BioASQ
A challenge on large-scale biomedical semantic indexing and question answering

The results of the 10th year of BioASQ will be presented in the BioASQ Lab 2022 that will take place in the context of CLEF 2022 in Bologna, Italy

WHAT IS BioASQ?

Task A: Hierarchical text classification
- Organizers distribute new unclassified PubMed articles.
- Participants assign MeSH terms to the articles.
- Evaluation based on annotations of PubMed curators.

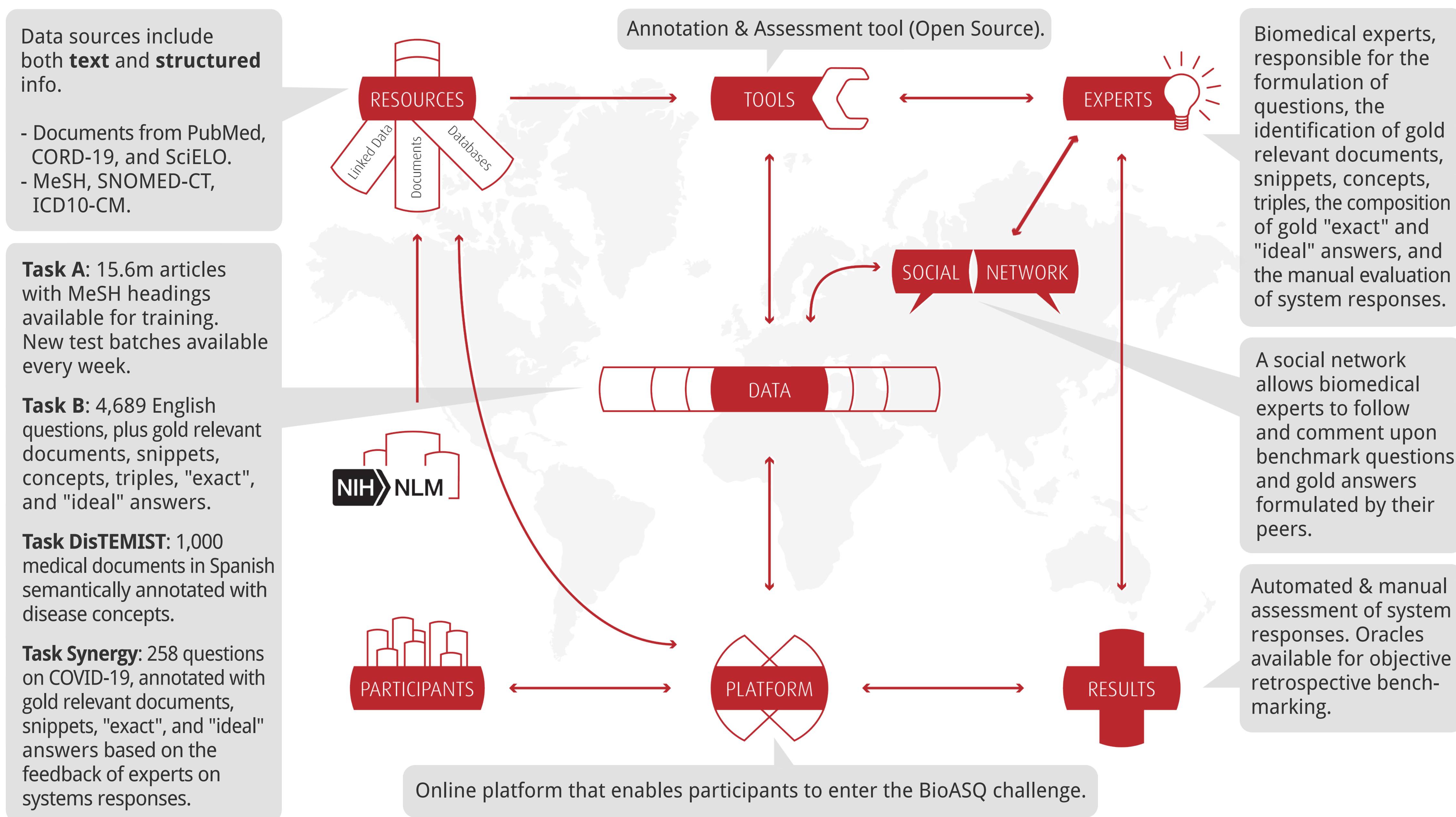**Task B: IR, QA, summarization, ...**
- Organizers distribute English biomedical questions produced by a team of biomedical experts.
- Participants provide: relevant articles, concepts, "exact" answers (e.g., named entities), "ideal" answers (paragraph-sized summaries).
- Evaluation: both automatic (GMAP, MRR, ROUGE etc.) and manual (by biomedical experts).

Task DisTEMIST: Disease Text Mining and Indexing Shared Task
- Organizers distribute clinical case report publications in Spanish.
- Participants assign disease annotations to the publications.
- Evaluation based on manual annotations.

Task Synergy: Question answering for developing issues
- Organizers distribute open questions about COVID-19.
- Participants provide relevant articles, snippets, "exact" answers, "ideal" answers.
- Biomedical experts assess the responses and provide feedback to the participants.
- Evaluation: both automatic and manual.

Data sources include both **text** and **structured** info.

- Documents from PubMed, CORD-19, and SciELO.
- MeSH, SNOMED-CT, ICD10-CM.

Task A: 15.6m articles with MeSH headings available for training. New test batches available every week.

Task B: 4,689 English questions, plus gold relevant documents, snippets, concepts, triples, "exact", and "ideal" answers.

Task DisTEMIST: 1,000 medical documents in Spanish semantically annotated with disease concepts.
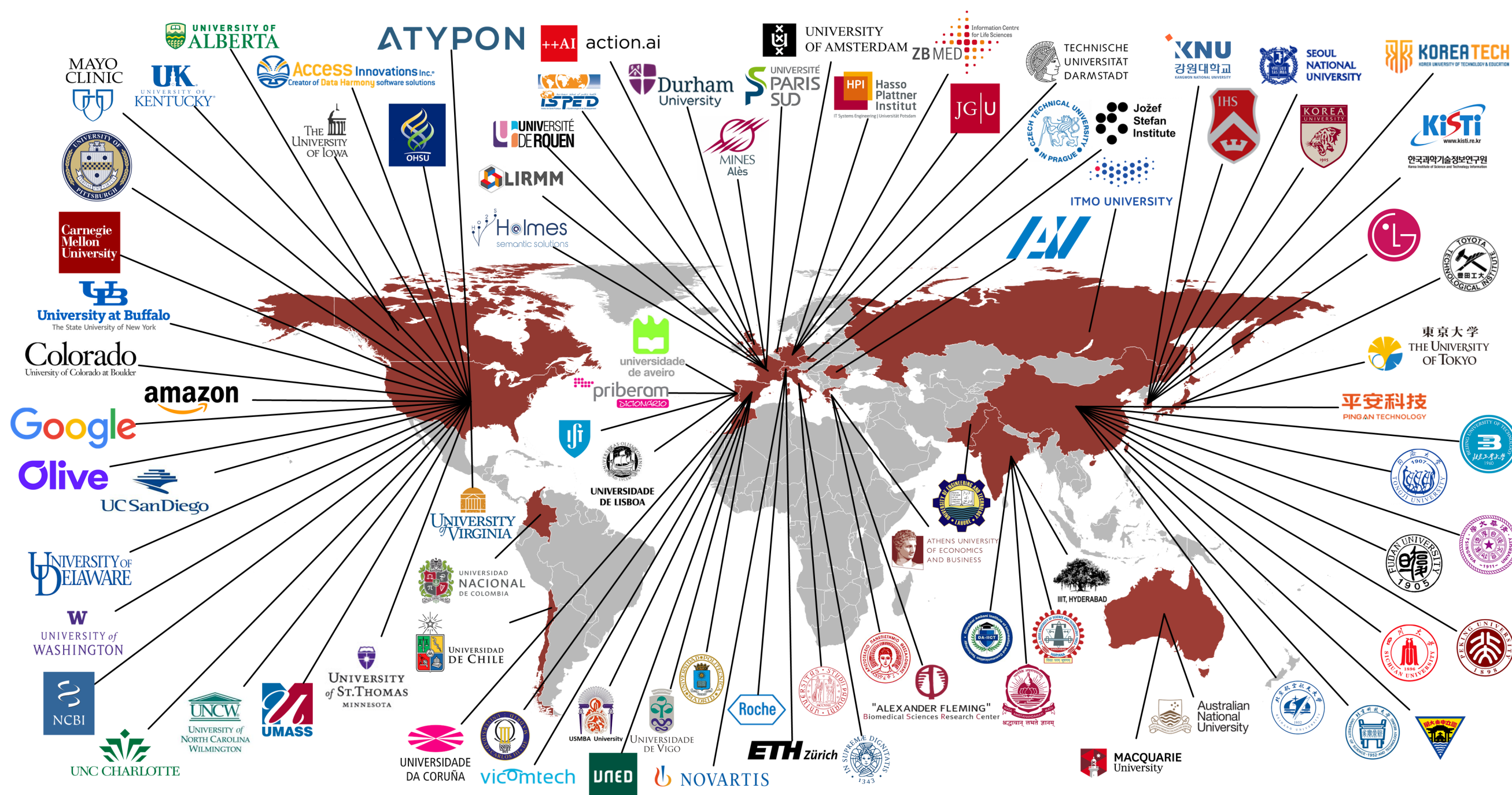
Task Synergy: 258 questions on COVID-19, annotated with gold relevant documents, snippets, "exact", and "ideal" answers based on the feedback of experts on systems responses.

Annotation & Assessment tool (Open Source).

RESOURCES — TOOLS — EXPERTS

Linked Data / Documents / Databases

SOCIAL NETWORK

DATA

NIH NLM

PARTICIPANTS — PLATFORM — RESULTS

Online platform that enables participants to enter the BioASQ challenge.

Biomedical experts, responsible for the formulation of questions, the identification of gold relevant documents, snippets, concepts, triples, the composition of gold "exact" and "ideal" answers, and the manual evaluation of system responses.
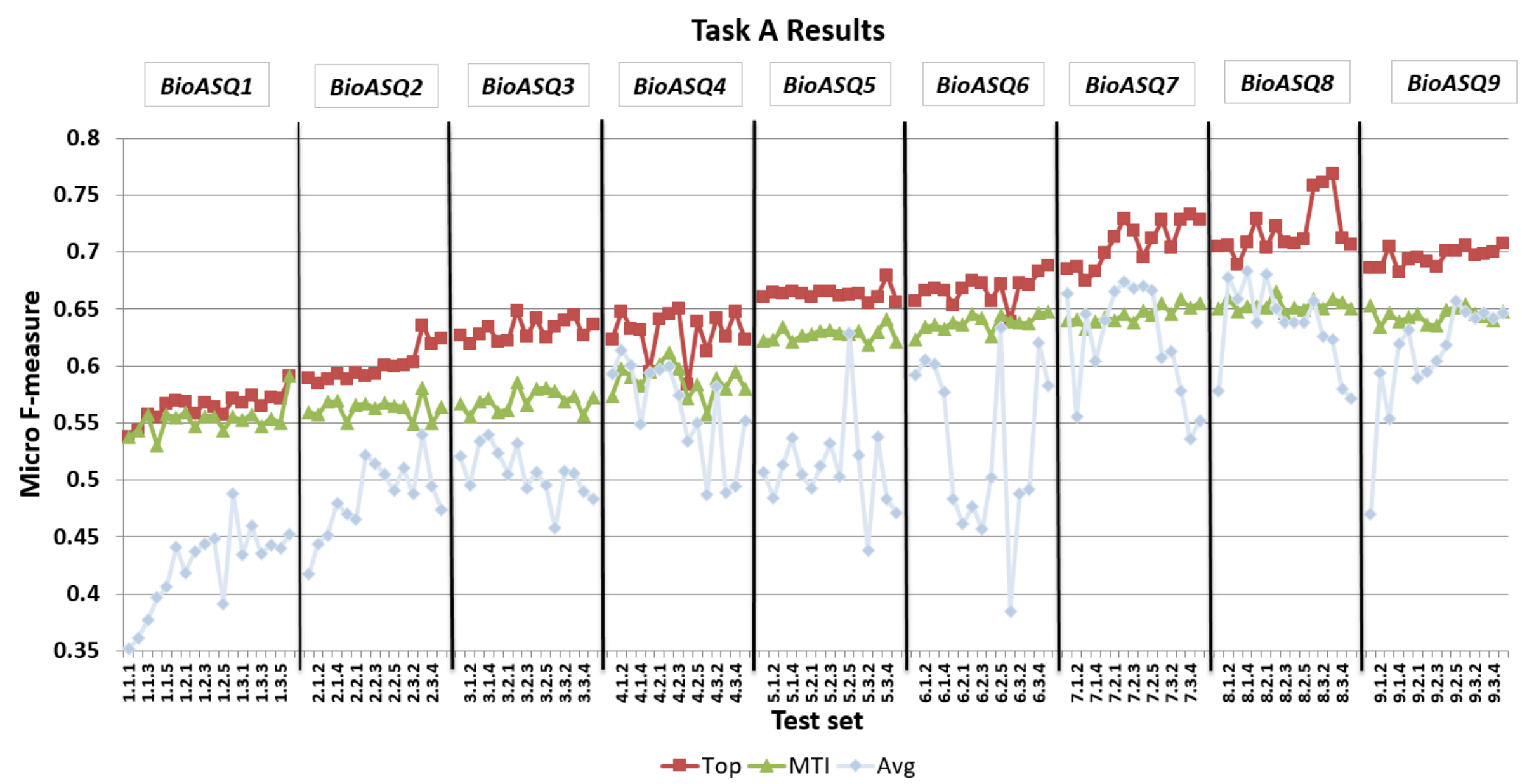
A social network allows biomedical experts to follow and comment upon benchmark questions and gold answers formulated by their peers.

Automated & manual assessment of system responses. Oracles available for objective retrospective bench-marking.

PAST PARTICIPANTS

PAST RESULTS

Task A Results

BioASQ1 BioASQ2 BioASQ3 BioASQ4 BioASQ5 BioASQ6 BioASQ7 BioASQ8 BioASQ9

Micro F-measure

Test set

Top — MTI — Avg

Stay tuned for BioASQ 10!

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