-Weighted Citation Impact ①



1.13

⚡ Incomplete year ②

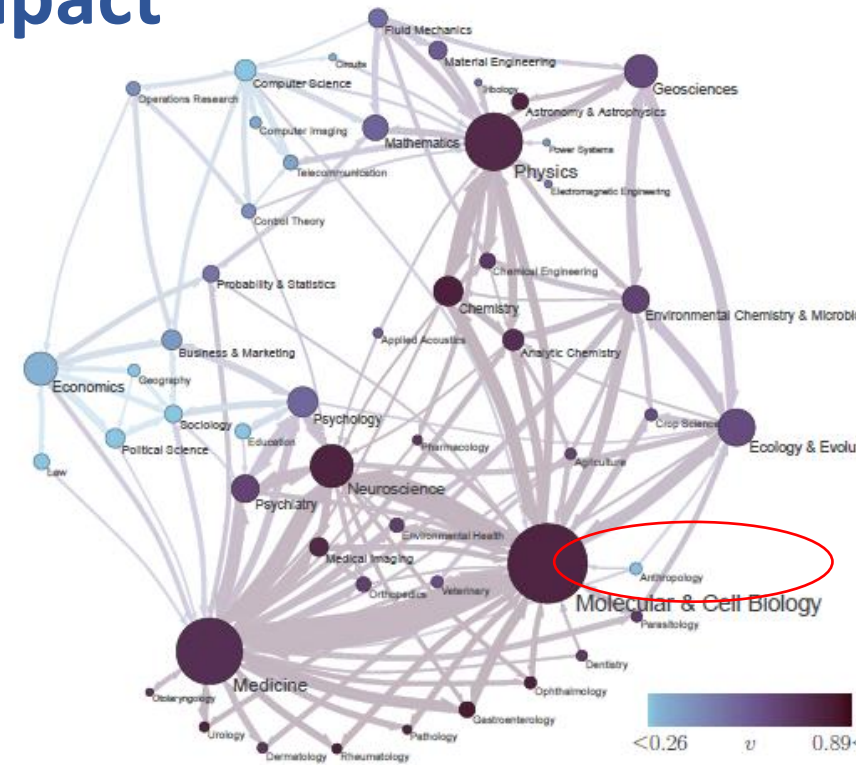
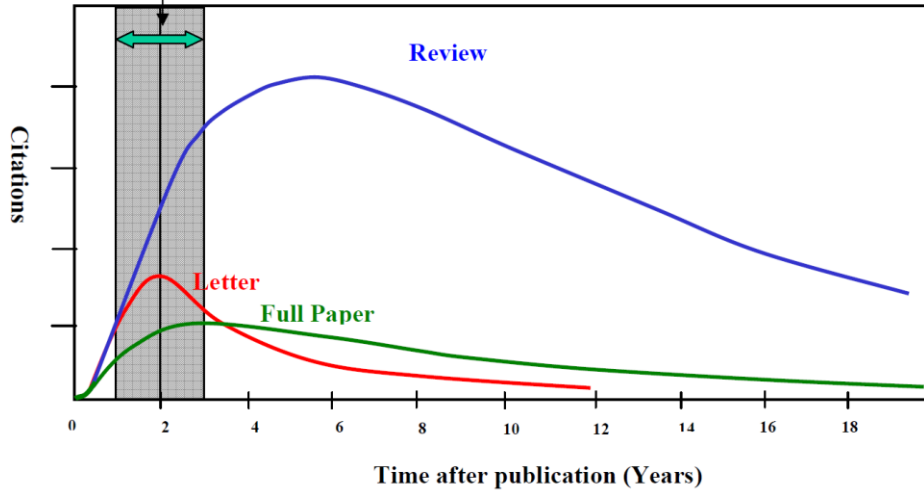
⚡ Incomplete year ②





# To Increase Citation & Impact

Impact Factor window

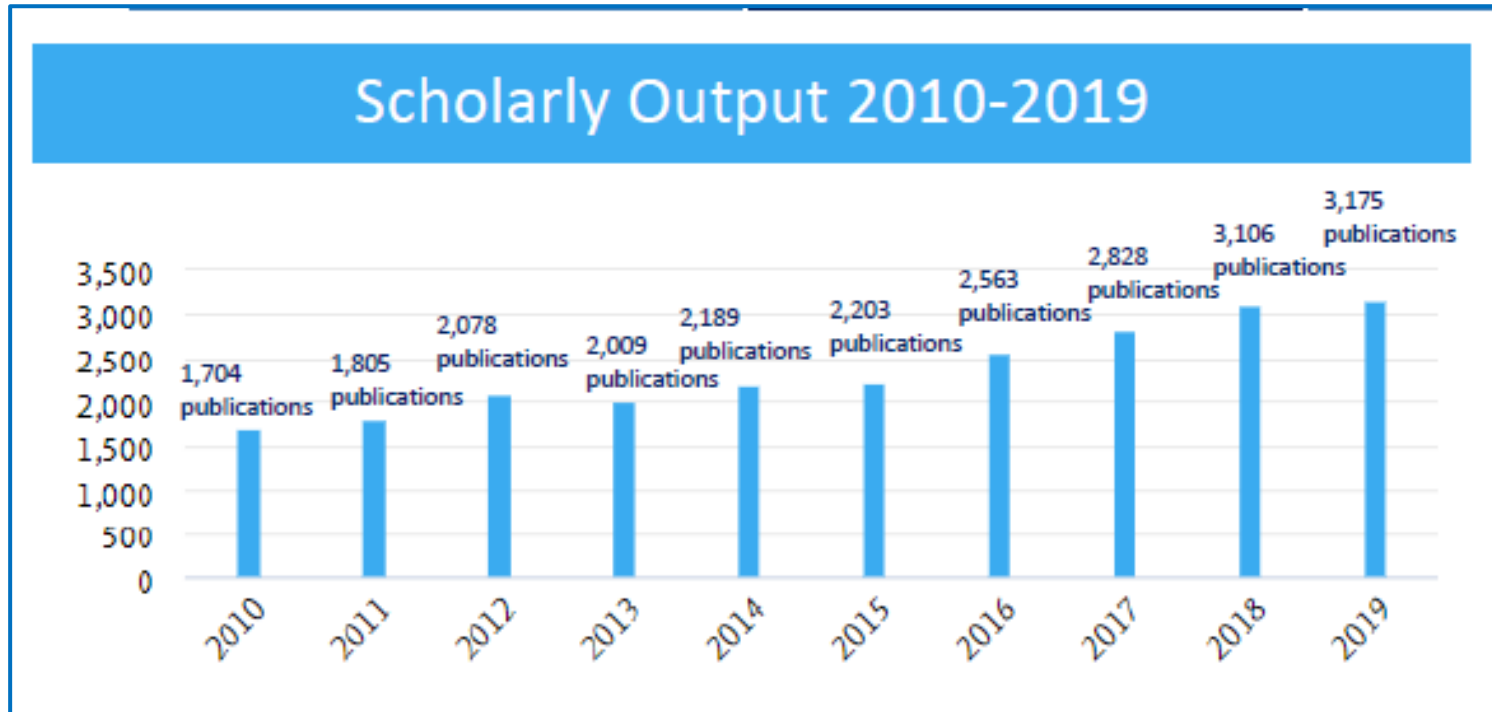


- 42.5% **International collaboration**  
3,689 publications (42.5%) were co-authored with Institutions in other countries  
Citations per Publication: 9.0
- 19.7% **National collaboration**  
1,713 publications (19.7%) were co-authored with other Institutions in Thailand, but not with Institutions in other countries  
Citations per Publication: 3.6
- 34.6% **Institutional collaboration**  
3,005 publications (34.6%) were co-authored with others at Mahidol University, but not with other Institutions  
Citations per Publication: 2.5
- 3.1% **Single authorship**  
271 publications (3.1%) were not co-authored but had a single author  
Citations per Publication: 2.9

Open Access  
Review Article  
Collaborations  
Basic Research



# Research Citation: Compare Q1-Q4

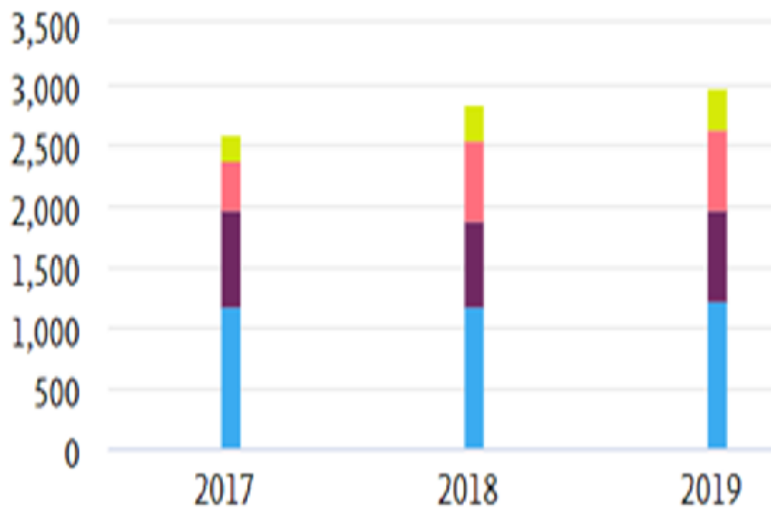


Citation Count	
Q1-Q4	329,659
Q1 only	254,788
Q2 only	53,814

% Contribution to Citation	
Q1	77.3%
Q2	16.3%
Q3-4	6.4%

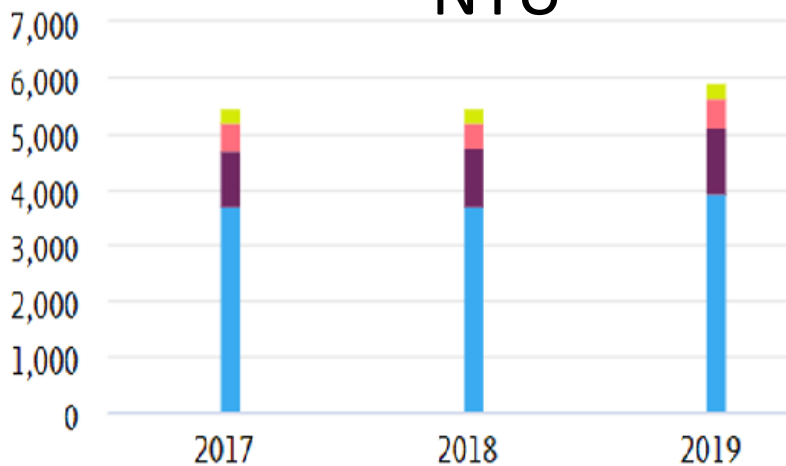
# Journal Quartile: Q1-Q2 is Keys

## MU



Quartiles	Publications ?	Publication share (%)
Q1 (top 25%)	3,589	42.7
Q2 (26% - 50%)	2,272	27.0
Q3 (51% - 75%)	1,726	20.5
Q4 (76% - 100%)	815	9.7

## NTU



Quartiles	Publications ?	Publication share (%)
Q1 (top 25%)	11,428	68.0
Q2 (26% - 50%)	3,256	19.4
Q3 (51% - 75%)	1,444	8.6
Q4 (76% - 100%)	674	4.0



# Robert Merton, The Matthew Effect in Science

Robert Merton's (1910-2003) landmark 1968 paper is qualitative and theoretical, mostly concerned with elucidating the rampant inequities in scientific citation and publication

- The Gospel of Matthew (13:12), "For whosoever hath, to him shall be given, and he shall have more abundance: but whosoever hath not, from him shall be taken away even that he hath."

- *"Eminent scientists get disproportionately greater credit for their contributions to science while relatively unknown scientists tend to get disproportionately less credit for comparable contributions..."*

- "...**(This effect or principle) holds in varying degrees for every social institution...**"



## CWTS Leiden Ranking 2020

	University	P	P(top 10%)	PP(top 10%)
1	Mahidol Univ	3187	178	5.6%
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Home About Rankings Survey Universities GR

Home >> ARWU 2020

2020 2019 2018 2017 2016 2015 2014 2013 2012 2011 2010 2009 2008

### Academic Ranking of World Universities 2020

Top 1000 Methodology Statistics					
World Rank	Institution*	By location Thailand	National/Regional Rank	Total Score	Score on Alumni
401-500	Mahidol University		1	0	
701-800	Chulalongkorn University		2	0	
801-900	Prince of Songkla University		3	0	
901-1000	Chiang Mai University		4	0	

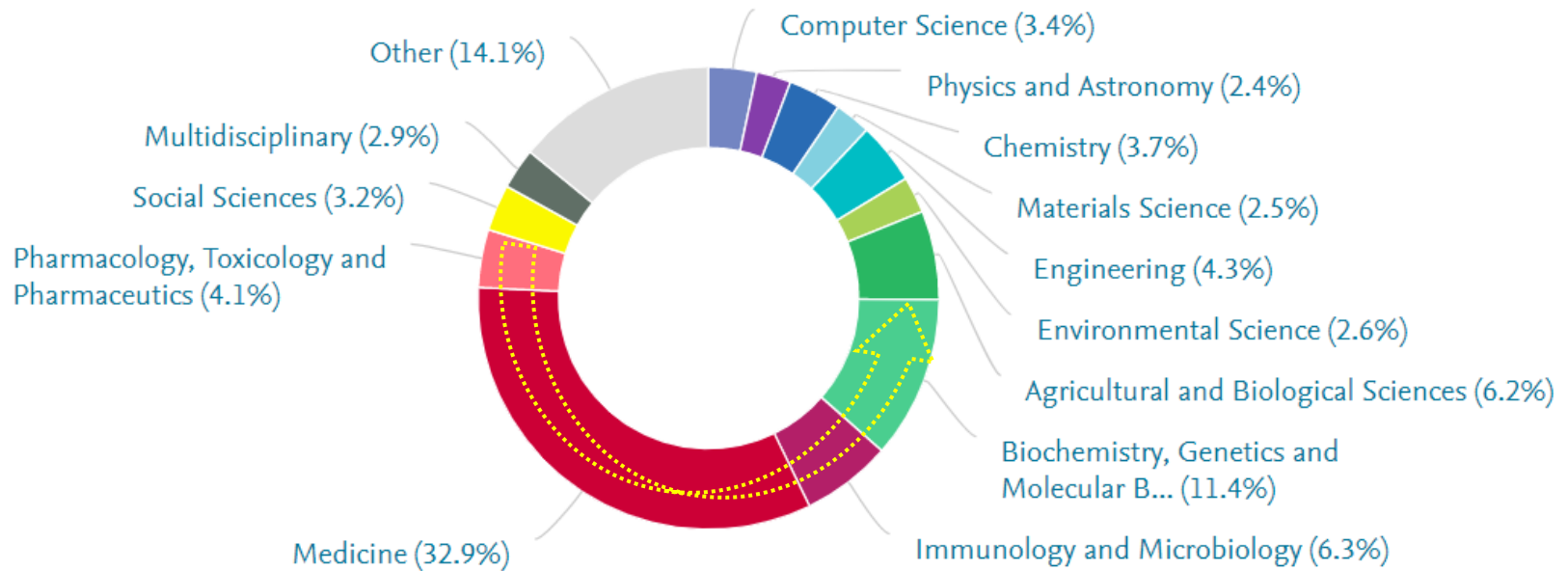


## Mahidol University Rankings

- #511 in Best Global Universities (tie)
- #89 in Best Global Universities in Asia (tie)
- #1 in Best Global Universities in Thailand



# To be Top 100: Subject Ranking



## Mahidol University Subject Rankings



#277 in Biology and Biochemistry (tie)

#244 in Biotechnology and Applied Microbiology (tie)

#617 in Chemistry (tie)

#206 in Clinical Medicine (tie)

#86 in Immunology

#45 in Infectious Diseases

#82 in Microbiology

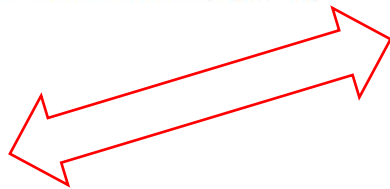
#311 in Molecular Biology and Genetics

#168 in Pharmacology and Toxicology (tie)

#397 in Plant and Animal Science (tie)

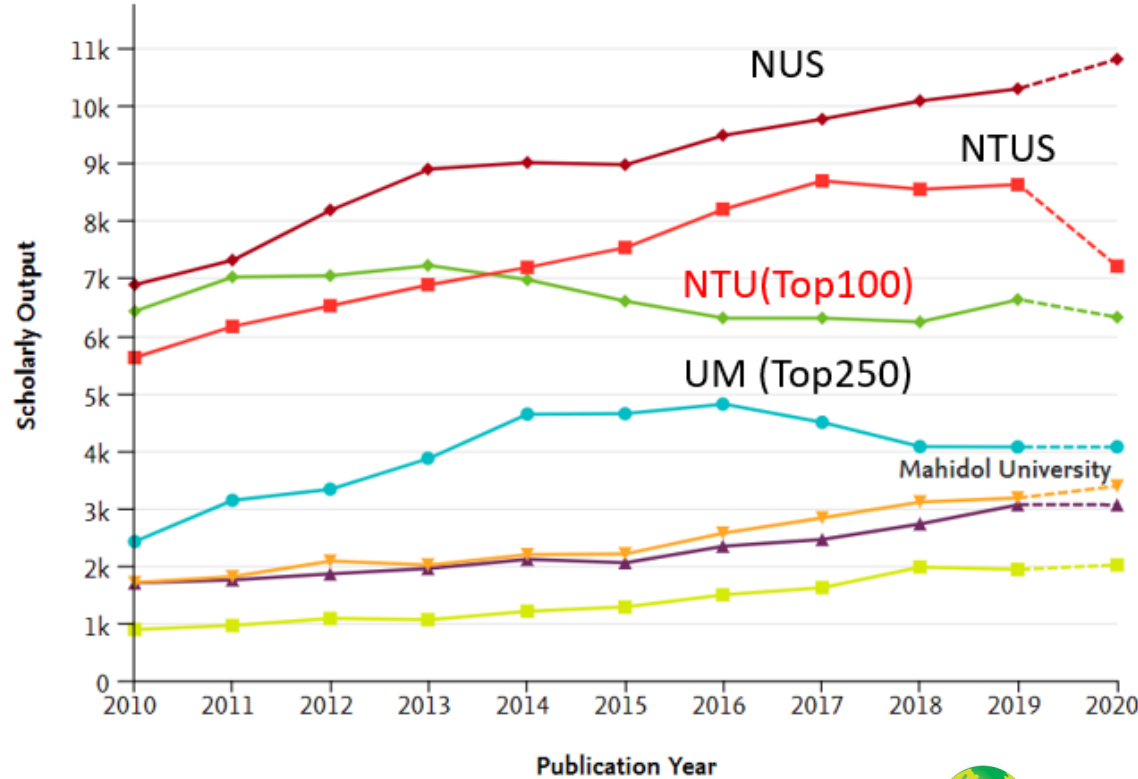
#234 in Public, Environmental and Occupational Health

#423 in Social Sciences and Public Health





# Research Output & University Ranking



	2019	2020
<b>QS WORLD UNIVERSITY RANKINGS</b>	★ 314	<u>252</u>
<b>SCIMAGO INSTITUTIONS RANKINGS</b>	357	359
<b>RUR AROUND UNIVERSITY RANKING</b>	428	<u>399</u>
<b>CWTS Leiden</b>	428	<u>412</u>
<b>ACADEMIC RANKING OF WORLD UNIVERSITIES</b>	400+	400+
<b>University Ranking by Academic Performance</b>	457	<u>448</u>
<b>NTU RANKING</b> Performance Ranking of Scientific Papers for World Universities	493	495
<b>USNews</b> BEST GLOBAL UNIVERSITIES 2019	522	<u>511</u>
<b>THE WORLD UNIVERSITY RANKINGS</b>	600+	600+



75 → 62

Av.=14 ↑



## Future: Short Term Plan

- Striving From 400+/- to 300
- Top 100 in Life Sc-Pharmacy
- Maintain Top Rank of Thai-Univ.
- Increase International Co-authors
- Focus on Quality: Q1 & Q2 Journals
- Promote High Impact Frontier Research
- Partner with Prominent International Cluster