

# INDIANA JUNIOR ACADEMY OF SCIENCE

Report for 2005  
Submitted November 16, 2005

Approximately 145 students and teachers representing nine schools attended the annual fall meeting of the Indiana Junior Academy of Science held at Indiana University Bloomington on November 5, 2005.

The following seven activities comprise the major portion of the Junior Academy meeting:

## 1. *The Problem Solving Exam*

This exam provides students with a fun and meaningful exercise in scientific knowledge and problem-solving skills. Two students from each school who are selected by their sponsoring teacher take the exam. A plaque is awarded to the top individual winner and certificates are given to the students who placed 2<sup>nd</sup> -5<sup>th</sup>.

This year's winners were:

### Individual Students

- 1<sup>st</sup> Place – Deanna Lind, Marian High School
- 2<sup>nd</sup> Place – Ryan Koerber, Christian Academy of Indiana
- 3<sup>rd</sup> Place – Jonathan Bell, Snider High School
- 4<sup>th</sup> Place – Emily Cook, Marian High School
- 5<sup>th</sup> Place – Peter Koerner, East Noble High School

Top Schools – From each school, their two students' scores are combined and the top schools are recognized.

- 1<sup>st</sup> Place – Marian High School
- 2<sup>nd</sup> Place – East Noble High School

## 2. *The Issues Presentation Competition*

This competition encourages students to learn about the political, social, and scientific issues surrounding the selected topic. This year, the topic was **"With the increasing drive towards genetically modified foods, should the federal government approve of the outdoor planting, or "biopharming" of plants genetically modified to produce pharmaceutical drugs?"** Each competitor gives a five minute presentation on the topic without the use of visual aids. The students are judged by a panel of peers, and the finalists are then judged by a panel of undergraduate students. A plaque is awarded to the winning student.

This year's winners were:

- 1<sup>st</sup> – Andrea Melcher, Northwestern High School
- 2<sup>nd</sup> – Jessica Jackson, Eastern High School
- 3<sup>rd</sup> – Natalie Lawyer, North Daviess High School

## 3. *Science Olympiad Competition*

This year we held one Science Olympiad competition called "Experimental Design" where students were given a sack of materials and asked to design, build, demonstrate, and explain an original experiment.

Winners were:

- 1<sup>st</sup> Place – Marian High School
- 2<sup>nd</sup> Place – Snider High School

#### 4. *The Research Paper Competition*

This competition allows students who have carried out an original scientific investigation the opportunity to present their work publicly. Students who wish to compete in this event submit an abstract of their work to the IJAS Director in early October. The abstracts are reviewed by a panel of impartial judges, and thirteen student finalists are selected. At the IJAS meeting, these students give a 10-minute poster presentation to a panel of judges who evaluate them on originality, research procedures, and presentation skill. The second and third place winners receive a plaque. The first place winner receives a plaque and a \$1,000 scholarship from the Hoosier Association of Science Teachers to attend any Indiana College or University.

This year's winners were:

1 <sup>st</sup> Place	Kaleb Naegeli, Northwestern High School
2 <sup>nd</sup> Place	Jonathan Bell, Snider High School
3 <sup>rd</sup> Place	Allison Lange, Noblesville High School
4 <sup>th</sup> Place	Abigail Hines, Orchard Day School
5 <sup>th</sup> Place	Esther Volmer, Christian Academy of Indiana
6 <sup>th</sup> Place	Caaminee Pandit, Noblesville High School
7 <sup>th</sup> Place	Jillian Hodge, Marian High School
8 <sup>th</sup> Place	Angie Sells, Eastern High School
9 <sup>th</sup> Place	Heather Shearer, Eastern High School
10 <sup>th</sup> Place	Jessica Jackson, Eastern High School
11 <sup>th</sup> Place	Mark Fraser, Marian High School
12 <sup>th</sup> Place	Tanner Punt, Noblesville High School

#### 5. *The Outstanding Junior Scientist Competition*

This event recognizes those students who are exemplary in overall scholarship as well as scientific ability and achievement. Each school may nominate two students for this competition. The top ten nominees are then selected to compete at the IJAS meeting, where they are interviewed by a panel of judges. The Outstanding Junior Scientist is selected based upon his/her academic record, involvement in original research and extracurricular scientific activities, and the interview. The second and third place winners receive plaques and the Most Outstanding Junior Scientist receives a plaque and a \$1,000 scholarship from the Indiana Academy of Science to attend any Indiana College or University.

This year's winners were:

1 <sup>st</sup> Place	172.6	Kaleb Naegeli, Northwestern High School
2 <sup>nd</sup> Place	148.6	Angie Sells, Eastern High School
3 <sup>rd</sup> Place	135.6	Caaminee Pandit, Noblesville High School
4 <sup>th</sup> Place	126.2	Michael Chartier, Marian High School
5 <sup>th</sup> Place	125.0	Auna Badke, Marian High School
6 <sup>th</sup> Place	124.9	Annalie Scudder, North Daviess High School
7 <sup>th</sup> Place	120.4	Abigail Hines, Orchard Day School
8 <sup>th</sup> Place	118.9	Jonathan Bell, Snider High School
9 <sup>th</sup> Place	115.6	Travis Schaffer, North Daviess High School
10 <sup>th</sup> Place	113.0	Sonal Sadaria, Noblesville High School

#### 6. *The Outstanding School Award*

The Outstanding School Award is given to the school with the most participation points. To calculate this score, credit is given for every abstract submitted, more credit for those abstracts accepted for the Research and for Outstanding Junior Scientist competitions, and finally for rank scores for the top presentations. Each school received credit for entering students in the Issues Competition, for having a judge at the Issues

presentations, and for entering students in the Problem Solving Exam. More credit was given to the winners.

The top three schools and the teachers representing them today are:

1 <sup>st</sup> Place	Northwestern High School
2 <sup>nd</sup> Place	Marian High School
3 <sup>rd</sup> Place	Eastern High School

### 7. Educational Tours

Educational tours of the *Greenhouse, Cadaver Lab, Mathers Museum, IFLE Lab, Dr. Garraghty and Dr. Rebec Research Labs* were given twice during the day to give all students attending an opportunity to get an up-close and personal look at some of the great research opportunities the IU Bloomington campus has to offer.

Many thanks to the following people for their assistance in making this annual meeting go so smoothly:

**Ms. Jocelyn Bowie, Director**  
Office of Recruiting  
College of Arts & Sciences  
Writing the Problem Solving Exam

**Dr. Daniel Ortiz-Barrientos**  
IU Department of Biology  
OJS Judge

**Dr. Diane Henshel, Faculty**  
IU School of Public and Environmental Affairs  
Research Judge

**Dr. Katy Pilachowski, Faculty**  
IU Astronomy Department  
OJS Judge

**Dr. Randy Arnold**  
IU Chemistry Department  
Research Judge

**Dr. Nelson Shaffer**  
IU Department of Geological Sciences  
OJS Judge

**Dr. James Ford**  
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**Dr. Caiqing Mo**  
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Abstract Judge

**Dr. David Kehoe**  
IU Department of Biology  
Research Judge

**Dr. Suchetana Mukhopadhyay**  
IU Department of Biology  
Abstract Judge

**Dr. Farrah Bashey-Visser**  
IU Department of Biology  
Research Judge

**Dr. Joseph Near**  
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Abstract Judge

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