



Society for Pediatric Pathology Awards Bulletin

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2008 Resident Recruitment Awards

In 2002, the Society for Pediatric Pathology established the Resident Recruitment Award (formerly called the Resident Case Presentation Award), which invites residents to compete for an expense-paid opportunity to attend the interim meeting. The award recognizes residents whose applications demonstrate interest in pediatric pathology and insight into the unique aspects of our exciting profession. Each year, two or three residents have been selected from approximately twenty residents who submit applications. The application process invites almost any format that fits on a single page and submissions have included artwork, crossword puzzles, personal essays, traditional case reports, and poetry.

In 2008, three Resident Recruitment Awards were presented to Drs. **Leslie Hamilton**, **Yael Kushner**, and **Deborah Vinson-Spencer**. Their entries appear in the current issue of the Society for Pediatric Pathology Awards Bulletin. In different ways, each captures a youthful perspective on the field of pediatric pathology.

- Raj P. Kapur

2008 Resident Recruitment Award Recipients



Leslie Hamilton
University of Calgary,
Calgary, Alberta,
CANADA



Yael Kushner
McGill University,
Montreal, Quebec,
CANADA

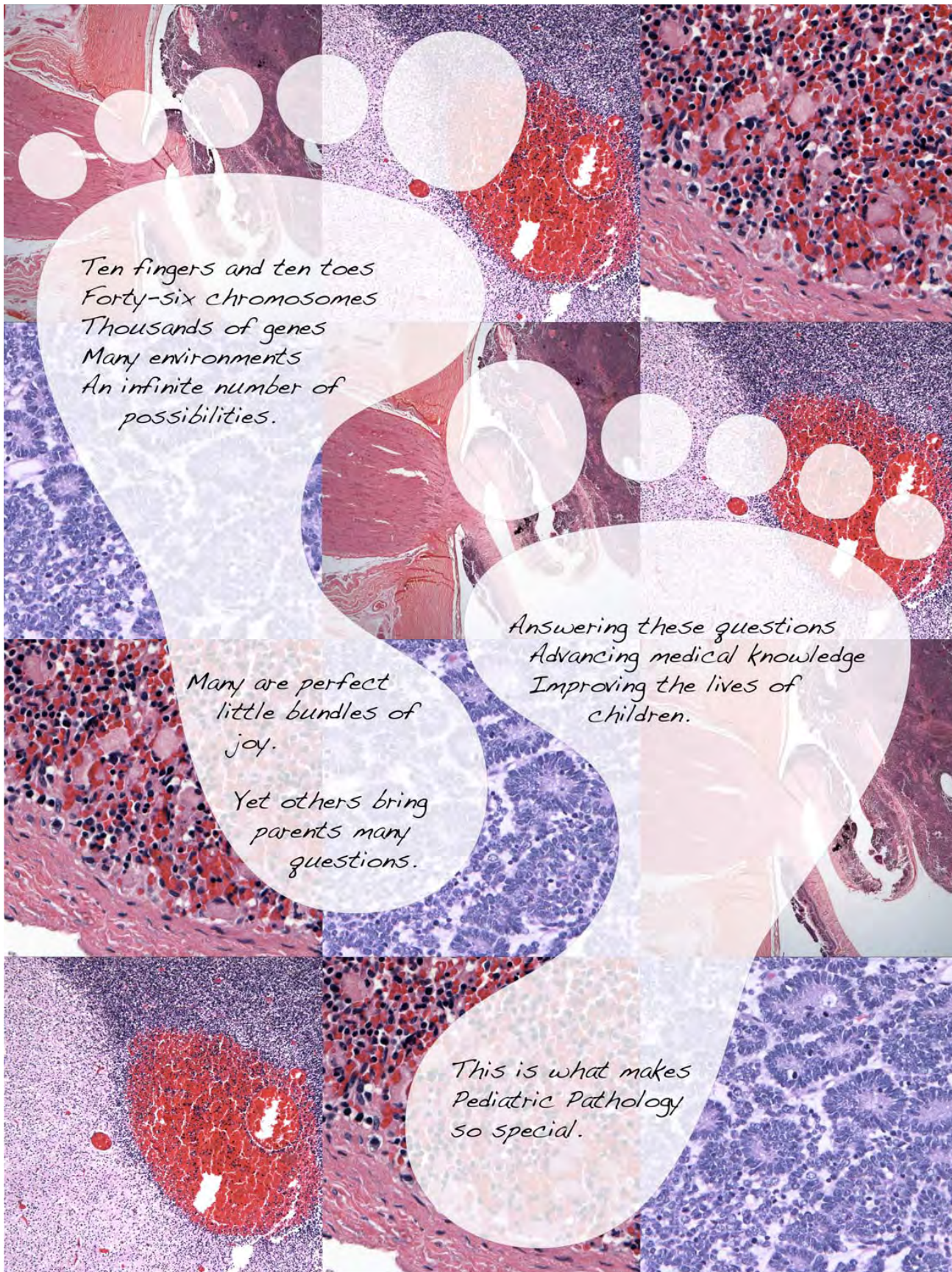


Deborah Vinson-Spencer
Medical University of
South Carolina,
Charleston, SC

2008 Resident Recruitment Awards - Winning Entries

Untitled

Leslie Hamilton, University of Calgary



Ten fingers and ten toes
Forty-six chromosomes
Thousands of genes
Many environments
An infinite number of
possibilities.

Many are perfect
little bundles of
joy.

Yet others bring
parents many
questions.

Answering these questions
Advancing medical knowledge
Improving the lives of
children.

This is what makes
Pediatric Pathology
so special.

2008 Resident Recruitment Awards - Winning Entries

Babes in Boyland:

A poem examining the embryological origins of the bipotential urogenital duct system

Yael Kushner, McGill University

This poem is inspired by my fascination with the delicate intricacy of embryology and its link to perinatal and pediatric pathology as a whole. Prior to my rotation in pediatric pathology, I did not give this natural process much thought. I now realize how much every critical step is of paramount importance to the outcome of each baby and all of what that implies for the lifetime of that child and their family. I feel a great sense of responsibility to learn to help families and clinicians understand what may have gone wrong, direct future management, and possibly provide information about future pregnancies

Our embryo is only six weeks old
When germ cells migrate low and behold
The gonadal ridge is their final destination
With coelomic epithelium they will undergo much proliferation
They form a network of sex cords as they grow
The rete ovari or testes is the star of their show
The aorta at level lumbar one or two
Supplies blood to the nearby kidney too
In the embryo the primitive kidney is tucked
Arising from a complex system of ducts.

At six weeks the embryo is still indifferent and bipotential
For a boy or a girl it has the credentials
Gonads, ducts, and genitalia could go either way
Only the genome will have the final say
The Y chromosome may be present
But if there is no SRY things could get unpleasant
We get into the business of a hermaphrodite
Both ducts or different genitalia could be our plight.

If the genome reads "44A XY" and we have SRY
A little boy will develop in utero as time goes by
Mesonephric or Wolffian ducts form in all males
The nephrons and collecting tubules it also entails
Sex cords infold and the rete testis surround
Tunica albuginea in the cortex is found
Mesonephric tubule and rete testis meet
In the end semen and urine take the same street.

The cells must do their job and secrete
Hormones and factors to make one duct retreat
In a boy, sertoli cells make anti-mullerian hormone
While the interstitial Leydig cells make testosterone
Both of these make the Mullerian duct go away
While the Wolffian duct is here to stay
Leydig cells near the capillaries can be seen
To secrete their hormones directly into the blood stream
Testosterone turns to DHT by five alpha reductase
And forms the external genitalia in their proper place.

The only remnant of a female duct system a boy cannot lose
The prostatic utricle where two parts of the mullerian ducts
did fuse
Gubenaculum in males governs the testis descent
Through the inguinal canal they must be sent
The labioscrotal fold is their final destination
There they will perform their spermatogenic occupation.

Male embryonic vestigial structures do remain
Paradidymus and appendix epididymus is their name
In adults they have a tendency to become cystic
Doctor's genitorectal exams we must persist with.

Now here comes one difference between a gal and a guy
Until puberty lad's germs cells get some shut-eye
Only at this stage do they activate
And produce sperm to mate and create.

If the genome says "44A XX" and SRY is nowhere to be found
Around the 8th to 10th week female genitalia can be found
Follicular and theca cells arise and grow
Ovaries, uterus, and oviducts is where they will be stowed
From the lumbar aorta branches the ovarian artery
It winds and turns to supply our girl's ovaries
In the absence of androgens the mesonephric duct checks out
Except for the primitive kidney and ureteric bud, they tough it
out.

The mullerian tubercle is where the two ducts fuse
Up until the middle of the gubernaculum where the ducts are
found again in twos
The uterus arises from the area of fusion, the mullerian
tubercle
Oviducts come from the two unfused ducts that remain bilateral
Many more ligaments hold the organs in their places
Between ovary and oviduct the mesovarium finds its home
Up and around the uterus, the peritoneum forms a dome
Under the fallopian tubes it is double layered in nature
Forming the anterior support of the uterus, "broad ligament" is
its nomenclature
From the posterior body wall top the ovary is the suspensory
ligament
Ovarian artery, vein, and lymphatics within it are sent.

Up at the gonadal ridge life still continues
Rete ovari degenerates and leaves only its residues
Coelomic epithelium around the primordial germ cell forms a
ring
At the ovary's cortex the germ cells into oogonia are changing
Around the ovary the epithelium is cuboidal
Follicles and theca cells make the environment quite steroidal
Through their various stages the oogonia do waltz
But until fertilized at meiosis II a follicle surely halts.

Although both sexes come from the very same places
You wouldn't believe it to look at their faces
All of these changes require intricate steps
Without genes, hormones, and their receptors they would be
inept
In you and I embryology plays a vital part
Remnant structures found from gonads to heart
The embryo starts as one cell to behold
As it grows and undergoes countless folds
To understand anomalies of the system urogenital
We must first recognize embryology is not ephemeral
To relive our beginnings in an overview,
You may enjoy the poem I have just shared with you.

2008 Resident Recruitment Awards - Winning Entries

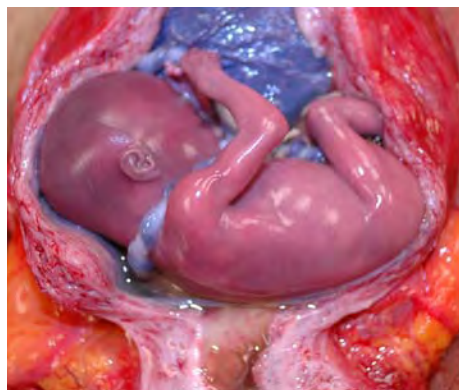
What's so special about pediatric pathology?

Deborah Vinson-Spencer, Medical University of South Carolina

Pediatric pathology is the culmination of decades of research and dedication for the chance to help an innocent child and family reach some glimpse of clarity, in a time otherwise filled with uncertainty and anxiety. The pediatric pathologist is the keystone in the quest for understanding when something goes wrong with a young child. The knowledge and expertise of the pediatric pathologist offers new hope, and some degree of resolution, to families coping with pain, confusion, and grief, by presenting them with a correct diagnosis.

“Mommy, Daddy, something’s wrong.” So begins the dialogue between a child and his or her parents that prompts gut-wrenching anxiety and confusion when a parent realizes that something truly is wrong with his or her child. The parents begin with medical visits, hoping that their primary care doctor will reassure them that nothing is wrong with their child. Their anxiety mounts when the doctor says “We need to do some tests to see what is going on with your child,” instead of simply offering reassurance. Parents know that lab tests mean pain and anguish for their child, all the while knowing that they must be brave and comforting on the outside, even if they are brimming internally with fear. Their hearts sink when they hear the news that the tests have come back positive for a malignant tumor. “How could my sweet, innocent child get cancer?” they ask themselves. They all handle the situations differently- some get angry, some go into denial, and some sit down and pray. But a common bond exists between parents of children who are afflicted with a serious illness, and that is one of hope - hope that their child will emerge victorious in the battle against this illness. Most parents don’t know that their plea for a successful outcome for their child lies largely with the behind the scenes contributions of the pediatric pathologist. They place their trust in the clinician, whom they can see, hear, and touch. But working behind the scenes is a pathologist whose knowledge and training allows him or her to present the family with an accurate diagnosis and give that family a wonderful gift - the gift of hope.

A correct diagnosis spares the child and the family the pain and heartache of undergoing needless treatments and tests. The pediatric pathologist, with years of training and dedication, helps families in ways that may never be realized or openly appreciated. But the truth is there, and the pediatric pathologist can bask in the deep inner peace knowing that he or she at least gave a family the gift of hope.



That's what's so special about pediatric pathology.