	Formalization of the scientific claim with the Super-Pattern						
Claim	Context	Subject	Qualifier	Relation	Object	Scientific claim as an AIDA sentence	Article identification
1	NONE	new-series-of-chitosan-based- polyurethane-elastomers-using- PCL	generally	is same as	synthesizable-material	A new series of chitosan based polyurethane elastomers (PUEs) using aromatic diisocyanate poly(ε-caprolactone) (PCL) can be synthesized.	https://www.semanticscholar.org/paper/Synthesis-and- molecular-characterization-of-based-Zia- Anjum/25610e37a5f82b59056f046526df5aab6c16776e
2	pperant-research	inexpensive-photocell-for- arduino-vb-interface	can generally	contributes to	recording-controlling-events-activity	Inexpensive photocells for the Arduino-Visual Basic interface can be used for recording and controlling events in operant research.	https://www.semanticscholar.org/paper/New-Technologies- Applied-to-Operant-Research%3A-for-Escobar-Santill%C3% A1n/0b5783130ba4447156b271d2cdcf9894a40ff995
	nterleukin-12-produced-by- Foll-like receptor-cells	Behcet's-disease	generally	contributes to	increased-T-helper1-cell-number	Interleukin (IL)-12 produced by Toll-like receptor (TLR)-expressing cells contributes to the induction of excessive [immune response] T helper 1 (Th1) -dominant immune responses in intestinal [disease] Behçet's disease (BD).	https://www.semanticscholar.org/paper/Involvement-of-innate-immunity-in-the-pathogenesis-Nara- Kurokawa/c25683072710c6ee76e38ff72ca95f0d315b543b
4	sinorhizobium-meliloti	molecular-mechanisms- participateIn-symbiosis	sometimes	is same as	molecular-mechanisms-participateIn- pathogenesis	Symbiosis and pathogenesis of Sinorhizobium meliloti share common molecular mechanisms.	https://www.semanticscholar.org/paper/Transcriptome- analysis-of-Sinorhizobium-meliloti-Ampe- Kiss/28de6940e26f1c0986c9d25a5a5f395d050d812c
5	dictyostelium-discoideum	RrpC	generally	prevents	reverse-transcription-of-DIRS1- retrotransposon	RrpC in Dictyostelium discoideum silences post-transcriptionally the retrotransposon DIRS-1.	https://www.semanticscholar.org/paper/The-Dictyostelium-discoideum-RNA-dependent-RNA-RrpC-Wiegand-Meier/b111bc966cc6928a9fcbcaebc7f9d37e2888fe8f
6	asterix-comic-books	traumatic-brain-injury	generally not	causes	permanent-neurological-deficit	In the Asterix illustrated comic books, incidences of traumatic brain injury lead to no permanent neurological deficits.	https://www.semanticscholar.org/paper/Traumatic-brain- injuries-in-illustrated-literature%3A-Kamp- Slotty/184f548cd80c40cf3a45dc2135d2c2d2cfed9df3
7	SIMPLE STATEMENT	unique-state-of-Being-in- immersive-virtual-environments	NONE	has created	paradigm-shift-in-what-humans-are- now-able-to-experience	The unique state of Being in immersive virtual environments (VEs) has created a paradigm shift in what humans are now able to experience.	https://www.semanticscholar.org/paper/Performing-in- (virtual)-spaces%3A-Embodiment-and-in- Morie/80cb2b87b060859c47073a1c4f1ca7c2d4ae292e
	piodiesel-transeterification- eactions	use-of-ultrasound-irradiation	generally not	requires	additional-heating-as-catalyst-for- chemical-reaction	The use of ultrasound irradiation in biodiesel transesterification reactions does not require any additional heating.	https://www.semanticscholar.org/paper/Biodiesel-by- Transesterification-of-Rapeseed-Oil-A-Encinar- Pardal/eaab45d248cebb1d42af6377f4783b6483d9d8ff
	veb-representations-of- people	activity-of-assigning-NDC-labels	can generally	contributes to	people-directory-service	Assigning Nippon Decimal Classification (NDC) numbers to people on the Web, labels can be assigned to people and a NDC-based people directory can be built.	https://www.semanticscholar.org/paper/People-search- using-NDC-classification-system-Murakami- Ura/23a6ae24c8ca8abd7b60c876e5f30b649ce459cd
10 V	very-deep-neural-networks	performance-of-training-with- explicit-reformulation-of-layers- with-learning-residual-functions- with-reference-to-input-layers	generally	has larger value than	performance-of-training-with- learning-unreferenced-functions	Very deep neural networks that use training that explicitly reformulates the layers as learning residual functions with reference to the layer inputs instead of learning unreferenced functions are easier to optimize.	https://www.semanticscholar.org/paper/Deep-Residual- Learning-for-Image-Recognition-He- Zhang/2c03df8b48bf3fa39054345bafabfeff15bfd11d
11	nenopausal-women	intake-of-licorice-roots	generally	decreases	frequency-of-vasomotor-hot-flashes	The intake of licorice roots decreases the frequency of vasomotor hot flashes in menopausal women.	https://www.semanticscholar.org/paper/Effects-of-Licorice- on-Relief-and-Recurrence-of-Hot-Nahidi- Zare/bafd823a17b202093bd584ec5195ffb3a47d4251
12 E	lapanese-higher-level- education-curricula	excellence-of-curriculum	generally	requires	CLIGAL-L1-japanese-L2-english	CLIGAL (content language integrated global awareness learning) in L1 Japanese and L2 English are necessary to create excellence across the Japanese higher education curriculum.	https://www.semanticscholar.org/paper/Creative-Excellence- in-the-Japanese-University%3A-and-Brady- Higgins/630b2a428b277bc20be1db4e97fc5b40d6481898
13	omicus-piniperda	lodgehole-pine	generally	is necessary and sufficient for	survival	Tomicus piniperda can survive entirely on lodgepole pine.	https://www.semanticscholar.org/paper/Pinus-contorta-as-a-potential-host-for-Tomicus-LL%C3%A5ngstr%C3%B6m-Hellqvist/69ec6852f92f784752b3d404404beca02b76293e
14	NONE	human-ovarian-cancer-cell-lines- and-human-endometrial-cancer- cell-lines	frequently	includes	misidentification	Human ovarian and endometrial cancer cell lines are frequently misidentified.	https://www.semanticscholar.org/paper/DNA-profiling- analysis-of-endometrial-and-ovarian-Korch- Spillman/d7f261350333ac7149afee8062ae8c59e7695448
15	aser-applications	information-about-relative- strength-of-individual-modes-of- a-laser-beam	can sometimes	enables	evaluation-of-beam-quality	For certain important applications information about relative strength of the individual modes of a laser beam is sufficient to evaluate beam quality.	https://www.semanticscholar.org/paper/Online-laser-beam-characterization-by-means-of-Duparre-Rockstuhl/cb8b45f16d53e1915b30d909e56434721ffe70d0
16	SIMPLE STATEMENT	average-time-debt-restructurings- with-private-creditors-in- democracies	NONE	has a value larger than	average-time-debt-restructurings- with-private-creditors-in-autocracies	Debt restructurings with private creditors in democracies experience longer restructurings than in autocracies.	https://www.semanticscholar.org/paper/Time-for-a-haircut% 3A-political-regimes-and-sovereign- Mamone/768d1971c11221a82422e4d416112915129917ab
17	NONE	viable-quaternion-based- complementary-observers-for- rigid-body-attitude-estimation	generally	contributes to	human-motion-applications	Viable quaternion-based complementary observers that are designed for rigid body attitude estimation are promising for human motion applications such as ambulatory monitoring.	https://www.semanticscholar.org/paper/Complementary- Observer-for-Body-Segments-Motion-by-Fourati- Manamanni/b18c35636d8b29fe0dc7ff879781d8a6cd358c9
18	dense-hydrogen-plasma	quantum-diffraction-effect	generally	has larger value than	electron-ion-correlation-effect	In dense hydrogen plasmas, quantum diffraction effects prevail over electron-ion correlation effects.	https://www.semanticscholar.org/paper/Correlation-effects- on-the-temperature-relaxation-Daligault- Dimonte/d8de6a0b4c86483e89f66e4fef6445c0b5a68a5b
19	ous-networks	application-of-multi-agent- paradigm	can generally	contributes to	improvement-of-management-of-bus-networks	The multi-agent paradigm is beneficial for improving the management of bus networks.	https://www.semanticscholar.org/paper/An-Agent-oriented-approach-to-Transportation-Balbo- Pinson/108e7f7aaa0db3a739bd1d485fc5f67765588331
	acute-anterior-circulation- cerebral-infarction	efficacy-treatment-with- shuxuetong-and-butylphtalide	generally	has larger value than	efficacy-treatment-with-shuxuetong	Treatment of acute anterior circulation cerebral infarction with Shuxuetong and Butylphthalide is more efficacious than treatment with Shuxuetong alone.	https://www.semanticscholar.org/paper/The-Efficacy-of- Butylphthalide-and-Shuxuetong-in-of- Na/0668b4e01e5971767a2bbafa93e3771dd78901e2
S	patients-with-acute-embolic- stroke-in-anterior-cerebral- circulation	treatment-with-hyperbaric- oxygen-therapy-and-with- intravenous-edaravone- administration	generally	is same as	effective-treatment	Hyperbaric oxygen therapy combined with intravenous edaravone administration is effective for the treatment of patients with acute embolic stroke in the anterior cerebral circulation.	https://www.semanticscholar.org/paper/Hyperbaric-oxygen-combined-with-intravenous-for-of-Imai-Mori/81dfe750306ab6ccf4a4de1161be338e551f1006
22	DMET-array	SNP-call-rate-required-for-saliva- derived-DNA	generally	has smaller value than	SNP-call-rate-required-for-blood-derived-DNA	Saliva-derived DNA requires fewer SNP calls compared to blood-derived DNA on the DMET Array.	https://www.semanticscholar.org/paper/Genotyping- Performance-between-Saliva-and-Genomic-A-Hu- Ehli/135fd26cf074ef77284176eb7f731dd9f664a829
23	steel-plant-in-Thailand	CO2-emission	frequently	is caused by	electricity-generation	One of the major CO2 emission sources in Thai steel industry is electricity generation.	https://www.semanticscholar.org/paper/The-current- situation-on-CO2-emissions-from-the-in-Sodsai- Rachdawong/b19d8ae52b6ee193c106966c830ac4ec738e3 5ca

			with the Super-Pattern	au.	Scientific claim as an AIDA sentence	Article identification
Context	Subject	Qualifier	Relation	Object		
caladenia-orchid	mychorrhizal-specificity	generally not	inhibits	distribution-at-landscape-level	Mycorrhizal specificity in Caladenia orchids does not limit their distribution at a landscape level.	https://www.semanticscholar.org/paper/Mycorrhizal- specificity-in-widespread-and-Caladenia-Oktalira- Whitehead/493282c61ee8929593a2bf1641c73addefae05
NONE	dose-response-relationship- hasResponseType-congenital- toxicity-and-hasDoseType- tetrahydrocannabiol	generally	is same as	non-linear-sigmoidal-relationship	Tetrahydrocannabinol (THC) shows a non-linear sigmoidal dose-response relationship in terms of congenital toxicity.	https://www.semanticscholar.org/paper/Chromothripsis-arepigenomics-complete-causality-Reece- Hulse/70f5097bf5e3877e9d7b17697e602dd7f1fa0dd0
caprine-animals-at-a-farm- in-wayanad-district-kerala- south-india	gastrointestinal-nematode	mostly	is same as	strongylosis	Strongylosis is the most predominant gastrointestinal nematode in a caprine farm of Wayanad district, Kerala, South India.	https://www.semanticscholar.org/paper/Pattern-of- Occurrence-of-Gastrointestinal-in-an-of-Sanalkumar- Purayil/dce7ffa593d0f515a68b20c369c1b71337df971b
NONE	process-of-Khalfbadam-et-al- electrolysis-filter-and- bioelectrochemical-system	can generally	contributes to	treatment-of-particulate-rich wastewater	A novel process for the treatment of particulate-rich wastewater consisting of an electrolysis filter and a bioelectrochemical system (BES) has desirable features for practical application.	https://www.semanticscholar.org/paper/Sequential-solid-entrapment-and-in-situ-alkaline-of-Khalfbadam- Ginige/98f973166d46de4cbdb5c48f07e69744ddc57e86
SIMPLE STATEMENT	improved-algorithm-based-on- dark-channel-prior	NONE	is superior	algorithm-based-on-dark-channel- prior	An improved haze removal algorithm based on dark channel prior is superior.	https://www.semanticscholar.org/paper/Improved-image- haze-removal-algorithm-based-on-fast-Yu- Pan/7fceec3adf0136c08092f3dc891630e81f538c2a
NONE	Fourier-multiplier-operator-with- symbol-that-satisfies-Hytonen- anisotropic-Mihlin-type-condition	always	is same as	Fourier-multiplier-operator-that-is-bounded-on-lp	An anisotropic Mihlin-type condition on the symbol guarantees the boundedness of the associated Fourier multiplier operator on $\$ 1½-\p\\\\nip\\\p\\\p\\\nip\\\nip\\\nip\\\nip\\\nip\\\nip\\\nip\\\nip\\\nip\\\nip\\\nip\\\nip\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\nip\\\\\nip\\\\\nip\\\\\nip\\\\nip\\\\\nip\\\\\nip\\\\\nip\\\\\nip\\\\\nip\\\\\\nip\\\\\\nip\\\\\\\\	https://www.semanticscholar.org/paper/Anisotropic-Four multipliers-and-singular-for-Hyt%C3% B6nen/cc89a99f5dc5d65d2f62da16bba43d01b1c3a294
goat-meat-nuggets	inclusion-of-enoki-msw-powder	generally	increases	oxidative-stability	The inclusion of enoki (Flammulina velutipes) mushroom stem waste (MSW) powder significantly improves the oxidative stability of goat meat nuggets.	https://www.semanticscholar.org/paper/Application-of-E Mushroom-(Flammulina-Stem-as-Banerjee- Das/1b9603efcadca239b4b0c6b41275539b1167ddad
coal-fired-power-plants- configured-with-multiple- stages-or-steps	polymer-membrane-systems-for- post-combustion-carbon-dioxide	generally	is necessary and sufficient for	capture-targets-of-90-percent-CO2- removal-efficiency	Polymer membrane systems for post combustion carbon dioxide at coal-fired power plants configured with multiple stages or steps are capable of meeting capture targets of 90% CO(2) removal efficiency.	https://www.semanticscholar.org/paper/Techno-economassessment-of-polymer-membrane-for-Zhai- Rubin/1a75d9d8f36404549e4d8366212ee4d8872c6bbt
corporate-jets	average-price-level	sometimes	has larger value than	general-price-level-of-GDP-deflator	The average price level of corporate jets has significantly outpaced the general price level measured by the GDP deflator.	https://www.semanticscholar.org/paper/A-Chain-Type-P Index-for-New-Business-Jet- Cho/a127ef46b88800ff352f22f75273fd494086a457
rat-brain-endothelial-cell	transient-oxidative-stress	generally	affects	pgp-expression	In rat brain endothelial cells, the transient oxidative stress affects the P-glycoprotein (Pgp) expression.	https://www.semanticscholar.org/paper/P-glycoprotein- expression-in-rat-brain-endothelial-Felix- Barrand/ae5fdc0413a1966bb973d3c9d32221e31f8e5c
montaine-environments- throughout-north-america	ponderosa-pine-population	generally	includes	potential-adaptations-to-pleistocene- climates-with-discrete-temporary- glacial-refugia	Ponderosa pine (Pinus ponderosa Douglas ex Lawson) populations in montane environments throughout western North America have potential adaptations to Pleistocene climates associated with discrete temporary glacial refugia.	https://www.semanticscholar.org/paper/Exploring-Clima Niches-of-Ponderosa-Pine-(Pinus-Shinneman- Means/2c76a6887594c5401cb260bfa1596d71103287a
ferrite-pearlite-railway- wheel-steel	laser-dispersed-treatment	can generally	contributes to	rolling-contact-wear-and-fatigue- resistance	The laser dispersed treatment improves the rolling contact wear and fatigue resistance of ferrite-pearlite railway wheel steel.	https://www.semanticscholar.org/paper/Influence-of-las dispersed-treatment-on-rolling-Zeng- Lu/03b67ed643bfb449c04e8dabd272104b481c4ece
acute-bone-loss-and-acute- bone-nonunion	solid-autogenous-bone-graft-or- cancellous-autogenous-bone- graft	can generally	contributes to	treatment	Solid and cancellous autogenous bone grafts are used in the treatment of acute bone loss and nonunion.	https://www.semanticscholar.org/paper//Use-of-solid-and cancellous-autologous-bone-graft-Marino- Ziran/7942526adcd4df57e6dbbcbc59242f06e348a3e3
pediatric-patient-with- general-anesthesia	preoperative-anexiety-and- preoperative-pain-in-routine-care- of-anesthetist	generally	decreases	incidence-of-emergence-agitation	The incidence of emergence agitation (EA) in pediatric patients who underwent general anesthesia can be minimized if preoperative anxiety and pain are considered in the routine care by an anesthetist.	https://www.semanticscholar.org/paper/Incidence-of- Emergence-Agitation-in-Pediatric-after-Andriyanto- Utariani/1adb2f4b31452c731835977b93e43011ef2bcc
worker-in-electromechanical- industry	lifelong-education	generally	requires	extensive-international-knowledge	Coping with the fast development in their workplaces, livelong education in the electro-mechanical industry requires extensive international knowledge.	https://www.semanticscholar.org/paper/Lifelong-educal in-robotics-and-mechatronics-Rojko- Kozlowski/3010418f8990af2423dc59007965d059d9b2
geoscience-approaches-to- create-realistic-stochastic- fault-network	a-new-method-to-create-realistic- stochastic-fault-networks-based- on-binary-tree	can generally	contributes to	creation-of-variety-of-model-topologie	In geosciences, a new method for creating realistic stochastic fault networks based on binary trees can be used to create different model topologies.	https://www.semanticscholar.org/paper/Stochastic- simulations-of-fault-networks-in-3D-Cherpeau- Caumon/f73a6586f3d1dc62323486d28461459206c82
NONE	hydrothermal-method-for-novel- 1D-chain-like-coordination- polymer	can generally	enables	synthesis-of-Pb-CDCA-2-DMF-DMF- 2H2O-n	A novel 1D chain-like coordination polymer, {{Pb(CDCA)2(DMF)} · DMF · 2H2O]}n (I) (HCDCA = chenodeoxycholic acid, DMF = dimethyl formamide) was synthesized by hydrothermal method.	https://www.semanticscholar.org/paper/Hydrothermal- syntheses-and-crystal-structure-of-a-Guan- Liu/aca0f2a9927e9a13b79e09e3af5889ebcc718970
pregnant-african-woman-in- muheza-tanzania	intermittent-preventive-treatment- with-sulfadoxine-pyrimethamine	generally not	contributes to	overall-pregnancy-outcome	Intermittent preventive treatment during pregnancy (IPTp) with sulfadoxine- pyrimethamine (SP) for African women in Muheza, Tanzania does not improve overall pregnancy outcomes.	https://www.semanticscholar.org/paper/Intermittent-treatment-to-prevent-pregnancy-malaria-Harrington-Mutabingwa/16bf17a2feebec42cc2e76071a39e6d158e
low-Mach-number- application	an-improved-entropy-consistent- Euler-flux	can generally	increases	low-speed-accuracy	An improved entropy-consistent Euler flux in low Mach number (EC-RoeM) improves low-speed accuracy.	https://www.semanticscholar.org/paper/An-improved- entropy-consistent-Euler-flux-in-low-Chen- Yan/beb2873aeb5afed07d0ea4b8081c21ad0a460fcf
patient-with-operation-of- cataract- phacoemulsification-at- department-ophthalmology- and-neurosurgery-siena- university	posterior-luxation-of-IOL	sometimes	is caused by	high-prevalence-of-pseudoexfoliation	For patients who had been operated for cataract phacoemulsification at the Department of Ophthalmology and Neurosurgery of the University of Siena, the occurrence of posterior luxations of in-the-bag intraocular lens luxation (IOLs) within one year can be linked to the high prevalence of pseudoexfoliation (PEX).	https://www.semanticscholar.org/paper/Spontaneous-i Bag-Intraocular-Lens-Luxation-of-Balestrazzi- Tosi/a970271b99552584483c688af4efe3ef5a506ec6
SIMPLE STATEMENT	frequency-of-molar-incisor- hypomineralization-within-boy- thatls-schoolchild-of-7-to-12- years-in-government-and-private- school	NONE	has larger value than	frequency-of-molar-incisor- hypomineralization-within-girl-thatls- schoolchild-of-7-to-12-years-in- government-and-private-school	Distribution of molar incisor hypomineralization (MIH) using the European Academy of Pediatric Dentistry (EAPD) criteria for MIH in schoolchildren of 7–12 years of age from government and private schools in Chennai is more in boys than girls.	https://www.semanticscholar.org/paper/Molar-Incisor- Hypomineralization-and-lts-Prevalence-Padavala- Sukumaran/44c9bd82e07a6d6a73ac78e3e5f4035a20t 9
SIMPLE STATEMENT	chance-of-primitive-narrowing-of- great-sapheneous-vein- segments-within-varicose-limb	NONE	has larger value than	chance-of-having-primitive- narrowing-of-great-sapheneous-vein- segments-within-healthy-limb	Primitive narrowing of great saphenous vein segments (saphenous hypoplasia) occurs in varicose limbs more frequently than in healthy [limbs] ones.	https://www.semanticscholar.org/paper/Segmental- hypoplasia-of-the-great-saphenous-vein-Caggiati- Mendoza/98d9770bccae831589bdd6bdc51fc5aeb2ef5

Claim		Formalization of	f the scientific claim	with the Super-Pattern	Calcatific plaim on an AIDA contains	Article identification	
	Context	Subject	Qualifier	Relation	Object	Scientific claim as an AIDA sentence	Article identification
4	ventricular-septal-defect- and-left-ventricular-outflow- tract-obstruction	transposition-of-great-arteries- with-Lecompte-procedure-and- Rastelli-repair	generally	contributes to	treatment	The Lecompte procedure and Rastelli repair in the transposition of the great arteries (TGA) with ventricular septal defect (VSD) and left ventricular outflow tract obstruction (LVOTO) provide satisfactory early [results] and late results.	https://www.semanticscholar.org/paper/Repair-of- transposition-of-the-great-arteries%2C-and-Lee- Lim/4fa74a5fd286acbe764e8e484136da9db0050d22
4	person	obesity-with-metabolic- abnormality	frequently	co-occurs with	knee-osteoarthritis	Obesity when accompanied by metabolic abnormality is closely associated with knee osteoarthritis.	https://www.semanticscholar.org/paper/Obesity%2C-metabolic-abnormality%2C-and-knee-A-study-in-Lee- Kim/eb8b7a2abef2e75f7b0f59ac3325a795fb672993
4	student-with-visual- impairments	program-about-oral-hygiene- skills-uses-group-instruction-and- individual-coaching	can generally	increases	oral-hygiene-skill	using group instruction and individual coaching enhances the oral hygiene	https://www.semanticscholar.org/paper/Teaching-Oral- Hygiene-Skills-to-Elementary-Students-Shih- Chang/5eb25fdf3b6b2e35d8d6784a898f9578365043f0
4	magneto-electro-elastic- cantilever-beam-in-thermal- environment	pyroelectric-effect	generally	increases	electric-potential-observed-at- volume-fraction-of-BaTiO3-0.2	A magneto-electro-elastic cantilever beam under thermal environment has a significant increase in electric potential observed at volume fraction of BaTiO3, vf = 0.2 due to pyroelectric effect.	https://www.semanticscholar.org/paper/Studies-on-magneto- electro-elastic-cantilever-beam-Kondaiah- Shankar/ad844432f09c901fd5af2a3c7ab4fcb4d78aa22d
5	detection-of-holes-with- global-optimization- techniques-and-parameter- didentification-techniques	accuracy-of-direct-model- application-to-detect-holes-in-a- plate	mostly not	is same as	accuracy-of-inverse-model- application-to-detect-holes-in-a-plate	The detection of holes in a plate using global optimization [techniques] and parameter identification techniques for the direct model and for the inverse model have comparable results.	https://www.semanticscholar.org/paper/Detection-of-holes- in-a-plate-using-global-and-Lopes- Jorge/f754cdc703a2e8de29feb1ae690803a651ce0348