

List of programs and projects financed by Slovenian Research Agency and Ministry of Higher education, Science and Technology which collaborate with NMR Centre at National Institute of Chemistry in 2020

National Institute of Chemistry			
#	Program	P.I.	Program no.
1.	Kemija in struktura bioloških učinkovin	Janez Plavec	P1-0242
2.	Folding in dinamika biomolekularnih sistemov	Franci Merzel	P1-0010
3.	Nanoporozni materiali	Nataša Zabukovec Logar	P1-0021
4.	Polimeri in polimerni materiali s posebnimi lastnostmi	Ema Žagar	P2-0145
5.	Funkcionalna živila in prehranska dopolnila	Irena Vovk	P1-0005
6.	Napredni materiali za nizkoogljično in trajnostno družbo	Miran Gaberšček	P2-0393
7.	Molekularna biotehnologija: od dinamike bioloških sistemov do aplikacij	Roman Jerala	P4-0176
8.	Analitika in kemijska karakterizacija materialov ter procesov	Samo Hočevar	P1-0034
9.	Molekulske interakcije	Gregor Anderluh	P1-0391
10.	Integralni pristop k preprečevanju onesnaževanja voda	Albin Pintar	P2-0150
#	Project	P.I.	Project no.
11.	Kovinsko-organski porozni materiali za selektivno shranjevanje in pretvorbo CO ₂ v uporabne produkte	Matjaž Mazaj	J1-8146
12.	Razvoj mikroporoznih aluminofosfatnih ogrodij za pridobivanje pitne vode iz zraka s pomočjo sonca	Krajnc Andraž	Z1-9171
13.	Dinamični vidik vezave ligandov na proteine	Simona Golič Grdadolnik	J1-8145
14.	Vpliv intermolekularnih interakcij na strukturo peptidov in proteinov	Jože Grdadolnik	J1-1705
15.	Razvoj multifunkcionalnih učinkovin za zdravljenje Alzheimerjeve bolezni	Stanislav Gobec	L1-8157
16.	Razvoj novih zaviralcev Hsp90 s protitumornim delovanjem	Tihomir Tomašič	J1-1717
Jožef Stefan Institute			
#	Program	P.I.	Program no.
17.	Magnetna resonanca in dielektrična spektroskopija pametnih "novih" materialov	Janez Dolinšek	P1-0125
18.	Svetloba in snov	Drevenšek-Olenik Irena	P1-0192

19.	Fizika mehkih snovi, površin in nanostruktur	Slobodan Žumer	P1-0099
20.	Eksperimentalna biofizika kompleksnih sistemov in slikanje v biomedicini	Janez Štancar	P1-0060
21.	Anorganska kemija in tehnologija	Tavčar Gašper	P1-0045
22.	Sodobni anorganski materiali in nanotehnologije	Spreitzer Matjaž	P2-0091
23.	Proteoliza in njena regulacija	Boris Turk	P1-0140
24.	Kroženje snovi v okolju, snovna bilanca in modeliranje okoljskih procesov ter ocena tveganja	Milena Horvat	P1-0143
25.	Toksini in biomembrane	Igor Križaj	P1-0207
26.	Keramični in komplementarni materiali za napredne inženirske in biomedicinske aplikacije	Kocjan Andraž	P2-0087
27.	Kemija za trajnostni razvoj	Urška Lavrenčič Štangar	P1-0134

#	Project	P.I.	Project no.
28.	Fazni prehodi v sistemih periodičnih nukleotidnih ekspanzij povezanih z nevrodegenerativnimi boleznimi	Drevenšek-Olenik Irena	J7-9399

Faculty of Chemistry and Chemical Technology, University of Ljubljana

#	Program	P.I.	Program no.
29.	Kemijsko inženirstvo	Matjaž Krajnc	P2-0191
30.	Fizikalna kemija	Vojeslav Vlachy	P1-0201
31.	Napredna anorganska kemija	Anton Meden	P1-0175
32.	Sinteze in transformacije organskih spojin. Novi reagenti v stereoselektivni in regioselektivni sintezi aminokislin kot intermediatov v organski sintezi	Jurij Svete	P1-0179
33.	Organska kemija: sinteza, struktura in aplikacija	Janez Košmrlj	P1-0230

Faculty of Pharmacy, University of Ljubljana

#	Program	P.I.	Program no.
34.	Farmacevtska kemija: načrtovanje, sinteza in vrednotenje učinkovin	Danijel Kikelj	P1-0208
35.	Farmacevtska tehnologija in biofarmacija: od dostavnih sistemov učinkovin do terapijskih izidov zdravil pri otrocih in starostnikih	Albin Kristl	P1-0189
36.	Farmacevtska biotehnologija: znanost za zdravje	Janko Kos	P4-0127

Biotechnical Faculty, University of Ljubljana			
#	Program	P.I.	Program no.
37.	Biokemijska in biofizikalno-kemijska karakterizacija naravnih snovi	Nataša Poklar Urlih	P4-0121
38.	Les in lignocelulozni kompoziti	Miha Humar	P4-0015
39.	Integrirano živilstvo in prehrana	Vidrih Rajko	P4-0234
40.	Prehrana in mikrobna ekologija prebavil	Bojana Bogovič Matijašič	P4-0097
Faculty of Civil and Geodetic Engineering, University of Ljubljana			
#	Program	P.I.	Program no.
41.	Vodarstvo in geotehnika: orodja in metode za analize in simulacije procesov ter razvoj tehnologij	Matjaž Mikoš	P2-0180
Agricultural Institute of Slovenia			
#	Project	P.I.	Program no.
42.	Izdelava izotopskih analiz vzorcev vina s slovenskim geografskim poreklom letnika 2017 (strokovna naloga)	Franc Čuš	pogodba z MKO
43.	Prehrana otrok in odraslih kot zaščitni dejavnik ali dejavnik zdravstvenih tveganj	Rogelj Irena	L3-8213
National Institute of Biology			
#	Program	P.I.	Program no.
44.	Biotehnologija in sistemska biologija rastlin	Maja Ravnikar	P4-0165
Faculty of Mechanical Engineering, University of Maribor			
#	Program	P.I.	Program no.
45.	Tekstilna kemija	Fras Zemljič Lidija	P2-0118
Institute of Oncology, Ljubljana			
#	Program	P.I.	Program no.
46.	Razvoj in ovrednotenje novih terapij za zdravljenje malignih tumorjev	Gregor Serša	P3-0003

National Laboratory of Health, Environment and Food, Maribor			
#	Program	P.I.	Program no.
47.	Črevesna mikrobiota - vloga v zdravju in pri boleznih	Maja Rupnik	P3-0387

Slovenian National Building and Civil Engineering Institute, Ljubljana			
#	Program	P.I.	Program no.
48.	Gradbeni objekti in materiali	Andraž Legat	P2-0273

SRIP- Smart Specialisation Strategy (S4)			
#	Project	P.I.	Project no.
49.	Food4Future	Irena Vovk	OP20.00366

Research projects with high schools			
#	Project	P.I.	School
50.	Vpliv genetskih in epigenetskih sprememb povezanih z razvojem različnih obolenj na strukturne lastnosti DNA	Alenka Mozer, Uroš Javornik	Gimnazija Vič

International projects			
#	Project	P.I.	Project no.
51.	Quantitative analysis for the non-canonical structures of pathogenic related nucleic acids	Janez Plavec, Naoki Sugimoto	BI-JP/18-20-002
52.	Sodelovanje v shemi »Food analysis using Isotopic Techniques – Proficiency Testing Scheme« (FIT-PTS 2017) – mednarodna primerjalna shema	Franc Čuš	V okviru strokovne naloge 1.1.
53.	High energy lithium sulphur cells and batteries	Robert Dominko	666221-HELIS
54.	A new class of powerful materials for electrochemical energy storage: Lithium-rich oxyfluorides with cubic dense packing	Robert Dominko	711792-LiRichFCC
55.	RETINA, Opening research laboratories to innovative industrial applications	Giovanni de Ninno	Interreg SI-AT 61
56.	LightDyNAMics, DNA as a training platform for photodynamic processes in soft materials	Peter Podbevšek	765266
57.	Napredne NMR metode za študij paramagnetnih in lokalno neurejenih katalitskih materialov	Gregor Mali	N1-0079

CERIC-ERIC Central European Research Infrastructure Consortium

#	Project	P.I.	Project no.
58.	Investigation of folding behavior and structural features of human EGFR proximal promoter	Claudia Sissi	Ceric-20192152
59.	Structural characterization of the HTLV G4/BRACO-19 unique interaction	Emanuela Ruggiero	Ceric-20192137
60.	Structural characterization of HIV-1 i-motif as new antiviral target	Emanuela Ruggiero	Ceric-20192136
61.	Structural studies of C-rich telomeric overhang from <i>Caenorhabditis elegans</i>	Lukas Trantirek	Ceric-20192131
62.	Interactions of Complexed Irbesartan in Cyclodextrins with dioleoylphosphatidylcholine vesicles	Dimitrios Ntountaniotis	Ceric-20192129
63.	Insights into noncanonical structures of telomeric C-rich sequence from ALT-activated cancer cells	Lukas Trantirek	Ceric-20192121
64.	NMR-based structural study of ligand binding to model G-quadruplexes	Daniela Montesarchio	Ceric-20192080
65.	The study of the role of aluminium in zeolite synthesis	Ana Palcic	Ceric-20197139
66.	MAS NMR study of deactivation mechanism of MgO-Al ₂ O ₃ and MgO-Al ₂ O ₃ -CeO ₂ catalysts for Guerbet alcohols condensation	Karina Valihura	Ceric-20197122
67.	Characterization of bi-functional (Ni/Al)-zeolite catalysts for vapor-phase catalytic hydrogenation of Levulinic Acid Conversion to gamma-Valerolactone	Iztok Arcon	Ceric-20197108
68.	Effect of Mg, Sr, La and Ce dopants on structural and textural properties of Ca-hydroxyapatites as catalyst for Guerbet alcohol condensation	Olga Larina	Ceric-20197049
69.	Biomimetic selenium substituted calcium phosphates derived from biogenic source	Antonia Ressler	Ceric-20197002
70.	Complete structural characterization of a new artificial water channel	Dan-George Dumitrescu	Ceric-20192112
71.	Investigation of the mechanochemical treatment of zeolites	Ana Palcic	Ceric-20192096
72.	Assessment of deterioration in archaeological bone material for conservation purposes	Alberto Viani	Ceric-20192076
73.	Investigation of sulfate attack and carbonation process on Portland cement mixtures prepared from synthesized clinker phases	Konstantinos Sotiriadis	Ceric-20192066
74.	Properties of Ketorolac and Aspirin in Zinc Oxide and Graphene Oxide Complexes	Darya Radziuk	Ceric-20192043
75.	Study of deactivation mechanism of MgO-Al ₂ O ₃ and MgO-Al ₂ O ₃ -CeO ₂ catalysts for Guerbet alcohols condensation	Olga Larina	Ceric-20192036
76.	Ex-situ investigation of the structural changes of MgO, Al ₂ O ₃ and MgO-Al ₂ O ₃ catalysts during plasma-catalytic conversion of CH ₄ +CO ₂ into	Denys Samoilenko	Ceric-20192025

	valuable chemicals		
77.	Understanding the electrochemical mechanism and performance of calcium-sulfur batteries	Lorenzo Stievano	Ceric-20192018
78.	Lipid-protein interactions - focusing on the role of lipocalins and non-by-layer lipid phases	Gyozo Garab	Ceric-20197143
79.	Interactions of Complexed Irbesartan in Cyclodextrins with dioleoylphosphatidylcholine vesicles	Dimitrios Ntountaniotis	Ceric-20192129

EN–FIST Centre of Excellence (Excellent NMR – Future Innovation for Sustainable Technologies)

#	Project	P.I.	Project no.
80.	Structure and analysis of organic compounds in solution with the use of NMR	Primož Šket	RRP2
81.	Synthetic Biology	Roman Jerala	RRP5

COBIK- Centre of Excellence for Biosensors, Instrumentation and Process Control

#	Project	P.I.	Project no.
82.	Basic and applicative research on bacteriophages	Matjaž Peterka	-

Contracts with partners from industry

#	Project	P.I.	Project no.
Krka, d.d., Novo mesto			
83.	Pogodba št. II/25-106 259 – 106632/2007	Janez Plavec	II/25-106 259 - 106632/2007
84.	Svetovanje pri vzdrževanju NMR sistema	Janez Plavec	II/36- 106258- KR/2015
85.	Pogodba o opravljanju analiznih storitev na Centru za NMR spektroskopijo	Janez Plavec	RA/87-2018
LEK d.d., Sandoz Development Center Slovenia, Ljubljana			
86.	Master services agreement (MSA)	Samo Andrenšek	14590-2018
Pliva d.d., Zagreb			
87.	Pogodba o sodelovanju na področju NMR spektroskopije	Janez Plavec	317/05-NMR
Melamin kemična tovarna d.d., Kočevje			
88.	Pogodba o sodelovanju	Janez Plavec	231/08
MGC-Pharmaceuticals d.o.o., Ljubljana			
89.	Pogodba o opravljanju analiznih storitev	Samo Andrenšek	

DECHRA, Velika Britanija		
90.	Pogodba o sodelovanju	Samo Andrenšek
Ferročrtalič d.o.o., Dolenjske Toplice		
91.	Pogodba o sodelovanju	Janez Plavec
Bia d.o.o., Ljubljana		
92.	Pogodba o sodelovanju	Janez Plavec
INA d.d., Zagreb		
93.	Pogodba o sodelovanju	Janez Plavec
Inšpektorat RS za kmetijstvo in okolje		
94.	Kontrola geografskega porekla slovenskih vin	Franc Čuš
ACIES Bio Ltd, Ljubljana		
95.	Raziskave na področju usmerjene sinteze organskih spojin	Gregor Kosec
96.	Strukturne študije makrolidov z NMR	Stojan Stavber
Helios d.d., Domžale		
97.	Karakterizacija vzorcev z NMR spektroskopijo	Janez Plavec
ALKEMIKA Ltd.		
98.	Sodelovanje na področju NMR	Alen Čusak